3rd INTERNETIONAL EGE CONGRESS ON SCIENTIFIC RESEARCH

DECEMBER 20-22, 2024

İzmir, Türkiye









ABSTRACTS BOOK

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PROF. DR. G. NAZAN GÜNAY

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3rd INTERNATIONAL EGE CONGRESS ON SCIENTIFIC RESEARCH

December 20-22, 2024 / İzmir, Türkiye

EDITOR

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ISBN: 978-625-378-120-0

CONGRESS ID

CONGRESS TITLE

3rd INTERNATIONAL EGE CONGRESS ON SCIENTIFIC RESEARCH

DATE AND PLACE

December 20-22, 2024 / İzmir, Türkiye

ORGANIZATION

IKSAD INSTITUTE

EGE UNIVERSITY

EGE UNIVERSITY (FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES)

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Prof. Dr. G. Nazan GÜNAY

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Total Accepted Article: 655

Total Rejected Papers: 186

Accepted Article (Türkiye): 316

Accepted Article (Other Countries): 339

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3rd INTERNATIONAL EGE CONGRESS ON SCIENTIFIC RESEARCH

December 20-22, 2024 / Ege University, İzmir, Türkiye

30.12.2024

REF: Akademik Teşvik

İlgili makama;

3. Uluslararası Ege Bilimsel Araştırmalar Kongresi, 20-22 Aralık 2024 tarihleri arasında İzmir'de 43 farklı ülkenin (Türkiye 316 bildiri- Diğer ülkeler 339 bildiri) akademisyen/araştırmacılarının katılımıyla gerçekleşmiştir

Kongre 16 Ocak 2020 Akademik Teşvik Ödeneği Yönetmeliğine getirilen "Tebliğlerin sunulduğu yurt içinde veya yurt dışındaki etkinliğin uluslararası olarak nitelendirilebilmesi için Türkiye dışında en az beş farklı ülkeden sözlü tebliğ sunan konuşmacının katılım sağlaması ve tebliğlerin yarıdan fazlasının Türkiye dışından katılımcılar tarafından sunulması esastır." değişikliğine uygun düzenlenmiştir.

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Sayı : E-32949219-900-2177834 03.12.2024
Konu : 3. Uluslararası Bilimsel Araştırmalar Kongresi

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20-22 Aralık 2024 tarihleri arasında düzenlenecek olan 3. Uluslararası Bilimsel Araştırmalar Kongresinde Düzenleme Kuruluna aşağıda isimleri yazılı olan öğretim üyeleri resmi olarak ve üniversitemiz akademisyen temsilcisi olarak görevlendirilmiştir.

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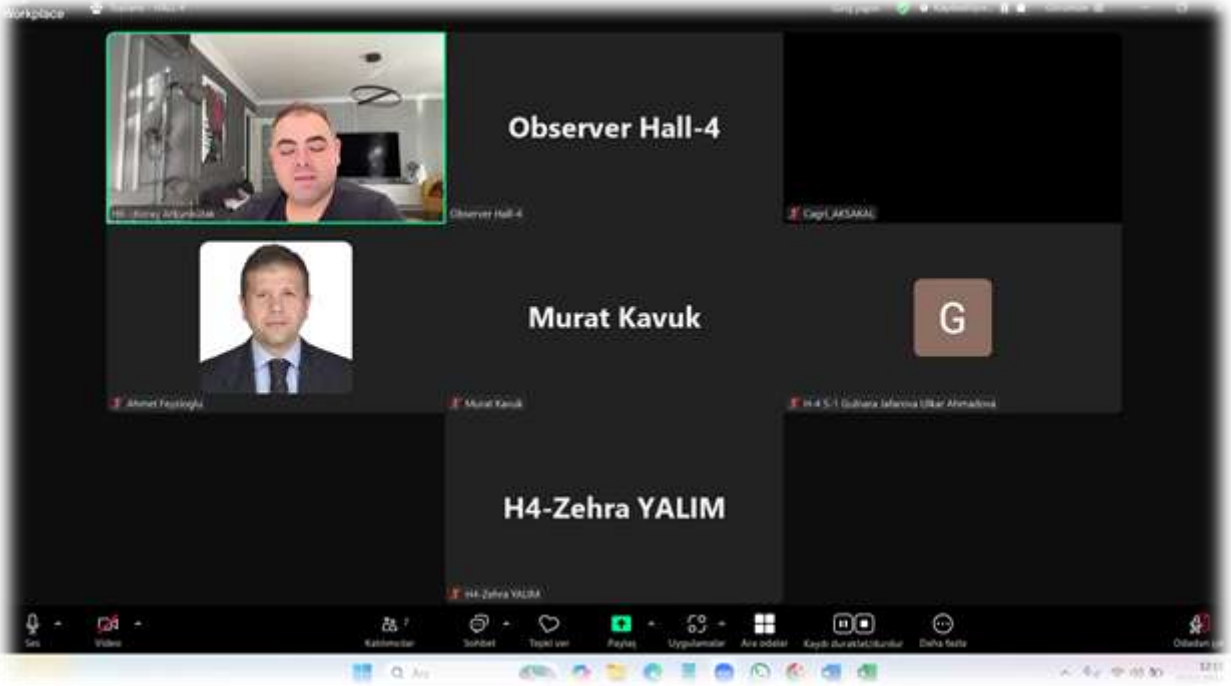
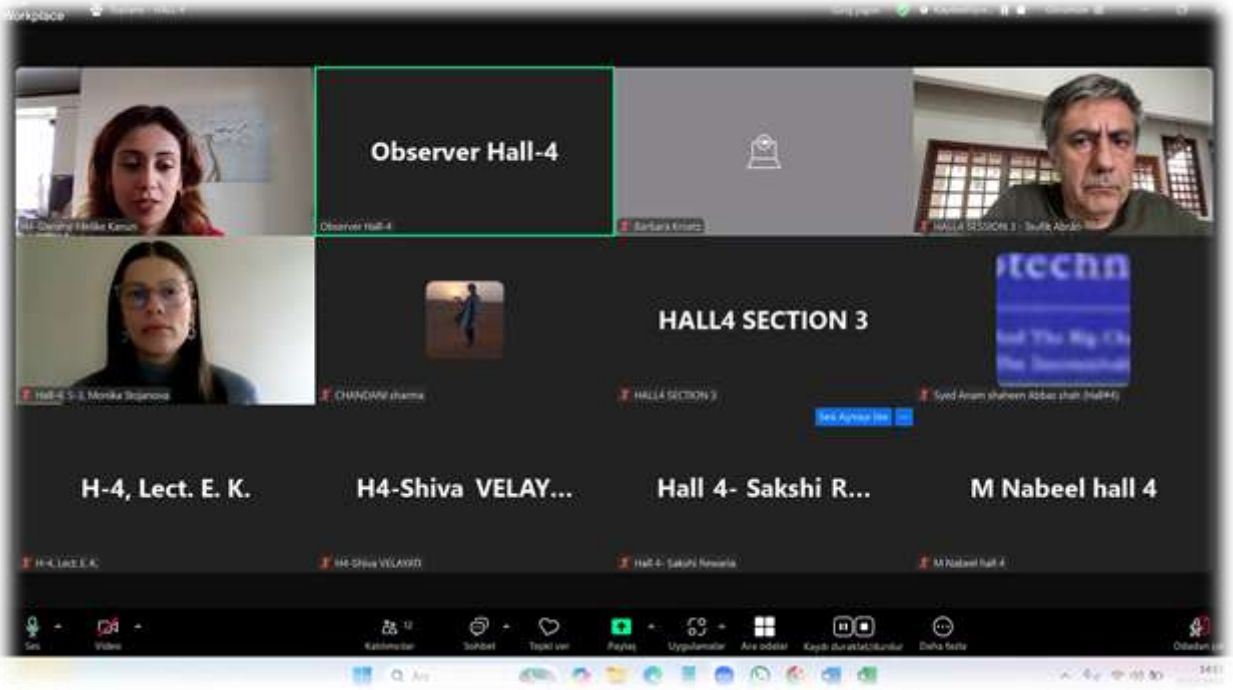


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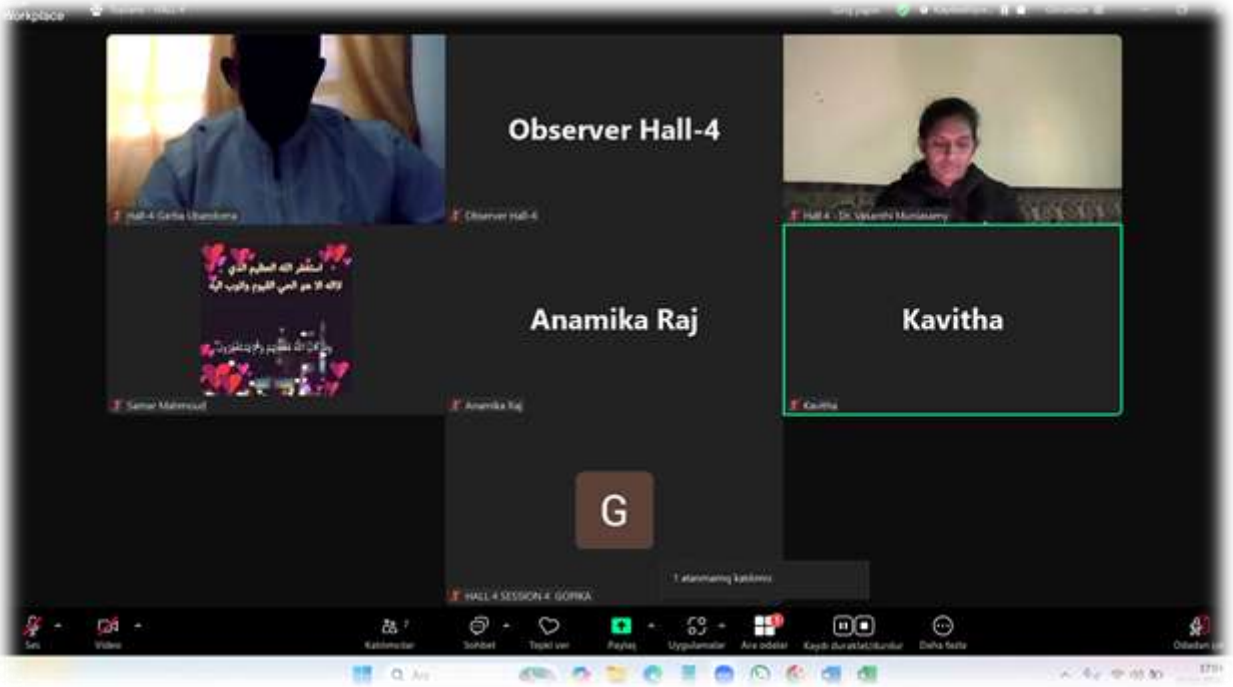


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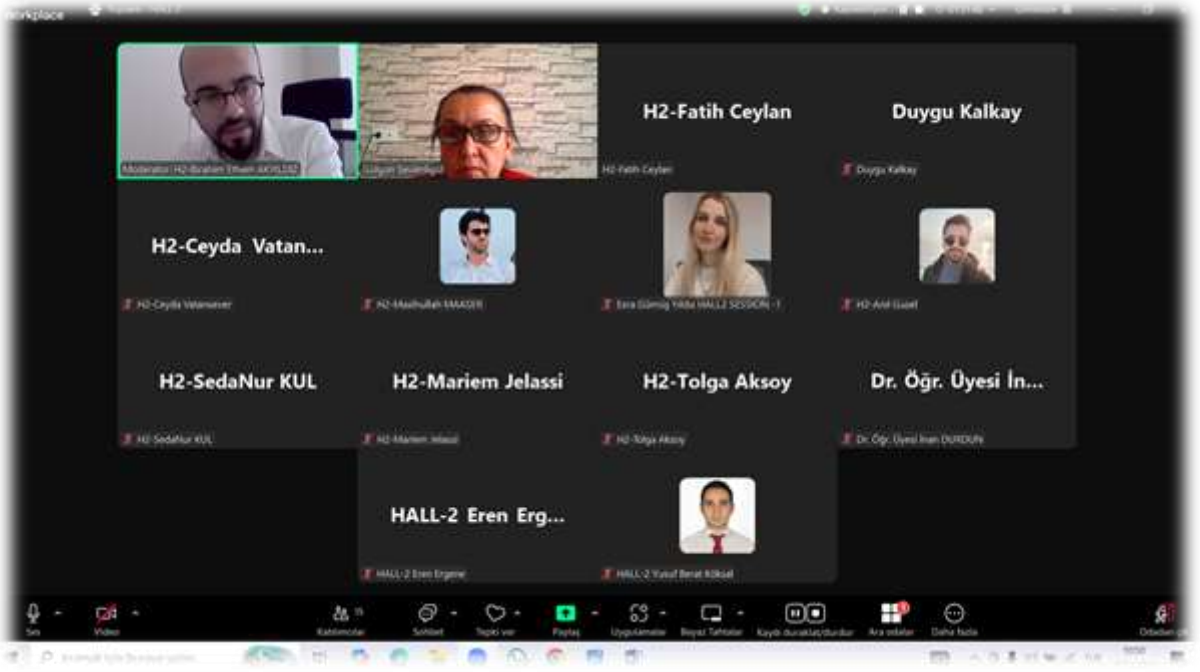




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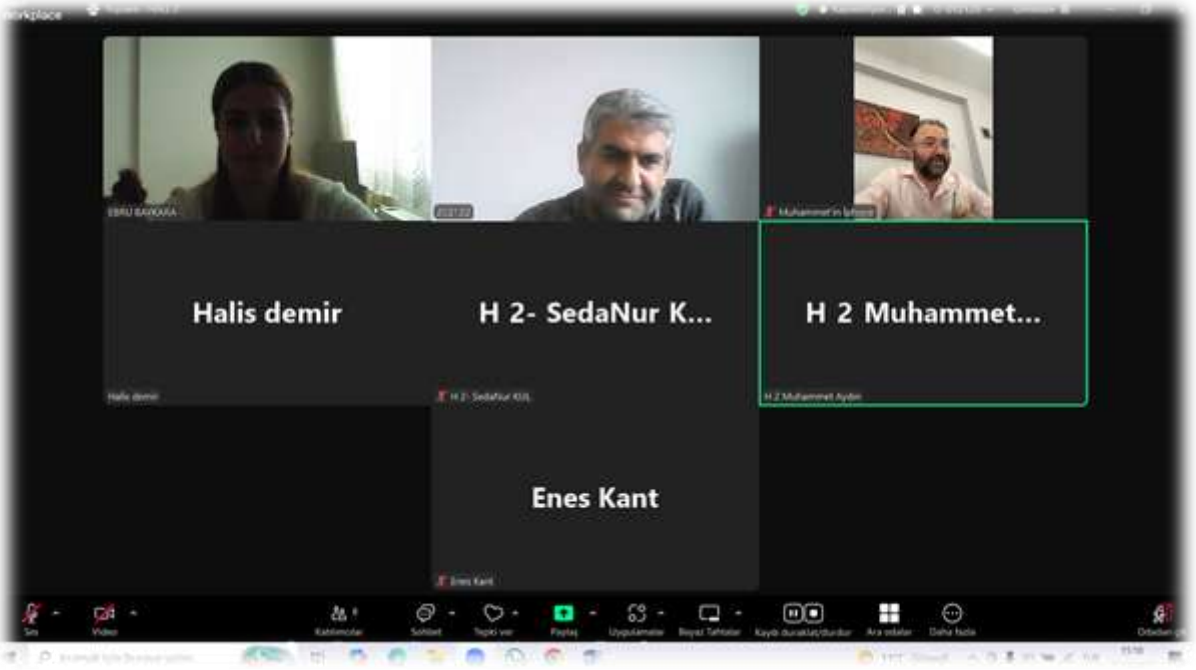




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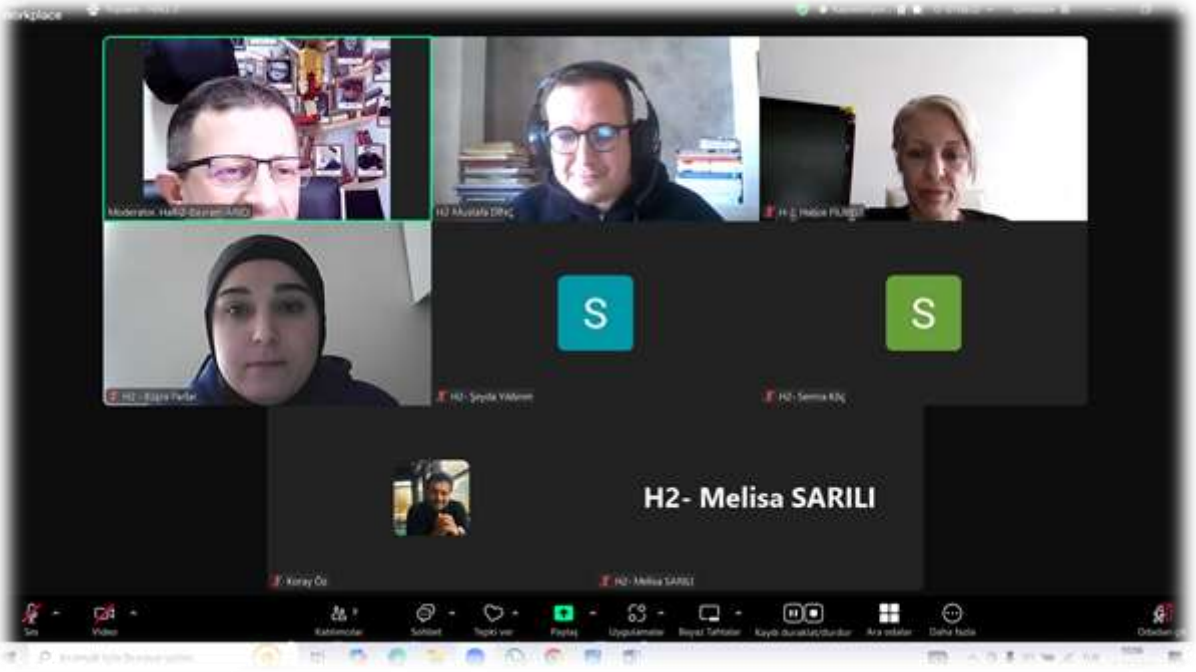




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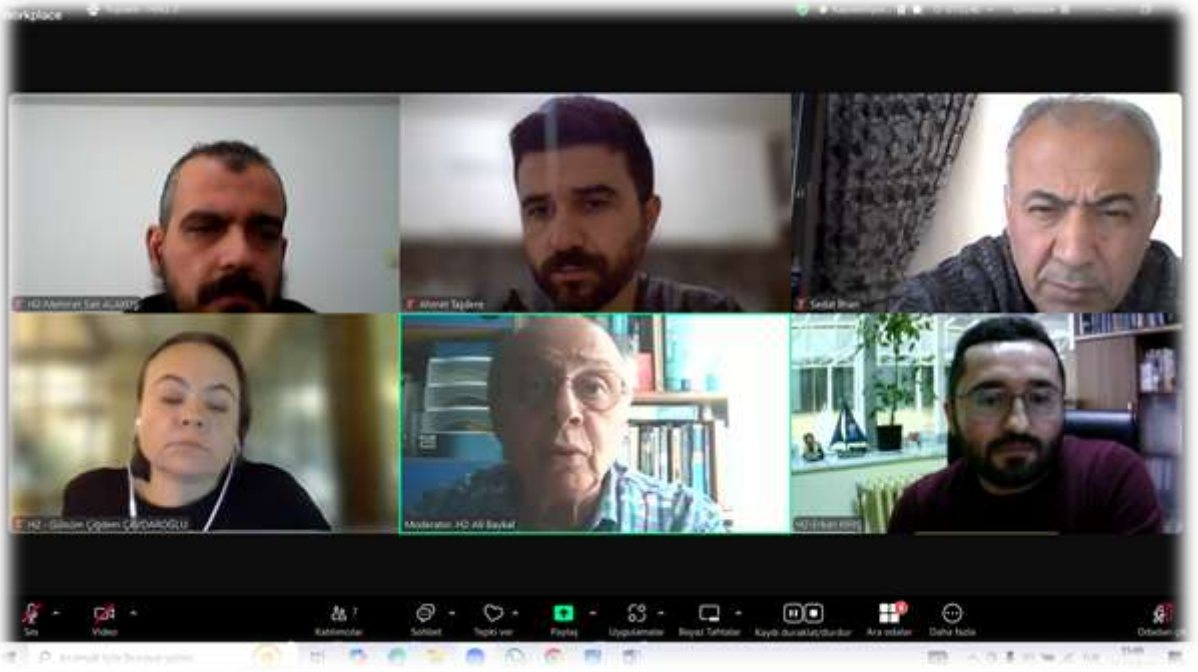
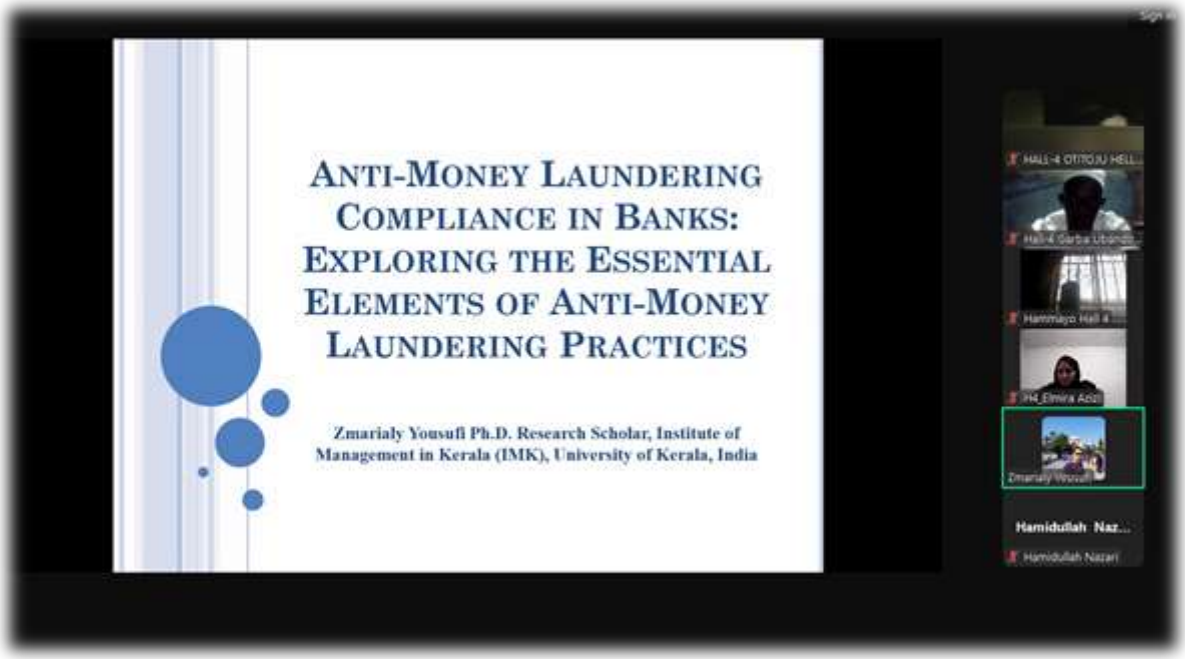




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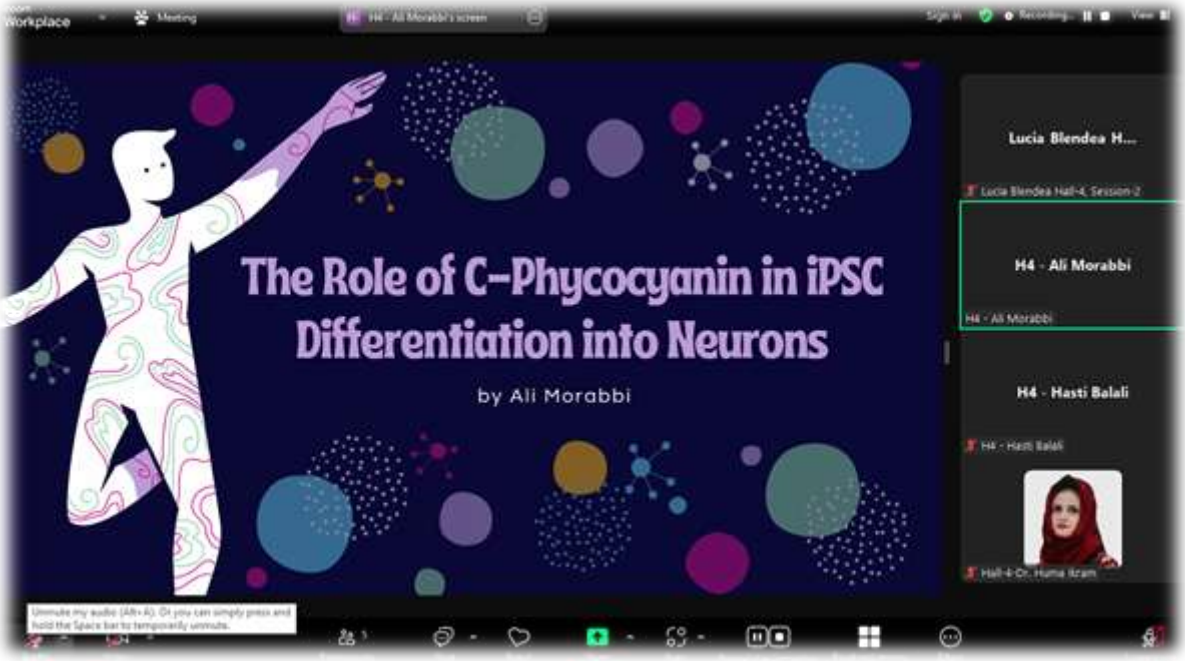


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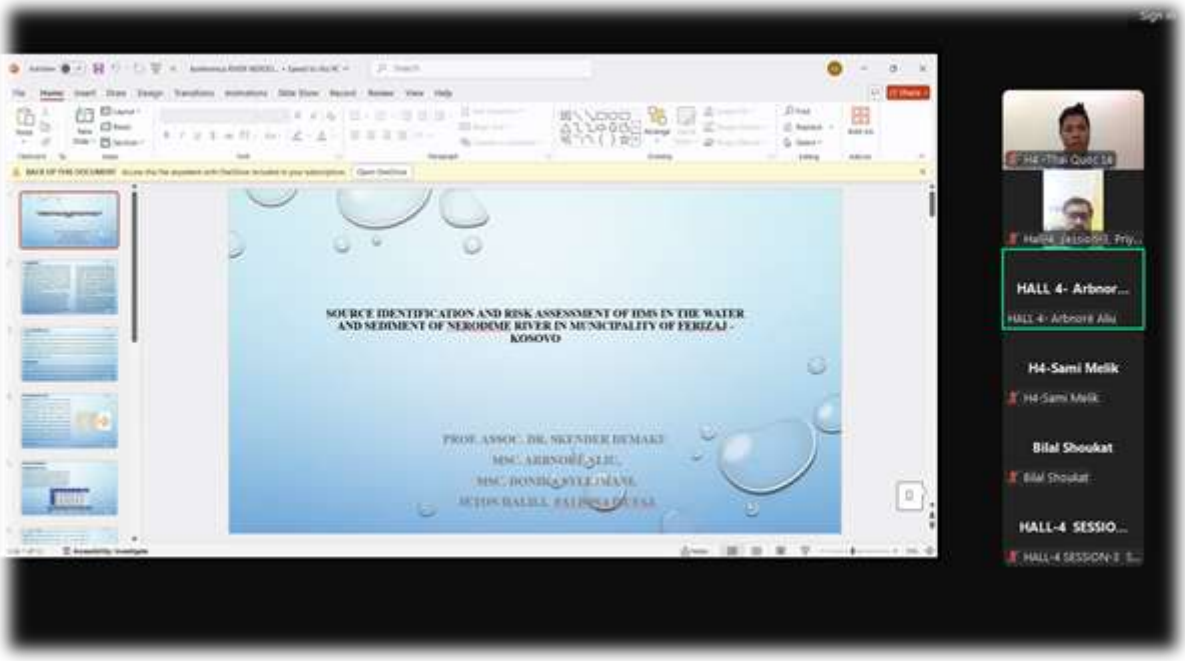




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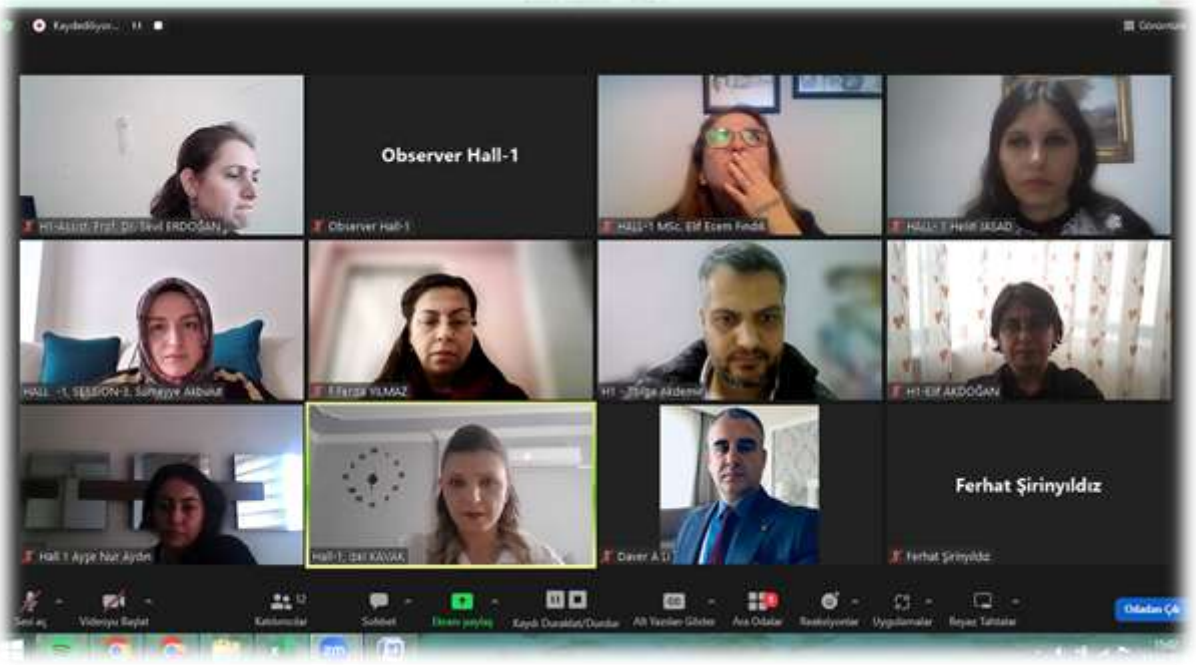




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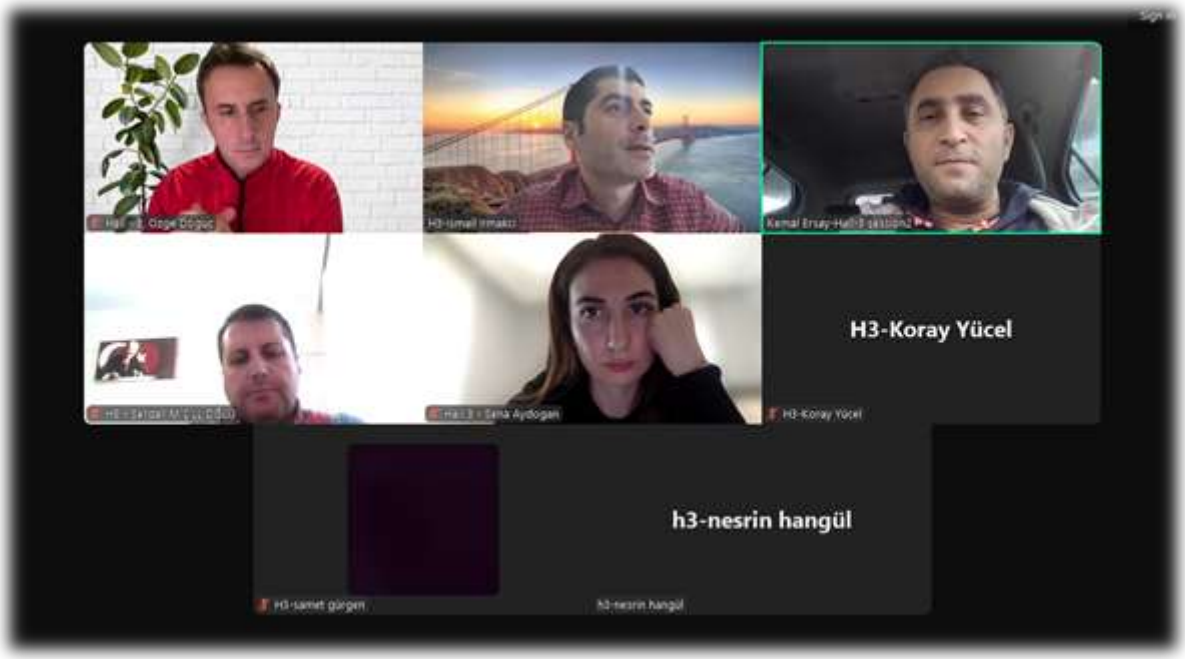


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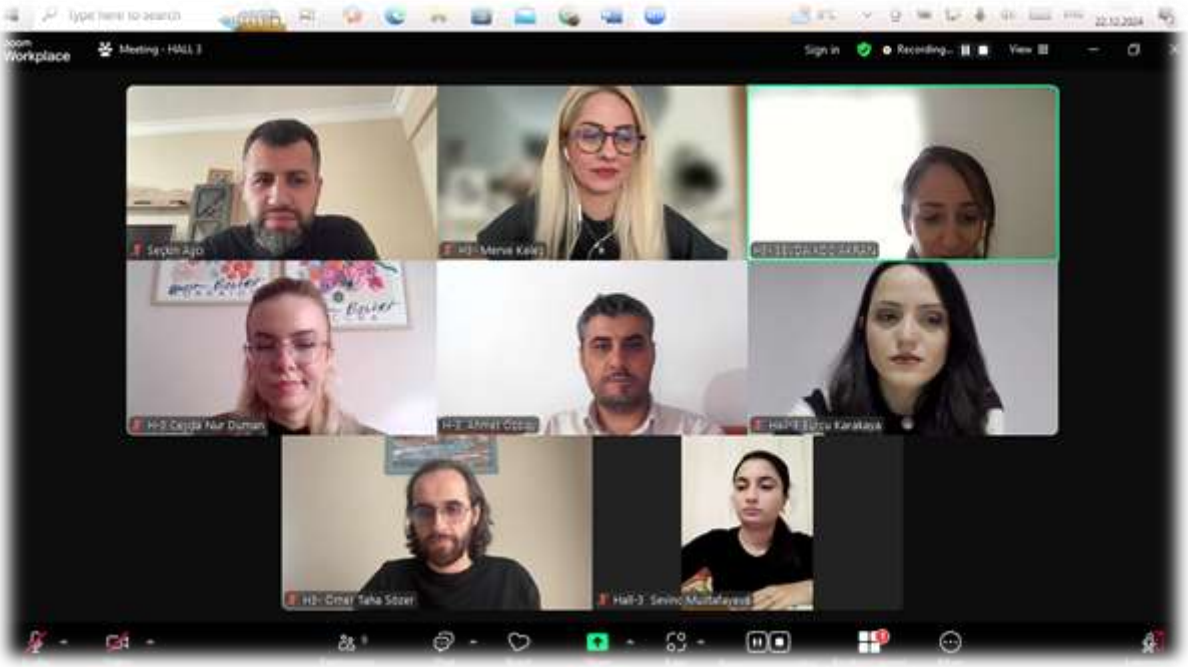




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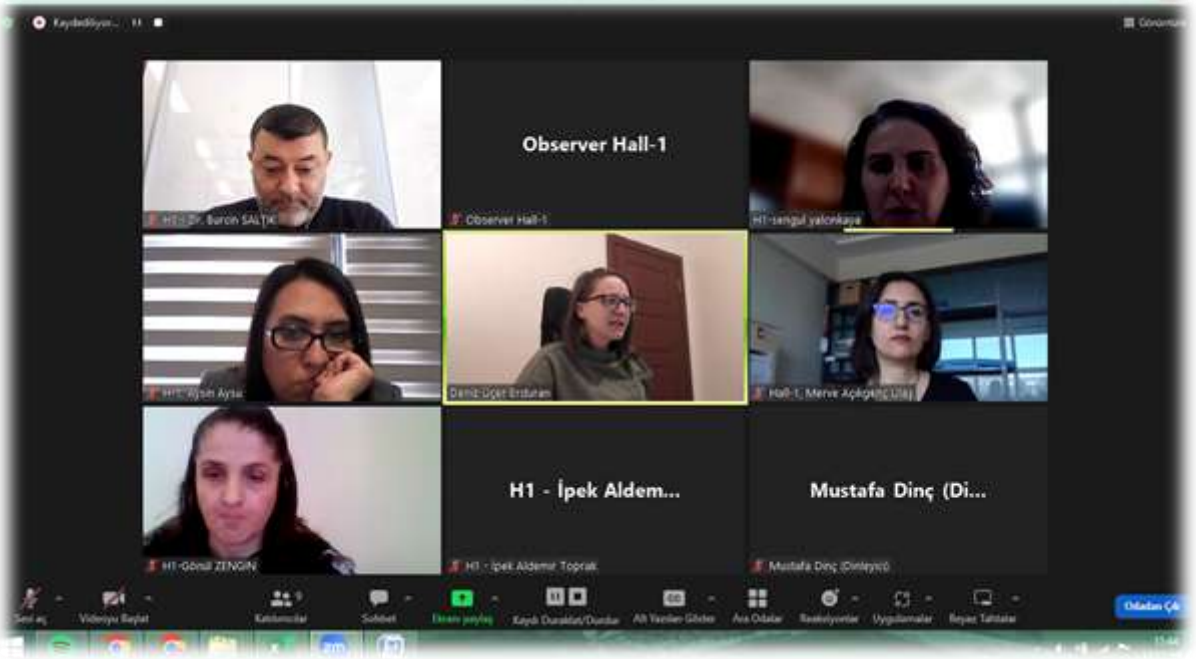


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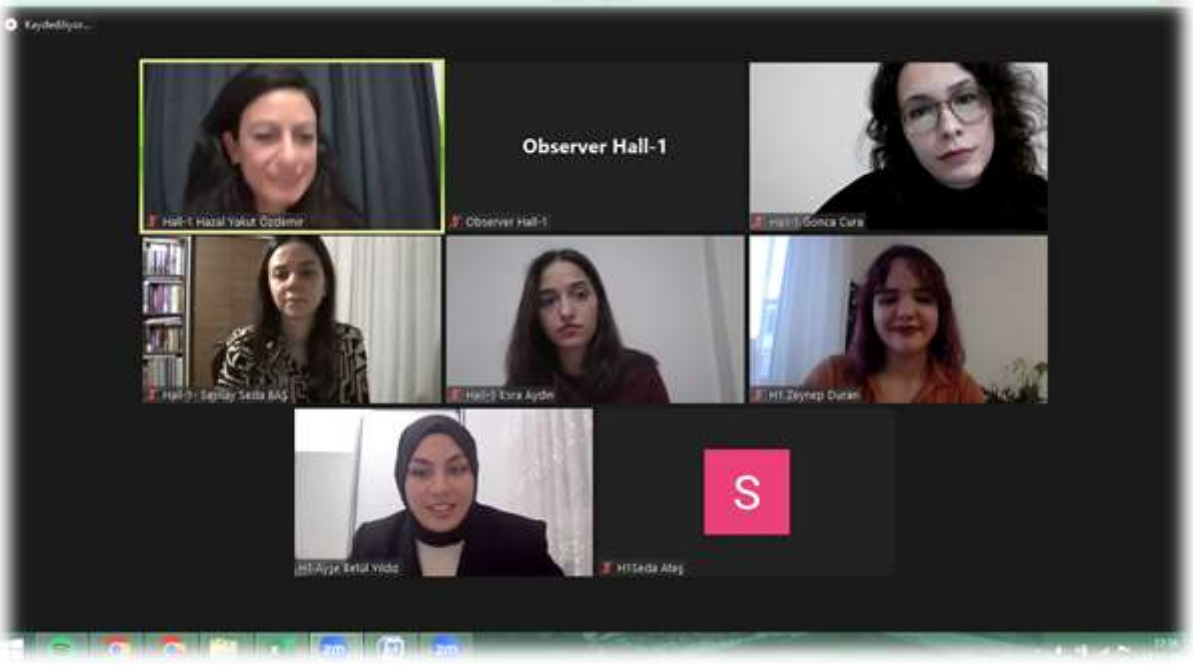
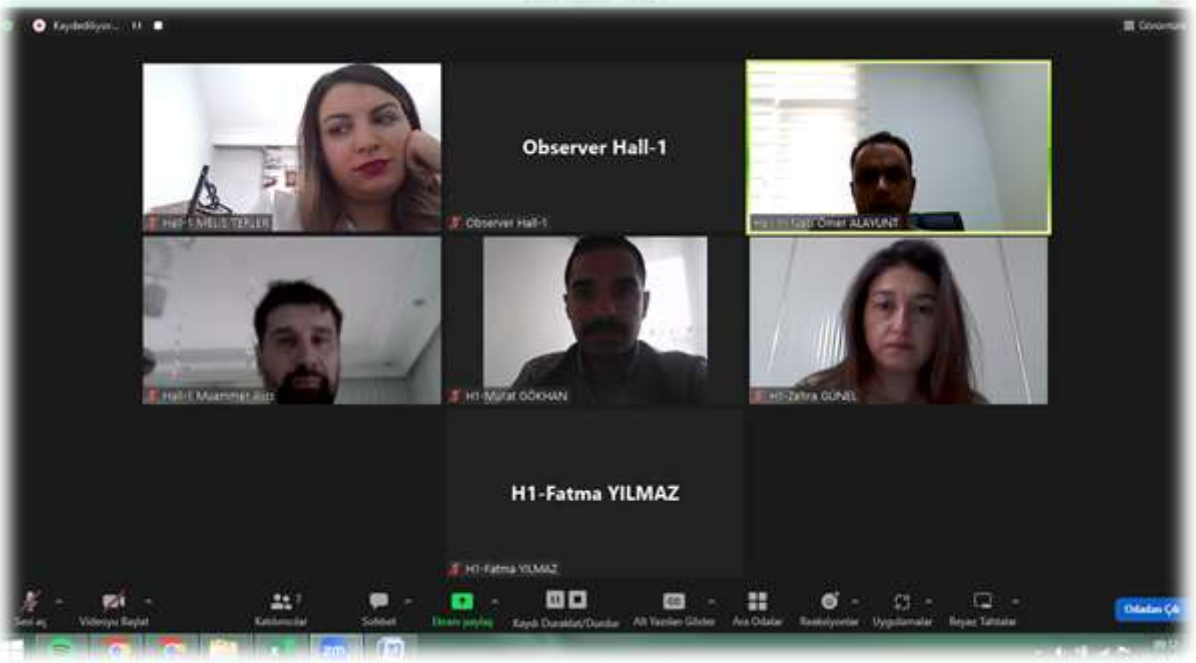


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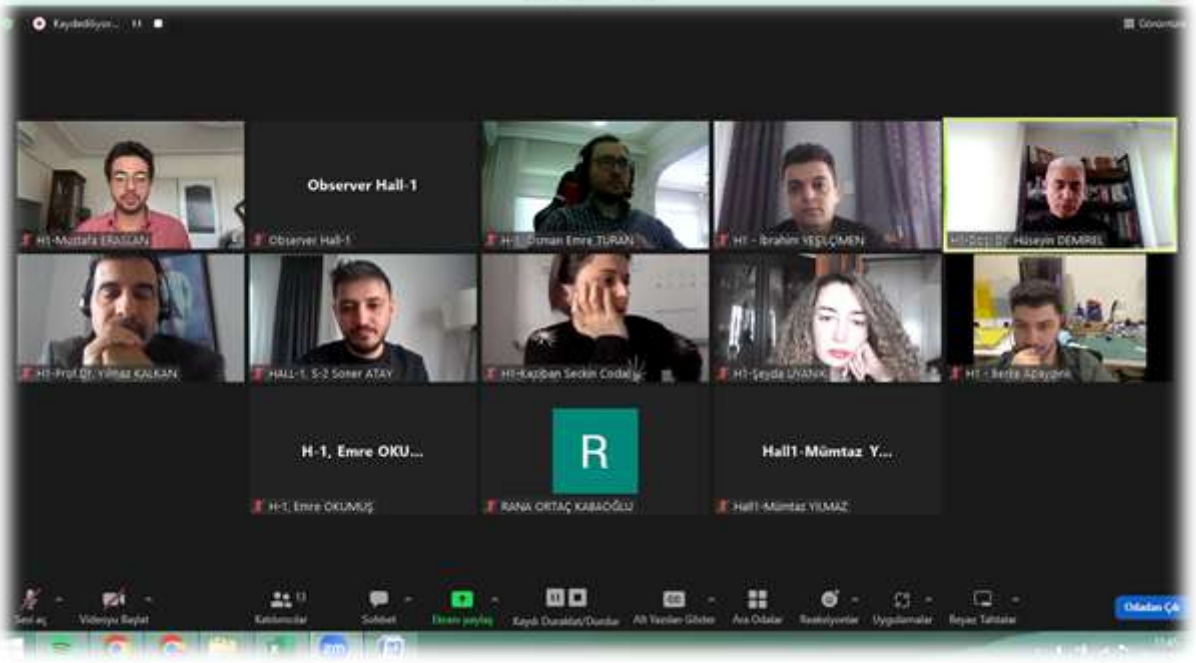


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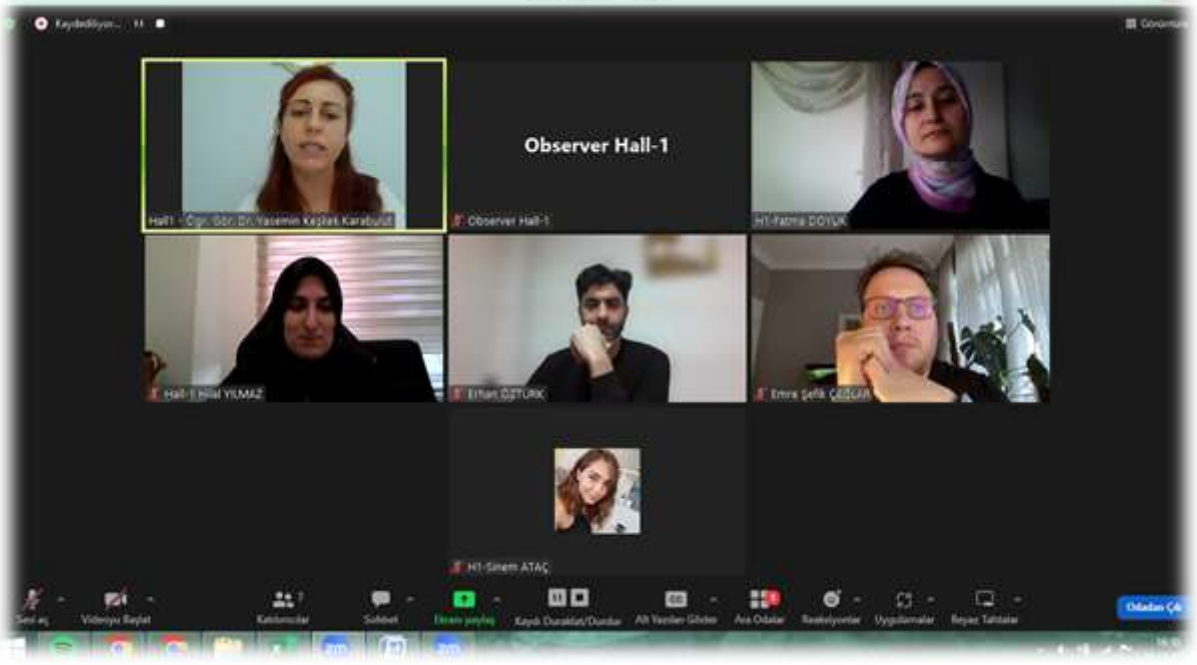


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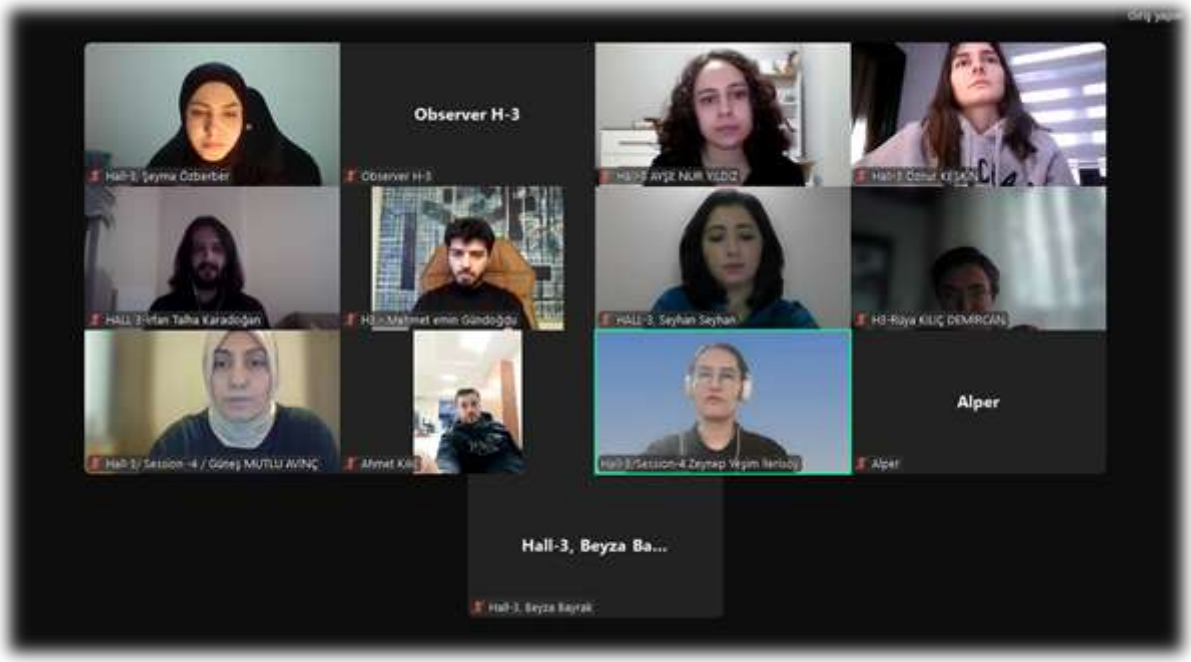


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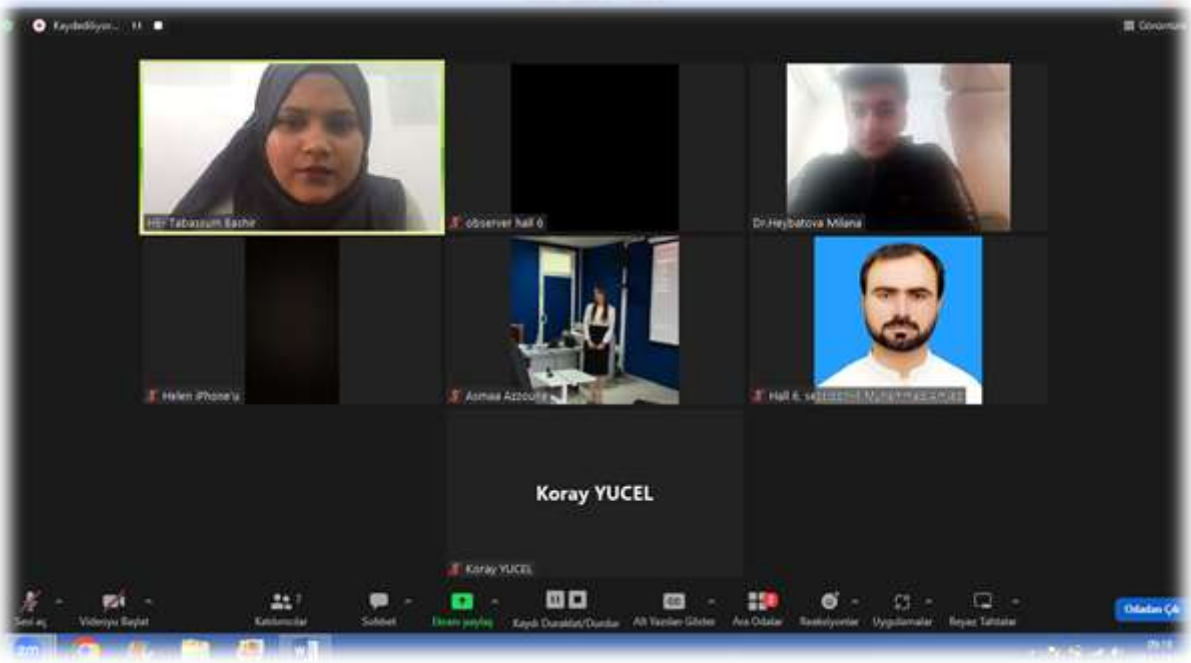


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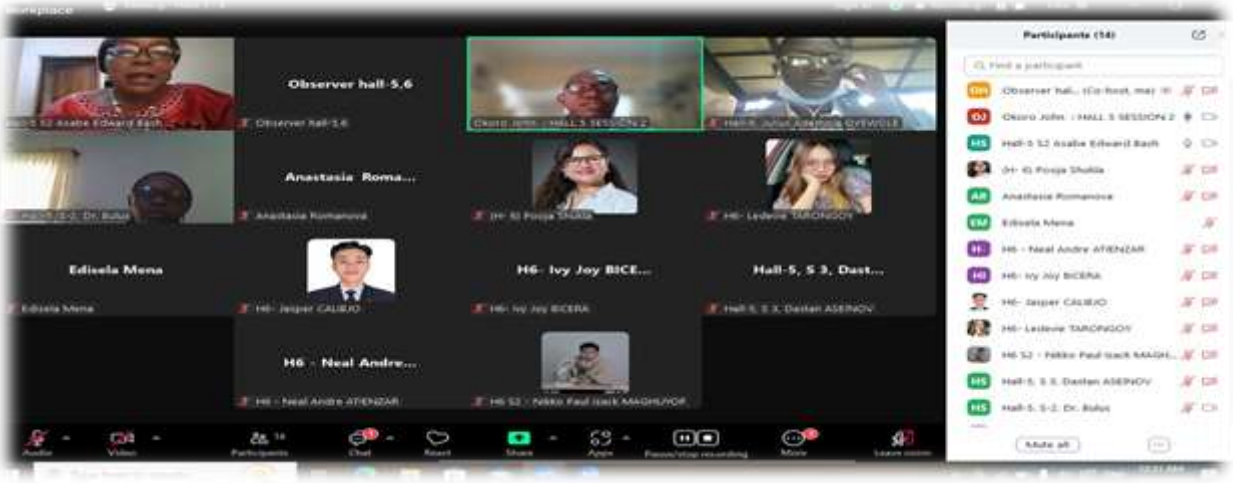




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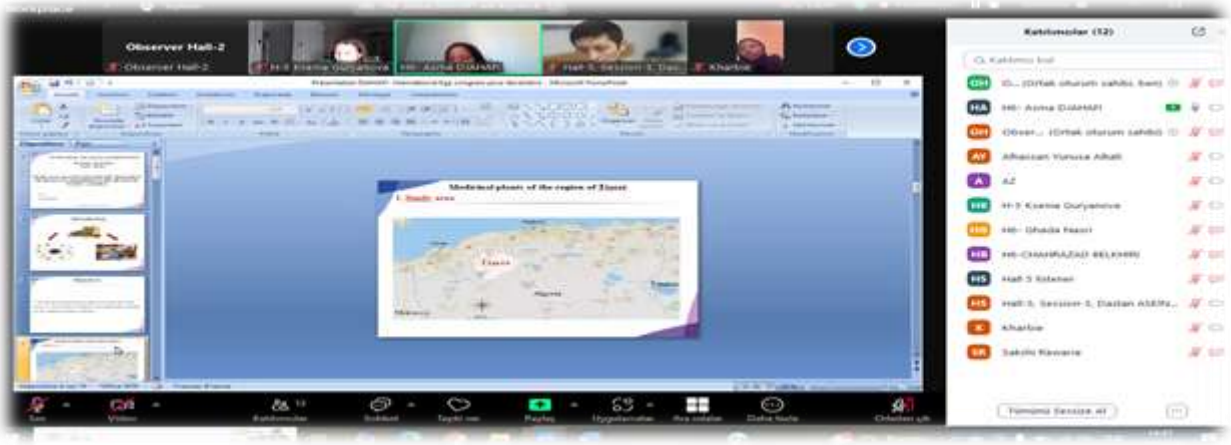






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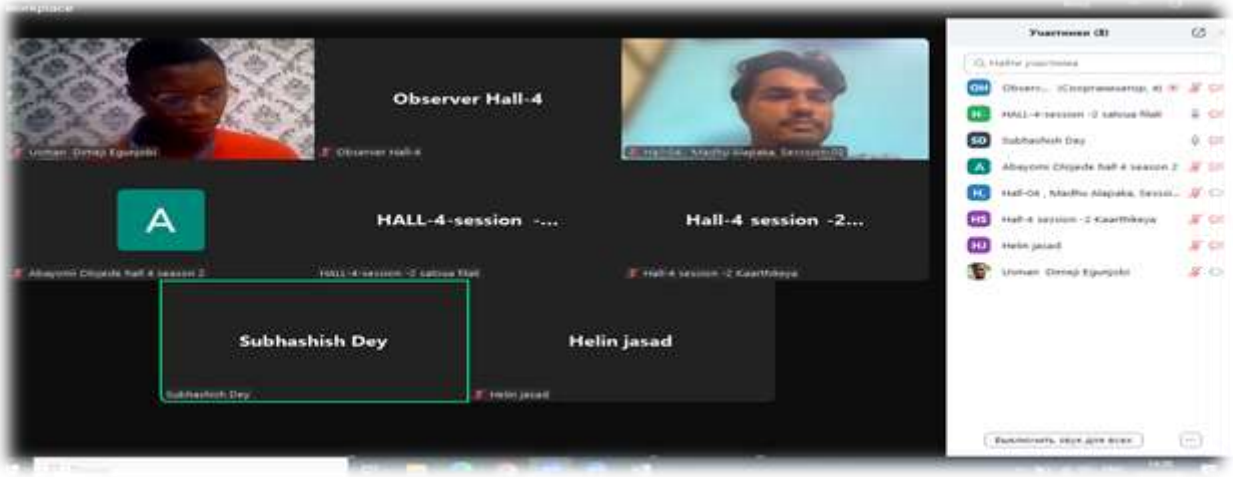




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3rd INTERNATIONAL EGE CONGRESS ON SCIENTIFIC RESEARCH

CONGRESS PROGRAM

December 20-22, 2024 / İzmir



https://us02web.zoom.us/j/86052666988?pwd=arQPHAi3RYE7balaN4wY5X3OlHwBqo.1

Participant Countries (43):

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- Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildiriler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
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-Opening Ceremony-

Date: 20.12.2024

Time: 08:40-09:00

Meeting ID: 860 5266 6988

Zoom Passcode: 202122

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President of IKSAD Institute

***

Prof. Dr. G. Nazan GÜNAY
Acting Dean, Ege University
HEAD OF ORGANIZING COMMITTEE

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-1, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Safinur ÇELİK

AUTHORS	AFFILIATION	TOPIC TITLE
Lect. Dr. Murat KAYA	Kayseri University TÜRKİYE	EFFECT OF DIFFERENT DRYING CONDITIONS ON ERITADENINE CONTENT AND BIOACTIVE PROPERTIES IN SHIITAKE MUSHROOM
Assoc. Prof. Dr. Safinur ÇELİK	Atatürk University TÜRKİYE	HERBAL BIOACTIVE COMPONENTS AND HYPERGLYCEMIA
Ali Berk DEMİR Eylem KORKMAZ YENEN	Hassan Tekstil A.S., Istanbul TÜRKİYE	THE EFFECT OF GEOMETRIC AND PHYSICAL PROPERTIES OF BICOMPONENT FIBER ON SPLITTING EFFICIENCY
Jahan ZAKİRJANOVA Fatih DOĞAN	Çanakkale Onsekiz Mart University TÜRKİYE	ANALYST COMPETENCY SCALE: VALIDITY AND RELIABILITY STUDY WITH RASCH MODEL
Mehtap ANDIRMAN Nurettin BARAN	Batman University TÜRKİYE Muş Alparslan University TÜRKİYE	EVALUATION OF SOME SUNFLOWER VARIETIES FOR YIELD AND YIELD CHARACTERISTICS
Mehmet ÖZBAY Anber M. ANBER Hüseyin KEKEÇMUHAMMED Prof. Dr. İlhan Özer İLHAN Prof. Dr. Emin SARIPINAR	Erciyes University TÜRKİYE Erciyes University TÜRKİYE Trustlife Labs, Drug Research & Development Center İstanbul TÜRKİYE Erciyes University TÜRKİYE Erciyes University TÜRKİYE	SYNTHESIS OF NEW DERIVATIVES OF ASADINES CONTAINING 4-OXOTHIAZOLIDINE RING

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-2, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Dr. İbrahim Ethem AKYILDIZ

AUTHORS	AFFILIATION	TOPIC TITLE
Lect. Masihullah MAASER	Ghazni University AFGHANISTAN Selçuk University TÜRKİYE	SAFEGUARDING OF FINANCIAL FREEDOM THROUGH INVESTMENT STRATEGIES: A CONCEPTUAL FRAMEWORK FOR NAVIGATING ECONOMIC UNCERTAINTIES
Ceyda VATANSEVER Assoc. Prof. Dr. Aysun HIZIROĞLU AYGÜN	İstanbul Technical University TÜRKİYE	THE IMPACT OF EDUCATION REFORM ON WOMEN'S CRIME EXPOSURE IN TÜRKİYE
Esra GÜMÜŞ YILDIZ Prof. Dr. M. Hanifi ASLAN	Hasan Kalyoncu University TÜRKİYE	AUTO-ENROLLMENT, STATE-SUPPORTED INDIVIDUAL RETIREMENT SYSTEM AND USA-TÜRKİYE COMPARISON
Dr. İbrahim Ethem AKYILDIZ	Bursa Uludağ University TÜRKİYE	REVERSING BRAIN DRAIN IN TURKEY: A COMPARATIVE STUDY OF INTERNATIONAL POLICIES
Halil TUNALI Duygu KALKAY	İstanbul University TÜRKİYE Bandırma Onyedi Eylül University TÜRKİYE	THE RELATIONSHIP BETWEEN HEALTH EXPENDITURES AND MACROECONOMIC INDICATORS ANALYSIS WITH PANEL DAT
Mariem JLASSI Hakan KAHYAOĞLU	Dokuz Eylül University TÜRKİYE	ANALYSIS OF THE RELATIONSHIP BETWEEN GREEN BONDS AND CRYPTOCURRENCY MARKETS: CONNECTEDNESS APPROACH
Anıl GÜZEL	Dokuz Eylül University TÜRKİYE	INNOVATIONS IN MONTE CARLO-BASED MARKOV SWITCHING TEST: AN APPLICATION TO TURKEY'S GDP DATA
Dr. Fatih CEYLAN	Uşak University TÜRKİYE	CAUSAL RELATIONSHIP BETWEEN TWITTER UNCERTAINTY INDEX AND STOCK RETURNS IN TÜRKİYE

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-3, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Funda Esin ÇOLAK

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Funda Esin ÇOLAK	SANKO University TÜRKİYE	THE EFFECT OF THE RELATIONSHIP BETWEEN SLEEP DURATION AND DIET QUALITY ON NUTRITION IN SANKO UNIVERSITY DEPARTMENT OF NUTRITION AND DIETETICS STUDENTS
Assoc. Prof. Dr. Funda Esin ÇOLAK	SANKO University TÜRKİYE	DETERMINATION OF PREVALENCE OF EATING DISORDER BEHAVIOR AND AFFECTING FACTORS AMONG SANKO UNIVERSITY STUDENTS
Assist. Prof. Dr. Tevfik KOÇAK Prof. Dr. Nilüfer ACAR TEK	Gümüşhane University TÜRKİYE Gazi University TÜRKİYE	RELATIONSHIP BETWEEN INDIVIDUALS' EATING HABITS AND FUNCTIONAL FOOD ATTITUDE AND ANTHROPOMETRIC VARIABLES
Assist. Prof. Dr. Tevfik KOÇAK Prof. Dr. Nilüfer ACAR TEK	Gümüşhane University TÜRKİYE Gazi University TÜRKİYE	DETOXIFICATION OF MYCOTOXINS IN FOODS
Dr. Özge KANDEMİR Assoc. Prof. Dr. Sefa KÜÇÜKLER Prof. Dr. Fatih Mehmet KANDEMİR	Aksaray University TÜRKİYE Atatürk University TÜRKİYE Aksaray University TÜRKİYE	INVESTIGATION OF THE EFFECTS OF HESPERIDIN ON CHLORPYRIFOS-INDUCED GASTRIC DAMAGE IN RATS
Metincan BOLAT	Alanya University TÜRKİYE	APPLICATIONS OF MOLECULAR GASTRONOMY: THE CASE OF OLIVE OIL
Res. Assist. Setenay Melek YURTTABİR Assoc. Prof. Dr. Göksel Kemal GİRGİN	Balıkesir University TÜRKİYE	THE USE OF AI-POWERED CHATBOTS IN PLANNING GASTRONOMY ROUTES ACCORDING TO GASTRO-TOURIST TYPOLOGIES
Lect. Bilgehan Rabia LAVAŞCI AYDIN	Alanya University TÜRKİYE	THE EFFECT OF SOCIAL MEDIA ON CHOCOLATE: THE SAMPLE OF DUBAI CHOCOLATE

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-4, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Şener Şükrü YİĞİTLER

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Seriyye GÜNDOĞDU	Azerbaijan National Academy of Sciences AZERBAIJAN	THE ROLE OF FAIRY TALES IN RAISING CHILDREN IN LINE WITH NATIONAL-SPIRITUAL VALUES IN THE CONTEMPORARY EDUCATION SYSTEM
Maharramova Elmira Mehdizadeh Gulshan Maharramova Ayten	Azerbaijan State Pedagogical University AZERBAIJAN	OUR EDUCATION AND MENTORING ACTIVITIES
Nazarli Fidan	Azerbaijan State Pedogogical University AZERBAIJAN	THE USAGE OF ELLIPSIS IN DISCOURSE
Gulnara Natig JAFAROVA Ulkar Alfaddin AHMADOVA	Azerbaijan National Academy of Sciences AZERBAIJAN	THE VOCABULARY OF PROPER NOUNS IN THE "DIWAN LUGHĀT AL-TURK"
Banovsha Hajiyeva	Baku State University AZERBAIJAN	PRINCIPLES OF FORMATION OF PHONETIC, LEXICAL-SEMANTIC, AND MORPHOLOGICAL FEATURES OF REDUPLICATIONS IN TURKISH
Sitara ALİZADA	Nakhchivan State University AZERBAIJAN	THE POETIC PRESENTATION OF THE SABIR CHARACTER IN AZERBAIJANI HISTORICAL POEMS
Lect. Tuğba AKTAŞ Prof. Dr. Kamil İŞERİ	Dokuz Eylül University TÜRKİYE	CITATION IN ACADEMIC TEXTS IN THE FIELD OF SOCIAL SCIENCES
Mahide CANTEZ Assist. Prof. Dr. Simge KOÇ	Dokuz Eylül University TÜRKİYE	AN ANALYSIS OF FACTORS INFLUENCING VOCATIONAL CHOICES OF SECONDARY EDUCATION STUDENTS IN TERMS OF SCHOOL TYPE AND SCIENCE EDUCATION
Assoc. Prof. Dr. Şener Şükrü YİĞİTLER	Bitlis Eren University TÜRKİYE	AN ALLEGORICAL EXAMPLE FROM THE CONSTITUTIONAL PERIOD TURKISH THEATRE: HAK VE KUVVET

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-5, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Dr. Ivana BOSKOVIC

AUTHORS	AFFILIATION	TOPIC TITLE
BABA HAMED	Higher School of Biological Sciences in Oran ALGERIA	PRODUCTION OF NANOCELLULOSE FROM MICROALGAL CELLULOSE: CHLORELLA VULGARIS
Safiyakhanim Babanli İsmat Ahmadov Rovshan Khalilov	Baku State University AZERBAIJAN	THE EFFECT OF ZnO NANOPARTICLES ON THE CHLOROPHYLL PIGMENT DEGRADATION OF BEAN LEAVES
Khalida DERRADJI Leila SMAIL Karima OULBACHIR	Khaldoun University of Tiaret ALGERIA	STUDY OF THE INHIBITORY EFFECT OF SOIL BACTERIA ON SOME PLANT PESTS
OULD AMER Imane SELLES Sidi Mohamed Ammar	Ibn Khaldoun University ALGERIA	BIOLOGICAL ACTIVITY OF CLOVE ESSENTIAL OIL ON ORAL BACTERIAL STRAINS
Assoc. Dr. Ivana BOSKOVIC Prof. Dr. Dragutin A. DJUKIC Dr. Monika STOJANOVA Prof. Dr. Marina Todor STOJANOVA Dr. Marijana PESAKOVIC	East Sarajevo University EAST SARAJEVO Kragujevac University SERBIA Association for Scientific-research, Educational and Cultural Activities NORTH MACEDONIA Ss. Cyril and Methodius University NORTH MACEDONIA Fruit Research Institute Čačak SERBIA	BIOLOGICALLY ACTIVE PLANT COMPOUNDS AND THEIR MECHANISMS OF ACTION: REVIEW
Muhammad Shuaibu Maiwada Abubakar Muhammad	Umaru Musa Yaradua University NIGERIA	EXTRACTION AND CHARACTERIZATION OF ORANGE PEEL ESSENTIAL OIL FOR FLAVOUR AND FRAGRANCE APPLICATION
Said Babou Miloud Chakit Radia El Gui Abdelhalem Mesfioui Youssef Sqalli-Houssaini	Ibn Tofail University MOROCCO	TOXICITY ASSESSMENT OF ETHANOLIC EXTRACT OF ROSMARINUS OFFICINALIS LEAVES IN FEMALE WISTAR RATS
Said Babou Miloud Chakit Abdelhalem Mesfioui Youssef Sqalli-Houssaini	Ibn Tofail University MOROCCO	ANTILIPIDEMIC AND NEPHRO-EPATOPROTECTIVE ACTIVITIES OF ROSMARINUS OFFICINALIS ETHANOLIC EXTRACT IN WISTAR RATS
Nguyen Xuan Duy Nguyen Thi Dung	Nha Trang University VIETNAM	TUNA PROCESSING WASTE SERVES AS A POTENTIAL NUTRITION RESOURCE IN AGRICULTURAL APPLICATIONS

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-6, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Dr. Heybatova Milana Faig

AUTHORS	AFFILIATION	TOPIC TITLE
Tabassum Basir Dr. Deoshree Akhouri	Aligarh Muslim University INDIA	EFFICACY OF BIOFEEDBACK TREATMENT MODALITY ON CLINICAL SYMPTOMS OF ANXIETY DISORDERS: INTERVENTION-BASED STUDY AT A TERTIARY CARE CENTER IN NORTHERN INDIA
AZZOUNE Asmaa Dahmani Chahnez-Amira Ouhaibi Hadjira Boughrara Wafa Boudjema Abdallah	Ecole superieure en sciences biologiques d'oran ALGERIA	CHARACTERISATION OF ABCB1 POLYMORPHISM AMONG ANKYLOSING SPONDYLITIS PATIENTS IN ALGERIAN POPULATION
P. Gunavathy D. Narmatha S. Harini Dr. M. Meena	R. M. K. Engineering College INDIA	MENTAL HEALTH AND PHYSICAL HEALTH
Wassila ILIAS Djabaria Naima MEROUFEL	University of Science and Technology of Oran "Mohamed BOUDIAF" ALGERIA	IMPACT NKG2D LIGAND POLYMORPHISM IN PROSTATE CANCER IN AN ALGERIAN POPULATION
Dr. Heybatova Milana Faig Abaszade Zumrud Amirgulu Dr. Gunel Aliyeva M Dr. Ismayilova Fatma Zakir Dr. Jafarova Zemfira Ibrahim Dr. Karimova Rena Jabbar	Azerbaijan Medical University AZERBAIJAN	PHYSIOLOGICAL CHARACTERISTICS, DIAGNOSIS AND TREATMENT OF HYPOPITUITARISM
Abaszade Zumrud Amirgulu Dr. Sadygova Gunel Balarza Dr. Osmanova Aysel Hkumbat Dr. Gunel Aliyeva M Dr.Irzayeva Arzu Eldar Dr. Nagiyeva Urfana Bakhram Dr. Karimova Rena Jabbar	Azerbaijan Medical University AZERBAIJAN	INTERACTIONS BETWEEN THE IMMUNE AND ENDOCRINE SYSTEMS IN PULMONARY DISEASES
Dr. Heybatova Milana Faig Dr. Sadygova Gunel Balarza Dr. Ismayilova Fatma Zakir Dr. Gunel Aliyeva M Aliyeva Zinyat Qoshgar Dr. Karimova Rena Jabbar	Azerbaijan Medical University AZERBAIJAN	ENDOCRINE SYSTEM DISEASES, METABOLIC AND NUTRITIONAL DISORDERS INTERACTION WITH LUNG DISEASES
Muhammad Amjad Syed Makhdoom Hussain Nisar Ahmad Muhammad Mahmood Danish Riaz	Government College University PAKISTAN	EFFICACY OF BIOMASS BY-PRODUCTS ON HEALTH PERFORMANCE OF CYPRINUS CARPIO
Babita Gupta	Institute of Technology and Management Gida Gorakhpur INDIA	REVOLUTIONIZING CANCER DIAGNOSIS: THE POTENTIAL OF 3D PRINTED NANOSENSORS

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ANKARA LOCAL TIME - 11 30 : 13 30
HALL-1, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Dr. Deniz ÜÇER ERDURAN

AUTHORS	AFFILIATION	TOPIC TITLE
Salar Salah Muhy Al-Din Burçin SALTIK	Arkin University CYPRUS	THE INFLUENCE OF 'DE STIJL' MOVEMENT PRINCIPLE ON MODERN FURNITURE
Prof. Dr. Şengül YALÇINKAYA Gönül ZENGİN	Karadeniz Technical University TÜRKİYE	A BIBLIOMETRIC STUDY ON THE TRENDS OF CHILDREN'S STUDIES IN THE FIELD OF ARCHITECTURE (1975-2024)
Gönül ZENGİN Prof. Dr. Şengül YALÇINKAYA	Karadeniz Technical University TÜRKİYE	STRESS-REDUCING DESIGN PRINCIPLES IN PEDIATRIC PATIENT ROOMS FROM THE PERSPECTIVE OF THE LITERATURE
Dr. Deniz ÜÇER ERDURAN	Bilkent University TÜRKİYE	EVALUATING THE MECHANICAL PROPERTIES OF LOCALLY PRODUCED BRICKS TO SUPPORT SUSTAINABLE BUILDING PRACTICES IN A SUBURBAN SETTING
Aysin AYSU Assoc. Prof. Dr. Münevver DAĞGÜLÜ Prof. Dr. Nazlı Ferah AKINCI	Yıldız Technical University TÜRKİYE	A CRITICAL EXAMINATION OF THE CITY OF RIO DE JANEIRO IN THE CONTEXT OF SUSTAINABILITY CRITERIA
Aysin AYSU Assoc. Prof. Dr. Münevver DAĞGÜLÜ Prof. Dr. Nazlı Ferah AKINCI	Yıldız Technical University TÜRKİYE	THE SIGNIFICANCE OF URBAN HEALTH
Assist. Prof. Dr. Merve AÇIKGENÇ ULAŞ	Fırat University TÜRKİYE	DETECTION OF STRUCTURAL DAMAGES WITH ARTIFICIAL INTELLIGENCE: TECHNOLOGICAL DEVELOPMENTS AND FUTURE PERSPECTIVES
Dr. İpek B. Aldemir TOPRAK	Ankara Yıldırım Beyazıt University TÜRKİYE	LEGAL NATURE OF THE INFLUENCER CONTRACT

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ANKARA LOCAL TIME - 11 30 : 13 30
HALL-2, SESSION-2

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HEAD OF SESSION: Prof. Dr. İsmet BAŞER

AUTHORS	AFFILIATION	TOPIC TITLE
Murat AKDAĞOĞLU Res. Assist. Dr. Damla BALABAN GÖÇMEN Prof. Dr. İsmet BAŞER	Tekirdağ Namık Kemal University TÜRKİYE	EFFECT OF DIFFERENT SOWING RATES AND NITROGEN DOSES APPLICATIONS ON GRAIN YIELD IN EINKORN WHEAT (Triticum monococcum L.)
Asena KÜÇÜK Oğuz BİLGİN Alpay BALKAN Res. Assist. Dr. Damla BALABAN GÖÇMEN Prof. Dr. İsmet BAŞER	Tekirdağ Namık Kemal University TÜRKİYE	DETERMINATION OF GRAIN YIELD AND QUALITY CHARACTERISTICS IN BREAD WHEAT (Triticum aestivum L.) MUTANT ELITE LINES
Eren ERGENE Res. Assist. Alperen Kaan BÜTÜNER Assoc. Prof. Dr. Hilal SUSURLUK	Bursa Uludağ University TÜRKİYE	EVALUATING THE TOXIC EFFECTS OF PESTICIDES ON NON-TARGET ORGANISMS: A CURRENT REVIEW
Res. Assist. Dr. Gözde Hafize YILDIRIM	Recep Tayyip Erdoğan University TÜRKİYE	CONTRIBUTIONS OF ORGANIC FERTILIZERS TO PLANT GROWTH
Res. Assist. Dr. Gözde Hafize YILDIRIM	Recep Tayyip Erdoğan University TÜRKİYE	EFFECTIVE WATER MANAGEMENT PLANS AGAINST DIMINISHING WATER RESOURCES IN AGRICULTURE
Öznur Kübra VERGİLİ Prof. Dr. Cengiz YÜCEDAĞ	Burdur Mehmet Akif Ersoy University TÜRKİYE	EVALUATION OF UŞAK-ATAPARK IN TERMS OF LANDSCAPE DESIGN PRINCIPLES
Ahmet ŞAHİN	Kırşehir Ahi Evran University TÜRKİYE	THE IMPORTANCE OF BEING READY FOR POSSIBLE EARTHQUAKE INCIDENTS FOR ANIMAL AGRICULTURE
Esmanur YILDIZ Assoc. Prof. Dr. Abdurrahman ONARAN	Çanakkale Onsekiz Mart University TÜRKİYE Akdeniz University TÜRKİYE	EFFECTS OF SOME PLANT GROWTH REGULATORS ON THE MULTIPLICATION CAPACITY OF BLUEBERRIES IN IN VITRO PROPAGATION
Pelşin ERMİŞ Prof. Dr. Aydın ALP	Dicle University TÜRKİYE	DETERMINATION OF QUALITY AND YIELD ELEMENTS OF EINWEAT WHEAT

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ANKARA LOCAL TIME - 11 30 : 13 30
HALL-3, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assist. Prof. Dr. Esen DAĞAŞAN BULUCU

AUTHORS	AFFILIATION	TOPIC TITLE
Aykut Alp YILMAZ Halis Ozan ALTINTAŞ Merih KÜÇÜKDÖĞERLİ Ömer KELEŞ	ECA Valve Industry Inc TÜRKİYE ECA Valve Industry Inc TÜRKİYE Ege University TÜRKİYE Ege University TÜRKİYE	DESIGN AND PROTOTYPE MANUFACTURING OF DIFFERENTIAL PRESSURE BALANCING VALVE
Res Assist. Kaan Can AKBABA Assist. Prof. Dr. Onur KOŞAR Prof. Dr. Mustafa Arif ÖZGÜR Assist. Prof. Dr. Abdullah KEÇECİLER	Kütahya Dumlupınar University TÜRKİYE	COMPARISON OF THE FLOW STRUCTURE OF NACA 6409 AIRFOIL UNDER DIFFERENT ANGLES OF ATTACK USING WIND TUNNEL AND NUMERICAL SIMULATION
Halil İbrahim BAL Prof. Dr. Mihrigül EKŞİ ALTAN	Yıldız Technical University TÜRKİYE	EFFECT OF PROCESS PARAMETERS ON MECHANICAL PROPERTIES OF POLYPROPLYENE PART MANUFACTURED BY MOLD OPEN MICRO- CELLULAR INJECTION MOLDING
Res Assist. Kaan Can AKBABA Assist. Prof. Dr. Onur KOŞAR Prof. Dr. Mustafa Arif ÖZGÜR	Kütahya Dumlupınar University TÜRKİYE	DESIGN AND ANALYSIS OF NATURE-INSPIRED VORTEX GENERATORS: BIOMIMETIC APPROACHES AND AERODYNAMIC PERFORMANCE
Assist. Prof. Dr. Süleyman Gökhan ÇOLAK Dr. Utku Bulut ŞİMŞEK Dr. Melis Özge Alas ÇOLAK Dr. Ahmet GÜNGÖR	Iskenderun Technical University TÜRKİYE Bogazici University TÜRKİYE Sabancı University TÜRKİYE Sabancı University TÜRKİYE	CO_2 ADSORPTION IN CU_2BASNS_4/POLYANILINE COMPOSITES: A SYNERGISTIC APPROACH
Assist. Prof. Dr. Esen DAĞAŞAN BULUCU	Erciyes University TÜRKİYE	INFLUENCE OF SINTERING REGIME ON THE MORPHOLOGY OF AL BASED HYBRID PARTICULATE REINFORCED COMPOSITE
Dr. Utku Bulut SIMSEK Assist. Prof. Dr. Suleyman Gokhan COLAK Assoc. Prof. Dr. Muslum DEMIR	Boğaziçi University TÜRKİYE İskenderun Technical University TÜRKİYE Boğaziçi University TÜRKİYE	SUPERCRITICAL CO_2 SYNTHESIS AND CHARACTERIZATION OF TITANIUM BASED MXENE
MSc. Koray BALTALI Assoc. Prof. Dr. S. Bahar BASTURK Assoc. Prof. Dr. Secil CELIK ERBAS	Manisa Celal Bayar University TÜRKİYE	INVESTIGATION OF MECHANICAL AND THERMAL PROPERTIES OF ±45° ORIENTED CARBON AND GLASS FIBER REINFORCED POLYMER COMPOSITES
Melek COŞGUN Pınar YILDIZ KUMRU Selen AVCI AZKESKİN	Kocaeli University TÜRKİYE	EVALUATION OF PROJECT SELECTION CRITERIA IN THE AVIATION INDUSTRY THROUGH FUZZY AHP

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ANKARA LOCAL TIME - 11 30 : 13 30
HALL-4, SESSION-2

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HEAD OF SESSION: Bharathwaj. R.

AUTHORS	AFFILIATION	TOPIC TITLE
Mrinalini J Raghavi Punithan Praisy Steffina K Punitha K– Dr. M. Meena	R. M. K. Engineering College INDIA	SOLAR AND WIND ENERGY
Bharathwaj. R. A. Yohith Sri Aadithiya Dr. M. Meena	R. M. K. Engineering College INDIA	NANOTECHNOLOGY IN PHOTONIC AND OPTOELCTRONICS
Priyadharshini V. S. R. Elakiya P. Harini Nivesh.ka K. Dr. M. Meena	R. M. K. Engineering College INDIA	USE OF NANOTECHNOLOGIES IN CLIMATIC CHANGES
Nithish Kumar. R. S.Rakshith S. Udhaya Kumar Ravi Shankar P. Pragadeshwar Dr. M. Meena	R. M. K. Engineering College INDIA	SOIL MOISTURE SENSOR USING EMBEDDED SYSTEM
Neha Nishad P. Sam Roshan I. S.T. Rama	Dr. M.G.R. Educational and Research Institute INDIA	DESIGN AND PERFORMANCE ANALYSIS OF HYBRID POWER PLANT CONTROLLER
Rahma BELKAID Lamia YOUB Farid NACERI	Batna 2 University ALGERIA	ENHANCED DIRECT TORQUE CONTROL FOR DOUBLE STAR INDUCTION MOTORS USING GA-OPTIMIZED PI CONTROLLER
Muhammad Mateen Afzal Awan	University of Management and Technology Lahore INDIA	ROLE OF PEROVSKITES IN RENEWABLE SOLAR PHOTOVOLTAICS ENERGY
Zehra YALIM Çağrı AKSAKAL Assoc. Prof. Dr. Ahmet FEYZİOĞLU	General Electric, Kocaeli TÜRKİYE Chester University UK	SHUNT REACTOR TANK WALL ANALYSIS: 1 BAR PRESSURE AND STIFFENER OPTIMIZATION

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ANKARA LOCAL TIME - 11 30 : 13 30
HALL-5, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Dr. Haneen Vasel

AUTHORS	AFFILIATION	TOPIC TITLE
Musa, A.A. Ibrahim, H. Bashir, A.B. Hussaini, H.A. Garba, A. Mohammed, BG.Manga	Bayero University NIGERIA	EXPLORING THE IMPACT OF MEDIA CONSUMPTION ON SOCIAL CAPITAL IN KANO
Binazir Mubariz	AhlulBayt International University IRAN	THE IMPACT OF POLITICAL CHANGES AFTER 2021 ON WOMEN'S RIGHTS IN AFGHANISTAN
Sévérin M. MEHOUENOU Amadou SALAMI Gilles N'DARI	Abomey-Calavi University BENIN REPUBLIC	THE PROBLEMATIC OF BRITISH MONARCHY IN THE CONTEXT OF A DEMOCRATIC RULE
Amadou SALAMI Sévérin M. MEHOUENOU Gilles N'DARI	Abomey-Calavi University BENIN REPUBLIC	THE PROBLEMATIC OF CHILDREN RIGHTS AND DUTIES IN CHARLES DICKENS OLIVIER TWIST
Zakia Hussaini Maryam Hassan	Ahl al-Bayt International University IRAN	POLITICAL PARTICIPATION OF WOMEN IN AFGHANISTAN
ANJITHA. A Dr. B. RAJENDRAN	Institute of Management in Kerala INDIA	THE EFFICIENCY OF THE PUBLIC INTERVENTION ON ENVIRONMENT IN KERALA
Karolina Bilous	Oles Honchar Dnipro National University UKRAINE	THE EXPERIENCE OF EUROPEAN COUNTRIES OF PROTECTING FREEDOM OF THOUGHT AND EXPRESSION
Dr. Haneen Vasel	Beit Berl College ISRAEL	PEDAGOGICAL INNOVATION IN SCHOOLS WITHIN THE ARAB SOCIETY IN ISRAEL: MOTIVATIONS, CHALLENGES, AND IMPACTS
Ananda Majumdar	Alberta University CANADA	NOSTALGIA IN THE ARTHURIAN LEGEND: BRIDGING PAST IDEALS AND PRESENT REALITIES

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ANKARA LOCAL TIME - 11 30 : 13 30
HALL-6, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Prof. Dr. Iryna Shkodina & Prof. Dr. Sergii ARKHIIEREIEV

AUTHORS	AFFILIATION	TOPIC TITLE
Günel AGHAJANOVA Rolan YUSUFOV	Azerbaijan State Oil and Industry University AZERBAJAN	THE IMPACT OF ERP SYSTEMS ON ENTERPRISE MANAGEMENT: A COMPARATIVE ANALYSIS OF GLOBAL PRACTICES AND AZERBAIJAN
ORJINTA, HOPE IFEOMA	Chukwuemeka Odumegwu Ojukwu University NIGERIA	ARTIFICIAL INTELLIGENCE STRATEGIES AND PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA
Laraib Tahir Neelam Bibi Eman Syed Hijab Shabbir	Women University INDIA	ROLE OF SELF-CONTROL IN THE RELATIONSHIP BETWEEN ONLINE SHOPPING ADDICTION AND COMPULSIVE BUYING BEHAVIOR AMONG YOUNG ADULTS
Dr.Amina Yahia Dr. Sandra Bousseti Dr. Khaled Naimi	University of L'Arbi Ben M'hidi Oum El Bouaghi ALGERIA	THE USE OF GEOGRAPHIC INFORMATION SYSTEMS FOR THE ANALYSIS OF COMMERCIAL ACTIVITY IN CONSTANTINE: CHALLENGES AND PERSPECTIVES
Nguyen THİ HANG Dang THI THU THUY Dao TRONG NHAN Nguyen NGOC ANH Le THI MUI Dao XUAN KHUE Nguyen MANH HUNG	Thai Nguyen University VIETNAM	PROPOSAL FOR A BUSINESS SYSTEM FOR FASHION PRODUCTS AND TRADITIONAL HANDICRAFTS OF THE DAO ETHNIC PEOPLE LINKED TO COMMUNITY-BASED TOURISM
Prof. Dr. Iryna Shkodina Prof. Dr. Sergii ARKHIIEREIEV	V. N. Karazin Kharkiv National University UKRAINE	INNOVATING GREEN FINANCE: SUSTAINABLE STRATEGIES FOR A FRAGMENTED ECONOMY
Ibitoye Stella Opeyemi Joseph Madugba Fakile Samuel	Landmark University NIGERIA	CONFLICT-OF-INTEREST MANAGEMENT AND FINANCIAL REPORTING QUALITY OF MICROFINANCE BANKS IN EKITI STATE, NIGERIA
Alexander Ehimare OMANKHANLEN Oludayo OGUNGBE	Covenant University NIGERIA	THE MONEY SUPPLY GROWTH AND INFLATION DYNAMICS IN NIGERIA
Manu, I. Ahmad, I.	Federal College of Education NIGERIA	SOCIO-ECONOMIC STATUS OF SMALL-SCALE GROUNDNUT OIL PROCESSING IN GOMBE LOCAL GOVERNMENT AREA, GOMBE STATE, NIGERIA

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-1, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Dr. Erşan Ömer YÜZER

AUTHORS	AFFILIATION	TOPIC TITLE
Engin DURSUN Assoc. Prof. Dr. Hacer OZTURA Ege EDİZDOĞAN Mustafa KARAŞAHİN Alper Yağız BALKAN	Valve Industry Inc. TÜRKİYE Yaşar University TÜRKİYE Independent Researcher TÜRKİYE Independent Researcher TÜRKİYE Independent Researcher TÜRKİYE	DESIGN AND IMPLEMENTATION OF A 24V-DC ELECTRO-THERMAL ACTUATOR FOR UNDERFLOOR HEATING SYSTEMS
Dr. Erşan Ömer YÜZER	Hakkari University TÜRKİYE	DETERMINING THE LIGHTING LEVELS AND IMPROVING LIGHTING EFFICIENCY IN A SPORTS HALL FACILITY
Dr. Erşan Ömer YÜZER	Hakkari University TÜRKİYE	ELECTRICITY GENERATION APPROACHES USING DIFFERENT TURBINE TYPES IN HYDROELECTRIC POWER PLANTS
Gülistan SUBAŞI Dr. Ercan AYKUT Fatma CEYHAN	İstanbul Gelişim University TÜRKİYE	ANALYSIS OF ENERGY EFFICIENCY IN FORMATION MODELS OF SWARM UAVs AND SELECTION OF OPTIMAL FORMATION MODEL USING AN AI-BASED DECISION MECHANISM
Fatma CEYHAN Dr. Ercan AYKUT Gülistan SUBAŞI	İstanbul Gelişim University TÜRKİYE	LOW CURRENT AND HIGH CURRENT ELECTRICAL PROJECT DESIGN
Merve KARAALP Dr. Ercan AYKUT	İstanbul Gelişim University TÜRKİYE	PLC BASED CONVEYOR SYSTEM WITH STEPPER MOTOR FOR STAMPLING
Res. Assist. İremnur DURU Assoc. Prof. Dr. Timuçin Emre TABARU	Sivas University of Science and Technology TÜRKİYE	INVESTIGATION OF DIAPHRAGM-BASED FIBER OPTIC SENSOR
Assist. Prof. Dr. Gizel BAKICIERLER SEZER Prof. Dr. Emine MISIRLI	Marmara University TÜRKİYE Ege University TÜRKİYE	USING THE FRACTIONAL DYNAMICAL MODEL OF ACOUSTIC WAVES TO PRODUCE NEW WAVE STRUCTURES

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-2, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assist. Prof. Dr. Özcan OĞUR

AUTHORS	AFFILIATION	TOPIC TITLE
Prof. Dr. Mahmut ÖZTÜRK	Harran University TÜRKİYE	CODES OF THE MESSAGES THAT CAME WITH THE FIRST REVELATION
Prof. Dr. Mahmut ÖZTÜRK	Harran University TÜRKİYE	NATURE AS A WHOLE OF CODED VERBAL MESSAGES IN GOD- SERVANT COMMUNICATION
Assist. Prof. Dr. Özcan OĞUR	Hakkâri University TÜRKİYE	THE PRINCIPLES OF TRUTH, JUSTICE, AND IMPARTIALITY IN THE SCIENCE OF HISTORY ACCORDING TO TAQI AL-DIN AL-SUBKI
Assoc. Prof. Dr. Muhammet AYDIN	Gümüşhane University TÜRKİYE	HUMAN TEACHINGS IN THE WRITINGS OF FAZLUR RAHMAN
Assoc. Prof. Dr. Muhammet AYDIN	Gümüşhane University TÜRKİYE	THE VALUE AND POSITION OF THE SCIENCE OF KALÂM IN GHAZALİ
Seda Nur KUL	Bilecik Şeyh Edebali University TÜRKİYE	SUYUTI'S RESHF AL-ZULAL MIN AL-SAHAR AL-HALAL AS A WORK WHERE LITERATURE, SCIENCE, AND LIFE INTERSECT
Assoc. Prof. Dr. Yasemin APALI Ebru BAYKARA	Burdur Mehmet Akif Ersoy University TÜRKİYE	SENSE OF GOD AND MORALS IN DESCARTES

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-3, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Pınar ÖZKAN

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Pınar ÖZKAN Prof. Dr. İpek DEVECİ KOCAKOÇ	Dokuz Eylül University TÜRKİYE	EXAMINING FEMVERTISING LITERATURE THROUGH BIBLIOMETRIC ANALYSIS
Prof. Dr. İpek DEVECİ KOCAKOÇ Assoc. Prof. Dr. Pınar ÖZKAN	Dokuz Eylül University TÜRKİYE	THE INFLUENCE OF INSTRUCTIONAL CONTENT ON YOUTUBE: INSIGHTS FROM METRICS AND VIEWER FEEDBACK
Assist. Prof. Dr. Ömer DULKADİR	Karabük University TÜRKİYE	VIEWS OF NEW MANAGERS IN TEXTILE ENTERPRISES ON ORGANIZATIONAL SOCIALIZATION IN THE FIRST TWO YEARS
Assist. Prof. Dr. Yılmaz GÜNEL	Sivas Cumhuriyet University TÜRKİYE	INVESTIGATION OF THE EFFECT OF ELECTRONIC WORD OF MOUTH COMMUNICATION (E-WOM) ON CONSUMERS' BRAND ATTITUDE IN TERMS OF VARIOUS VARIABLES
Reyhan Ayşe AKPINAR Assist. Prof. Dr. Yılmaz GÜNEL	Sivas Cumhuriyet University TÜRKİYE	INVESTIGATION OF AGRICULTURAL LOAN CUSTOMERS' SATISFACTION LEVELS WITH BANKING SERVICES
Assoc. Prof. Dr. Engin ÇAKIR Refika YILDIZ ÇAKIR	Aydın Adnan Menderes University TÜRKİYE Nazilli Municipality, Aydın TÜRKİYE	PRIORITIZING SOCIAL MUNICIPAL PRACTICES USING WASPAS METHOD
Assoc. Prof. Dr. Engin ÇAKIR	Aydın Adnan Menderes University TÜRKİYE	IMPLEMENTATION OF LEAN PRODUCTION TECHNIQUES IN A FIG PROCESSING COMPANY IN NAZİLLİ
Assist. Prof. Dr. Yavuz KILINÇ	Kocaeli University TÜRKİYE	ACCOUNTING OF SALAM CONTRACTS ACCORDING TO INTEREST-FREE FINANCE ACCOUNTING STANDARDS

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-4, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Chandani Sharma

AUTHORS	AFFILIATION	TOPIC TITLE
Amal Bassam Rajaa Bassam Marouane El Alouani Mohammed Hafid Hamid Saufi Said Belaaouad Younes Rachdi	Hassan II University MOROCCO Mohammed V University MOROCCO	OPTIMIZATION OF RED CLAY-BASED POROUS GEOPOLYMER SYNTHESIS AND APPLICATION FOR METHYL ORANGE REMOVAL FROM WASTEWATER
Prof. Dr. Dragutin A. DJUKIC Prof. Dr. Leka MANDIC Dr. Monika STOJANOVA Prof. Dr. Marina Todor STOJANOVA Prof. Dr. Alexander M. SEMENOV Prof. Dr. Vesna DJUROVIC Prof. Dr. Ivana BOSKOVIC	Kragujevac University SERBIA Association for Scientific-research, Educational and Cultural Activities NORTH MACEDONIA Ss. Cyril and Methodius University NORTH MACEDONIA M.V. Lomonosov Moscow State University RUSSIA East Sarajevo University SERBIA	DYNAMIC NITROGEN BALANCE IN THE EARTH'S PEDOSPHERE AND ATMOSPHERE
Assoc. Prof. Dr. Chandani Sharma	Maharishi Markandeshwar University INDIA	INNOVATIONS IN MATERIALS SCIENCE: UNLOCKING THE FUTURE OF TECHNOLOGY AND SUSTAINABILITY
Assist. Prof. Shiva velayati	Architecture at University IRAN	THE ROLE OF ARCHITECTURAL VARIABLES IN REDUCING ENERGY CONSUMPTION IN BUILDINGS
G.A. Ubandoma S. S. Zainab H.A. Ismail I. Suleiman I. Malami	Ibrahim Badamasi Babangida University NIGERIA Federal University NIGERIA College of Agriculture and Animal Science NIGERIA	THE ATTITUDE OF RICE FARMERS TORWARDS AGRICULTURAL EXTENSION SERVICES IN LAPAI LOCAL GOVERNMENT AREA OF NIGER STATE, NIGERIA
Barbara L KROETZ Maria J SANTOS Taufik ABRÃO	Londrina State University BRAZIL	Q-LEARNING ALGORITHM APPLIED TO THE MINING PROCESS IN THE DOCE RIVER BASIN, BRAZIL
Dr. Jogendra Kumar Nitesh Kothiyal Piyush Krishna Abhishek Kumar Abhay Chandola Yogesh Bainola	Govind Ballabh Pant Institute of Engineering & Technology INDIA	TRAFFIC FLOW PREDICTION IN VANET USING ML
Muhammad Shoaib Prof. Dr. Dilawar khan	Kohat university of science and technology PAKISTAN	THE IMPACT OF ENERGY AND WATER USE EFFICIENCY ON SUSTAINABLE AGRICULTURE IN SOUTH ASIA; 2000 TO 2023
Ganime Melike KANUN Süleyman Sefa BİLGİLİOĞLU Muzaffer Can İBAN	Mersin University TÜRKİYE	INVESTIGATION OF POTENTIAL FAILURES IN CLEAN WATER NETWORKS USING AHP AND FREQUENCY RATIO METHODS: THE CASE OF MERSİN YENİŞEHİR

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ANKARA LOCAL TIME - 14 00 : 16 00
HALL-5, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Prof. Y.Muni raju

AUTHORS	AFFILIATION	TOPIC TITLE
Younes Yassine Miloud Chakit Mohamed Belkhaoud El Mahjoub Aouane	Ibn Tofail University MOROCCO	PHYSICAL ACTIVITY TO COMBAT ACADEMIC BURNOUT IN SECONDARY SCHOOL STUDENTS IN MOROCCO
Maryam Hassan	Ahlul Bayt International University IRAN	THE ROLE OF MOTHERS EDUCATION IN SELF CONFIDENCE OF GIRL CHILD IN INDIA
Ahmad Yasir Rasoolyar Prof. Y.Muni raju	Mangalore University INDIA	THE STATE OF WOMEN'S EDUCATION IN AFGHANISTAN: OPPORTUNITIES, CHALLENGES, AND SETBACKS
Nazym TEKESBAYEVA Assel BUKANOVA Ayaulym KAMI	Abai Kazakh National Pedagogical University KAZAKHSTAN International University of Information Technology KAZAKHSTAN	DEVELOPMENT AND TESTING OF AN ADAPTIVE LEARNING METHODOLOGY FOR PROGRAMMING FOR FUTURE COMPUTER SCIENCE TEACHERS IN THE ERA OF EDUCATIONAL PROCESS DIGITALIZATION
Igonoh A. Okolo Jacob N. Nandang	Jos University NIGERIA National Commission for Museum and Monuments, Jos Museum NIGERIA	EFFECTS OF TWO TEST ITEMS ARRANGEMENT ON JUNIOR SECONDARY TWO STUDENTS' ACHIEVEMENT IN BUSINESS STUDIES IN WASE LOCAL GOVERNMENT OF PLATEAU STATE, NIGERIA
Abdullahi, Ibrahim Mohammed Maliki Danlami Domnan Diretnan Abubakre, Abdulqudus Sunday, Agabaidu Abraham Muhammad, Ibrahim	Federal University of Technology NIGERIA	DEPLOYING A STANDALONE FACIAL AND EMOTION RECOGNITION CLASSROOM MANAGEMENT SYSTEM ON RESOURCE-CONSTRAINED ENVIRONMENT
Abdul-Rahman Balogun Muhammed-Shittu	British School in Baku AZERBAIJAN	SCHOLARSHIP AND ENDOWMENT IMPACTS ON ACADEMIC INTEGRITY OF NIGERIAN STUDENTS AT AL-AZHAR UNIVERSITY, CAIRO-EGYPT
Dr. Raji Kaliyaperumal Shylaja Jeyapaul Safaa Alqhtany Dr. Khalda Ahamed Mohammed Mohammed Amna Hussain Madani Dr. Duria Hassan Merghani Mohammed	King Khalid University SAUDI ARABIA	THE LEARNING EFFECTS OF FLIPPED CLASSROOM ON NURSING STUDENT'S VITAL SIGNS KNOWLEDGE, SKILL, AND SATISFACTION: POST-TEST ONLY CONTROL GROUP STUDY

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-6, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Sabrina Roguai

AUTHORS	AFFILIATION	TOPIC TITLE
Shalu Bansal Vinod Kumar	GD Goenka University INDIA	SYNTHESISE CHARACTERIZATION AND ANTIMICROBIAL ACTIVITY OF OXADIAZOLE-THIONE DERIVATIVES
Abderrahim Ait Lhaj Brahim Ouazik Mohamed El Hasnaoui Hassan Chaib	Ibn Tofail University MOROCCO	DFT AND DFT+U ANALYSIS OF STRUCTURAL AND OPTOELECTRONIC PROPERTIES OF SNO_2 SINGLE CRYSTALS WITH THE HCTH FUNCTIONAL
Sabrina Roguai	Abbes Laghrour University ALGERIA	STUDY OF THE EFFECTS OF Ni DOPING ON THE STRUCTURAL, MICROSTRUCTURAL, AND OPTICAL PROPERTIES OF TIN OXIDE FILMS USING PSP METHOD
Yousra Taoudi Hicham Oudghiri Hassani Souad Rakass	Sidi Mohamed Ben Abdellah University MOROCCO	A NEW APPROACH TO THE PREPARATION OF CdMoO4 NANOPOWDERS WITH METHYLENE BLUE OXIDATION ACTIVITY EVALUATION
Aloui Mourad Menana Elhalaoui	Sidi Mohamed Ben Abdellah University MOROCCO	DISCOVERING NOVEL SURVIVIN INHIBITORS: A MULTIDISCIPLINARY APPROACH
Amina Mumtaz Muhammad Nawaz Muhammad Akhtar Ismail	Applied Chemistry Research Centre, Pakistan Council of scientific and Industrial Research Laboratories Complex PAKISTAN	SPECTROPHOTOMETRIC QUANTIFICATION OF CEPHALEXIN AND ITS APPLICATION IN DOSAGE FORMS
HAMZA. OUACHTOUK AMINE. HARBI SAID. AZERBLOU YOUSSEF. NAIMI EL MOSTAFA. TACE	Hassan II University MOROCCO	STRUCTURAL AND VIBRATIONAL ANALYSIS OF La2-xBixNiMnO6 DOUBLE PEROVSKITES WITH SUBSTITUTIONS AT x = 0.25, 1
Assala Marir Mounia Guergouri Rafik Bensegueni	Constantine 1 University ALGERIA Souk Ahras University ALGERIA	STUDY OF THE ELECTROCHEMICAL AND OPTICAL BEHAVIOR OF POLYN-ETHYLCARBAZOLE-3-AMINE

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 16 30 : 18 30
HALL-1, SESSION-4

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assist. Prof. Dr. Hazal YAKUT ÖZDEMİR

AUTHORS	AFFILIATION	TOPIC TITLE
Assist. Prof. Dr. Derya AZİM	Bandırma Onyedi Eylül University TÜRKİYE	INVESTIGATION OF PHYSICAL ACTIVITY, PAIN, AND QUALITY OF LIFE IN INDIVIDUALS AGED 65 AND OVER LIVING IN RURAL AND URBAN AREAS
Assoc. Prof. Dr. Bahar ANAFOROĞLU Sevilay Seda BAŞ Merve GAZİ Damla AĞIRDEMİR	Ankara Yıldırım Beyazıt University TÜRKİYE	A COMPARATIVE ANALYSIS OF THE EFFECTS OF TWO DISTINCT TAPING ON BALANCE, TIBIAL OSCILLATION AND PES PLANUS SEVERITY IN INDIVIDUALS WITH PES PLANUS
Prof. Dr. Bayram ÜNVER Msc. Elif Gizem TÜRKER Gonca CURA	Dokuz Eylül University TÜRKİYE	TURKISH VALIDITY, RELIABILITY, AND CULTURAL ADAPTATION OF OUTPATIENT PHYSICAL THERAPY IMPROVEMENT IN MOVEMENT ASSESSMENT LOG WITH NON-OPERATIVE SHOULDER PAIN RECEIVING OUTPATIENT TREATMENT
Prof. Dr. Bayram ÜNVER Gonca CURA Esra AYDIN	Dokuz Eylül University TÜRKİYE	ANALYSIS OF YOUTUBE VIDEOS ON TOTAL KNEE ARTHROPLASTY REHABILITATION IN TERMS OF RELIABILITY AND QUALITY
Prof. Dr. Bayram ÜNVER Esra AYDIN Gonca CURA	Dokuz Eylül University TÜRKİYE	ANALYSIS OF YOUTUBE VIDEOS ON TOTAL HIP ARTHROPLASTY REHABILITATION IN TERMS OF RELIABILITY AND QUALITY
Assist. Prof. Dr. Hazal YAKUT ÖZDEMİR	İzmir Demokrasi University TÜRKİYE	INVESTIGATION OF THE RELATIONSHIP BETWEEN HEALTH LITERACY AND HUMAN PAPILLOMAVİRUS (HPV) KNOWLEDGE AND HEALTH BELIEFS REGARDING HPV AND VACCINE AMONG PHYSIOTHERAPY STUDENTS
Assoc. Prof. Dr. Yıldız ANALAY AKBABA Phy. Ayşe Betül YILDIZ Phy. Rabia YALÇIN Phy. Zeynep DURAN Phy. Seda ATEŞ	İstanbul-Cerahpaşa University TÜRKİYE	THE ACUTE EFFECT OF MIRROR THERAPY ON SENSATION, HAND FUNCTION AND REACTION TIME FOLLOWING FLEXOR TENDON REPAIR
Assoc. Prof. Dr. Hüseyin ERİŞ	Harran University TÜRKİYE	THE RELATIONSHIP BETWEEN JOB SATISFACTION AND PERFORMANCE IN HEALTH WORKERS

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ANKARA LOCAL TIME - 16 30 : 18 30
HALL-2, SESSION-4

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Prof. Dr. Ferit İZCİ

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Tuna BATUHAN	Atatürk University TÜRKİYE	EVALUATING THE PERFORMANCE OF RESEARCH UNIVERSITIES IN TÜRKİYE
Assoc. Prof. Dr. Tuna BATUHAN	Atatürk University TÜRKİYE	SUSTAINABLE DEVELOPMENT POLICIES IN UNIVERSITIES: INSTITUTIONAL STRATEGIES AND EFFECTIVE PRACTICES
Tolga AKSOY	Ondokuz Mayıs University TÜRKİYE	1990S RIGHT-WING POLITICAL PARTY FRAGMENTATIONS
Prof. Dr. Ferit İZCİ Davut SULAR	Van Yüzüncü Yıl University TÜRKİYE	ENTREPRENEURIAL PUBLIC MANAGEMENT APPROACH AND TELEMEDICINE APPLICATION AS AN EXAMPLE OF ENTREPRENEURSHIP IN HEALTH SERVICES
Assoc. Prof. Dr. Emrah FİRİDİN	Karadeniz Technical University TÜRKİYE	ANALYSIS OF STUDIES ON ENVIRONMENTAL GOVERNANCE PERCEPTION IN LOCAL GOVERNMENTS: TRABZON AND ÇANAKKALE EXAMPLES
Gülseren ERGÜN Lect. Melike AKPINAR Prof. Dr. Hakan CANDAN	Karamanoğlu Mehmetbey University TÜRKİYE	TRUSTEE APPOINTMENTS AND LOCAL DEMOCRACY: LEGAL AND PRACTICAL EFFECTS OF CENTRAL GOVERNMENT TUTELAGE
Res. Assist. Yusuf Berat KÖKSAL	Yeditepe University TÜRKİYE	POLITICAL PARTICIPATION IN TURKIYE: PARTICIPATION TRENDS AND RELATIONS OF CONVENTIONAL AND UNCONVENTIONAL POLITICAL PARTICIPATION
Prof. Dr. Filiz BALTA PELTEKOĞLU Assoc. Prof. Dr. Emel DEMİR ASKEROĞLU	Marmara University TÜRKİYE Tekirdağ Namık Kemal University TÜRKİYE	BIBLIOMETRIC ANALYSIS WITH VOSVIEWER ON PUBLIC RELATIONS REVIEW JOURNAL IN THE CONTEXT OF SOCIAL MEDIA AND PUBLIC RELATIONS
Assoc. Prof. Dr. Gözde SUNAL	İstanbul Ticaret University TÜRKİYE	TECHNOLOGY AND HUMAN RELATIONSHIPS IN THE CONTEXT OF HER: THE IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN PSYCHOLOGY AND SOCIAL BONDS

ONLINE PRESENTATIONS / 20.12.2024

ANKARA LOCAL TIME - 16 30 : 18 30
HALL-3, SESSION-4

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Fatma Dilek TURAN

AUTHORS	AFFILIATION	TOPIC TITLE
Lect. Onur KESKİN Nezir YILDIZ Mizgin ATALAY	Bingöl University TÜRKİYE	EVALUATION OF HEALTH LITERACY OF WOMEN LIVING IN RURAL AREAS AND HAVING A NEW BIRTH IN BİNGÖL
Assoc. Prof. Dr. Fatma Dilek TURAN	Akdeniz University TÜRKİYE	EVALUATION OF ANXIETY IN CHILDREN WITH HEART DISEASE AND THEIR PARENTS: A BIBLIOMETRIC ANALYSIS OF NATIONAL GRADUATE THESES
Assoc. Prof. Dr. Fatma Dilek TURAN	Akdeniz University TÜRKİYE	BIBLIOMETRIC ANALYSIS OF GRADUATE THESES ON THE USE OF PICTURE ANALYSIS METHODS IN CHILDREN IN TURKEY
Dr. Fatih ERDOĞAN Assoc. Prof. Dr. Yaşar Mahsut DİNÇEL Dr. Gündüz Ercan KUTLUAY Dr. Mohammad AMIRY	Tekirdağ Namık Kemal University TÜRKİYE	RETROSPECTIVE REVIEW OF NONTRAUMATIC LOWER EXTREMITY AMPUTATIONS
Spc. Dr. Merve ÇIRAK BALTA Assist. Prof. Dr. Merva AYDEMİR AKKAYA	Van Yüzüncü Yıl University TÜRKİYE	ASSOCIATION OF TUMOR INFILTRATING LYMPHOCYTES WITH HISTOPATHOLOGICAL PARAMETERS AND RESPONSE TO TREATMENT IN BREAST CANCER RECEIVING NEOADJUVANT THERAPY
Burcu ASLANTEKİN Lect. Esma DERİNÖZ Ramazan ÇETİN Assoc. Prof. Dr. Emrah ÖZCAN Assoc. Prof. Dr. Nermin TEPE	Balıkesir University TÜRKİYE	PULVINAR THALAMI VOLUME AND ASYMMETRY IN PATIENTS DIAGNOSIS OF MIGRAINE
Assoc. Prof. Dr. Timur KOCA Dr. Meltem BEYDİLLİ ŞAHİNER Dr. Ece ATAK Prof. Dr. Aylin Fidan KORCUM	Akdeniz University TÜRKİYE	RECENT ADVANCES IN RECTAL CANCER MANAGEMENT: PAVING THE WAY FOR ORGAN PRESERVATION
Muhammed Sabit KIYICI Zehra VAROL Elif Afra BEŞPARMAK Assist. Prof. Dr. Seçil YILMAZ	Erciyes University TÜRKİYE	INVESTIGATION OF THE ANTIOXIDANT EFFECTS OF COENZYME Q10 AND VITAMIN C ON BREAST CANCER STEM CELLS
Assist. Prof. Dr. Ecem İpek ALTINOK Assoc. Prof. Dr. Taner KASAR	Ordu University TÜRKİYE	DUCHENNE MUSCULAR DYSTROPHY: CARDIOVASCULAR EFFECTS AND ELECTROCARDIOGRAPHIC FINDINGS IN CHILDREN

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ANKARA LOCAL TIME - 16 30 : 18 30
HALL-4, SESSION-4

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Dr. Jogendra Kumar

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. Jogendra Kumar	Govind Ballabh Pant Institute of Engineering and Technology INDIA	DELAY-AWARE ROUTING ANALYSIS IN VANETS USING MACHINE LEARNING
Samar Jamal Hassan Mahmoud Noor Maizura Binti Mohamad Noor Zuriana Abu Bakar	Malaysia University MALAYSIA	EMPOWERING VISUALLY IMPAIRED USERS THROUGH ACCESSIBLE E-TRANSPORTATION APPLICATION DESIGN
V. Srividhya K.Sujatha N. Kavitha N.P.G. Bhavani	Dr. M.G.R Educational and Research Institute INDIA	REINFORCED NEURAL NETWORKS FOR LUNG CANCER DETECTION
Y. Gopika O. Hari Teja Reddy U. Jayalatsumi K. Sujatha	Dr. M.G.R Educational and Research Institute INDIA	IOT DRIVEN HYBRID ALGORITHM FOR REAL TIME AIR QUALITY PREDICTION
E. Gokhula Rani K. Sujatha	Dr. M.G.R Educational and Research Institute INDIA	A RELIABLE AND SECURE ENHANCED MACHINE LEARNING MODEL TO DETECT MEDICAL DATA HIJACKING IN CLOUD ENVIRONMENT
Assist. Prof. Dr. Vasanthi Muniasamy	King Khalid University SAUDI ARABIA	AI-DRIVEN CARDIOLOGY: LEVERAGING MACHINE LEARNING FOR DIAGNOSTIC PRECISION AND PATIENT CARE
Dasari.Poojitha Beri Preethi Anantha Priya. S. Gowthami. M. C. Dr. M. Meena	R. M. K. Engineering College INDIA	ROBOTICS
Anamika Raj Noor Maizura Mohamad Noor Rosmayati Mohemad Noor Azliza Che Mat Shahid Hussain	Malaysia University MALAYSIA	AN INTELLIGENT MODEL TO PREDICT DIABETIC RETINOPATHY CLINICAL DECISION SUPPORT SYSTEM USING IMAGE PROCESSING TECHNIQUES
Arshiya THAPLIYAL	India International University INDIA	NAVIGATING AI AND DATA PROTECTION: INSIGHTS ON GDPR AND EMERGING LEGAL FRAMEWORKS

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ANKARA LOCAL TIME - 16 30 : 18 30
HALL-5, SESSION-4

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Major Gheorghe GIURGIU

AUTHORS	AFFILIATION	TOPIC TITLE
M. Chandana P. Jaideep V. Naveen S.T. Rama	Dr. M.G.R. Educational and Research Institute INDIA	PHARMACEUTICAL DATA LOGGING WITH SCADA ANALYTICS
Ms. Madhuri A. Fating Dr. Mrs. Alpana J. Asnani	Priyadarshini J. L. College Of Pharmacy INDIA	FORMULATION AND EVALUATION OF HERBAL COUGH SYRUP BY BASE CONTAINING AQUEOUS EXTRACT OF MADHUCA INDICA
Dr. Malini M. Patil Akarshita Kochhar Aisha Nishat Anjali Sinha P. Shireesha	RV Institute of Technology and Management INDIA	PARKINSONS DISEASE DETECTION SYSTEM
Ishika Sahu Hina Vaish	Chhatrapati Shahu Ji Maharaj University INDIA	EFFECT OF AEROBIC EXERCISE ON SLEEP QUALITY, INSOMNIA AND FUNCTIONAL CAPACITY AMONG POSTMENOPAUSAL WOMEN: A STUDY PROTOCOL
Ayyoub KIHEL Ikram HAMMI Dounia DARIF Prof. Dr. Myriam RIYAD Prof. Dr. Khadija AKARID	Hassan II University MOROCCO	THE DIFFERENT FACES OF THE NLRP3 INFLAMMASOME IN CUTANEOUS LEISHMANIASIS: A REVIEW
Sehrish Firyal Hira Anwar	University of Veterinary and Animal Sciences INDIA	MOLECULAR ANALYSIS OF SINGLE NUCLEOTIDE POLYMORPHISMS IN THE COMPLEMENT COMPONENT 5 GENE OF MASTITIC BUFFALO
Manal Ghatesse Yasmine Tabouktirt Fouzia Hmimid Mostafa Kabine Noureddine Bourhim Yassine Zouheir	Hassan II University MOROCCO	HARNESSING NATURAL COMPOUNDS TO TACKLE ANTIBIOTIC RESISTANCE
Tarush Kushwaha Hina Vaish	Chhatrapati Shahu Ji Maharaj University INDIA	INFLUENCING FACTORS OF SIX-MINUTE WALK TEST ON TYPE 2 DIABETES MELLITUS: A LITERATURE REVIEW
Major Gheorghe GIURGIU Prof. Dr. Med. Manole COJOCARU	Deniplant-Aide Sante Medical Center ROMANIA Titu Maiorescu University ROMANIA	MICROBIOTA MODULATION AS THERAPEUTIC APPROACH IN THE NEUROPATHIC PAIN IN DOG WITH SPINAL CORD INJURY: IMPACT OF POLENOPLASMIN

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HALL-6, SESSION-4

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HEAD OF SESSION: Dr. Vasanthi Muniasamy

AUTHORS	AFFILIATION	TOPIC TITLE
K.Thamizhmaran	Government College of Engineering INDIA	COMPARISON BETWEEN DIFFERENT SET OF PARAMETER USING RELAY NODE IN MANET
Nouf S. Aldahwan Muhammed S. Ramzan	King Abdulaziz University SAUDI ARABIA	EXPLORING COMMUNITY CLOUD COMPUTING ADOPTION: QUANTITATIVE STUDY IN SAUDI HEIS
T.Gopalakrishnan K.S.Abinayasree	Christian College of Engineering and Technology INDIA	INTELLIGENT SURVEILLANCE SYSTEM FOR WEAPON AND FIRE DETECTION IN ANY ENVIRONMENTS
Dr. Vasanthi Muniasamy	King Khalid University SAUDI ARABIA	SATELLITE IMAGE RETRIEVAL SYSTEM BASED ON AUTOREGRESSIVE MODEL WITH BAYES BACKPROPAGATION NEURAL NETWORK
Dr.S.Rajeswari	Saranathan College of Engineering INDIA	ENHANCING ENERGY EFFICIENCY IN WIRELESS MESH NETWORKS: A HYBRID APPROACH FOR POWER CONTROL AND ADAPTIVE ROUTING
Rahma BELKAID Lamia YOUB Farid NACERI	Batna 2 University ALGERIA	ENHANCED DIRECT TORQUE CONTROL FOR DOUBLE STAR INDUCTION MOTORS USING GA-OPTIMIZED PI CONTROLLER
OLGA ANDREEA URDA IONUȚ ALEXANDRU TOADER	Alexandru Ioan Cuza University ROMANIA	LEGAL PROFESSIONS AFFECTED BY INSECURE IT SYSTEMS
Fatima Akram	Government College University PAKISTAN	COMPUTATIONAL INSIGHTS OF GEOMETRIC AND ELECTRONIC PROPERTIES OF PYROVANADATES
Irakli Basheleishvili Manana Chumburidze Elza Bitsadze Giorgi Kapanadze Lia Janadze	Akaki Tsereteli State University GEORGIA	APPLICATION OF MCDM APPROACHES IN THE OPTIMIZATION OF SOFTWARE TESTING STRATEGIES
Koray ARKUNKÜTAK	İstanbul Technical University TÜRKİYE	DEVELOPMENT OF A BRIDGE DEVICE FOR THE INTEGRATION OF KNX AND MATTER PROTOCOLS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-1, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Naci Ömer ALAYUNT

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Naci Ömer ALAYUNT	Siirt University TÜRKİYE	HPLC METHOD FOR SERUM SPERMIDINE ANALYSIS AND ITS CLINICAL APPLICATION POTENTIAL
Murat GÖKHAN İzzet USTAALİOĞLU	Balikesir Gonen State Hospital TÜRKİYE	FOREIGN BODY IN OESOPHAGUS
Muammer AVCI	Isparta City Hospital TÜRKİYE	CASE REPORT: HEART FAILURE, HYPONATREMIA AND SGLT-2 INHIBITION
Assist. Prof. Dr. Fatma YILMAZ	Muğla Sıtkı Koçman University TÜRKİYE	EFFECT OF UNTREATED DENTAL CARIES ON CARDIOVASCULAR DISEASES
Assist. Prof. Dr. Kübra ARSLAN ÇARPAR Res. Assist. Melis TERLER	Mersin University TÜRKİYE	BIBLIOMETRIC ANALYSIS OF POSTGRADUATE THESES ON 'CLEAR ALIGNERS' IN ORTHODONTICS DEPARTMENTS IN TURKEY
MSc. Ayşe Nur EDİZ Prof. Dr. Hilal ŞAHİN-NADEEM Assist. Prof. Dr. Zehra GÜNEL	Aydın Adnan Menderes University TÜRKİYE Aydın Adnan Menderes University TÜRKİYE Konya Food and Agriculture University TÜRKİYE	EFFECT OF MICROWAVE COOKING ON THE PHYSICOCHEMICAL PROPERTIES OF POTATOES, CARROTS, AND CULTIVATED MUSHROOMS
İsmail TOPCU	Alanya Alaaddin Keykubat University TÜRKİYE	INVESTIGATION OF MECHANICAL PROPERTIES OF AL 6061 MATRIX COMPOSITES REINFORCED WITH DIFFERENT B4C AND CNT RATIOS
İsmail TOPCU	Alanya Alaaddin Keykubat University TÜRKİYE	MICROSTRUCTURE ANALYSIS OF AL 6061 ALLOY REINFORCED WITH DIFFERENT B4C AND CNT RATIOS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-2, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Bayram ARICI

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. Koray ÖZ	Dokuz Eylül University TÜRKİYE	THE CONTRIBUTION OF MULTICULTURALISM TO LANGUAGE LEARNING: THE CASE OF ERASMUS STUDENTS
Dr. Koray ÖZ	Dokuz Eylül University TÜRKİYE	STUDENT VIEWS ON MENTAL IMAGERY APPLICATIONS IN TURKISH LANGUAGE TEACHING
Assoc. Prof. Dr. Bayram ARICI Semra KÖÇ Ömer YAVUZ	Muş Alparslan University TÜRKİYE	COMPARISON OF 2019 TURKISH CURRICULUM AND 2024 TURKISH CURRICULUM
Assoc. Prof. Dr. Bayram ARICI Şemsinur ARICI Assist. Prof. Dr. Yakup TOPAL	Muş Alparslan University TÜRKİYE Bayburt University TÜRKİYE Gümüşhane University TÜRKİYE	EVALUATION OF GRADUATE THESES RELATED TO BILINGUALISM PREPARED BETWEEN 2013-2024 FROM VARIOUS PERSPECTIVES
Dilek GÖKALP Tuğba ATEŞ DEMİR Assoc. Prof. Dr. Nalan ALTAY	Manisa Celal Bayar University TÜRKİYE	A REVIEW OF POSTGRADUATE STUDIES EDUCATION AND TRAINING IN TURKEY WITH THE TITLE OF CULTURAL VALUES
Assoc. Prof. Dr. Şeyda YILDIRIM Cüneyt BUHARLIOĞLU Asaf YILDIRIM	Manisa Celal Bayar University TÜRKİYE Karsiyaka Special Hearts Public Education Center İzmir TÜRKİYE Izmir Ismail Rahmi Karadavut Primary School İzmir TÜRKİYE	THE EFFECT OF TEACHERS' GENDER DIFFERENCE ON THEIR SITUATION ON HOUSEWORK SHARING
Assist. Prof. Dr. Erkan AYDIN Büşra PARLAR	Aksaray University TÜRKİYE Aksaray University TÜRKİYE	ANALYSIS OF LEARNING OUTCOMES AND PROCESS COMPONENTS IN THE 2024 MIDDLE SCHOOL TURKISH LANGUAGE CURRICULUM AT 5TH AND 6TH GRADES ACCORDING TO THE REVISED BLOOM'S TAXONOMY
Assist. Prof. Dr. Erkan AYDIN Mustafa DİNÇ	Aksaray University TÜRKİYE	ANALYSIS OF LEARNING OUTCOMES AND PROCESS COMPONENTS IN THE 2024 MIDDLE SCHOOL TURKISH LANGUAGE CURRICULUM AT 7TH AND 8TH GRADES ACCORDING TO THE REVISED BLOOM'S TAXONOMY

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-3, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assist. Prof. Dr. Cemal KARAASLAN

AUTHORS	AFFILIATION	TOPIC TITLE
Res. Assist. Dr. Mitat ÖZTÜRK	Osmaniye Korkut Ata University TÜRKİYE	EVALUATION OF LIQUEFACTION POTENTIAL AND SEVERITY INDEX DEPENDING ON EARTHQUAKE GROUND MOTION LEVELS
Efna Dilan YAGCI Prof. Dr. Ozan HOVARDAOGLU	Erciyes University TÜRKİYE	RELATIONSHIP BETWEEN URBAN RESILIENCE AND URBAN DENSITY AGAINST EARTHQUAKE RISK IN DISTRICT CENTER URBAN SETTLEMENTS IN TÜRKİYE
MSc. Murteda ÜNVERDİ Yahya KAYA Prof. Dr. Ali MARDANİ	Bursa Uludağ University TÜRKİYE	FIBER TYPE EFFECT ON OPTIMAL WATER CONTENT OF ROLLER- COMPACTED CONCRETE MIXTURES PRODUCED BY MAXIMUM DENSITY METHOD
Yahya KAYA MSc. Petek BALCI Asisst. Prof. Dr. Süleyman ÖZEN Prof. Dr. Ali MARDANİ Prof. Dr. Ali KARA	Bursa Uludağ University TÜRKİYE	EFFECT OF POLYPROPYLENE FIBER LENGTH MODIFIED WITH ETHYL CHLOROFORMATE ON STRENGTH PERFORMANCE OF CEMENTITIOUS SYSTEMS
Assist. Prof. Dr. Cemal KARAASLAN	Iğdır University TÜRKİYE	THE EFFECT OF WATER CONTENT ON THE COMPRESSIVE STRENGTH OF VOLCANIC ASH-BASED GEOPOLYMER MORTARS
Assist. Prof. Dr. Yaşar İNCEYOL	Adıyaman University TÜRKİYE	INVESTIGATION OF VINEYARD HOUSE CONSTRUCTION ON AGRİCULTURAL LANDS IN ADIYAMAN CENTRAL DISTRICT FOLLOWING THE FEBRUARY 6, 2023 EARTHQUAKES
Res. Assist. Dr. Onur ŞAHİN Rabiye GÜZELCE	Yıldız Technical University TÜRKİYE	SUSTAINABLE INTELLIGENT TRANSPORTATION POLICIES IN ISTANBUL
Res. Assist. Dr. Onur ŞAHİN Rabiye GÜZELCE	Yıldız Technical University TÜRKİYE	USE OF INTELLIGENT TRANSPORTATION SYSTEMS IN LOCAL GOVERNMENTS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-4, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Dr. Nguyen Thi Hong Phuoc

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Sakineh Sojoodi Elmira Azizi Norouzabadi	Tabriz University IRAN	RANKING OF INDUSTRIAL SUBSECTORS IN IRAN BASED ON SUSTAINABLE DEVELOPMENT CRITERIA
Zmarialy Yousufi	Kerala University INDIA	ANTI-MONEY LAUNDERING COMPLIANCE IN BANKS: EXPLORING THE ESSENTIAL ELEMENTS OF ANTI-MONEY LAUNDERING PRACTICES
Hamidullah NAZARI Sumi A M Mustafa SALIMI Zmarialy YOUSUFI Prof. Dr. K.S. CHANDRASEKAR	Kerala University INDIA	THE IMPACT OF GREEN RECRUITMENT AND SELECTION ON ORGANIZATIONAL PERFORMANCE DYNAMICS
Dang Hoang Thai Hien Ho Huy Tuu	Thai Binh Duong University VIETNAM Nha Trang University VIETNAM	APPLYING TBP TO EXPLAINING CONSUMER FOOD WASTE: THE ROLE OF GREEN SELF-IDENTITY
Dr. Nguyen Thi Hong Phuoc	Law at Sai Gon University VIETNAM	VIETNAMESE LAW ON ENSURING SECURITY AND CONFIDENTIALITY OF ELECTRONIC TRANSACTIONS IN BANKING ACTIVITIES
HAMMAYO ABUBAKAR ABDULKADIR AHMED HAMMAYO SULAIMAN TOLBA MAGAJI	Federal University of Kashere NIGERIA	EFFECTIVENESS OF NON-GOVERNMENTAL ORGANIZATIONS (NGOs) ON THE NIGERIAN ECONOMY: A FOCUS ON ITS COMPONENTS OF; POVERTY REDUCTION, SOCIAL PROTECTION, GENDER EQUALITY AND INCOME GENERATION
Dhivya C R Arunkumar	Tamil Nadu Agricultural University INDIA	STRATEGIES FOR ENHANCING INCOME THROUGH AGRIBUSINESS VENTURES
Chi Thi Van TA	National Kaohsiung University of Hospitality and Tourism TAIWAN Nha Trang University VIETNAM	WHAT HELPS AND HINDERS THE IMPLEMENTATION OF HOTELS' GREEN PRACTICES IN DEVELOPING COUNTRIES

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-5, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assist. Prof. Dr. Anar Tanabayeva

AUTHORS	AFFILIATION	TOPIC TITLE
Assist. Prof. Dr. Anar Tanabayeva	International Information Technology University KAZAKHSTAN	THE IMPACT OF AI ON MODERN SOCIETY AND IDENTITY FORMATION
Dr. Gangesh Shah Gondwana	Banaras Hindu University INDIA	UNDERSTANDING THE INDUS SCRIPT, TEXTS, SYMBOLS AND READING THEM WITH CONSISTENCY THROUGH PRIMEVAL KOITOORS' LANGUAGE THEIR UNIQUE SOCIAL STRUCTURE CULTURE AND KNOWLEDGE SYSTEMS
Mustafa Salimi Zmarialy Yousufi Hamidullah Nazari Dr. K.S.Chandrasekar	Kerala University INDIA	TO BUILD OR TO BUY TALENT: A BIBLIOMETRIC AND META-ANALYSIS OF THE EXISTING LITERATURE ON TALENT MANAGEMENT
Binazir Mubariz	AFGHANISTAN	THE IMPACT OF POLITICAL CHANGES AFTER 2021 ON WOMEN'S RIGHTS IN AFGHANISTAN
Daya Ram GAUDEL	Kathmandu University NEPAL	CONTEXTS, CHALLENGES, AND INSIGHTS: BEYOND PHILOSOPHY AND METHODS OF THE INTERVIEW IN PHENOMENOLOGICAL RESEARCH
Saeed Ahmad Zaman Dr. Naima Nawaz Dr. Idrees Dr. Zain Nawaz Nadia Idrees Dr. Ijaz Ashraf Lubna Anjum Dr. Shahzad Ayesha Riaz Abdul Rahman	Agriculture University PAKISTAN	INTELLECTUAL BRAIN DRAIN IN PAKISTAN: A CRISIS ESCALATES AS THOUSANDS PROFESSIONALS LEAVES
Saeed Ahmad Zaman Dr. Naima Nawaz Dr. Idrees Dr. Zain Nawaz Nadia Idrees Dr. Ijaz Ashraf Lubna Anjum Dr. Shahzad Ayesha Riaz Abdul Rahman	Agriculture University PAKISTAN	MALE ENGAGEMENT IN FAMILY PLANNING PROGRAMS IN PAKISTAN: A STRATEGIC PLANNING GUIDE
Saeed Ahmad Zaman Dr. Naima Nawaz Dr. Idrees Dr. Zain Nawaz Nadia Idrees Dr. Ijaz Ashraf Lubna Anjum Dr. Shahzad Ayesha Riaz Abdul Rahman	Agriculture University PAKISTAN	TYPES OF SAMPLING AND SAMPLE SIZE DETERMINATION IN HEALTH AND SOCIAL SCIENCE RESEARCH

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-6, SESSION-1

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Phan Vinh An

AUTHORS	AFFILIATION	TOPIC TITLE
R. Vidhyalakshmi K. Rajaganapathy	Bharath Institute INDIA	INTERSECTIONALITY IN FEMINISM: UNDERSTANDING THE MULTIPLE IDENTITIES OF WOMEN
Viktor Sopiha Halyna Mamus Halyna Havryshchak	Ternopil Volodymyr Hnatiuk National Pedagogical University UKRAINE	ARRANGEMENT OF STUDENTS' INDEPENDENT WORK DURING THE STUDY OF PROFESSIONAL DISCIPLINES
Nur Fadila Akma Mamat Noor Maizura Mohamad Noor Rosmayati Mohemad Noor Azliza Che Mat	Malaysia University MALAYSIA	A FRAMEWORK FOR RUBRIC ASSESSMENT USING AN ONTOLOGY-BASED APPROACH
Tlemsani Youssef Belkhaoud Mohamed Miloud Chakit Younes Yassine Ebn Touhami Mohamed	Ibn Tofail University MOROCCO Regional Center of Education and Training MOROCCO	UTILIZATION OF ICT IN EDUCATION
Belkhaoud Mohamed Miloud Chakit Younes Yassine Lamri Driss Guerss Fatima-Ezzahraa	Regional Center of Education and Training MOROCCO Ibn Tofail University MOROCCO	ENHANCEMENT OF ATHLETIC PERFORMANCE
Phan Vinh An Dang Hoang Xuan Huy	Ninh Thuan Vocational College VIETNAM Ninh Thuan Vocational College VIETNAM Nha Trang University VIETNAM	DEVELOPING VOCATIONAL EDUCATION THROUGH SCHOOL-ENTERPRISE LINKAGES IN KHANH HOA AND NINH THUAN, VIETNAM
Thị Phương Hoài	Independent Researcher VIETNAM	CORRECTIVE FEEDBACK AND LEARNER UPTAKE IN ENGLISH-VIETNAMESE TRANSLATION CLASSES: AN EXPLORATORY STUDY
Aymen Mishal Dr. Afshan Naseem Hibah Zahid Iqra Naseer	Management and Technology University PAKISTAN	CORRELATION BETWEEN PROFESSIONAL EXPERIENCE AND TEACHER SELF-EFFICACY

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-7, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. prof. M. As. Michailov

AUTHORS	AFFILIATION	TOPIC TITLE
Sadiq, M.S Singh, I.P Ahmad, M.M Sani, B.S	Department of Agricultural Economics and Agribusiness, FUD NIGERIA Department of Agricultural Economics, SKRAU INDIA Department of Agricultural Economics and Agribusiness, BUD NIGERIA	ARTIFICIAL INTELLIGENCE FOR ENHANCING SUPPLY CHAIN MANAGEMENT IN AGRIBUSINESS
Sadiq, M.S Singh, I.P Ahmad, M.M Sani, B.S	Department of Agricultural Economics and Agribusiness, FUD NIGERIA	FOOD SAFETY AND BLOCKCHAIN IN AGRIBUSINESS
Alfredo Guatemala Mariano Salucita Román Domínguez German Martínez Prats	Universidad Juárez Autónoma de Tabasco MEXICO	GREEN TECHNOLOGY ADOPTION: STRATEGIC FRAMEWORKS FOR SUSTAINABLE URBAN DEVELOPMENT
Alfredo Guatemala Mariano Salucita Román Domínguez German Martínez Prats	Universidad Juárez Autónoma de Tabasco MEXICO	SMART CITY APPLICATIONS: LEVERAGING BIODEGRADABLE CONDUCTIVE POLYMERS FOR SUSTAINABLE URBAN FUTURES
Assoc. prof. M. As. Michailov	SWU “Neofit Rilski” BULGARIA	ABOUT THE IMPORTANCE OF PROCESSES INFORMATION IN CATCHMENT BASINS
Adesanmi, Monisola Anthonia	Federal Polytechnic NIGERIA	CAUSES OF BUILDING COLLAPSE IN NIGERIA: THE ESTATE SURVEYOR AND VALUER’S PERSPECTIVES
Deepak Bansal	Indian Institute of Finance INDIA	DESIGN AND DEVELOPMENT OF NOVEL APPORACH FOR FILE SHARING FOR SECURITY USING BLOCKCHAIN TECHNOLOGY
BLERTA (KRISTO) NAZARKO	European University ALBANIA	APPLICATION OF STATISTICAL TESTS AND REGRESSION IN THE ASSESSMENT OF THE ECONOMIC DEVELOPMENT TREND OF THE WESTERN BALKAN COUNTRIES (2012-2023)
IBITOYE Stella Opeyemi Joseph Madugba FAKILE, Samuel	Landmark University NIGERIA	ONFLICT-OF-INTEREST MANAGEMENT AND FINANCIAL REPORTING QUALITY OF MICROFINANCE BANKS IN EKITI STATE, NIGERIA

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-1, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Hüseyin DEMİREL

AUTHORS	AFFILIATION	TOPIC TITLE
Soner ATAY Assoc. Prof. Dr. Murat AYAZ	Kocaeli University TÜRKİYE	DESIGN AND DEVELOPMENT OF AN AUTOMATION SYSTEM FOR HUMAN-CENTERED LIGHTING IN INDUSTRIAL FACILITIES
Res. Assist. Osman Emre TURAN Dr. Fatmatülzehra USLU	Bursa Technical University TÜRKİYE	IS OTSU'S THRESHOLD ENOUGH FOR SEGMENTATION QUALITY CHECK?
Mustafa ERASLAN Assist. Prof. Dr. Mümtaz YILMAZ Prof. Dr. Yılmaz KALKAN	Aydın Adnan Menderes University TÜRKİYE	WOUND ANALYSIS USING IMAGE PROCESSING TECHNIQUES
Muhammed Mustafa KANDEMİR Assist. Prof. Dr. Mümtaz YILMAZ Prof. Dr. Yılmaz KALKAN	Aydın Adnan Menderes University TÜRKİYE	IOT SYSTEM FOR AIR QUALITY AND GAS MONITORING IN GEOTHERMAL REGIONS
Berke APAYDINLI Furkan Miray ATICI Abdulkadir GÜNAY Res. Assist. Yeliz GÜLDORUM Prof. Dr. Mihrigül EKŞİ ALTAN	Yıldız Technical University TÜRKİYE	TOPOLOGICAL AND BIOMECHANIC OPTIMIZATION OF CUSTOMISED HIGH POROUS NOVEL Ti6Al4V SPINAL CAGE
Assoc. Prof. Dr. Hüseyin DEMİREL Keziban Seçkin CODAL	Ankara Yıldırım Beyazıt University TÜRKİYE	A CASE STUDY ON THE ALIGNMENT OF ACADEMIC PROGRAMMING COURSES WITH INDUSTRY NEEDS: CURRENT STATUS AND IMPROVEMENT STRATEGIES
MSc.İbrahim YEŞİLÇİMEN Assoc. Prof. Dr. Rana ORTAÇ KABAOĞLU	İstanbul-Cerrahpaşa University TÜRKİYE	DEVELOPMENT OF A MODEL FOR DETERMINING APPROPRIATE HARDWARE REQUIREMENTS FOR MICROCONTROLLERS IN ELECTRONIC CONTROL UNITS
Assoc. Prof. Dr. Hüseyin DEMİREL	Ankara Yıldırım Beyazıt University TÜRKİYE	COMPARISON OF THE PERFORMANCE OF A STOPWATCH CIRCUIT BUILT WITH THE PIC16F877 AND CONVENTIONAL DIGITAL ICS
Şeyda UYANIK Assoc. Prof. Dr. Hüseyin DEMİREL	Karabük University TÜRKİYE Ankara Yıldırım Beyazıt University TÜRKİYE	INNOVATIONS IN HIGH-VOLTAGE TRANSMISSION LINES: ENHANCING EFFICIENCY, DURABILITY, AND SUSTAINABILITY
Emre OKUMUŞ Dr. Fatmatülzehra USLU	Bursa Technical University TÜRKİYE	A COMPARISON OF UNCERTAINTY METHODS ON PROSTATE SEGMENTATION

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-2, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Prof. Dr. Ayla ÜNSAL

AUTHORS	AFFILIATION	TOPIC TITLE
Beyza YILMAZ Prof. Dr. Ayla ÜNSAL	Kırşehir Ahi Evran University TÜRKİYE	NURSING CARE FOR ANXIETY LEVEL IN PATIENTS BEFORE SURGERY
Pınar KARACABEY BİLACAN Prof. Dr. Ayla ÜNSAL	Kırşehir Ahi Evran University TÜRKİYE	RESPONSIBILITIES OF NURSES IN HEALTH CARE ASSOCIATED INFECTIONS IN INTENSIVE CARE UNITS
Melisa SARILI Prof. Dr. Emine GERÇEK ÖTER	Aydın Adnan Menderes University TÜRKİYE	MINDFULNESS-BASED PRACTICES IN WOMEN'S HEALTH
Spc. Tayyibe İN Assoc. Prof. Dr. Nurcan KIRCA	Akdeniz University TÜRKİYE	IMMUNICATION IN THE PRECONCEPTIONAL PERIOD
Aslıhan MISIR Kimya KILICASLAN Prof. Dr Gülbeyaz CAN	İstanbul-Cerrahpaşa University TÜRKİYE	AWARENESS OF THE PRINCIPLES OF BODY MECHANICS IN NURSING STUDENTS: EXAMINATION OF MUSCULOSKELETAL PROBLEMS, PAIN AND FATIGUE
Nurşen KULAKAÇ Res. Assist. Cemile AKTUĞ	Gümüşhane University TÜRKİYE	SURGICAL MANAGEMENT AND NURSING CARE OF INTESTINAL STOMA COMPLICATIONS
Res. Assist. Cemile AKTUĞ Nurşen KULAKAÇ	Gümüşhane University TÜRKİYE	TISSUE AND ORGAN DONATION THROUGH THE EYES OF NURSING STUDENTS
Beyza ÖZDEMIR Lect. Dr. Hilalnur KUCUKAKGUN	Çanakkale Onsekiz Mart University TÜRKİYE	EVALUATION OF UNIVERSITY STUDENTS' HEALTH LITERACY AND STROKE AWARENESS RESULTS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-3, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assist. Prof. Dr. Yeliz AY YILDIZ

AUTHORS	AFFILIATION	TOPIC TITLE
Ömer SEİS Assoc. Prof. Dr. Yener AKSOY Assoc. Prof. Dr. Fatih KARAKAŞ	Ondokuz Mayıs University TÜRKİYE	COMMENTS ON SPORTS AND WRESTLING IN INDIAN EPICS
Ömer SEİS Assoc. Prof. Dr. Yener AKSOY	Ondokuz Mayıs University TÜRKİYE	THE EFFECT OF ALCOHOL AND CIGARETTE USE ON INTERNET ADDICTION IN ATHLETES
Assist. Prof. Dr. Yeliz AY YILDIZ Prof. Dr. Işık BAYRAKTAR	Alanya Alaaddin Keykubat University TÜRKİYE	EXAMINING THE PERFORMANCE OF ATHLETES WHO COMPLETED THE 20 KM WALKING COMPETITION AT THE PARIS 2024 OLYMPIC GAMES, IN TERMS OF SEASONAL VARIABLES
Murat Yasin SANCAK Assoc. Prof. Dr. Mehmet İMAMOĞLU	Sinop University TÜRKİYE	ECONOMIC AND SOCIO-CULTURAL EVALUATION OF SPORTS TOURISM POTENTIAL OF SAMSUN PROVINCE
Murat Yasin SANCAK Assoc. Prof. Dr. Mehmet İMAMOĞLU	Sinop University TÜRKİYE	ACADEMIC AND THEMATIC ANALYSIS OF POSTGRADUATE THESES ON SPORT AND TOURISM IN TURKEY
Sinem BOLAT	Ondokuz Mayıs University TÜRKİYE	OPINIONS OF GRADUATE STUDENTS FROM DIFFERENT UNIVERSITIES ON GRADUATE EDUCATION
Prof. Dr. Nilgün H. BUDAK	Isparta University of Applied Sciences TÜRKİYE	"DERDİMİ ALAN" FROM ISPARTA GASTRONOMY CULTURAL HERITAGE
Prof. Dr. Nilgün H. BUDAK	Isparta University of Applied Sciences TÜRKİYE	ISPARTA LOCAL FLAVOR "CIFNE"
Aysun ÇELEBİOĞLU	Manisa Celal Bayar University TÜRKİYE	PROBLEMS AND SOLUTION SUGGESTIONS REGARDING EDUCATION AND TRAINING IN TURKISH UNIVERSITIES IN THE FIELD OF EMERGENCY AND DISASTER MANAGEMENT

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-4, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: K.R.Padma

AUTHORS	AFFILIATION	TOPIC TITLE
Ali MORABBI Assist. Prof. Dr. Mohammad KARIMIAN Assist. Prof. Dr. Fereshteh MIR MOHAMMADREZAEI	Mazandaran University IRAN	THE IMPACT OF C-PHYCOCYANIN ON IPSC DIFFERENTIATION INTO NEURONS: A FOCUS ON THE NOTCH PATHWAY
Hasti BALALI Assoc. Prof. Dr. Maryam MOHADJERANI Assist. Prof. Dr. Mohammad KARIMIAN	Mazandaran University IRAN	THE ANTIOXIDANT PROPERTIES OF C-PHYCOCYANIN IN INHIBITING MIGRATION AND METASTASIS OF A549 LUNG CANCER CELLS: INSIGHTS INTO THE NOTCH PATHWAY
Otitoju, Hellen Tolushe Adekola Saheed Ayodeji	Akintola University of Technology NIGERIA Abuja University NIGERIA	THE IMPACT OF LIFESTYLE MODIFICATION ON CARDIAC FAILURE IN HYPERTENSIVE PATIENTS
Ana-Lucia Blendea Ioan Gotca Lacramioara Atudorei	University of Medicine and Pharmacy ROMANIA Socola Psychiatry Institute ROMANIA	THE IMPORTANCE OF NUTRITION AND EMOTIONAL INTELLIGENCE IN MODULATING NEUROPHYSIOLOGICAL RESPONSES TO PSYCHOLOGICAL TRAUMA: THE ROLE OF BIOLOGICAL MARKERS IN STRESS ADAPTATION AND THE PREVENTION OF NEUROTIC DISORDERS
K.R.Padma K.R.Don	Women's University INDIA Bharath University INDIA	A HEALTHY DIET ENHANCES IMMUNITY AND REDUCES VIRAL INFECTIONS, WITH A SPECIAL EMPHASIS ON COVID-19
Ilhame Fitah Miloud Chakit Mohamed El Kadiri Sara Brikat Aboubaker El Hessni Abdelhalem Mesfioui	Ibn Tofail University MOROCCO Moulay El Hassan Health Center MOROCCO	FACTORS INFLUENCING SOCIAL FUNCTIONING IN MOROCCAN PATIENTS WITH SCHIZOPHRENIA
Huma Ikram Atufa Shabbir Darakhshan Jabeen Haleem	Karachi University PAKISTAN	FROM ANTI-HYPERTENSIVE TO MEMORY BOOSTER: REPURPOSING VERAPAMIL FOR MEMORY ENHANCEMENT AND COGNITIVE FUNCTION
Geeta Shinde Sakshi Ingale Chetana Shewale Aman Upaganlawar Chandrashekhar Upasani	SNJBs Shriman Sureshdada Jain College of Pharmacy INDIA	NEPHROPROTECTIVE ACTIVITY OF KUDZU ROOT EXTRACT IN STREPTOZOTOCIN INDUCED DIABETIC NEPHROPATHY IN RATS
Anap Jyoti Dattatray	Dr. Kolpe Institute Of Pharmacy INDIA	CARDIOVASCULAR DISEASE IN WOMEN'S AND RISK FACTORS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-5, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Melik Sami

AUTHORS	AFFILIATION	TOPIC TITLE
Syed Saqib Raza Naqvi Mehwash Kashif	Karachi Medical and Dental College INDIA	EFFECT OF DIFFERENT IRRIGATING SOLUTIONS ON THE APICAL SEALING ABILITY OF RESIN BASED ROOT CANAL SEALER
GURLEEN KAUR	LLM at IILM University INDIA	INTEGRATING ARTIFICIAL INTELLIGENCE IN KYRENIA'S URBAN SUSTAINABILITY: A ROADMAP FOR THE FUTURE
Luigi Rarità	Salerno University ITALY	IMPACT OF THE AUTONOMOUS VEHICLES ON PARTICULATE MATTER EMISSIONS
Bouchra DARKAOUI Naoual OUKKACHE	Hassan II University MOROCCO Pasteur Institute MOROCCO	DEVELOPMENT AND EFFICACY OF A SPECIFIC ANTIVENOM FOR SEVERE SCORPION ENVENOMATIONS IN MOROCCO AND NORTH AFRICA
Dio Samudra	UIN KH.Abdurrahman Wahid Pekalongan INDONESIA	RENEWABLE ENERGY CRISIS ANALYSIS: STRUCTURAL ECONOMIC CHALLENGES IN THE 2020-2024 ENERGY TRANSITION
Besa Zeneli Baloku Alberta Tahiri	Haxhi Zeka University KOSOVO	THE LEGAL CHALLENGES OF ECOTOURISM: BALANCING CONSERVATION AND COMMERCIAL INTERESTS
Melik Sami Khelil Sara Tallal Abdel Karim Bouzir	Mohamed Khider Biskra University ALGERIA Blida University ALGERIA	ORIENTATION-DRIVEN DESIGN: A PATHWAY TO SUSTAINABLE ENERGY USE IN ARCHITECTURE
Melik Sami Khelil Sara Tallal Abdel Karim Bouzir	Mohamed Khider Biskra University ALGERIA Blida University ALGERIA	HERITAGE AND SUSTAINABILITY: ENERGY-EFFICIENT SOLUTIONS FOR HISTORICAL STRUCTURES

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-6, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Dr. K. SELVAM

AUTHORS	AFFILIATION	TOPIC TITLE
Ogaji Abu Abdullahi Bashiru Egamana Mercy Nna Umar Abubakar	Federal University NIGERIA	FOOD SAFETY PRACTICES AMONG GROUNDNUT PROCESSORS IN NIGER STATE, NIGERIA
Fatimazahra Jouga Fatima Mourabiti Souraya Sakoui Reda Derdak Ana L Diéguez Javier Dubert Juan L. Barja Abdelaziz Soukri Bouchra El khalfi	Hassan II University MOROCCO Chouaïb Doukkali University MOROCCO Santiago de Compostela University SPAIN	CHARACTERIZATION OF LACTIC ACID BACTERIA AS BIOCONTROL AGENTS IN AQUACULTURE
Taiwo, A.M Awolola, A.A Adejumo, D.R Omotoso, A.B	Oyo State College of Agriculture and Technology NIGERIA	ECONOMIC ANALYSIS OF LEAFY VEGETABLE MARKETING IN OYO STATE
Pooja Rasal Gaurav Kasar	JES's SND College of Pharmacy INDIA Divine College of Pharmacy INDIA	MARINE DERIVED PRODUCT FOR COSMECEUTICALS
Fozia Anjum Zumaira Siddique Arooj Anwar	Government College University PAKISTAN	BIOCHEMICAL PROFOLING AND ETHNOMEDICINAL POTENTIAL OF AVOCADO PEEL EXTRACT (CALIFORNIA LONG)
VIGNESH K Dr. K. SELVAM ARSHA G	Palar Agricultural College INDIA	EVALUATION OF ANTIMICROBIAL ACTIVITY OF Bacillus subtilis AGAINST Sarocladium oryzae CAUSES SHEATH ROT IN RICE (Oryzae sativa L.)
VIGNESH K Dr. K. SELVAM ARSHA G	Palar Agricultural College INDIA	EVALUATION OF ANTIMICROBIAL ACTIVITY OF Bacillus subtilis AGAINST Macrophomina phaseolina CAUSES DRY ROOT ROT IN BLACKGRAM (Vigna mungo L.)
Bengani Ranjana Kapila Manoj Gamit Sejal	Gujarat University INDIA	PLANKTON AS AN INDICATOR OF FISH FARM PRODUCTIVITY
Ayoub Chaoui Salaheddine Farsad Aboubakr ben hamou Nisrine Nouj Mohamed Benafqir Ezzahery Mohamed Noureddine El Alem	Ibn Zohr University MOROCCO	ADVANCED OPTIMIZATION OF ANAEROBIC CO-DIGESTION PROCESSES: BIOMETHANE GENERATION FROM POULTRY BY-PRODUCTS AND CHICKEN MANURE
Bismillah Iftikhar Sumbal Imran Asifa Javaid Saim Naseer Dr. Mah Ru Nisa Atif	Hajvery University PAKISTAN	ICTAL-INDUCED CARDIOVASCULAR DISEASE AND ASSOCIATED NEUROLOGICAL COMORBIDITIES: A META-ANALYTICAL APPROACH

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-7, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Ilham M'RABTI

AUTHORS	AFFILIATION	TOPIC TITLE
SADHANA K SAMREEN F THEJASWINIE A P Dr A VIJAYALAKSHMI	R.M.K. Engineering College,Kavaraipettai INDIA	BLACK HOLES
Savitha.S Sarayu.Y Suji.S Dr. A. Vijayalakshmi	R.M.K. Engineering College,Kavaraipettai INDIA	ROBOTICS AND AUTOMATION IN AGRICULTURE
Thiruvengadam.T Sherin raj. R Dr. A. Vijayalakshmi	R.M.K. Engineering College,Kavaraipettai INDIA	WATER SCARCITY SOLUTIONS
Ilham M'RABTI	Sultan Moulay Slimane University MOROCCO	ASSESSMENT THE IMPACT OF CLIMATE CHANGE AND LAND USE/COVER ON WATER BALANCE IN THE UPPER OUM ER RABIA CATCHMENT USING HYDROLOGICAL MODELING
Souad. Belferdi S. Mokrani M. A. Abdi H. Bencherif	Mustafa Benboulaid University ALGERIA	NUMERICAL STUDY OF LEAD-FREE HALIDE PEROVSKITES KSNCL3 SOLAR CELLS USING INSE AS ELECTRON TRANSPORT MATERIALS
Mokrani Sabrina Belferdi Souad Zeghiche Yasmina Bencherif Hichem Bendib Toufik Kouda Souhil	Mustafa Benboulaid University ALGERIA	NUMERICAL STUDY OF 2D DION JACOBSON-BASED PEROVSKITE SOLAR CELLS USING SCAPS 1D
Mohamed El Amine Guerbazi Adel Chine Fouad Khaldi Abdellah Mohammedi Ayoub Boutaghane Khalid Faiza	Ecole Nationale Polytechnique de Constantine ALGERIA	TEMPERATURE EFFECTS IN POLYMER ELECTROLYTE FUEL CELLS MODELING
Y. Zeghiche	Higher National School of Renewable Energies ALGERIA	DOUBLE ETL HETEROSTRUCTURE WITH SPIKE-CLIFF CONFIGURATION TO BOOST THE EFFICIENCY OF DOUBLE PEROVSKITE SOLAR CELL
MAHDAOUI Hajar GHAZI Abdlkhalek	Ibn Tofail University MOROCCO	WASTEWATER TREATMENT IN POWER PLANTS AND ITS RELATIONSHIP TO THE ENVIRONMENT: A CASE STUDY OF KENITRA IN MOROCCO

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-1, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Hayriye ŞENTÜRK ÇİFTÇİ

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Sadettin DEMIREL İpek Nazli SINAG	Bursa Uludağ University TÜRKİYE	PHYTOTHERAPEUTIC EFFECTS OF FICUS CARICA LINN. LATEX AND ITS BIOCHEMICAL COMPONENTS ON LUNG CANCER
Esmanur ÇAĞ Dr. Meliha KOLDEMİR GÜNDÜZ	Kütahya Health Sciences University TÜRKİYE	CARBARYL INDUCES ADIPOGENESIS IN 3T3-L1 ADIPOCYTE CELLS
Dr. Meliha KOLDEMİR GÜNDÜZ Ayşe KOÇAK SEZGİN Güllü KAYMAK Elif AYDIN	Kütahya Health Sciences University TÜRKİYE	THE ROLE OF TIRZEPATIDE IN OBESITY TREATMENT
Assoc. Prof. Dr. Hayriye ŞENTÜRK ÇİFTÇİ	İstanbul University TÜRKİYE	INVESTIGATION OF THE ROLE OF NLRP3 INFLAMOSOME IN AUTOIMMUNE DISEASES THROUGH BIOINFORMATICS ANALYSIS
Ekin ÇELİK Durmuş Burak DEMİRKAYA Begüm EDİZ	Kırşehir Ahi Evran University TÜRKİYE Marmara University TÜRKİYE Kırşehir Ahi Evran University TÜRKİYE	DETERMINATION OF THE EFFECT OF MICRO RNA 149 ON MCF-7 BREAST CANCER CELL LINE
MSc. Nahdhoit Ahamada RACHID Prof. Dr. Nihal Doğruöz GÜNGÖR	İstanbul University TÜRKİYE	BIOTECHNOLOGICAL IMPORTANCE OF PREDATORY BACTERIA: CASE OF BDELLOVIBIRO BACTERIOVORUS
MSc. Nahdhoit Ahamada RACHID Prof. Dr. Nihal Doğruöz GÜNGÖR	İstanbul University TÜRKİYE	MICROBIAL SURFACTANTS AS POTENTIAL AGENTS OF GREEN AND BLUE ECONOMY
Assist. Prof. Dr. Ayşe ÖZMEN YAYLACI	Hitit University TÜRKİYE	BIOCHEMICAL AND HISTOPATHOLOGICAL INVESTIGATION OF THE POSSIBLE PROTECTIVE EFFECTS OF TARAKASTEROL-ACETATE ON OXIDATIVE STRESS DAMAGE DURING RENAL ISCHEMIA-REPERFUSION IN RATS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-2, SESSION-3

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Prof. Dr. Ali BAYKAL

AUTHORS	AFFILIATION	TOPIC TITLE
Ümit Can KAN Assoc. Prof. Dr. Mustafa İLHAN	Dicle University TÜRKİYE	AN EXAMINATION OF THE MEASUREMENT INVARIANCE OF THE MATHEMATICS ANXIETY SCALE IN TERMS OF GENDER VARIABLE
Mehmet Sait ALAKUŞ Prof. Dr. Sedat İLHAN	Dicle University TÜRKİYE	THE GENUS AND FROBENIUS NUMBER OF SOME PERFECT NUMERICAL SEMIGROUPS WITH THE DETERMINE NUMBER n(S)=5
Mehmet Sait ALAKUŞ Prof. Dr. Sedat İLHAN	Dicle University TÜRKİYE	ON A NOTE SOME NON PERFECT SYMMETRIC NUMERICAL SEMIGROUP WITH MULTIPLICITY FOUR
Assist. Prof. Dr. Gülsüm Çiğdem ÇAVDAROĞU	Işık University TÜRKİYE	A GEOSPATIAL ANALYSIS OF THE PARKS, EMERGENCY ASSEMBLY AREAS, AND URBAN GREEN SPACES IN IZMIR DISTRICTS
Ahmet TAŞDERE	Uşak University TÜRKİYE	A CRITICAL ANALYSIS OF EPDAD ACCREDITATION PROCESS: THE CASE OF SCIENCE TEACHING UNDERGRADUATE PROGRAM
Prof. Dr. Ali BAYKAL	Bahçeşehir University TÜRKİYE	TIMSS 2023: A FOCUS ON EDUCATIONAL SUCCESS AND FAILURE DYNAMICS
Prof. Dr. Ali BAYKAL	Bahçeşehir University TÜRKİYE	TIMSS 2023: SEARCH FOR A PATTERN WITHIN KNOWING, APPLYING, AND REASONING SKILLS
Assoc. Prof. Dr. Erkan KIRIŞ	Recep Tayyip Erdoğan University TÜRKİYE	ANALYSIS OF SOME HEAVY METALS IN ARABICA AND ROBUSTA COFFEE BEANS SAMPLES CONSUMED IN TURKEY USING ICP-OES METHOD
Assoc. Prof. Dr. Erkan KIRIŞ Kübra CAMGÖZ Aslı HATİPOĞLU	Recep Tayyip Erdoğan University TÜRKİYE	EVALUATION OF SOME HEAVY METALS CONCENTRATION IN ORGANIC BLACK TEA SAMPLES

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-3, SESSION-3

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Prof. Dr. Yasin ARSLAN

AUTHORS	AFFILIATION	TOPIC TITLE
Assist. Prof. Dr. Elif ERÇARIKCI Assist. Prof. Dr. Emir ÇEPNİ	Atatürk University TÜRKİYE	FABRICATION OF BI-COMPONENT COPPER OXIDE/GRAPHENE OXIDE FLEXIBLE PAPER FOR REMOVAL OF METHYLENE BLUE
Assoc. Prof. Dr. Hasan Basri SAVAŞ	Mardin Artuklu University TÜRKİYE	RELATIONSHIP BETWEEN FOOD ADDITIVES AND CANCER: SCIENTIFIC EVALUATION
Assoc. Prof. Dr. Hasan Basri SAVAŞ	Mardin Artuklu University TÜRKİYE	MEDICAL EDUCATION IN MARDIN BIMARISTAN
Assoc. Prof. Dr. Emre ARSLANBAŞ Berker BAYDAN	Aksaray University TÜRKİYE HAVELSAN, Technology Campus, Ankara TÜRKİYE	A GENERAL OVERVIEW OF ARTIFICIAL INTELLIGENCE APPLICATIONS IN PHARMACOLOGY
Gizem AYDIN	ERETEAM, R&D İstanbul TÜRKİYE	COMPARISON OF LARGE LANGUAGE MODELS IN TEXT NORMALIZATION: T5 AND GPT-2
Prof. Dr. Yasin ARSLAN Prof. Dr. Fatma TOMUL	Burdur Mehmet Akif Ersoy University TÜRKİYE	REMOVAL OF METHYLENE BLUE BY SILVER NANOPARTICLES/NANOCOM POSITES
Prof. Dr. Fatma TOMUL Prod. Dr. Yasin ARSLAN	Burdur Mehmet Akif Ersoy University TÜRKİYE	EFFICIENT REMOVAL OF DICLOFENAC FROM WASTEWATER USING MESOPOROUS CALCIUM SILICATE AND IRON-LOADED MESOPOROUS CALCIUM SILICATE
Dr. Seda AĞÇAM Prof. Dr. Gül ÖZYILMAZ	Hatay Mustafa Kemal University TÜRKİYE	INVESTIGATION OF PHENOLIC COMPONENTS AND ANTIOXIDANT ACTIVITIES OF HALHALI , OLIVE LEAF EXTRACT FOR 12 MONTHS
Res. Assist. Dr. Furkan Ozan ÇÖVEN Res. Assist. Ayşegül İNAM Assist. Prof. Dr. Tülay ÖNCÜ ÖNER	Manisa Celal Bayar University TÜRKİYE	DETERMINATION OF ANTIBACTERIAL AND CYTOTOXIC ACTIVITIES OF ROOTS OF FERULA ELAEOCHYTRIS

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-4, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Melik Sami

AUTHORS	AFFILIATION	TOPIC TITLE
Melik Sami Khelil Sara Tallal Abdel Karim Bouzir	Mohamed Khider Biskra University ALGERIA Blida University ALGERIA	REDUCING ENERGY LOSS IN BUILDINGS: THE ROLE OF NEXT-GENERATION INSULATION SYSTEMS
Alexandrov V.S.	Kazan National Research Technical University named after A.N. Tupolev RUSSIA	APPLICATION OF EMBEDDED SYSTEMS TO THE ASSESSMENT OF THE OPERABILITY OF A COMPLEX OBJECT
Amritha LJ Sreejith J	SRM University INDIA	REDEFINING ENERGY FINANCE GOVERNANCE: PUBLIC AND PRIVATE SYNERGIES
Syed Anam Shaheen Abbas Shah Muhammad Shoaib Muhammad Yasin Naz Shazia Shukrullah	Agriculture University PAKISTAN	SYNTHESIS AND CHARACTERIZATION OF SILICA-CHITOSAN DECORATED MAGNETIC NANOSTRUCTURE FOR WASTEWATER TREATMENT
Jeton Halili Fatjona Isufaj Skender Demaku Arbnora Aliu Donika Sylejmani	Hasan Prishtina University of Prishtina KOSOVO Alma Matter Europaea Campus College KOSOVO	SOURCE IDENTIFICATION AND RISK ASSESSMENT OF HMS IN THE WATER AND SEDIMENT OF NERODIME RIVER IN MUNICIPALITY OF FERIZAJ-KOSOVO
Priyam Sarmah Sagarika Sarma	Gauhati University INDIA	POTENTIAL OF HEAVY METALS TOLERATING AND BIOSURFACTANT PRODUCING BACTERIAL CONSORTIA IN REMOVAL OF CRUDE OIL FROM CONTAMINATED WATER
Bilal Shoukat Muhammad Yasin Naz Shazia Shukrullah Hammad Hussain Muhammad Shoaib	Agriculture University PAKISTAN	CONVERSION OF PLASTIC WASTE INTO BAMBOO-TYPE CARBON NANOTUBES AND HIGH-QUALITY OIL USING BIOCHAR AS CATALYST
Mohammed Ouali Mahfoud Touhari Noura Ghrib	Djilali Bounaama University ALGERIA	ETUDE TECHNIQUE ET ANALYSE STATIQUE NON LINEAIRE D'UN BATIMENT EN BETON ARME
Thai Quoc Le Hau Huu Le	Nha Trang University VIETNAM The Lion Investment Management Limited Liability Company VIETNAM	AN ANALYSIS OF FACTORS AFFECTING THE ACCEPTANCE AND COMPLETION OF CONSTRUCTION PROJECTS TO PUT THEM INTO USE ON SCHEDULE IN LONG AN PROVINCE, VIETNAM

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-5, SESSION-3

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assoc. Prof. Dr. Violla Makhzoum

AUTHORS	AFFILIATION	TOPIC TITLE
Saeed Ahmad Zaman Dr. Naima Nawaz Dr. Idrees Dr. Zain Nawaz Nadia Idrees Dr. Ijaz Ashraf Lubna Anjum Dr. Shahzad Ayesha Riaz Abdul Rahman	Agriculture University PAKISTAN	DETERMINATION OF SAMPLE SIZE AND SAMPLING METHODS IN APPLIED RESEARCH
Saeed Ahmad Zaman Dr. Naima Nawaz Dr. Idrees Dr. Zain Nawaz Nadia Idrees Dr. Ijaz Ashraf Lubna Anjum Dr. Shahzad Ayesha Riaz Abdul Rahman	Agriculture University PAKISTAN	"ENERGY STUDIES" ESTABLISHING A NEW DISCIPLINE
Dr. Yasira Waqar Dr. Irfan Bashir Dr. Afshan Naseem Fareeha Sherazi	Management and Technology University PAKISTAN	STUDENT-TEACHER RELATIONSHIP AND CLASSROOM ENGAGEMENT AT UNDERGRADUATE LEVEL IN PAKISTAN
Payam Tarighi Ali Akbary	Ahlul Bayt International University IRAN	NEW STRUCTURAL SYSTEMS
Nitika Thakur	Shoolini University INDIA	BARRIERS TO WOMEN'S ADVANCEMENT IN THE WORKPLACE: GENDER PAY GAP, GLASS CEILING, AND STICKY FLOORS
Md.Mizanur Rahman	Bangabandhu Sheikh Mujibur Rahman Science and Technology University BANGLADESH	"SHIFTING SANDS: THE EVOLVING POWER DYNAMICS IN SYRIA AND THE MIDDLE EAST"
Syed Agung Afandi Rizki Erdayani Muslim Afandi	Universitas Islam Negeri Sultan Syarif Kasim Riau INDONESIA	LOCAL OPEN GOVERNMENT ISSUES IN AUSTIN, UNITED STATES
Assoc. Prof. Dr. Violla Makhzoum	Modern University for Business and Science (MUBS) LEBANON	THE IMPACT OF INNOVATIVE CURRICULA ON PREPARING HUMAN RESOURCES FOR JOB MARKET REQUIREMENTS: A STUDY OF PRIVATE BUSINESS ADMINISTRATION STUDENTS IN LEBANON

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-6, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Engr. Muneeb Hassan & Engr. Haseeb Hassan

AUTHORS	AFFILIATION	TOPIC TITLE
Kiril Degtyarev Vasyl Gnitko Denys Kriutchenko Ivan Osypov Elena Strelnikova	A, Podhorny Institute of Mechanical Engineering Problems UKRAINE V. N. Karazin Kharkiv National University UKRAINE	MODELING CRACK PROPAGATION IN POWER MACHINE UNITS
Nadhira BİOUD Abdelfateh BENMAKHLOUF Rabie MEZOUAR	Mohamed El Bachir El Ibrahimi-Bordj University ALGERIA	IMPACT OF HIGH-PRESSURE AND HIGH-TEMPERATURE ON BULK MODULUS AND PRESSURE DERIVATIVE OF THE BULK MODULUS IN MgCu
OGAH, Jude Ogbu IROKWE, Jesinta Ineoma HARUNA, Enyeojo Daniel SHAAPERA, Moses AKIRGHIRGA, Luter Richard	Joseph Sarwuan Tarkaa Unıversıty Makurdı NIGERIA	AUTOMATIC TRAFFIC CONTROLLER WITH VIOLATION DETECTION SYSTEM
V. N. AMADI S.O. OKEMINI Prof. S.A. JONAH	Ndufu-Alike Federal University NIGERIA Ahmadu Bello University NIGERIA	COMPREHENSIVE CALIBRATION OF A 5.08 cm × 5.08 cm NaI (Tl) DETECTOR FOR GAMMA-RAY SPECTROMETRY ACROSS 59.5–1332.5 keV, USING PRIMARY GAMMA EMISSION LINES
Engr. Muneeb Hassan Engr. Haseeb Hassan	Pakistan Institute Of Engineering and Technology Multan PAKISTAN Sargodha University PAKISTAN	LEVERAGING DIGITAL TWIN TECHNOLOGY FOR RESILIENT INFRASTRUCTURE DEVELOPMENT
ALI Hamada	Hassan II University MOROCCO	ELIMINATION OF CRYSTAL VIOLET DYE CONTAINED IN WASTEWATER BY COMBINING ELECTROCOAGULATION TECHNIQUE WITH BIOCOAGULANTS
Ishaku Gunda Abdullahi Muhammad Aminu Musa	Ahmadu Bello University NIGERIA	EVALUATING THE INFLUENCE OF PCM IN VARIOUS PARTS OF THE BUILDING ENVELOPE FOR PASSIVE THERMAL COMFORT IN THE TEMPERATE DRY CLIMATE OF NIGERIA
Ephesus O. Fatunmbi Olubisi, L. Aako Olusegun A. Olaiju	Federal Polytechnic NIGERIA	NUMERICAL COMPUTATION FOR REACTIVE MAGNETIZED EYRING-POWELL NANOFLUIDIC FLOW OVER A THIN STRETCHY DEVICE WITH GENERALIZED ARRHENIUS KINETICS
GUNASEKAR G	Annamalai University INDIA	HOUSEHOLD, HUMAN PESTS AND THEIR MANAGEMENT
Kerim Mert CELIK Murat BAYRAKTAR Rahman EHVAN Ilker KUZUCU Prof. Dr. Onur ÇOBAN	LINDE OPSAN Inc. Kocaeli TÜRKİYE Kocaeli University	EFFECT OF EJECTOR PUNCH ON TOOL LIFE AND COST EFFECTIVENESS IN ULTRA-HIGH STRENGTH STEEL PUNCHING PROCESS
Eng. Furkan KILIÇ Assist. Prof. Dr. Hasan DEMİRTAŞ Res. Assist. Abdulkadir ÇEBİ	R& D Engineer, POELSAN Plastic Industry and Trade Inc. Samsun TÜRKİYE Samsun University TÜRKİYE	THE EFFECT OF PARAMETERS ON THE MATERIAL REMOVAL RATE IN THE SINKING ELECTRICAL DISCHARGE MACHINING OF AISI 1.2738 STEEL

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 14 00 : 16 00
HALL-7, SESSION-3

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Aliyu Hassan

AUTHORS	AFFILIATION	TOPIC TITLE
Aniekan Essienubong Ikpe Imoh Ime Ekanem Samuel Cletus Akpan	Akwa Ibom State Polytechnic NIGERIA Enugu State University NIGERIA	ADOPTION OF ANN ALGORITHMS IN OPTIMIZATION PROCESS OF VEHICLE BREAK PAD MANUFACTURING LINE
Imoh Ime Ekanem Samuel Cletus Akpan Emem Okon Ikpe	Akwa Ibom State Polytechnic NIGERIA Enugu State University NIGERIA	DEPLOYMENT OF REGENERATIVE AI APPROACH IN CONVENTIONAL MANUFACTURING PROCESSES
Nadagouda Kalyani Chathura Balasai Yalakacharla Narasimha Devara Guru Venkata Prasad Dasari Rahul Gandhi Bommepalli Pradeep Reddy	G. Pulla Reddy Engineering College INDIA	STUDY ON COMPRESSIVE STRENGTH OF QUARRY DUST AS FINE AGGREGATE IN CONCRETE
Nadagouda Kalyani Chyaraju Balasai Yalakacharla Narasimha Devara Guru Venkata Prasad Dasari Rahul Gandhi Bommepalli Pradeep Reddy	G. Pulla Reddy Engineering College INDIA	APPLICATION OF REMOTE SENSING METHODS IN AGRICULTURE
Chenafi Mohamed Amine Abdesselam Boucif Kamel Demmouche	Ain Temouchent University ALGERIA	IMPACT OF AG AND Mg SUBSTITUTION ON THE PROPERTIES OF CuZnSnS QUATERNARY SEMICONDUCTORS FOR OPTOELECTRONIC APPLICATIONS
Aliyu Hassan	Air Force Institute of Technology, Nigerian Air Force NIGERIA	ANALYZING THE IMPACT OF TEMPERATURE FLUCTUATIONS ON THE PROPERTIES OF SLAG CEMENT CONCRETE
Anas Hamdani Said Bouda Atman Adiba Rachid Razouk	National Institute of Agricultural Research (INRA) MOROCCO Sultan Moulay Slimane University MOROCCO	AGRO-PHYSIOLOGICAL AND BIOCHEMICAL RESPONSES OF THE 'ANGELINO' CULTIVAR (PRUNUS SALICINA L) UNDER CONDITIONS OF DROUGHT AND HEAT STRESS
BENZAHRA Hayat MRABTI Imane AIT BADDOU Sanae GRIJJA Hassan SELMAOUI Karima AFECHTAL Mohamed	National Institute for Agricultural Research MOROCCO Ibn Toufail University MOROCCO	BIOLOGICAL CONTROL OF PENICILLIUM DIGITATUM AND PENICILLIUM ITALICUM ON POSTHARVEST CITRUS FRUITS
Kaouthar ELBIRGUI Houssam ASSIOUI Omaima BOUDIA Hanane ENNAJI Houda ELALAMI Nadia IOUNES Samir IBENMOUSSA	Hassan II University MOROCCO	EXPLORING THE SAFETY AND TOXICITY OF ADENOCARPUS DECORTICANS: BRINE SHRIMP LETHALITY AND ORAL ADMINISTRATION IN BALB/C MICE

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 16 30 : 18 30
HALL-1, SESSION-4

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Dr. Yasemin KEŞKEK KARABULUT

AUTHORS	AFFILIATION	TOPIC TITLE
Lect. Fatma DOYUK Assoc. Prof. Dr. Hafize DİLEK TEPE	Manisa Celal Bayar University TÜRKİYE	UNVEILING THE ANTIOXIDANT POTENTIAL AND PHYTOCHEMICAL RICHES OF ELDERBERRY AND ELDERFLOWER: A COMPREHENSIVE ANALYSIS OF SAMBUCUS NIGRA L. EXTRACTS
Lect. Dr. Yasemin KEŞKEK KARABULUT Lect. Dr. Erhan ÖZTÜRK Assoc. Prof. Dr. Zeynep Şilan TURHAN	Kırklareli University TÜRKİYE Iğdır University TÜRKİYE Iğdır University TÜRKİYE	DOCKING STUDY OF CANDIDATE 1,3,4-THIADIAZOLE DERIVATIVES WITH ANTIBACTERIAL ACTIVITY
Lect. Dr. Erhan ÖZTÜRK Lect. Dr. Yasemin KEŞKEK KARABULUT Assoc. Prof. Dr. Zeynep Şilan TURHAN	Iğdır University TÜRKİYE Kırklareli University TÜRKİYE Iğdır University TÜRKİYE	CALCULATION OF ANTIBACTERIAL ACTIVITIES OF 1,3,4-THIADIAZOLE DERIVATIVES BY DFT METHOD
Dr. Emre Şefik ÇAĞLAR Dr. Emine Saldamlı Prof. Dr. Neslihan Üstündağ OKUR	University of Health Sciences TÜRKİYE	DEVELOPMENT AND VALIDATION OF AN HPLC METHOD FOR MOXIFLOXACIN HCl ACTIVE SUBSTANCE IN BULK AND PHARMACEUTICAL FORMULATION
Dr. Emre Şefik ÇAĞLAR Dr. Mehmet Evren OKUR	University of Health Sciences TÜRKİYE	INTRANASAL DRUG DELIVERY AND PHARMACEUTICAL APPLICATIONS
Sena Nur YILMAZ	Dimes Food and Drink Ind. and Inc. İzmir TÜRKİYE	NATURAL ANTIMICROBIAL PRESERVATIVE ADDITIVES USED IN THE FOOD INDUSTRY
Dr. Gamze KOR SIMSEK Prof. Dr. Filiz ICIER	Dimes Food and Drink Ind. & Inc. İzmir TÜRKİYE Ege University TÜRKİYE	EMERGING TECHNOLOGIES IN THE EXTRACTION OF LYCOPENE FROM TOMATO PROCESSING BYPRODUCTS
Sinem ATAC	Dimes Food and Drink Ind. & Inc. İzmir TÜRKİYE	APPLICATIONS OF MICROBIAL ENZYMES IN THE FOOD INDUSRTY
Lect. Dr. Hilal YILMAZ Prof. Dr. Vahdettin ÇİFTÇİ	Kocaeli University TÜRKİYE Bolu Abant İzzet Baysal University TÜRKİYE	ROLE OF MICROBIAL BIOSTIMULANTS IN MITIGATING DROUGHT STRESS
Lect. Dr. Hilal YILMAZ Prof. Dr. Vahdettin ÇİFTÇİ	Kocaeli University TÜRKİYE Bolu Abant İzzet Baysal University TÜRKİYE	THE ROLE OF NANO IRON (Fe) APPLICATIONS IN PLANT GROWTH AND PHYSIOLOGY UNDER DROUGHT STRESS
Assist. Prof. Dr. Özlem ÖZKAN ÖNÜR Dr. Ethem İLHAN ŞAHİN	Nişantaşı University TÜRKİYE Adana Alparslan Türkeş Science and Technology University TÜRKİYE	THE ROLE OF SELF-HEALING MATERIALS IN ARCHITECTURE AND THEIR IMPACT ON FUTURE BUILDING TECHNOLOGIES

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 16 30 : 18 30
HALL-2, SESSION-4

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assist. Prof. Dr. Betül GARDA

AUTHORS	AFFILIATION	TOPIC TITLE
Lect. Zeynep MÜHÜRCÜOĞLU Prof. Dr. Rahmi YÜCEL	Bolu Abant İzzet Baysal University TÜRKİYE	THE EFFECT OF SUNK COST BIAS ON RATIONAL DECISION-MAKING STYLE: A STUDY ON R&D FIRMS IN TECHNOLOGY DEVELOPMENT ZONES
Prof. Dr. Rahmi YÜCEL Assist. Prof. Dr. Derya YÜCEL	Bolu Abant İzzet Baysal University TÜRKİYE	INNOVATION ACCOUNTING
Nagihan KIZILTAŞ Assoc. Prof. Dr. Ümit BAŞARAN	Zonguldak Bülent Ecevit University TÜRKİYE	A STUDY ON THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY ADVERTISEMENTS ON CONSUMER BEHAVIOR
Lect. Dr. Emre SEYREK	Ağrı İbrahim Çeçen University TÜRKİYE	GREEN CONCEPTS IN MANAGEMENT AND ORGANIZATION: A SYSTEMATIC REVIEW OF GRADUATE THESES IN TURKEY
Lect. Dr. Zeliha SÜNBÜL KOÇAK	Balıkesir University TÜRKİYE	THE USE OF ARTIFICIAL INTELLIGENCE FOR ADVANCED CLIMATE CHANGE ACCOUNTING: SUSTAINABLE DECISION-MAKING
Can ŞAHAN Assoc. Prof. Dr. İstem KÖYMEN	Amasya University TÜRKİYE Dokuz Eylül University TÜRKİYE	EXAMINATION OF THE EARTHQUAKE PREPAREDNESS OF AFAD AND FIRE BRIGADE PERSONNEL
Res. Assist. Dr. Seyfettin ANMAÇ Assist. Prof. Dr. Muhammet Ali AYTAÇ	Hakkari University TÜRKİYE İstanbul Gedik University TÜRKİYE	MIXED METHODS IN MARKETING RESEARCH: EVOLUTION, KEY TOPICS, AND METHODOLOGICAL PATTERNS
Assist. Prof. Dr. Betül GARDA	Selçuk University TÜRKİYE	SUSTAINABLE TOURISM AND ENVIRONMENTALLY FRIENDLY PRACTICES
Assist. Prof. Dr. Betül GARDA	Selçuk University TÜRKİYE	DIGITALIZATION AND TECHNOLOGICAL INNOVATIONS IN TOURISM

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 16 30 : 18 30
HALL-3, SESSION-4

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assoc. Prof. Dr. Zeynep Yeşim İLERİSOY

AUTHORS	AFFILIATION	TOPIC TITLE
Ayşe Nur YILDIZ Beyza BAYRAK Öznur KESKİN Assoc. Prof. Dr. Alper BİDECİ	Düzce University TÜRKİYE	INVESTIGATION OF FAÇADE DEMAGES IN MASS HOUSING STRUCTURES: THE CASE OF BEYKÖY-DÜZCE
İrfan Talha KARADOĞAN Mehmet Emin GÜNDOĞDU Ahmet KILIÇ Assoc. Prof. Dr. Alper BİDECİ	Düzce University TÜRKİYE	ANALYSIS OF THE RISKS OF STEEL EXTERNAL ESCAPE STAIRS IN STUDENT DORMITORIES
Res. Assist. Berru İzel GÖKGÖZ Assoc. Prof. Dr. Zeynep Yeşim İLERİSOY	OSTİM Technical University TÜRKİYE Gazi University TÜRKİYE	EVOLUTION AND FUTURE OF SMART HOME TECHNOLOGIES
MSc. Şeyma ÖZBERBER Assoc. Prof. Dr. Zeynep Yeşim İLERİSOY	Gazi University TÜRKİYE	INCLUSION OF THE SMART BUILDING CONCEPT IN NATIONAL-SCALE CORPORATE REPORT
Res. Assist. Seyhan SEYHAN Prof. Dr. Elif BAYRAMOĞLU Assoc. Prof. Dr. Mahmut M. BAYRAMOĞLU	Karadeniz Technical University TÜRKİYE	POSSIBILITIES OF URBAN OPEN SPACE INNER COURTYARDS IN PUBLIC HOUSING
Res. Assist. Seyhan SEYHAN Prof. Dr. Elif BAYRAMOĞLU Assoc. Prof. Dr. Mahmut M. BAYRAMOĞLU	Karadeniz Technical University TÜRKİYE	GREEN ECONOMY DIMENSION OF URBAN OPEN GREEN AREAS
Assist. Prof. Dr. Güneş MUTLU AVİNÇ Assist. Prof. Dr. Rüya KILIÇ DEMİRCAN	Muş Alparslan University TÜRKİYE Sinop University TÜRKİYE	A BIBLIOMETRIC ANALYSIS ON WOODEN STRUCTURAL MATERIALS
Assist. Prof. Dr. Rüya KILIÇ DEMİRCAN Assist. Prof. Dr. Güneş MUTLU AVİNÇ	Sinop University TÜRKİYE Muş Alparslan University TÜRKİYE	6 FEBRUARY 2023 STRUCTURAL DAMAGE CONDITIONS OF ELBISTAN CENTRAL DISTRICT AND RURAL AREAS AFTER THE KAHRAMANMARAŞ EARTHQUAKES

ONLINE PRESENTATIONS / 21.12.2024

ANKARA LOCAL TIME - 16 30 : 18 30
HALL-4, SESSION-4

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HEAD OF SESSION: DR. CHUKWUEMEKA G. EME

AUTHORS	AFFILIATION	TOPIC TITLE
YAKUBU Abubakar Lidani	Federal Polytechnic Kaltungo NIGERIA	ATM CARD SCAM IN NIGERIA AND THE WAY OUT. A PROPOSED FRAMEWORK
Anwesha Ghosh	Amity University INDIA	DRIVING DIVERSITY: HOW INDIAN CORPORATE LAW CHAMPIONS SDG 5
Sagnika Das	North Bengal University INDIA	A STUDY ON THE CHALLENGES OF IMPLEMENTATION OF THE SOCIO-ECONOMIC RIGHTS IN THE SAARC COUNTRIES: AN ANALYTICAL STUDY
DEEPIKA. D	R.M.K. Engineering College INDIA	GLOBAL TRENDS: INFLATION, INTEREST RATES, AND MONETARY POLICY
DR. CHUKWUEMEKA G. EME	National Open University NIGERIA	APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN THE 21ST CENTURY MANUFACTURING INDUSTRY IN NIGERIA: INSIGHT FROM SELECTED MANUFACTURING COMPANIES IN ABIA STATE, NIGERIA
DR. CHUKWUEMEKA G. EME	National Open University NIGERIA	CLIMATE CHANGE AND ITS EFFECTS ON THE SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA
DR. CHUKWUEMEKA G. EME	National Open University NIGERIA	FACTORS INFLUENCING RURAL-URBAN MIGRATION OF YOUTHS IN ABIA STATE, NIGERIA
Anna AUZA José Alberto FUINHAS	Coimbra University PORTUGAL	NO SOCIAL CAPITAL WITHOUT BIODIVERSITY
Anna AUZA José Alberto FUINHAS	Coimbra University PORTUGAL	IS ECONOMIC CONNECTEDNESS LIKELY TO RAISE ENVIRONMENTAL FOOTPRINT?
José Alberto FUINHAS Anna AUZA	Coimbra University PORTUGAL	BIODIVERSITY AND SOCIAL CAPITAL THROUGH THE LENS OF INCOMPLETE CONTRACTS

ONLINE PRESENTATIONS / 21.12.2024

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HALL-5, SESSION-4

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HEAD OF SESSION: Zineb El Hamri

AUTHORS	AFFILIATION	TOPIC TITLE
Amal Dagni Soukayna Jarjini Souraya Sakoui Abdelaziz Soukri Bouchra El khalfi	Hassan II University MOROCCO	BIOLOGICAL ACTIVITIES OF DYSPHANIA AMBROSIOIDES ESSENTIAL OIL: ANTIMICROBIAL AND ANTIOXIDANT PROPERTIES
Kadiata Ba Bouchra EL Khalfi Abdelaziz Soukri	Hassan II University MOROCCO	STUDY OF THE BIOLOGICAL ACTIVITIES OF NATURAL EXTRACTS FROM SOME EXOTIC PLANTS
Khadija BENAMAR Rachid Lahlali Saad Ibnsouda Koraichi Kawtar Fikri-Benbrahim	Sidi Mohamed Ben Abdellah University MOROCCO National School of Agriculture MOROCCO	APPLICATIONS OF PROPOLIS IN POSTHARVEST APPLES BLUE MOLD DISEASE MANAGEMENT
Fowotade, Sulayman. A. Umar Abdullahi A. Ahmad Fadhila. Murtala Dahiru Y. Hafsat Usman K. Jonah Ojonugwa	Hussaini Adamu Federal Polytechnic NIGERIA	COMPARATIVE ANALYSIS OF BIOACTIVE PROPANOLIC EXTRACT OF TERMITE INVADED AND TERMITE FREE BARK OF AZADIRACHTA INDICA IN HUSSAINI ADAMU FEDERAL POLYTECHNIC KAZAURE, JIGAWA NIGERIA
Fathalah ELWAHAB Rabea ZIRI Ranya HAJJAMİ Ali AIT YOUSSEF Mohamed SEDKİ	Ibn Toufail University MOROCCO Regional Center of Agricultural Research of Kenitra MOROCCO	TACKLING RICE YELLOW MOTTLE VIRUS (RYMV): A COMPREHENSIVE APPROACH TO DISEASE MANAGEMENT
Dra. Mariana López Sámano Dra. Kalpana Nanjareddy Dr. Manoj-Kumar Arthikala	National Autonomous University MEXICO	PROMOTER ACTIVITY OF NLP1 AND NLP7 GENES IN PHASEOLUS VULGARIS DURING SYMBIOSIS WITH RHIZOBIUM TROPICI
Zineb El Hamri M. Alami M. Assouag	Moulay Ismail University MOROCCO	EFFECT OF WALNUT SHELL POWDERS ON THE MORPHOLOGICAL, THERMAL, AND MECHANICAL PROPERTIES OF POLY(LACTIC ACID)
Zineb El Hamri M. Alami M. Assouag	Moulay Ismail University MOROCCO	THE IMPACT OF NaOH PRETREATMENT, THERMAL PRETREATMENT, AND THEIR COMBINED NaOH-THERMAL APPROACH ON BIOMETHANE PRODUCTION FROM THE ANAEROBIC DIGESTION OF WALNUT SHELLS
D, Malathi S, Bhuvaneswari	Bharathi Women's College INDIA	PHYTOCHEMICAL ANALYSIS OF TRADITIONALLY USED MEDICINAL PLANTS

ONLINE PRESENTATIONS / 21.12.2024

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HALL-6, SESSION-4

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HEAD OF SESSION: Dr. Chokri BAYOUDH

AUTHORS	AFFILIATION	TOPIC TITLE
Chaimaa Moukhfi Youssef Ghandi Hamza Ouachtouk Soufiane Zerraf Mohammed Elalaoui Belghiti S. Belaaouad	Hassan II University MOROCCO	ADVANCED APPROACHES TO THE SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF PHOSPHATE COMPOUNDS
LAHOUEL Khemissi GASMI Meriem	Abbes Laghrour University ALGERIA	MORPHOLOGICAL, STRUCTURAL AND OPTICAL PROPERTIES OF SnO2 THIN FILM DEPOSITED BY SOL-GEL DIP COATING METHOD
Adel DELIOU Abdelkader FIDJAH Khmissi BELKAID Meriem DEHBI	Djelfa University ALGERIA Scientific and Technical Research Center on Arid Regions CRSTRA ALGERIA	STUDY OF FAILURE OF KEVLAR/EPOXY COMPOSITE LAMINATES
Dr. Chokri BAYOUDH Mrs. Hedil GAAYA Mrs. Afifa MAJDOUB Pr. Taoufik BETTAIEB	Regional Research Centre on Horticulture and Organic Agriculture (CRRHAB) TUNUSIA IRESA-University TUNUSIA Regional Research Centre on Horticulture and Organic Agriculture (CRRHAB) TUNUSIA Carthage University TUNUSIA	IMPACT OF AgNO3 ON ETHYLENE INHIBITORY EFFECTS REDUCTION OF UCB-1 PISTACHIO ROOTSTOCK VITROPLANTLETS
Azzeddine Taoufyk Benhadria Elhouceine Fatima Elgharbi Rezzouq Asiya Mahfoud Agunaou Lahoucine Bahsis	Hassan II University MOROCCO	PRACTICAL AND RAPID SYNTHESIS OF VARIOUS CHROMENE-BASED PHARMACEUTICAL PRODUCTS, ASSISTED BY Ag@Co3O4/ALGINATE AS A HETEROGENEOUS CATALYST, BIODEGRADABILITY, AND EFFICACY
Hussein Kh. Rasheed Aseel A. Kareem	Baghdad University IRAQ	PREPARATION AND CHARACTERIZATION OF SOLID POLYMER ELECTROLYTE BASED ON PVA/PMDA
Pooja Rasal Gaurav Kasar	JES's SND College of Pharmacy INDIA	AQUASOMES: A NOVEL DRUG CARRIER SYSTEM
Mekki Amel Hammou Mohamed Bouzid Kouider Chinoune Kheira Bouhoussa Bouhadjar	Higher School of Biological Sciences of Oran (ESSBO) ALGERIA Oran1 Ahmed Ben Bella University ALGERIA Science and Technology University ALGERIA Mohamed Boudiaf University of Science and Technology ALGERIA	ADSORPTION CHARACTERISTICS OF MB DYE ON ALGINATE-SEPIOLITE BIOCOMPOSITE BEADS: STUDY OF ADSORPTION, SPEED, AND SIMULATION
Sai Janavi P H Sandhya M Dr. A. Vijayalakshmi	R.M.K. Engineering College,Kavaraipettai INDIA	CHEMINFORMATICS

ONLINE PRESENTATIONS / 21.12.2024

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HALL-7, SESSION-4

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HEAD OF SESSION: Dr. Jayasree Krishnan

AUTHORS	AFFILIATION	TOPIC TITLE
Romina RADONSHIQI Bledar RADONSHIQI	LOGOS College University ALBANIA CEO Eventalb ITALY	WORKING CONDITIONS AND SALARY IN ALBANIA
Raji Farouk Abiodun Dr. Abd-El-Aziz, Abd-El-Latif Adekunle	Ilorin University NIGERIA	ASSESSMENT OF RESOURCES FOR QUALITY BLOCK / BRICKLAYING AND CONCRETING TRADE IN TECHNICAL COLLEGES IN OGUN STATE
Sajjadur Rahman	Dhaka University BANGLADESH	INTERNET OF THINGS (IOT) ON THE DEVELOPMENT OF AGRICULTURE 5.0: PROSPECTS AND CHALLENGES
Jona Spahiu	Tirana University ALBANIA	MAIN CHALLENGES OF THE CONCEPT OF FUNDAMENTAL BREACH UNDER THE UNITED NATIONS CONVENTION ON INTERNATIONAL SALE OF GOODS
Olena BOKIY Kateryna DANILOVA	Institute of Food Resources of NAAS UKRAINE	OVERCOMING THE CONSEQUENCES OF WAR AND CRISIS IN THE AGRICULTURAL SECTOR OF UKRAINE, TAKING INTO WORLD EXPERIENCE
Dr. Jayasree Krishnan Ms Reshma Devi	Vels Institute of Science Technology and Advanced Studies (VISTAS) INDIA St Joseph's College of Engineering INDIA	THE IMPACT OF DIGITAL WALLETS ON STUDENTS' IMPULSIVE PURCHASE DECISIONS
Noémi Mózes Andrea Lehoczki Mónika Fekete Tamás Csípő	Semmelweis University HUNGARY	SPERMIDINE-RICH FOODS AND CHRONIC DISEASE PREVENTION: INSIGHTS FROM NUTRITIONAL STUDIES

ONLINE PRESENTATIONS / 22.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-1, SESSION-1

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. İsmail DEMİR

AUTHORS	AFFILIATION	TOPIC TITLE
Vildan İNCE Prof. Dr. Aydın ALP	Dicle University TÜRKİYE	COMPARISON OF QUALITY ELEMENTS OF BREAD WHEAT TYPES AND LINES
Lect. Dr. Feyza Döndü BİLGİN Assoc. Prof. Dr. İlkay YAVAŞ	Aydın Adnan Menderes University TÜRKİYE	EFFECTS OF INCREASES IN NIGHT TEMPERATURES ON PLANTS
Prof. Dr. Şebnem KUŞVURAN Dr. Damla TURAN BÜYÜKDİNÇ	Çankırı Karatekin University TÜRKİYE Recep Tayyip Erdoğan University TÜRKİYE	EFFECT OF NANO SILICON APPLICATIONS ON BIOCHEMICAL CHANGES IN PEPPER UNDER DROUGHT STRESS CONDITIONS
Ahmet DANCI Assoc. Prof. Dr. Yakup Onur KOCA	Aydın Adnan Menderes University TÜRKİYE	POPCORN (Zea mays everta)
Murat ÇAVUMİRZA Assoc. Prof. Dr. İsmail DEMİR	Kırşehir Ahi Evran University TÜRKİYE	CULTIVATION AND IMPORTANCE OF CONFECTIONARY SUNFLOWER IN TURKEY
Murat ÇAVUMİRZA Assoc. Prof. Dr. İsmail DEMİR	Kırşehir Ahi Evran University TÜRKİYE	THE EFFECTS OF DIFFERENT SALT CONCENTRATIONS ON GERMINATION AND SEEDLING GROWTH OF CONFECTIONARY SUNFLOWER (Helianthus annuus L.) VARIETIES
Assoc. Prof. Dr. İsmail DEMİR	Kırşehir Ahi Evran University TÜRKİYE	RELATIONSHIP BETWEEN YIELD AND SOME YIELD COMPONENTS OF SAFFLOWER (Carthamus tincturus L.)
Assoc. Prof. Dr. İsmail DEMİR	Kırşehir Ahi Evran University TÜRKİYE	DETERMINATION OF FLOWER YIELD AND YIELD COMPONENTS OF SOME SAFFLOWER (Carthamus tincturus L.) CULTIVARS IN KIRŞEHİR ECOLOGICAL CONDITIONS
Assist. Prof. Dr. Zekiye ŞENGÜL Mustafa Metin ATABAY	Siirt University TÜRKİYE Agricultural Engineer Siirt TÜRKİYE	ASSESSMENT OF CONSUMERS' KNOWLEDGE, ATTITUDES, AND BEHAVIORS TOWARD FOOD SAFETY: A CASE STUDY IN THE CENTRAL DISTRICT OF SİİRT PROVINCE
Assist. Prof. Dr. Zekiye ŞENGÜL Özcan ÖNER	Siirt University TÜRKİYE Agricultural Engineer Diyarbakır TÜRKİYE	THE EFFECTS OF CLOSED PRESSURIZED IRRIGATION SYSTEMS ON AGRICULTURAL PRODUCTION AND WATER MANAGEMENT: THE CASE OF DİYARBAKIR ERGANİ DISTRICT

ONLINE PRESENTATIONS / 22.12.2024

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HALL-2, SESSION-1

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Prof. Dr. Hayriye Yıldız DAŞGAN

AUTHORS	AFFILIATION	TOPIC TITLE
Cenk AKŞİT Prof. Dr. Yusuf Ersoy YILDIRIM	The Republic of Turkey Ministry of Agriculture and Forestry Ankara TÜRKİYE Ankara University TÜRKİYE	MONITORING THE DYNAMICS OF HYDROLOGICAL RESOURCES WITHIN THE BASIN: A CRITICAL APPROACH FOR SUSTAINABLE WATER MANAGEMENT
Cenk AKŞİT Süleyman KODAL Prof. Dr. Yusuf Ersoy YILDIRIM	The Republic of Turkey Ministry of Agriculture and Forestry Ankara TÜRKİYE Freelance Consultant, Ankara TÜRKİYE Ankara University TÜRKİYE	INVESTIGATION OF SOIL MOISTURE DYNAMICS UNDER SUBSURFACE DRIP IRRIGATION IN SILAGE MAIZE UNDER WATER-LIMITED CONDITIONS
Assist. Prof. Dr. Özgür KAHRAMAN Bedirhan AKTAŞ	Çanakkale Onsekiz Mart University TÜRKİYE	ASSESSMENT OF ENVIRONMENTAL FACTORS AFFECTING PLANT GROWTH AND LAND DEGRADATION IN AYDOS FORESTS: ANALYSIS AND SOLUTION PROPOSALS
Prof. Dr. Hayriye Yıldız DAŞGAN	Çukurova University TÜRKİYE	THE ROLE OF BIOSTIMULANTS IN SOILLESS AGRICULTURE: UNLOCKING NEW OPPORTUNITIES FOR VEGETABLE PRODUCTION
Prof. Dr. Hayriye Yıldız DAŞGAN	Çukurova University TÜRKİYE	INNOVATIVE SOLUTIONS FOR SUSTAINABLE WATER MANAGEMENT AND PRODUCTIVITY: THE USE OF SUPERABSORBENT HYDROGELS IN AGRICULTURE
Assist. Prof. Dr. Emre KARA Assist. Prof. Dr. Onur İLERİ	Aydın Adnan Menderes University TÜRKİYE Eskişehir Osmangazi University TÜRKİYE	ROW CONFIGURATION OF FORAGE PEA-SORGHUM X SUDANGRASS HYBRID INTERCROPPING FOR YIELD AND RELATIVE FEED VALUE
İnan DURSUN Kübra SAĞLAM	Bingöl University TÜRKİYE İstanbul Gelişim University TÜRKİYE	DETERMINATION OF BIOLOGICAL ACTIVITIES OF HONEY PRODUCED IN BINGÖL PROVINCE, TURKEY
Zehra Nur CELİLOĞLU Prof. Dr. Ali KOÇ	Eskişehir Osmangazi University TÜRKİYE	WINTER CATCH CROP PERFORMANCE OF SOME FORAGE PEA GENOTYPES IN ESKİŞEHİR PLAIN

ONLINE PRESENTATIONS / 22.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-3, SESSION-1

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assoc. Prof. Dr. Levent YAKAR

AUTHORS	AFFILIATION	TOPIC TITLE
Assoc. Prof. Dr. Sezen TOFUR Dilek GÖKALP Tuğba ATEŞ DEMİR	Manisa Celal Bayar University TÜRKİYE	EXAMINATION OF GRADUATE STUDIES TITLED CULTURAL VALUES ON EDUCATION AND TRAINING IN TURKEY
Assoc. Prof. Dr. Levent YAKAR	Kahramanmaraş Sütçü İmam University TÜRKİYE	EXAMINATION OF POSTGRADUATE EDUCATION INTENTION LEVELS OF FACULTY OF EDUCATION STUDENTS
Assoc. Prof. Dr. Levent YAKAR	Kahramanmaraş Sütçü İmam University TÜRKİYE	EXAMINATION OF THE RELATIONSHIP BETWEEN SCORES OBTAINED FROM MULTIPLE CHOICE AND OPEN-ENDED QUESTIONS
Res. Assist. Dr. Cafer KILIÇ	Uşak University TÜRKİYE	ETHNOCENTRISM, CULTURAL SENSITIVITY, AND MULTICULTURAL PERSONALITY: OUTCOMES OF A CULTURALLY SENSITIVE COUNSELING COURSE
Gülce DENİZKURDU Assist. Prof. Dr. Cevat EKER	Zonguldak Bülent Ecevit University TÜRKİYE	INVESTIGATION OF CHILDREN'S SONGS USED IN PRESCHOOL MUSIC EDUCATION IN TERMS OF CONTENT, CONCEPTUAL DIMENSION AND PROSODY
Assist. Prof. Dr. Özgür TUTAL Sadullah MACAT	Hakkari University TÜRKİYE	EXAMINATION OF VOCATIONAL HIGH SCHOOL TEACHERS' SELF-EFFICACY IN DEVELOPING DIGITAL EDUCATIONAL GAMES
Assist. Prof. Dr. Ramazan YURTSEVEN Assoc. Prof. Dr. Emine Akkaş BAYSAL	Afyon Kocatepe University TÜRKİYE	TEACHERS' VIEWS ON EFFECTIVE LEARNING-TEACHING ENVIRONMENTS: A SWOT ANALYSE
Assist. Prof. Dr. Ramazan YURTSEVEN	Afyon Kocatepe University TÜRKİYE	EXAMINING THE OPINIONS AND METAPHORICAL PERCEPTIONS OF PROSPECTIVE TEACHERS REGARDING MICRO TEACHING PRACTICES
Lect. Tuğçe Merve SAĞIR Assoc. Prof. Dr. Burak KARABEY	Dokuz Eylül University TÜRKİYE	AN EXAMINATION OF PROSPECTIVE SPECIAL EDUCATION TEACHERS' VIEWS ON THE COURSE OF TEACHING MATHEMATICS IN SPECIAL EDUCATION
Lect. Tuğçe Merve SAĞIR Assoc. Prof. Dr. Burak KARABEY	Dokuz Eylül University TÜRKİYE	REFLECTIONS OF DESIGN THINKING TRAINING ON THE PRACTICAL EXPERIENCES AND PERSPECTIVES OF PROSPECTIVE SPECIAL EDUCATION TEACHERS

ONLINE PRESENTATIONS / 22.12.2024

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HEAD OF SESSION: Assist. Prof. Dr. Ayşe AZAMET

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. Naci Serhat BAŞKAN Assist. Prof. Dr. Pınar BAŞKAN	Marmara University TÜRKİYE	WHAT MAKES A GOOD TEACHER IN THE ERA OF 21st CENTURY SKILLS: PERCEPTIONS OF PRE-SERVICE ENGLISH AS A FOREIGN LANGUAGE TEACHERS
Kamil ÖNAL	Niğde Ömer Halisdemir University TÜRKİYE	TEXT ADAPTATION STUDIES IN TEACHING TURKISH TO FOREIGNERS – THE EXAMPLE OF İRAN TALES
Rabia ALKAN Assist. Prof. Dr. Serpil AZAP	Tokat Gaziosmanpaşa University TÜRKİYE	FROM SHYNESS TO FLUENCY: THE CORRELATION BETWEEN ENGLISH EXPOSURE AND THE FOREIGN LANGUAGE PRONUNCIATION ANXIETY LEVELS OF TURKISH STUDENTS
Lect. Dr. Selin YURDAKUL	Ordu University TÜRKİYE	COLONIAL LEGACY AND POSTCOLONIAL IDENTITY IN DORIS LESSING'S THE GRASS IS SINGING
Murat KAYIKCI	Trabzon University TÜRKİYE	MONA HATOUM'S ART WORKS IN THE CONTEXT OF POSTMODERN ART APPROACH
Assoc. Prof. Dr. Neslihan Dilşad DİNÇ	Bitlis Eren University TÜRKİYE	THE SEARCH FOR DEFECTIVENESS IN ABSTRACT GEOMETRIC ARRANGEMENTS: BUBI
Assist. Prof. Dr. Ayşe AZAMET	Sivas Cumhuriyet University TÜRKİYE	SYMPTOMATIC DEPICTIONS IN ARTWORKS
Enes KANT Prof. Dr. Deniz Beste ÇEVİK KILIÇ Prof. Dr. Elif GÜVEN	Balıkesir University TÜRKİYE	THE OPINIONS OF PARENTS OF STUDENTS TAKING AMATEUR PIANO EDUCATION LESSONS ON OUT-OF-CLASS STUDIES
Dr. Çağatay OLGUN	Independent Researcher İzmir TÜRKİYE	FORMAL STRUCTURES IN DEVRİM ERBİL'S ISTANBUL LANDSCAPES: IDEALIZATION AS A TOOL OF RESTORATIVE NOSTALGIA

ONLINE PRESENTATIONS / 22.12.2024

ANKARA LOCAL TIME - 09 00 : 11 00
HALL-5, SESSION-1

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Vjollca Berisha & Sevdije Govori

AUTHORS	AFFILIATION	TOPIC TITLE
Ahmad Abubakar Abubakar Sani	Umaru Musa Yar'adua University NIGERIA	ISOLATION OF BIOACTIVE COMPOUNDS OBTAINED FROM CARICA PAPAYA TO TREAT MALARIA AND VARIOUS OTHERS FOR HUMAN HEALTH
Priyanka Das Asish Saha Swades Pal	Malda Women's College INDIA Gour Banga University INDIA	HOW HEALTH OF URBAN PONDS AFFECTS ECOSYSTEM SERVICES?
Sathisha A B Ashwini M Rao K S Basavarajappa	Government First Grade College INDIA Bapuji Institute of Engineering and Technology INDIA	MATHEMATICAL APPROACH ON GROWTH OF CANCER IN BLOOD VESSELS
Vjollca Berisha Sevdije Govori	Pristina University KOSOVO	ANTICANCER, ANTIBACTERIAL AND ANTIFUNGAL ACTIVITY OF TRANSITION METAL COMPLEXES WITH COUMARIN SCHIFF BASE DERIVATIVES: DESIGN, SYNTHESIS AND CHARACTERIZATION
Bolanle Awonusi Khadijat Toyin Musah Dekola Saheed Ayodeji	Abuja University NIGERIA	INCIDENCE OF PRESSURE ULCERS AMONG SPINAL CORD INJURED PATIENTS AFTER HOSPITAL DISCHARGE IN NIGERIA
Isabel PIRES Paula RODRIGUES Celso SANTOS Precilia AMARAL Camila ALAMPE Sónia SARAIVA Filipe SILVA	Trás-os-Montes e Alto Douro University PORTUGAL	UNITING EFFORTS FOR HUMAN, ANIMAL, AND WILDLIFE PROTECTION UNDER THE ONE HEALTH CONCEPT
DR. MEHWASH KASHIF DR. MEHWASH KASHIF DR. AMAN ASHAR SYEDA NIMRA QADRI M. ASFAHAN SHAH	Karachi Metropolitan University PAKISTAN	EFFECTS OF PROBIOTICS ON ORAL MICROBIOLOGICAL ENVIRONMENT, GINGIVAL HEALTH AND DENTAL PLAQUE; A META-ANALYSIS
Mykola Godziiev Alexander Plakida Sergey Gushcha Veronika Volyanska	Ukrainian Research Institute of Medical Rehabilitation and Resort Therapy of Ministry of Health UKRAINE Odessa National Medical University UKRAINE	EVALUATION OF THE EFFECTIVENESS OF REHABILITATION TREATMENT OF SERVICEMEN WITH CONSEQUENCES OF MINE-BLAST TRAUMATIC BRAIN INJURY
Assist. Prof. Dr. Ömerul Faruk AYDIN	İstanbul Yeni Yüzyıl University TÜRKİYE	WORKPLACE INJURIES AMONG HEALTHCARE WORKERS: A RETROSPECTIVE ANALYSIS OF TRAUMA TYPES, AFFECTED REGIONS, AND RETURN-TO-WORK PATTERNS

ONLINE PRESENTATIONS / 22.12.2024

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HALL-6, SESSION-1

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Bahijja Abdullahi

AUTHORS	AFFILIATION	TOPIC TITLE
Jihane Benkhaira El Hassani Hafid	Sidi Mohamed Ben Abdellah University MOROCCO	THE IMPACT OF MONETARY POLICY ON ECONOMIC RECOVERY IN MOROCCO: AN EMPIRICAL ANALYSIS
Farhana Naz	Women University PAKISTAN	ENCROACHMENTS AND URBAN SPRAWL: UNDERSTANDING NEIGHBORHOOD CHALLENGES IN MARKET PLACES, LAHORE
Egzon Hyseni Idriz Kovaçi Artan Maloku	St. Kliment Ohridski University BULGARIA Ferizaj Applied Sciences University KOSOVO Haxhi Zeka University KOSOVO	THE ROLE OF PREDICTIVE ANALYTICS IN RISK ASSESSMENT AND PREMIUM CALCULATION IN THE INSURANCE INDUSTRY
Bahijja Abdullahi	Federal Polytechnic NIGERIA	BLOCKCHAIN SOLUTIONS FOR SUPPLY CHAIN MANAGEMENT: ENHANCING SECURE AND TRANSPARENT TRACEABILITY WITH ADVANCED PRIVACY MEASURES
Bahijja Abdullahi	Federal Polytechnic NIGERIA	HYBRID BLOCKCHAIN SOLUTIONS FOR SUPPLY CHAIN MANAGEMENT: ENHANCING SECURE AND TRANSPARENT TRACEABILITY WITH ADVANCED PRIVACY MEASURES
Sana Rasool Umm Eman Syed Dr. Anam Khan Neelam Bibi	Rawalpindi Women University PAKISTAN	THE MEDIATING ROLE OF FEAR OF MISSING OUT IN THE RELATIONSHIP BETWEEN NOMOPHOBIA AND CYBERLOAFING AMONG EMPLOYEES
Malvina Hysa Dori Risilia	Logos University ALBANIA Agricultural University of Tirana ALBANIA	RISK MANAGEMENT IN COMPANIES AND FINANCIAL INSTITUTIONS IN ALBANIA
Edisela MENA	Tirana University ALBANIA	ECONOMIC COMPLEXITY

ONLINE PRESENTATIONS / 22.12.2024

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HALL-1, SESSION-2

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assoc. Prof. Dr. Murat AKKUŞ

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. Fatma ERASLAN KÖSE	Independent Researcher TÜRKİYE	CHANGE AND DEVELOPMENT OF ARCHITECTURE IN CENTRAL ASIA FROM THE SCYTHIANS TO THE GREAT SELJUK STATE
Yakup ÖZEN	Bartın University TÜRKİYE	HISTORICAL FIGURES IN DOUKAS' "HISTORY OF BYZANTIUM"
Dr. Merve DOĞAN	Biruni University TÜRKİYE	THE OTTOMAN-SERBIAN-MONTENEGRIN WAR OF 1876 WITH EXAMPLES FROM THE TIMES NEWSPAPER
Assist. Prof. Dr. Yunus Emre TANSÜ Mirel AKTAŞ	Gaziantep University TÜRKİYE	AZERBAIJAN'S ALPHABET CHANGE AND ITS EFFECTS ON TURKEY
Lect. Dr. Sezgi BALCI	Ege University TÜRKİYE	A LOOK AT CENGİZ DAĞCI'S NOVEL "LETTERS TO MY MOTHER" WITH THE HERMENEUTIC METHOD
Assoc. Prof. Dr. Murat AKKUŞ Assoc. Prof. Dr. Bekir KARADAĞ	Gaziantep Islam Science and Technology University TÜRKİYE	THE QIRAAT OF SAJDAH VERSES AND ITS FIQH RULINGS
Assoc. Prof. Dr. Bekir KARADAĞ Assoc. Prof. Dr. Murat AKKUŞ	Gaziantep Islam Science and Technology University TÜRKİYE	THE EFFECT OF QIRAAT MISTAKES ON PRAYER
Dr. Nurettin AKCAN	Gaziantep Islamic Science and Technology University TÜRKİYE	THE CONCEPT OF THE «PROMISED LAND» IN THE CONTEXT OF THE JEWISH HOLY BOOK COLLECTION
Dr. Nurettin AKCAN	Gaziantep Islamic Science and Technology University TÜRKİYE	MIGRATIONS OF PROPHET IBRAHIM AND HIS FAMILY IN THE CONTEXT OF THE BIBLE AND THE QUR'AN
Assist. Prof. Dr. Emrah YILMAZ	Siirt University TÜRKİYE	A BOOKLET ON THE MEASURES TAKEN AGAINST CATTLE PLAGUE IN THE OTTOMAN STATE: SIĞIR VEBASI VE HAKKINDA İTTİHAZI LAZIM GELEN TEDABİR

ONLINE PRESENTATIONS / 22.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-2, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assoc. Prof. Dr. Mehmet KOCAOĞLU

AUTHORS	AFFILIATION	TOPIC TITLE
Prof. Dr. Metin AKSOY Assoc. Prof. Dr. Ömer UĞUR	Gümüşhane University TÜRKİYE	THE ROLE OF EU DECISION-MAKING MECHANISMS IN MIGRATION POLICY
Assoc. Prof. Dr. Ömer UĞUR Prof. Dr. Metin AKSOY	Gümüşhane University TÜRKİYE	THE MIGRATION POLICIOES OF THE EUROPEAN UNION: THE BANKRUPTCY OF THE CONCEPT OF NORMATIVE POWER IN THE FACE OF THE MIGRANT CRISIS
Dr. Uğur TÜLÜ	Piri Reis University TÜRKİYE	PROVISIONS ON SEAFARER'S RIGHT OF REPATRIATION IN THE MARITIME LABOUR CONVENTION 2006
Lect. Melike AKPINAR Prof. Dr. Hakan CANDAN	Karamanoğlu Mehmetbey University TÜRKİYE	MIGRATION AND CRIME: CRIME DYNAMICS OF SYRIAN REFUGEES IN TURKEY AND COMPARISON WITH EUROPE
Asisst. Prof. Dr. Pınar BACAKSIZ	Dokuz Eylül University TÜRKİYE	VIRTUAL REALITY AS A TOOL FOR THE REHABILITATION OF OFFENDERS
Assoc. Prof. Dr. Kemal Cem BAYKAL	Çanakkale Onsekiz Mart University TÜRKİYE	DISEASE DISCOURSE IN DEATH NEWS AND PROBLEMS ARISING
Assoc. Prof. Dr. Mehmet KOCAOĞLU	Selçuk University TÜRKİYE	JUSTICE AND MORALITY
Muhammet Mustafa YILMAZ Assist. Prof. Dr. Emre AYTAV	National Defense University TÜRKİYE	A BRIEF REVIEW OF INSENSITIVE MUNITIONS AND NATO TEST PROTOCOLS

ONLINE PRESENTATIONS / 22.12.2024

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HALL-3, SESSION-2

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HEAD OF SESSION: Assist. Prof. Dr. İsmail IRMAKÇI

AUTHORS	AFFILIATION	TOPIC TITLE
Şafak BAYIR Kemal ERSAY	Karabük University TÜRKİYE 2 T.R. MoNE Karabuk Science and Art Center, Karabük TÜRKİYE	USE OF MBITS IN EDUCATIONAL ENVIRONMENTS
Şafak BAYIR Kemal ERSAY	Karabük University TÜRKİYE 2 T.R. MoNE Karabuk Science and Art Center, Karabük TÜRKİYE	USE OF GRAPE:BIT IN EDUCATIONAL ENVIRONMENTS
Özge DOĞUÇ Onur KARDEŞ	İstanbul Medipol University TÜRKİYE İstanbul Beykent University TÜRKİYE	LEVERAGING GENERATIVE AI FOR THE EVALUATION OF STUDENT EXAMINATION PAPERS
Koray YÜCEL Assoc. Prof. Dr. Mehmet Hilal ÖZCANHAN	Dokuz Eylül University TÜRKİYE	MTWIN: A DIGITAL TWIN OF PATIENT'S MENTAL STATE
Assist. Prof. Dr. İsmail IRMAKÇI	Ege University TÜRKİYE	ANALYSIS OF STATE-OF-THE-ART DEEP LEARNING METHODS FOR MULTI-CLASS COVID-19 PREDICTION ON 2D CHEST X-RAY IMAGES USING TRANSFER LEARNING
Assist. Prof. Dr. İsmail IRMAKÇI	Ege University TÜRKİYE	BATCH SIZE OPTIMIZATION IN DEEP LEARNING FOR PREDICTING SURVIVAL FROM COLORECTAL CANCER HISTOLOGY SLIDES
Assist. Prof. Dr. Sena Aydoğan Assoc. Prof. Dr. Fatma ŞENER FİDAN	Gazi University TÜRKİYE Abdullah Gül University TÜRKİYE	PERFORMANCE EVALUATION OF GREEN UNIVERSITIES IN TÜRKİYE
Serdar MİÇİLLİOĞLU Samet GÜRGEN	Iskenderun Technical University TÜRKİYE	EVALUATION OF CONTRACTOR SELECTION CRITERIA FOR SUSTAINABLE SEA BED DRAWING OPERATIONS WITH FUZZY AHP
Nesrin HANGÜL	Kafkas University TÜRKİYE	EDUCATION IN ADANA (1960-1980)

ONLINE PRESENTATIONS / 22.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-4, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Subhashish Dey

AUTHORS	AFFILIATION	TOPIC TITLE
FILALI, Saloua NASSER, Abdelkader KERKOUR-EL MIAD Abdelhamid AMAR, Najib	Mohammed Premier University MOROCCO	ASSESSMENT OF MARBLE WASTE AND FLY ASH AS SUSTAINABLE SAND SUBSTITUTES IN CONCRETE: EFFECTS ON COMPRESSIVE STRENGTH AND WORKABILITY
Imane Bedoui Miloud Chakit Mohamed Fadli	Ibn Tofail University MOROCCO	ASSESSMENT OF GROUNDWATER QUALITY FOR IRRIGATION PURPOSES IN SIDI SLIMANE, MOROCCO USING THE IRRIGATION WATER QUALITY INDEX
Imane Bedoui Miloud Chakit Mohamed Fadli	Ibn Tofail University MOROCCO	BACTERIOLOGICAL AND PARASITOLOGICAL POLLUTANTS ASSESSMENT IN IRRIGATION WATER, SOIL AND CROPS
Egunjobi Usman Dimeji Olojede Abayomi Opeyemi Bello Ibrahim Monday Habeeb Bolaji Onisabi Alamu Yusuf Emmanuel Lawal Aisha Ajoke	Federal University NIGERIA	ASSESSMENT OF THE PLANNING IMPLICATIONS ON HOUSING DEVELOPMENT IN LOKOJA, KOGI STATE
Mr.Madhu Alapaka Mr.Kaarthikeya	VIT-AP University INDIA	THE INVESTIGATES HOW CONTROLLER-LEVEL CACHING CAN ENHANCE RAID- 5 PERFORMANCE BY REDUCING WRITE RESPONSE TIMES AND OPTIMIZING SYSTEM EFFICIENCY IN TRANSACTION PROCESSING ENVIRONMENTS
Subhashish Dey	Seshadri Rao Gudlavalleru Engineering College INDIA	SYNTHESIS AND UTILIZATIONS OF SOLID WASTE BIOSORBENTS FOR ELIMINATIONS OF TOTAL HARDNESS FROM WATER
B. Mahalaxmi C. Sulochana	Raichur University INDIA Gulbarga University INDIA	ANALYSIS OF FORCED AND FREE CONVECTION IN THE NANOFLUID FLOW OF OXYTACTIC MICROORGANISMS WITH GOLD BLOOD NANOPARTICLES
LAAROUSSI Karima JEMJAMI Saloua HARKANI Assia EL AISSAOUI Abdellah	Hassan I University MOROCCO Laboratory of agricultural machinery, energy and precision agriculture, INRA MOROCCO	THE PURPOSES OF REMOTE SENSING IN PHOTOVOLTAIC SYSTEM PERFORMANCE
Adlin Jebakumari S Dr.A. Jayanthiladevi	Marwadi University INDIA	REVOLUTIONIZING AGRO-ECONOMIES: THE ROLE OF AI IN DISEASE PREDICTION FOR SUSTAINABLE AGRICULTURE

ONLINE PRESENTATIONS / 22.12.2024

ANKARA LOCAL TIME - 11 30 : 13 30
HALL-5, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Okoro, John Chukwuma

AUTHORS	AFFILIATION	TOPIC TITLE
ASABE EDWARD BASH AMINA MUSTAPHA	Jos University NIGERIA	EFFECTS OF GRAPHIC ORGANISER ON ATTITUDE AND ACHIEVEMENT OF JUNIOR SECONDARY SCHOOL TWO STUDENTS IN BASIC SCIENCE AND TECHNOLOGY IN JEMA'A LOCAL GOVERNMENT AREA, KADUNA
Younes Yassine Miloud Chakit Mohamed Belkhaoud El Mahjoub Aouane	Ibn Tofail University MOROCCO	RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND BURNOUT AMONG MOROCCAN SECONDARY SCHOOL STUDENTS
Okoro, John Chukwuma	Nigeria University NIGERIA	FEMALE-HEADED HOUSEHOLDS' ADAPTATION STRATEGIES TO HERDERS' FARM INTRUSION IN NSUKKA AGRICULTURAL ZONE OF ENUGU STATE, NIGERIA
Clementina Hashimu Bulus Dorcas Oyu Ayaka	Jos University NIGERIA College of Eduaction NIGERIA	EFFECT OF SIMULATION STRATEGY ON ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN ECONOMICS IN MANGU, PLATEAU STATE, NIGERIA
Anastasia Romanova	The Academy of Economic Studies MOLDOVA	THE IMPORTANCE OF DEVELOPING LISTENING SKILLS AT ESL LESSONS
Assoc. Prof. Dr. Svitlana MYSHKO Assoc. Prof. Dr. Nataliya TODOROVA Alla TYSHCHUK	Uzhhorod National University UKRAINE	DEVELOPING FOREIGN LANGUAGE COMMUNICATION SKILLS USING ARTIFICIAL INTELLIGENCE
Agwuma Brightwell Ngozi	Federal College of Education NIGERIA	AVAILABILITY AND UTILIZATION OF INSTRUCTIONAL MATERIALS IN TEACHING MATHEMATICS IN PUBLIC SECONDARY SCHOOLS IN OGBA/EGBEMA/NDONI LOCAL GOVERNMENT AREA OF RIVERS STATE
AMINA DADA MUHAMMED HASSAN	Minna Institute of Technology and Innovation NIGERIA	THE DEVELOPMENT ENTREPRENEURSHIP SKILLS IN FOOD AND NUTRITION EDUCATION: A PANACEA FOR SUSTAINABLE RETIREMENT
ABD-EL-AZIZ, Abd-El-Latif Adekunle MUHAMMED, Kamaldeen Jimoh OLADOSU, Kamaldeen Korede	Ilorin University NIGERIA	INFLUENCE OF TECHNICAL COLLEGE TEACHERS' ENGAGEMENT WITH SOCIAL MEDIA ON PROFESSIONAL DEVELOPMENT AND PRACTICES' EFFECTIVENESS
Adaramola Ojo Jayeola Akinleye, Abiodun Olamilekan	Federal Polytechnic NIGERIA	UTILIZING ICT TOOLS TO IMPROVE THE DELIVERY OF TVET CURRICULUM: AN INVESTIGATION INTO ENCOURAGING DIVERSE LEARNING STYLES AND INCREASING STUDENT INVOLVEMENT

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HALL-6, SESSION-2

Meeting ID: 860 5266 6988
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HEAD OF SESSION: Ms. Pooja Shukla

AUTHORS	AFFILIATION	TOPIC TITLE
Emmanuel Joseph SUMATRA	Ateneo de Davao University PHILIPPINES	BUILDING BRIDGES WITH GENERATION Z: A LITERATURE REVIEW ON EFFECTIVE COOPERATIVE MARKETING STRATEGIES
Neal Andre ATİENZAR Ivy Joy BİCERA Jasper Kent CALİBJO Nikko Paul Izack MAGHUYOP Ledevie TARONGOY	Ateneo de Davao University PHILIPPINES	FACTORS INFLUENCING SAVING INTENTIONS: A STUDY ON GENERATION Z EDUCATORS' FINANCIAL DECISION-MAKING
Ms. Pooja Shukla	Hong Kong Metropolitan University HONG KONG	STAKEHOLDER-CENTRIC GOVERNANCE: ADAPTING TO TECHNOLOGICAL AND ENVIRONMENTAL CHALLENGES
Christian Angel AWA Julianne Kaye CORTEZ Larrah Erica GULTIANO Hennessy JARDIN Danica Suzanne LAGRIA	Ateneo de Davao University PHILIPPINES	GENERATION Z AND COFFEE SHOPS: THE ROLE OF MUSIC, LIGHTING, AND INTERIOR DESIGN IN CONSUMER CHOICES
Ali Ahsan Prof. Dr. Saima Gulzar	School of Architecture and Planning INDIA	CLIMATE RESPONSIVE DESIGN, GUIDELINES FOR PRACTITIONERS IN PAKISTAN
Advika Devanshi	Symbiosis Law School INDIA	ENHANCING RESTORATIVE JUSTICE FOR VIOLENT CRIME VICTIMS THROUGH FORENSIC TECHNOLOGY
Ayesha Mushtaq Rabia Khadim Muhammad Ashfaque	University of Management and Technology PAKISTAN Virtual University PAKISTAN	APPEARANCE REJECTION SENSITIVITY IN YOUNG ADULTS: A SCALE FOR THE PAKISTANI SOCIAL CONTEXT
Julius Ademola OYEWOLE Olaleye, Victor Olugbenga	Ilesa University NIGERIA	NARRATIVE IDENTITY CONSTRUCTION AND LINGUISTIC RESILIENCE: CODE-SWITCHING AS A HEALING MECHANISM IN MULTICULTURAL COUNSELING
Julius Ademola OYEWOLE Olaleye, Victor Olugbenga	Ilesa University NIGERIA	LANGUAGE TRAUMA AND THERAPEUTIC DISCOURSE: EXPLORING LINGUISTIC MICRO-AGGRESSIONS IN COUNSELING INTERACTIONS

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HALL-1, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Assist. Prof. Dr. Tolga AKDEMİR

AUTHORS	AFFILIATION	TOPIC TITLE
Helin JASAD Dr. Nuray GÜNDOĞDU Assoc. Prof. Dr. Süreyya Gül YURTSEVER Assoc. Prof. Dr. Fethiye Ferda YILMAZ	Ege University TÜRKİYE Izmir Atatürk Training and Research Hospital TÜRKİYE İzmir Katip Çelebi Ege University TÜRKİYE	VIRULENCE CHARACTERISTICS IN FLUCONAZOLE-RESISTANT Candida parapsilosis complex ISOLATES
Elif İrem AKDOĞAN Assoc. Prof. Dr. Daver ALİ	Karabük University TÜRKİYE	EFFECT OF FRICTION FACTOR BETWEEN LEAFLET AXIS AND HINGE ON PRESSURE NEEDED TO OPEN MECHANICAL HEART VALVE
Assist. Prof. Dr. Tolga AKDEMİR	Recep Tayyip Erdoğan University TÜRKİYE	A REVIEW OF HEAVY METAL ACCUMULATION IN FISH AND SHELLFISH TISSUES IN THE EASTERN BLACK SEA REGION, TURKIYE AND HUMAN HEALTH RISK ASSESSMENTS OVER THE PAST DECADE
MSc Elif Ecem FINDIK Assist. Prof. Dr. Sevil ERDOĞAN Assist. Prof. Dr. Serap YILMAZ ÖZGÜVEN Prof. Dr. İlker DIBIRDIK	Trakya University TÜRKİYE	SYNTHESIS AND CHARACTERIZATION OF TWO NEW MOLECULES FOR INFLAMMATORY BOWEL DISEASE TREATMENT AND TESTING THEIR ANTI-INFLAMMATORY CAPACITIES
Rojda Enfal ASLAN Nuran CIKCIKOĞLU YILDIRIM Ayşe Nur AYDIN Osman SERDAR	Munzur University TÜRKİYE Aquaculture Research Center Trabzon TÜRKİYE	EFFECT OF BISPHENOL A ON ENZYME ACTIVITIES IN Danio rerio
Ebru İfakat ÖZCAN Ayşe Nur AYDIN Osman SERDAR	Munzur University TÜRKİYE Aquaculture Research Center Trabzon TÜRKİYE	ACETYLCHOLINESTERASE ACTIVITY CHANGES INDUCED BY XONE PESTICIDE IN Dreissena polymorpha
Res. Assist. Dr. Sümeyye AKBULUT Res. Assist. Elanur DAŞDEMİR Selver Sümeyye ERTUNÇ Zafer KÖŞK	Atatürk University TÜRKİYE	DETERMINATION OF THE BACTERIOCIN PRODUCTION POTENTIAL OF LACTIC ACID BACTERIA ISOLATED FROM ERZURUM CIVIL CHEESE SAMPLES IN TERMS OF FOOD SAFETY AND THEIR POTENTIAL TO DEGRADE BIOGENIC AMINES AT GENE LEVEL
Assist. Prof. Dr. Ferhat ŞİRİNYILDIZ İzel KAVAK	Aydın Adnan Menderes University TÜRKİYE	PHYSIOLOGICAL EFFECTIVENESS OF TRAMADOL ON POST OPERATIVE PAIN PROCESSES

ONLINE PRESENTATIONS / 22.12.2024

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HALL-2, SESSION-3

Meeting ID: 860 5266 6988
Zoom Passcode: 202122

HEAD OF SESSION: Prof. Dr. Kemal Macit HİSAR

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. İpek AYDIN	Dokuz Eylül University TÜRKİYE	THE RELATIONSHIP BETWEEN PERCEPTION OF RECREATION BENEFIT AND PERCEIVED HEALTH
Dr. İpek AYDIN	Dokuz Eylül University TÜRKİYE	THE EFFECT OF SERVICE QUALITY DIMENSIONS ON PATIENTS' DECISION TO PREFER THE HOSPITAL AGAIN
Assist. Prof. Dr. Şenay KOCAKOYUN AYDOĞAN Yağız EKE	İstanbul Gedik University TÜRKİYE	VIVACORTEX TURKEY'S DIGITAL QUIZ PLATFORM FOR EDUCATION
Assist. Prof. Dr. Şenay KOCAKOYUN AYDOĞAN Efe Erdem GÜLER	İstanbul Gedik University TÜRKİYE	SMART E-WASTE MANAGEMENT PLATFORM FOR SUSTAINABLE RECYCLING
Latife BASIÇ DURAN Assist. Prof. Dr. Simge KOÇ	Dokuz Eylül University TÜRKİYE	AN ASSESSMENT OF STUDENT VIEWS ON STEM-FOCUSED COURSE ACTIVITIES
Prof. Dr. Kemal Macit HİSAR	Selçuk University TÜRKİYE	THE EFFECT OF GLOBALIZATION ON HEALTH POLICIES
Prof. Dr. Kemal Macit HİSAR	Selçuk University TÜRKİYE	SOCIOECONOMIC AND CULTURAL DETERMINANTS OF PUBLIC HEALTH
Assist. Prof. Dr. Emine KULUŞAKLI	Malatya Turgut Özal University TÜRKİYE	DISTANCE LEARNERS' TIME MANAGEMENT SKILLS IN OPEN AND DISTANCE HIGHER EDUCATION
Rahima S. Mammadova Kəmalə O. İskəndərova	Azerbaijan State Pedagogical University AZERBAIJAN	THE IMPORTANCE OF THE DEVELOPMENT AND TEACHING OF GREEN CHEMISTRY FOR SOLVING ECOLOGICAL PROBLEMS
Assoc. Prof. Dr. Süleyman ÇELİK Assist. Prof. Dr. Şahin AY	Siirt University TÜRKİYE	THE ROLE OF DIGITAL TRANSFORMATION IN ECONOMIC DEVELOPMENT: AN EMPIRICAL ANALYSIS
Assoc. Prof. Dr. Süleyman ÇELİK Assist. Prof. Dr. Şahin AY	Siirt University TÜRKİYE	EMPIRICAL EXAMINATION OF THE RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND WELFARE IN PERIODS

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Meeting ID: 860 5266 6988
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HEAD OF SESSION: Assoc. Prof. Dr. Sevda KOC AKRAN

AUTHORS	AFFILIATION	TOPIC TITLE
Dr. Ahmet ÖZBAY Ceyda Nur Duman Özgür DEMİRCİ SEYREK	Ministry of National Education, İstanbul TÜRKİYE İstanbul Aydın Ministry of National Education, Samsun TÜRKİYE	THE RELATIONSHIP BETWEEN COGNITIVE FLEXIBILIITY AND SOCIAL ANXIETY IN ROMANTIC RELATIONSHIP VIOLENCE
Göksu Büşra ACER Dr. Nilgün ONNAR	İstanbul Arel University TÜRKİYE	THE MEDIATING ROLE OF RUMINATION IN THE RELATIONSHIP BETWEEN DEPRESSION, ANXIETY, STRESS, AND LIFE SATISFACTION
Merve KELEŞ Özlem ÇAPAN ÖZEREN	İstanbul Arel University TÜRKİYE	THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND METACOGNITION: THE MODERATING ROLE OF MINDFULNESS
Dr. Ahmet ÖZBAY Burcu KARAKAYA Seçkin AŞCI	Ministry of National Education, İstanbul TÜRKİYE İstanbul Aydın University TÜRKİYE İstanbul Arel University TÜRKİYE	THE MEDIATING ROLE OF PERFECTIONISM IN THE RELATIONSHIP BETWEEN OBSESSIVE-COMPULSIVE SYMPTOMS IN PARENTS OF INDIVIDUALS WITH AUTISM DIAGNOSIS AND PARENTING ATTITUDES
Ömer Taha SÖZER	Van Yüzüncü Yıl University TÜRKİYE	HOLISTIC APPROACHES TO MENTAL HEALTH AND SUICIDE PREVENTION: INTEGRATING INDIVIDUAL, SOCIAL, AND ENVIRONMENTAL FACTORS
Dr. Hüseyin Ozan TORUN Dr. Burak AKDÖNER	İzmir City Hospital TÜRKİYE Near East University CYPRUS	EVALUATION OF APPLICATIONS AND APPOINTMENTS IN A STATE HOSPITAL PSYCHIATRY OUTPATIENT CLINIC
Assoc. Prof. Dr. Sevda KOC AKRAN	Siirt University TÜRKİYE	TEACHER CANDIDATES' PERSPECTIVE ON THE CONCEPT OF CRIME: BROKEN WINDOWS THEORY
Gülse KARAÇİÇEK Hande ÇELİKAY SÖYLER	Near East University CYPRUS	METHAMPHETAMINE USE DISORDER AND SUBSTANCE INDIVIDUALS WHO DO NOT USE COMPLEX ATTENTION AND FOCUSED ATTENTION SKILLS COMPARISON
Babayeva Nigar Yasın Mustafayeva Sevinj Musa	Azerbaijan State Pedagogical University AZERBAIJAN	TEACHING THE AMMONIA TOPIC WITH MIND MAPPING AND ITS IMPORTANCE

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AUTHORS	AFFILIATION	TOPIC TITLE
A, Attahiru B. Attahiru	Kebbi State University of Science and Technology NIGERIA	ASSESSMENT OF MINERAL COMPOSITION OF MANGO FRUITS (MANGIFERA INDICA L.)
Mr. Ram Prataap Yadav Prof. Sunil Kumar Srivastav Prof. Ajai Kumar Srivastav	DDU Gorakhpur University INDIA	PROTECTIVE EFFECT OF JAMUN SEED (SYZYGIUM CUMINI) EXTRACT AND ORANGE PEEL (CITRUS SINENSIS) EXTRACT AGAINST CADMIUM INDUCED ALTERATIONS IN TESTES OF RAT
BENBBA Rania EL MOUDEN Hasnae AKHSASSİ Mohamed GOURDO Lhoucien WİFAYA Ahmed AMARRAQUE Abderrahim OUTZOURHİT Abdelkader	Cadi Ayyad University MOROCCO Ibn Zohr University MOROCCO	PERFORMANCE ANALYSIS OF BIFACIAL PHOTOVOLTAIC MODULES UNDER VARIED GROUND ALBEDO CONDITIONS: CASE STUDIES FROM MARRAKECH AND AGADIR, MOROCCO
Sana Safdar Syed Mohsan Raza Shah Muhammad Javed Zaheer Abbas Iqra	Education University PAKISTAN	HALOXYLON SALICORNICUM (MOQ.) BUNGE EX BOISS. A SUCCULENT PLANT, PROMISING CONTENDER FOR PHYTOREMEDIATION OF HIGHLY SALINE SOILS
Omaima BOUDAIA Zineb SEKKOUT Kaouthar ELBIRGUI Nadia IOUNES Najat EL AMRANI Driss RADALLAH Amal EL HAMSAS EL YOUBI	Hassan II University MOROCCO	EXPLORING THE SAFETY PROFILE OF SMYRNIUM OLUSATRUM: TOXICITY EVALUATION OF FLAVONOIDS AND ALKALOIDS USING THE ARTEMIA SALINA ASSAY
Syeda Sabika Zahra Naqvi Syed Mohsan Raza Shah	Education University PAKISTAN	MORPHO-ANATOMICAL MODIFICATION IN WITHANIA SOMNIFERA (L.) DUNAL FROM PUNJAB,PAKISTAN: INSIGHT INTO ADAPTATION
Anitha Paneerselvam N. K. Udaya Prakash Vardhana Janakiraman	Vels Institute of Science INDIA	AN INVESTIGATION ON FUNGAL BIODIVERSITY IN COASTAL SOILS OF TAMIL NADU
MRABTI Imane GRIJJA Hassan BENZAHRA Hayat AIT BADDOU Sanae BRHADDA Najiba ZIRI Rabea AFECHTAL Mohamed	National Institute for Agricultural Research MOROCCO Ibn Toufail University MOROCCO	COMPARATIVE EVALUATION OF TEN DNA EXTRACTION METHODS FOR THE PYRIFORM SCALE INSECT, PROTOPULVINARIA PYRIFORMIS, INFESTING CITRUS TREES IN MOROCCO
Dodo Juliet Dingtsen Goji Yildun Shangkum Prof. Esther A. Adelakun	Jos University NIGERIA	ASSESSMENT OF PHYTOCHEMICALS, PHYSICOCHEMICAL PROPERTIES OF OILS FROM NEEM AND WATERMELON SEEDS FOUND IN JOS, PLATEAU STATE. NIGERIA

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HEAD OF SESSION: Moses Adeolu AGOI

AUTHORS	AFFILIATION	TOPIC TITLE
Lect. Dr. Marilena-Oana NEDELEA	Stefan cel Mare University pf Suceava ROMANIA	DIPLOMATIC RELATIONS BETWEEN ROMANIA AND TURKEY
Ms. Sakshi Rewaria	MVN University INDIA	THE ROLE OF ARTIFICIAL INTELLIGENCE IN STRENGTHENING LEGAL SYSTEMS AND PROMOTING ACCESS TO JUSTICE UNDER SDG 16
YAAGOUBI AHMED	Sultan Moulay Slimane University MOROCCO	ETHOS IN MOROCCAN POLITICAL DISCOURSE: BETWEEN MANIPULATION AND ARGUMENTATION
Sobiye, Tolulope Christianah	Federal Polytechnic NIGERIA	INTERTEXTUALITY AND ALLUSION IN TWO OF OSUNDARE'S POLITICAL POEMS
Ksenia GURYANOVA	South Ural State University RUSSIA	MODERN ENVIRONMENTAL ISSUES THAT REQUIRE URGENT SOLUTIONS
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Assoc. Prof. Dr. Azize ŞAHİN Lect. Aysun ŞAHİN	İstanbul University TÜRKİYE Düzce University TÜRKİYE	SOCIAL AND PSYCHOLOGICAL REFLECTIONS OF MATERIALISM ON CONSUMERS
Assoc. Prof. Dr. Azize ŞAHİN Lect. Aysun ŞAHİN	İstanbul University TÜRKİYE Düzce University TÜRKİYE	SOCIAL MEDIA AND BRAND EXTERNALITIES

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Asma DJAHAFI	Tiaret University ALGERIA	MEDICINAL PLANTS USED FOR THE TREATMENT OF DIGESTIVE DISORDERS IN THE REGION OF TIARET, ALGERIA
Julius Oluwayomi OLUWADAMILARE OlaOluwa Marvelous AYOKUNMI	Ilesa University NIGERIA	THE ROLE OF MUSIC IN ENHANCING PHYSICAL FITNESS FOR A HEALTHY LIVING THROUGH THE USE OF GYMS WITH EXERCISE PHYSIOLOGY SERVICES
Julius Oluwayomi OLUWADAMILARE OlaOluwa Marvelous AYOKUNMI Phebian Funmilayo ADEKUNLE	Ilesa University NIGERIA	ILERA L'ORO (HEALTH IS WEALTH): APPRAISAL OF THE ROLE OF MUSIC IN ENHANCING GOOD HEALTH AND HUMAN WELLBEING AMONG THE YORUBA OF SOUTH WEST NIGERIA
Sarki kabirat Oluwakunmi Oluwayemisi Deborah Adegboye Adekola Saheed Ayodeji	Abuja University NIGERIA	THE IMPACT OF FEMALE GENITAL MUTILATION ON REPRODUCTIVE AND MENTAL HEALTH IN NIGERIA
Makka M. Sarsenbaeva M.Z.	Kazakhstan Medical University KAZAKHSTAN	HOSPITAL AIR QUALITY AND HEALTH OF MEDICAL WORKERS
Ghada Nasri Ben Hamida Mariem Hentati Nour Trabelsi Bouthaina Hadjkacem Faten Rekik Nabila Ben Ayed Houda Yaich Sourour	Hedi Chaker University Hospital TUNUSIA	NUTRITIONAL KNOWLEDGE AND PRACTICES IN DIABETIC PATIENTS
Chahrazad Belkhiri Soufiane Bouyaalaoui Youssef Afejjay Chaimae Himri Hicham Elmsellem Ilyesse Rahhou Chaouki Belbachir Bouchra Legssyer	Mohammed First University MOROCCO Higher Institute of Nursing Professions and Health techniques (ISPITSO) MOROCCO	SMOKING PREVALENCE AND DETERMINANTS AMONG NURSING STAFF AT THE REGIONAL HOSPITAL CENTRE (RHC) AL FARABİ
Tanko, Linus Umar Ibrahim Ajibogun Samuel Milka Samson Tyoden	Kaduna State College of Education NIGERIA Federal University of Education NIGERIA FCT College of Education NIGERIA	PRE-SERVICE CAREGIVERS CONCEPTION OF MENTAL HEALTH IN EARLY CHILDHOOD EDUCATION: A PARTICIPATORY DEVELOPMENT APPROACH

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Assist. Prof. Dr. Serap ÖNER	Hakkari University TÜRKİYE	EVALUATION OF THE RELATIONSHIP BETWEEN E-HEALTH LITERACY AND RATIONAL DRUG USE AMONG UNIVERSITY STUDENTS: THE EXAMPLE OF HAKKARİ
Gülgün SEVİMLİGÜL Assist. Prof. Dr. Burcu Kübra SÜHA	Sivas Cumhuriyet University TÜRKİYE	THE IMPORTANCE OF ETHNIC AND CULTURAL ASSESSMENT IN EVALUATING HEALTH
Berat IŞKIRIK Assist. Prof. Dr. Burcu Kübra SÜHA	Sivas Cumhuriyet University TÜRKİYE	NURSES' MENTAL STATUS EXAMINATION AND SPIRITUAL ASSESSMENT COMPETENCIES
Mustafa BAŞARA Assoc. Prof. Dr. Fatma ÖZKAN TUNCAY	Sivas Cumhuriyet University TÜRKİYE	NURSING CARE OF AN INDIVIDUAL WITH MYASTHENIA GRAVIS: CASE REPORT
Şirin Eda KELDAL Assoc. Prof. Dr. Fatma ÖZKAN TUNCAY	Sivas Cumhuriyet University TÜRKİYE	NURSING CARE OF AN INDIVIDUAL WITH GUILLAIN BARRE SYNDROME: CASE REPORT
Samet KORKMAZ Assoc. Prof. Dr. Tülay KARS FERTELLİ	Sivas Cumhuriyet University TÜRKİYE	TELEHEALTH APPLICATIONS IN DIABETES MANAGEMENT
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Assoc. Prof. Dr. Nurperihan TOSUN	Sivas Cumhuriyet University TÜRKİYE	GLOBAL PLAYERS IN MEDICAL TOURISM: SWOT REVIEW OF INDIA AND SINGAPORE
Assoc. Prof. Dr. Nurperihan TOSUN	Sivas Cumhuriyet University TÜRKİYE	DYNAMICS OF MEDICAL TOURISM IN TÜRKIYE AND IRAN: OPPORTUNITIES AND CHALLENGES

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Res. Assist. İremnur DURU Assist. Prof. Dr. Nurhan GÜNEŞ Assoc. Prof. Dr. Timuçin Emre TABARU	Sivas University of Science and Technology TÜRKİYE	EXAMINATION OF REFLECTION COEFFICIENT BASED RADIATION PATTERN OF BREAST CANCER
Anıl ORTA Assist. Prof. Dr. Ayşe Nur ESEN	İstanbul Technical University TÜRKİYE	DETERMINATION OF NATURAL RADIOACTIVITY IN THE SEDIMENTS OF THE MEDITERRANEAN SEA, TÜRKİYE
Assoc. Prof. Dr. Aysun ALTIKAT	Iğdır University TÜRKİYE	THE HIDDEN ACTOR OF GLOBAL WARMING: WATER VAPOR POLLUTION
Assoc. Prof. Dr. Aysun ALTIKAT	Iğdır University TÜRKİYE	WATER SCARCITY AND MANAGEMENT: STRATEGIC APPROACHES FOR TURKEY
Dr. Halime ERZEN YILDIZ Prof. Dr. Berna OTO	Van Yüzüncü Yıl University TÜRKİYE	THE INVESTIGATION OF PHOTON INTERACTION PARAMETERS OF DEXAMETHASONE DRUG
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Assoc. Prof. Dr. Seyithan SEYDOŞOĞLU	Siirt University TÜRKİYE	ECOLOGICAL INTENSIFICATION IN FEED PRODUCTION: AN OVERVIEW
Assoc. Prof. Dr. Seyithan SEYDOŞOĞLU	Siirt University TÜRKİYE	BALANCED MANAGEMENT OF MIXED PASTURES UNDER CLIMATE CHANGE

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HEAD OF SESSION: Assoc. Prof. Dr. Aytaç ÜNSAL ADACA

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Assoc. Prof. Dr. Mustafa Barış AKGÜL Res. Assist. Sevdet KILIÇ Res. Assist. Bahar ERDEN	Siirt University TÜRKİYE	VENTRAL BULLA OSTEOTOMY IN A CAT
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P C PRAVEEN KUMAR M GOPIKA	ECE Department G.Pulla Reddy Engineering College INDIA	DESIGN AND ANALYSIS OF DUAL-BAND HIGH-GAIN THZ ANTENNA ARRAY FOR THZ SPACE APPLICATIONS
P C PRAVEEN KUMAR B LEELA VAMSI KUMAR REDDY K VENKATESH NAIK	ECE Department G.Pulla Reddy Engineering College INDIA	DESIGN OF EFFICIENT 37 GHZ MILLIMETER WAVE MICROSTRIP PATCH ANTENNA FOR 5G MOBILE APPLICATION
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SISSAH Safae HMIOUI Aziz	Laboratory for Research and Studies in Management, Entrepreneurship and Finance (LAREMEF) MOROCCO	BIBLIOMETRIC ANALYSIS OF THE IMPACT OF ARTIFICIAL INTELLIGENCE AND AUTOMATION ON MANAGEMENT CONTROL PRACTICES
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Dr. Shouket Ahmad Kouchay	Islamic University Madinah SAUDI ARABIA	INTEGRATING AI AND MACHINE LEARNING IN CLOUD SECURITY FRAMEWORKS FOR PROACTIVE THREAT DETECTION AND MITIGATION

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HEAD OF SESSION: Dr. A.Vijayalakshmi

AUTHORS	AFFILIATION	TOPIC TITLE
Anas Abdulhadi Suleiman Lawal Nura Jibrin	Department of Mechanical Engineering Kaduna Polytechnic NIGERIA Hassan Usman KATSINA polytechnic NIGERIA Federal College of Education Gidan Madi NIGERIA	REVIEW: FABRICATION AND TESTING OF SOLAR-POWERED WATER PUMPS FOR IRRIGATION FARMERS IN NIGERIA
V Rangaveni B J S Varaprasad B Yashwanth	G Pulla Reddy Engineering College INDIA	SEISMIC RESPONSE REDUCTION USING LEAD RUBBER BASE ISOLATORS: A MATHEMATICAL APPROACH
Amina Benaboura Rachid Bechar Walid Kadri	Hassiba Benbouali UniOversity ALGERIA	OPTIMIZED TASK OFFLOADING FOR IOT USING DEEP Q-NETWORKS: BALANCING LATENCY AND ENERGY CONSUMPTION
ODE JONATHAN ACHA Dr. Donald Dehiin Hile Agada Felix Ojochegbe	J.S Tarka University NIGERIA	ESTIMATION OF DAILY AND GLOBAL EXTRATERRESTRIAL SOLAR RADIATION AT MAKURDI BENUE STATE
Chaimae Himri Chahrazad Belkhiri Salah-eddine Azizi Ilyesse Rahhou Mounir Legssyer Bouchra Legssyer	Mohammed First University MOROCCO	VALORIZATION OF SPENT COFFEE GROUNDS: UNLOCKING BIOACTIVE POTENTIAL FOR SUSTAINABLE TOPICAL APPLICATIONS
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Sandeep J Umesh A Thiyagarajan G M Dr. A. Vijayalakshmi	R.M.K. Engineering College,Kavaraipettai INDIA	EFFECT OF PLASTIC POLLUTION
Krishnaveni T Rayyan Sadharah Z Lakshana R Dr.A.Vijayalakshmi	R.M.K. Engineering College,Kavaraipettai INDIA	BIODEGRADABLE ELECTRONICS FOR ENVIRONMENTAL SUSTAINABILITY
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Deevenamma. U Gnanasree. S Chiru Hasini. T Dr. A. Vijayalakshmi	R.M.K. Engineering College,Kavaraipettai INDIA	THE ROLE OF GENETICS IN PERSONALIZED MEDICINE
Pooja Rasal Pranoti Nikam Akanksha Punekar Madhuri Nagare Gaurav Kasar	JES's SND College of Pharmacy INDIA Divine College of Pharmacy INDIA	ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR ESTIMATION OF AZELNIDIPINE IN BULK DRUG AND PHARMACEUTICAL DOSAGE FORM BY USING RP-HPLC
Dragana MEKIĆ Gyöngyi VASTAG Borko MATIJEVIĆ Gorana MRĐAN Suzana APOSTOLOV	Novi Sad University SERBIA	CHROMATOGRAFIC PARAMETERS IN EVALUATION OF THIOCARBOHYDRAZONES' LIPOPHILICITY AND PHARMACOKINETICS
Binar Panunggal Shu-Ping Tsao Wei-Ting Shih Hui-Yu Huang Shih-Yi Huang	Taipei Medical University TAIWAN Diponegoro University INDONESIA	EXERCISE IMPROVES MOTOR FUNCTION IN RATS WITH PARKINSON'S DISEASE
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THE IMPACT OF INNOVATIVE CURRICULA ON PREPARING HUMAN RESOURCES FOR JOB MARKET REQUIREMENTS: A STUDY OF PRIVATE BUSINESS ADMINISTRATION STUDENTS IN LEBANON

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ABSTRACT

Introduction and Purpose: In response to rapidly evolving job market requirements, higher education institutions face growing pressure to align their curricula with industry demands. This research investigates the role of innovative curricula in preparing human resources for the labor market, focusing on private university students specializing in business administration in Lebanon. The study aims to assess the effectiveness of current educational practices and propose strategies to enhance their alignment with market needs.

Materials and Methods: The research employs a mixed-methods approach, combining quantitative surveys and qualitative interviews with students, faculty members, and industry professionals. Data were collected from a representative sample of private universities in Lebanon, with a focus on business administration faculties. Key metrics include curriculum design, student skill acquisition, and perceptions of job market readiness.

Results: Preliminary findings suggest that innovative curricula incorporating practical applications, technology integration, and collaborative projects significantly enhance students' readiness for the job market. However, gaps persist in areas such as soft skills development and alignment with rapidly changing industry standards.

Discussion and Conclusion: The study emphasizes the importance of continuous curriculum updates and collaboration between academic institutions and industry stakeholders. Recommendations include embedding experiential learning opportunities, fostering partnerships with employers, and integrating future-focused competencies such as digital literacy and adaptability. By adopting these measures, universities can better equip their graduates to meet labor market challenges while fostering sustainable economic growth.

Key Words: Innovative Curricula, Job Market Readiness, Higher Education, Business Administration, Lebanon, Human Resource Development.

THE ROLE OF SELF-HEALING MATERIALS IN ARCHITECTURE AND THEIR IMPACT ON FUTURE BUILDING TECHNOLOGIES

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ABSTRACT

As civilization has advanced, the materials needed by humanity have increasingly shown characteristics of being stronger, more durable, and longer-lasting. Throughout human history, from its beginning to the present day, societies' level of development has been directly related to the quality and variety of materials they use. For this reason, researchers continuously make intensive efforts to develop more durable, lighter, and more functional materials. In this study, self-renewing smart materials in various forms such as metals, polymers, and alloys have been examined. These materials enhance human quality of life and support technological advances. These materials, which stand out due to their long-term durability, resistance to environmental effects, and unique properties, have been highlighted to self-repair and heal damage just like living organisms heal their wounds. These innovative materials have the ability to automatically detect physical and chemical damage they are exposed to, and repair and renew their structures at the molecular level. This feature significantly extends the service life of materials while minimizing maintenance and repair costs. In the near future, with the possibilities offered by advancing technology, these smart materials will become an indispensable part of our daily lives. For example, cracks and damage in car bodies will heal themselves, and buildings and bridges damaged by earthquakes or other natural disasters will quickly regain their structural integrity through their self-healing ability. Self-healing materials will also contribute to environmental sustainability by enabling more efficient use of resources. This technology will not be limited to large-scale structures; everyday items, furniture, and electronic devices will also be equipped with self-repairing smart systems. Thanks to these developments, both our quality of life will improve and maintenance-repair costs and workforce requirements will significantly decrease. Additionally, self-healing materials will contribute to environmental sustainability by enabling more efficient use of resources.

Keywords: Elastomers, Self-healing, Composite, Ceramic, Polymers.

ENHANCED DIRECT TORQUE CONTROL FOR DOUBLE STAR INDUCTION MOTORS USING GA-OPTIMIZED PI CONTROLLER

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Abstract

This article presents a novel approach to direct torque control (DTC) for dual-star induction motors (DSIM), where a PI controller is optimized using a genetic algorithm (GA). The primary goal is to fine-tune the PI speed regulator's gains to enhance the stability and performance of the drive system.

Classical DTC for DSIMs is widely recognized for its simplicity and ease of implementation. However, conventional DTC often results in high torque and flux ripples, along with variable switching requency. To address these issues, the article presents a new hybrid DTC-GA method, combining traditional DTC with a PI controller optimized via a genetic algorithm.

The genetic algorithm serves as an advanced optimization technique to refine the PI controller's ains. A simulation study conducted in a Matlab/Simulink environment demonstrates the effectiveness and robustness of this DTC-GA strategy, showing its ability to maintain high performance even under varying system parameters.

Keywords: Dual-Star Induction Motor, Direct Torque Control, PI Speed Controller, genetic algorithm, Matlab/Simulink Simulation.

RELATIONSHIP BETWEEN INDIVIDUALS' EATING HABITS AND FUNCTIONAL FOOD ATTITUDE AND ANTHROPOMETRIC VARIABLES

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Abstract

Objective: Consequently, enhancing consumers' dietary attitudes and nutritional knowledge to promote healthy eating habits and ensure optimal quality of life is a primary responsibility and objective of both dietitians and health professionals. This study was designed and executed to examine the correlation between individuals' dietary habits, attitudes towards functional foods, and anthropometric characteristics.

Method: The present cross-sectional investigation was performed on the adult population aged 18 and older. A total of 402 participants, comprising 304 women and 98 men, were incorporated into the study by convenience sampling. A questionnaire comprising four sections—demographic information, anthropometric measures, the Dutch Eating Behaviour Scale (DEBQ), and Functional Food Attitude (FBT)—was employed to gather data. Data were analysed employing statistical tests with the SPSS 22 software.

Result: Seventy-five point six percent of the study participants were female, and the educational attainment of females was significantly greater than that of males ($p<0.001$). Female participants exhibited higher levels of inactivity and slight activity compared to male individuals ($p<0.001$), whereas a greater proportion of male individuals experienced insufficient sleep relative to female persons ($p<0.001$). A substantial disparity existed between male and female subjects regarding anthropometric characteristics (<0.001). The mean DEBQ total eating score was found to be 88.97±19.24 for females and 78.36±17.75 for males, with a significant difference in the Emotional Eating score subparameter between the groups ($p<0.001$). The average total FBT eating score for women was 103.89±13.17 and for males was 104.62±14.98, with no significant difference observed between the groups in the Functional Food Attitude sub-parameters ($p>0.05$). Our study identified a strong correlation between the sub-dimensions of Eating Habits and several sub-parameters of Functional Food Attitude, as well as demographic and anthropometric variables ($p<0.05$).

Conclusion: As a result, effective dietary practices and a comprehensive understanding of functional nutrition are essential for adequate and balanced nutrition. The individual's eating behaviours and the optimisation of anthropometric factors are influenced by their eating attitudes and level of functional nutrition knowledge. We anticipate that policymakers can enhance individuals' quality of life by developing and executing educational interventions aimed at fostering optimal dietary behaviours and elevating nutritional knowledge, consistent with current literature findings.

Keywords: Eating habits, Functional food attitude, Anthropometric variables

DOCKING STUDY OF CANDIDATE 1,3,4-THIADIAZOLE DERIVATIVES WITH ANTIBACTERIAL ACTIVITY

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ABSTRACT

Many five-membered heterocyclic rings have superior chemical properties and exhibit versatile biological activities. It is known that heterocyclic compounds containing sulfur and nitrogen in their structures are widely used in drug design. The chemistry of 1,3,4-thiadiazole is highly advanced and its applications in many areas such as industrial, materials, agricultural and medicinal chemistry have been reported. 1,3,4-thiadiazoles are associated with a variety of biological activities, presumably by virtue of a toxophoric -N-C-S- grouping. In recent years, research has focused on classes of thiadiazole compounds, many of which have been observed to have broad-spectrum pharmacological activity. In particular, 1,3,4-thiadiazole derivatives substituted with various chemical groups have been reported to exhibit antimicrobial, antidepressant or anxiolytic, and antituberculosis activities. Furthermore, some thiadiazole derivatives were screened against bacterial strains and were found to have significant activity against E. coli and C. Albicans.

In this study, in order to determine the antibacterial effects of 1,3,4-thiadiazole derivatives, docking studies with the receptor of Escherichia coli bacteria, 4PRV protein, were carried out using the Autodock Vina program. The dissolved enzyme with code 4PRV was selected from the RSCB Database for docking, considering the dissolution type, solubility coefficient, presence of mutation, and dissolution year. 4PRV structure, DNA gyrase, a bacterial enzyme involved in bacterial DNA replication and transcription and a validated target for antibiotics. The position and intermolecular interactions of the relevant derivatives in the complex with the E. coli 4PRV protein receptor were evaluated.

Key Words: 1,3,4-thiadiazole, Docking, Autodock Vina, Antibacterial Activity.

ENDOCRINE SYSTEM DISEASES, METABOLIC AND NUTRITIONAL DISORDERS INTERACTION WITH LUNG DISEASES

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ABSTRACT

In summary, there are a number of important respiratory manifestations of endocrine diseases. Hypothyroidism may be associated with respiratory failure that can be caused by a reduction in central respiratory drive, upper airway obstruction, and associated restrictive pulmonary function from pleural effusions or an intrinsic decrease in lung volumes. Hyperthyroidism can present with dyspnea as a major clinical manifestation because of the increase in central respiratory drive associated with thyrotoxicosis. Cardiac dysfunction associated with hyperthyroidism may lead to pulmonary edema in some patients. Hypoparathyroidism may occur acutely, especially after thyroid surgery and be associated with hypocalcemia and acute tetany, laryngeal stridor, and muscle weakness.

Keywords: Endocrine system, Metabolism, Lung diseases

BUILDING BRIDGES WITH GENERATION Z: A LITERATURE REVIEW ON EFFECTIVE COOPERATIVE MARKETING STRATEGIES

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ABSTRACT

Introduction and Purpose: The global cooperative movement faces challenges in engaging Generation Z (Gen Z), a tech-savvy and socially conscious demographic with preferences for sustainability, equity, and authentic interactions. This systematic literature review explores promotional strategies that enhance Gen Z awareness and membership in cooperatives, addressing barriers such as limited awareness, perceived irrelevance, and outdated practices. The objective is to identify effective promotional approaches to attract and sustain Gen Z membership, ensuring the movement's growth and relevance.

Materials and Methods: A systematic review was conducted following PRISMA guidelines, incorporating studies from databases including Scopus, PubMed, and Web of Science. The search encompassed peer-reviewed articles published between 2008 and 2023, focusing on promotional strategies targeting Gen Z within the cooperative context. Data extraction captured key attributes such as study design, population, outcomes, and methodological rigor. Analysis emphasized digital and experiential marketing, influencer collaborations, and participatory engagement models.

Results: Digital platforms like TikTok, Instagram, and YouTube emerged as critical tools for engaging Gen Z, with influencer marketing proving particularly impactful due to its alignment with their values of authenticity and relatability. Experiential marketing leveraging immersive technologies (e.g., AR/VR) showed potential in fostering emotional connections. However, barriers such as insufficient awareness of cooperative models, perceptions of irrelevance, and structural rigidity were identified. Facilitators included alignment of cooperative principles with Gen Z's values and the adoption of innovative, tech-driven approaches.

Discussion and Conclusion: The study highlights the importance of adopting digital and experiential marketing strategies to connect with Gen Z. By leveraging influencers, storytelling, and participatory experiences, cooperatives can resonate with this generation's preferences for authenticity and social impact. Modernizing operations and communication practices while emphasizing cooperative principles is essential to overcoming barriers and ensuring long-term Gen Z engagement. Future research should explore region-specific strategies, emerging technologies, and structural adaptations to address gaps in knowledge and practice.

Key Words: Generation Z; Cooperative Movement; Digital Marketing; Social Media; Experiential Marketing; Sustainability

DETOXIFICATION OF MYCOTOXINS IN FOODS

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Abstract

Objective: The rising global population and globalisation, coupled with hunger, poverty, sickness, and environmental pollution in developing nations, are compelling the scientific community to pursue solutions. The paramount issue among these challenges is undoubtedly the matter of nutrition. Insufficient or erroneous nutrition, together with food contamination and foodborne illness, are critical variables influencing the sustenance of human life, quality of life, and its continuity. Mycotoxins are metabolites produced by fungi that typically contaminate food and present a health hazard to consumers. Preventing the production of mycotoxins is one of the most crucial methods to mitigate their detrimental effects. This study aims to elucidate the detoxifying mechanisms of mycotoxins present in food.

Method: We conducted a comprehensive search of all published experimental, observational, and review research to elucidate the detoxification processes and health risks associated with mycotoxins present in food. A literature search was conducted utilising electronic databases, supplemented by a manual inspection of the reference lists of papers retrieved from PubMed till December 2024. The subsequent essential terms were employed: PubMed: ("Nutrient" OR "Food" OR "Causes of nutritional deficiencies" OR "Food contaminations" OR "Food poisoning" OR "Food safety" OR "Contaminants occurring in foods" OR "Microorganisms causing food spoilage" OR "Moulds causing food spoilage" OR "Mycotoxins causing food spoilage" OR "Aflatoxins" OR "Aspergillus flavus" OR "Aspergillus parasiticus" OR "Aflatoxin B1" OR "Trichothecenes" OR "Ways to protect against harmful effects of mycotoxins" OR "Detoxification of mycotoxins in foods" OR "Biotechnology in detoxification of mycotoxins in foods"). The literature search was conducted with the terms employed by EndNote.

Result: In our nation, food safety encompasses the delivery of food to consumers in a wholesome and trustworthy manner, safeguarding its chemical, physical, sensory, and biological attributes from production to consumption (from field to fork), along with the means implemented to achieve this objective. Mycotoxins produced by moulds are secondary metabolites that can induce acute or chronic effects, including carcinogenic, mutagenic, teratogenic, and oestrogenic consequences in humans and animals. Good agricultural techniques mitigate mycotoxin levels in food; but, as they encompass all processes from cultivation to consumption, they do not entirely eradicate mycotoxins. The detoxification of foods to eliminate mycotoxins is critically significant for public health.

Conclusion: In food processing, chemical or enzymatic transformations, aided by physical procedures, elevated temperatures, and alkaline or acidic conditions such as grinding, brewing, and extrusion, as well as biological techniques, might diminish the detrimental metabolites of mycotoxins. Although physical approaches and associated processes now offer the most effective reduction of mycotoxin content in food post-harvest, it is indisputable that advancements in biotechnology hold the most promise for the future.

Keywords: Food contamination, Mycotoxins, Mycotoxin detoxification

CALCULATION OF ANTIBACTERIAL ACTIVITIES OF 1,3,4-THIADIAZOLE DERIVATIVES BY DFT METHOD

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ABSTRACT

The thiadiazole molecule is an organic compound containing a five-membered heterocyclic ring in its structure. The ring of the molecule contains sulfur (S) and nitrogen (N). The organic compound in question belongs to the class of nitrogen-sulfur heterocycles, which have a wide range of applications as structural units of biologically active molecules and useful intermediates in medicinal chemistry. thiadiazoles have attracted widespread attention due to their various applications as antibacterial, antimycobacterial, antimycotic, antifungal and antidepressant agents. 1,3,4-Thiadiazoles and some of their derivatives are extensively studied due to their wide pharmacological activity spectrum. In this study, the antimicrobial activities of thiadiazole derivatives were calculated theoretically. The calculations were obtained in the 6-311+G (d, p) basis set using the Density Functional Theory (DFT) method with the help of molecular simulation software Gaussian 16W and GaussView 6.0 using volume account. The highest occupied molecular orbital (HOMO), lowest unoccupied molecular orbital (LUMO) and density are very important in explaining the electronic and optical properties of molecular orbitals. These molecular orbitals also provide important information about the mechanisms of antimicrobial activity in biological studies.

Key words: Thiadiazole, DFT, Antimicrobial activity.

PHYSIOLOGICAL CHARACTERISTICS, DIAGNOSIS AND TREATMENT OF HYPOPITUITARISM

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ABSTRACT
Hypopituitarism is a chronic endocrine illness that caused by varied etiologies. Clinical manifestations of hypopituitarism are variable, often insidious in onset and dependent on the degree and severity of hormone deficiency. However, it is associated with increased mortality and morbidity. Therefore, early diagnosis and prompt treatment is necessary. Hypopituitarism can be easily diagnosed by measuring basal pituitary and target hormone levels except growth hormone (GH) and adrenocorticotropic hormone (ACTH) deficiency. Dynamic stimulation tests are indicated in equivocal basal hormone levels and GH/ACTH deficiency. Knowledge of the use and limitations of these stimulation tests is mandatory for proper interpretation. It is necessary for physicians to inform their patients that they may require lifetime treatment.

Keywords: Hypopituitarism, Physiology, Treatment

FACTORS INFLUENCING SAVING INTENTIONS: A STUDY ON GENERATION Z EDUCATORS' FINANCIAL DECISION-MAKING

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ABSTRACT

Introduction and Purpose: As Generation Z (Gen Z) increasingly enters the workforce, understanding their saving behaviors becomes crucial, particularly among public school teachers in Davao City. This study examines how attitudes, subjective norms, and perceived behavioral control influence the saving intentions of Gen Z educators. The goal is to identify the factors that either promote or hinder their saving practices, thereby contributing to their financial stability and preparedness.

Materials and Methods: A quantitative correlational research design was utilized, involving a survey distributed to 116 Gen Z secondary public school teachers in Davao City. The study focused on the relationships between the identified factors and saving intentions, employing statistical analysis to assess significance and correlation.

Results: The analysis revealed that perceived behavioral control and subjective norms significantly impact saving intentions, with perceived behavioral control being the most influential factor. Conversely, attitudes did not show a significant effect on saving intentions, indicating that confidence in financial decision-making is paramount for this demographic.

Discussion and Conclusion: The findings highlight the need for targeted financial education programs that enhance self-efficacy and address social influences on saving behaviors. By aligning educational initiatives with the values and needs of Gen Z, stakeholders can foster improved financial habits and preparedness among young educators. Future research should explore additional factors influencing saving intentions and the effectiveness of specific financial education interventions.

Key Words: Generation Z; Saving Behavior; Financial Preparedness; Subjective Norms; Perceived Behavioral Control; Davao City

ASSESSMENT OF MARBLE WASTE AND FLY ASH AS SUSTAINABLE SAND SUBSTITUTES IN CONCRETE: EFFECTS ON COMPRESSIVE STRENGTH AND WORKABILITY

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ABSTRACT

The rapid growth of infrastructure, urbanization, and industrial activities has significantly increased global demand for concrete, placing immense pressure on natural resources and raising ecological concerns. Incorporating recycled materials into concrete offers a sustainable alternative without compromising its quality. This study investigated the effects of substituting natural sand with marble dust and fly ash as fine aggregates on concrete properties. Three series of mixtures were prepared: S1 involved replacing sand with marble dust at rates ranging from 10% to 50% in 10% increments; S2 used similar substitution rates with fly ash; and S3 combined marble dust and fly ash at varying proportions to evaluate their combined impact. Results showed that across all mix series and testing ages, compressive strength increased by 49.94%, 49.15%, 49.53%, and 53.08% at 7, 14, 28, and 56 days, respectively, with the highest performance observed at 20% marble dust and 30% fly ash replacement. However, higher marble dust proportions negatively affected workability compared to conventional concrete. These findings demonstrate the potential of waste marble powder and fly ash to improve concrete performance while supporting sustainable construction practices.

RETROSPECTIVE REVIEW OF NONTRAUMATIC LOWER EXTREMITY AMPUTATIONS

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ABSTRACT

Introduction and Purpose: Reamputation is the surgical resection of a previously amputated limb after amputation. In our study, age, gender, side, etiology, amputation level, number of days of hospitalization, history of cardiovascular intervention, hemogram, biochemistry, serology parameters, number and technique of surgical procedures performed in patients requiring reamputation were retrospectively analyzed in patients who underwent lower extremity amputation for non-traumatic reasons in our clinic. In line with these data, it was aimed to determine the factors that may predict the likelihood of reamputation after amputation surgery. Changes in the parameters examined in repeated amputation surgeries were analyzed. It was aimed to determine the optimal data for amputation surgery.

Materials and Methods: Between 2013 and 2023, 314 patients who underwent lower extremity amputation surgery for peripheral arterial disease and/or microvascular disorders in our clinic were included in the study. The 203 patients who recovered without complications after the first amputation surgery were grouped as control group 1. Patients who underwent reamputation due to complications after the first amputation surgery were considered as separate study groups. The data of the patients who underwent reamputation before the first amputation surgery were analyzed, and 111 patients were included in this group and designated as group 2. The 104 patients who underwent the second reamputation surgery were designated as group 3. 32 patients who underwent the third reamputation surgery were designated as group 4. Patients were also grouped according to the level of amputation, and the effect of the choice of amputation level on reamputation was analyzed.

Results: The proportion of patients who underwent more than one amputation due to complications after the first amputation (group 2; 111 patients) was 35.3%. The proportion of patients who underwent two reamputations (group 3; 104 patients) was 32.6%, and the proportion of patients who underwent three reamputations (group 4; 32 patients) was 10.1%. In our control group (group 1), 48.8% of amputations were performed at the distal ankle (group A), 34.5% at the transtibial level (group B), and 16.7% at the knee level (group C). In Group2, 52.3% of the procedures were performed at the distal ankle level (Group A), 32.4% at the transtibial level (Group B), and 15.3% at the knee level (Group C). There was no significant difference in the analyzed laboratory parameters between group 1 and group 2.

Discussion and Conclusion: There is a need for studies to develop individualized predictive models for amputees that can assess wound healing potential after lower extremity amputation for diabetic foot and/or peripheral vascular disease, help predict the risk of re-amputation, and assist clinicians in making decisions about the extent of amputation. Current clinical algorithms used to predict the risk of healing failure have limitations and require a more individualized approach to decision making and development of predictive data.

Keywords: Reamputation, Amputation, Diabetes

EFFECTS OF SOME PLANT GROWTH REGULATORS ON THE MULTIPLICATION CAPACITY OF BLUEBERRIES IN IN VITRO PROPAGATION

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ABSTRACT

Introduction and Purpose: Blueberry is a berry fruit species in the genus *Vaccinium* in the *Ericaceae* family. Three different blueberry species are cultivated in the world. These species are called highbush blueberries (*Vaccinium corymbosum* L.), rabbiteye blueberries (*Vaccinium ashei* Reade synm: *Vaccinium virgatum* Ait.) and lowbush blueberries (*Vaccinium angustifolium* Ait.). In our country, the cultivation of highbush blueberry varieties is the most intensive. Blueberry plant is a species that grows in strongly acidic soils. However, with the increase in soilless blueberry cultivation in recent years, it has been observed that it has spread in almost all ecological conditions. In parallel with the increase in cultivation in our country, the need for seedlings is also increasing. Blueberry transplant are obtained by vegetative propagation. Most intensively, tissue culture techniques are utilized. With in vitro propagation, it is possible to obtain plants free from diseases and pests and to obtain plants with accurate seedlings. In addition, in vitro techniques have the advantage of unseasonal production and the number of plants taken per unit area.

Materials and Methods Three different blueberry cultivars, Misty, Star and Legacy, were used in this study. Shoot tip technique was used in the experiment and the effects of three different plant growth regulator treatments (1 mg/l BAP+1mg/IAA; 2 mg/l BAP+1mg/IAA and 4 mg/l zeatin) on the number of shoots per explant and multiplication capacities were examined.

Results: As a result of the research, 4 mg/l zeatin application was found to be more successful than the other two application combinations (1 mg/l BAP+1mg/IAA; 2 mg/l BAP+1mg/IAA) in terms of both shoot number and shoot development. Our results showed that only 4 mg/l zeatin application was sufficient for in vitro propagation of blueberry plants.

Keywords*: Vaccinium corymbosum*, southern highbush cultivar, *in vi*

EFFECT OF UNTREATED DENTAL CARIES ON CARDIOVASCULAR DISEASES

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ABSTRACT

Introduction and Purpose: Dental caries and cardiovascular diseases are widespread public health issues. Dental caries is a multifactorial infectious disease caused by acids from cariogenic bacteria that destroy dental tissues. Cardiovascular diseases, a group of heart and blood vessel disorders, are influenced by factors like high blood pressure, cholesterol, smoking, lifestyle, diabetes, and inactivity. Research indicates these diseases share common risk factors. This review aims to assess the effect of untreated dental caries on cardiovascular diseases.

Materials and Methods: This review study included publications from 2010 to 2024, using the keywords "dental caries and cardiovascular disease" to search for "cohort studies," "cross-sectional studies," and "reviews" reported in the literature. This study discussed the effect of dental caries on cardiovascular diseases.

Results: The findings suggested that the cariogenic oral microbiota and dental caries could be considered risk factors for cardiovascular diseases. One potential pathway through which untreated dental caries could have contributed to cardiovascular diseases was bacterial translocation. It had been shown that *Streptococcus mutans,* known as the most cariogenic microorganism, accelerated the formation of atherosclerotic plaques and inflammatory cell invasion. Untreated caries or infected teeth served as sources of bacteremia. Chronic low-level infections in the teeth triggered systemic infections, increasing the levels of biomarkers closely associated with cardiovascular diseases, such as C-reactive protein. Studies also found a positive correlation between dental caries and hypertension. Additionally, cardiac complications had been reported due to bacteremia originating from oral infections.

Discussion and Conclusion: Understanding the link between dental caries and cardiovascular diseases can aid in developing treatment strategies and effective public health measures to improve oral and cardiovascular health. Cooperation between dentists and medical doctors is crucial for progress in both areas. Thus, further research on the relationship between cardiovascular diseases and dental caries should be conducted in larger, long-term studies.

Key Words: Dental Caries; Cardiovascular Diseases; Dental Infections; Risk Faktors

USE OF GRAPE:BIT IN EDUCATIONAL ENVIRONMENTS

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ABSTRACT

Introduction and Purpose: Grape:bit is a microcontroller board developed by the KittenBot company specifically for second and third grade information technology courses and corporate teaching. ESP32, which has high performance, wireless communication, graphic programming and other computers, was used as the main microcontroller on the board. It is stated that they are designed to think within the scope of information technologies, to share their manual skills effectively, and to provide advanced and creative assistance. The general purpose of the study is to reveal the features and technical information of the microcontroller in question, considering its development stages, and to determine its usability in educational environments.

Materials and Methods: The study was carried out within the framework of descriptive research, which is one of the scientific research methods. Descriptive research aims to reveal, in other words, describe, the existing situation. In a sense, they aim to portray the existing situation. In this respect, they reveal exactly what the current situation is. On the other hand, in the descriptive research method, it is tried to describe the phenomenon as it exists rather than controlling the variables. Therefore, the features of Grape:bit were examined and described from various perspectives.

Results: Within the scope of the research, findings regarding the features and technical information of the microcontroller in question were revealed and its usability in educational environments was examined. Additionally, information on various expansion options and modules for developing different projects with Grape:bit was included. Within the scope of components related to Grape:bit, the editors used in the programming environment and the basic information and processes of programming the microcontroller were also mentioned. In addition, information and examples regarding the use of Grape:bit in educational environments were also included within the scope of the study.

Discussion and Conclusion: In the field of education, robotic systems are used to teach students programming and engineering skills. Robotic coding allows children to develop their problem-solving abilities and produce innovative solutions using their creativity. With the use of Grape:bit and similar microcontrollers, students' motor skills can also be improved within the scope of physical programming. The biggest aim of these trainings is to raise a society that produces with technology instead of a society that consumes technology. Additionally, with the use of this and similar microcontrollers, students can easily acquire 21st century skills and integrate them into their lives more easily.

Key Words: Grape:bit; STEM; Coding; Microcontroller; Robotics.

USE OF MBITS IN EDUCATIONAL ENVIRONMENTS

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ABSTRACT

Introduction and Purpose: Mbits is a small microcontroller board developed for computer education. Mbits was produced in collaboration with Shenzhen Elecrow, Innovative Experiment and Artronshop companies. The Mbits board uses ESP32 as the main microcontroller with WiFi and Bluetooth connectivity. It was developed specifically for Thailand to support STEAM education and computer learning. microBlock IDE or microPython are used as development tools for coding the card. It covers learning about coding, electronics, automatic control, basic embedded systems and STEAM education. The general purpose of the study is to reveal the features and technical information of the microcontroller in question, considering its development stages, and to determine its usability in educational environments.

Materials and Methods: The study was carried out within the framework of descriptive research, which is one of the scientific research methods. Descriptive research aims to reveal, in other words, describe, the existing situation. In a sense, they aim to portray the existing situation. In this respect, they reveal exactly what the current situation is. On the other hand, in the descriptive research method, it is tried to describe the phenomenon as it exists rather than controlling the variables. Therefore, the features of Mbits were examined and described from various perspectives.

Results: Within the scope of the research, findings regarding the features and technical information of the microcontroller in question were revealed and its usability in educational environments was examined. Additionally, information on various expansion options and modules for developing different projects with Mbits was included. Within the scope of components related to Mbits, the editors used in the programming environment and the basic information and processes of programming the microcontroller were also mentioned. In addition, information and examples regarding the use of Mbits in educational environments were also included within the scope of the study.

Discussion and Conclusion: In the field of education, robotic systems are used to teach students programming and engineering skills. Robotic coding allows children to develop their problem-solving abilities and produce innovative solutions using their creativity. With the use of Mbits and similar microcontrollers, students' motor skills can also be improved within the scope of physical programming. The biggest aim of these trainings is to raise a society that produces with technology instead of a society that consumes technology. Additionally, with the use of this and similar microcontrollers, students can easily acquire 21st century skills and integrate them into their lives more easily.

Key Words: Mbits; STEM; Coding; Microcontroller; Robotics.

INTERACTIONS BETWEEN THE IMMUNE AND ENDOCRINE SYSTEMS IN PULMONARY DISEASES

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ABSTRACT

The role of the endocrine system on the immune response, especially in the lung, remains poorly understood. Hormones play a crucial role in the development, homeostasis, metabolism, and response to the environment of cells and tissues. Major infectious and metabolic diseases, such as tuberculosis and diabetes, continue to converge, necessitating the development of a clearer understanding of the immune and endocrine interactions that occur in the lung. Research in bacterial respiratory infections is at a critical point, where the limitations in identifying and developing antibiotics is becoming more profound. Hormone receptors on alveolar and immune cells may provide a plethora of targets for host-directed therapy. This review discusses the interactions between the immune and endocrine systems in the lung. We describe hormone receptors currently identified in the lungs, focusing on the effect hormones have on the pulmonary immune response.

Keywords: Lung diseases, Immune system, Endocrine system

GENERATION Z AND COFFEE SHOPS: THE ROLE OF MUSIC, LIGHTING, AND INTERIOR DESIGN IN CONSUMER CHOICES

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ABSTRACT

Introduction and Purpose: Knowing the interests of Generation Z (Gen Z) customers is crucial as the coffee shop sector grows, especially in Davao City. This study explores how Gen Z students' preferences for coffee shops are influenced by a variety of ambiance features, including lighting, music, interior design, seating arrangements, and temperature control. In order to improve coffee shop marketing strategies and client satisfaction, the goal is to determine the most and least favored ambiance combinations.

Materials and Methods: Three hundred Gen Z students in Davao City were given a survey as part of a quantitative research design that included conjoint analysis. Using statistical techniques, the study examined the importance and strength of the correlations between coffee shop preferences and ambiance qualities.

Results: The results show that the two most important ambiance elements affecting Gen Z students' preferences for coffee shops are music and lighting, with lively music and low lighting

being the most popular pairings. Although they are seen as secondary in importance, other characteristics like seating arrangement and interior design also play a part.

Discussion and Conclusion: The findings highlight how crucial it is to create a welcoming atmosphere at coffee shops in order to draw in Gen Z customers. In order to cater to the tastes of this group, coffee shop operators should give music and lighting top priority in their design plans. Future studies should examine how other elements, such menu variety and service quality, affect Gen Z's choice of coffee shop.

Key Words: Generation Z; Coffee Shop Preferences; Ambiance Attributes; Conjoint Analysis; Davao City; Consumer Behavior

THE UNTAPPED POWER OF *SMYRNIUM OLUSATRUM* L. FLAVONOIDS IN ARTHRITIS AND VASCULAR CARE

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ABSTRACT

Inflammation plays a crucial role in the pathogenesis of chronic diseases such as arthritis, characterized by disruptions in cellular components and immune processes. One key feature of inflammation is increased vascular permeability, driven by leukocyte-endothelial interactions, which exacerbates inflammatory responses and tissue damage. While conventional anti-inflammatory therapies, including non-steroidal anti-inflammatory drugs, are effective, their limitations and associated side effects highlight the need for safer alternative treatments. In this context, flavonoids have emerged as promising candidates due to their broad biological activities and favorable safety profiles. *Smyrnium olusatrum* L., a plant rich in bioactive compounds, has been traditionally used for medicinal purposes, but its potential as an anti-inflammatory and anti-arthritic agent remains underexplored. This study evaluates the anti-inflammatory and anti-arthritic properties of flavonoids extracted from *S. olusatrum* seeds.

The anti-arthritic activity was assessed through the inhibition of protein denaturation using BSA and egg albumin as models. Anti-inflammatory effects were evaluated through an acetic acid-induced vascular permeability assay in mice, complemented by leukocyte counts from peritoneal exudates and tail vein blood smears. Histological analysis of tissue sections was also performed to assess cellular responses.

The results showed that the flavonoid extract of *S. olusatrum* demonstrated concentration-dependent inhibition of BSA denaturation, with protection percentages ranging from 60.77% to 64.62% across the tested concentrations. These effects were comparable to those of the reference drug diclofenac, highlighting the extract's potential anti-arthritic properties.

In the vascular permeability assay, flavonoids demonstrated marked efficacy by reducing Evans blue concentrations in exudates from 15.67 µg/mL at 5 mg/kg to 9.97 µg/mL at 20 mg/kg. The extracts outperformed diclofenac in reducing Evans blue infiltration in tissues such as the liver, spleen, kidneys, and skin. Microscopic observations confirmed these findings, revealing decreased Evans blue accumulation in treated organs.

These results indicate that flavonoids from *S. olusatrum* possess significant antiarthritic and anti-inflammatory properties, underscoring their potential as promising therapeutic agents for inflammatory diseases.

VALORIZATION OF SPENT COFFEE GROUNDS: UNLOCKING BIOACTIVE POTENTIAL FOR SUSTAINABLE TOPICAL APPLICATIONS

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Abstract

Coffee, celebrated as a cornerstone of global culture and commerce, ranks among the most widely consumed beverages worldwide. Its preparation processes, such as steeping and pressing, extract a variety of bioactive compounds that contribute to its popularity. However, the scale of coffee consumption poses environmental challenges, particularly due to the by-product of spent coffee grounds (SCG), which amount to approximately 6 million tons annually. Each kilogram of brewed coffee generates double its weight in wet SCG, creating a pressing need for sustainable management.

The growing interest in the composition of SCG stems from its potential as a valuable by-product with properties comparable to those of coffee beans. SCG exhibits diverse biological activities, including antioxidant, anti-inflammatory, antimicrobial, anti-aging, anti-cancer, and photoprotective effects. These characteristics make it an attractive resource for developing topical pharmaceutical and cosmetic formulations due to its affordability, sustainability, safety, and demonstrated efficacy.

This study aims to highlight the potential applications of SCG in topical formulations while identifying the key bioactive compounds responsible for its biological activities. By exploring these aspects, this research seeks to foster innovative approaches to harness coffee resources more effectively, paving the way for advancements in this promising field.

Keywords: *spent coffee grounds , health , cosmetic, anti-inflammatory, anti-cancer.*

COMPARATIVE ANALYSIS OF BIOACTIVE PROPANOLIC EXTRACT OF TERMITE İNVADED AND TERMİTE FREE BARK OF *AZADİRACHTA İNDİCA* İN HUSSAİNİ ADAMU FEDERAL POLYTECHNIC KAZAURE, JIGAWA NIGERIA

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Abstract
Termites are polymorphic social insects living in colonies and best thrived in arid and semi-desert areas with underground nest. They live in the collection of green plants and cause material damage to living grasses, crops and seedlings, thus causing major threat in agriculture and forestry. Neem tree, *Azadirachta indica* is the most versatile, multifarious tree of the tropics with immense potential applications. Its non-wood products possess numerous biological activities. In the present study, solvent extraction technique is employed to obtain the propanolic extract of the neem-bark samples. The outcomes revealed that saponins, tannins, carbohydrate, glycoside, terpenoid and flavonoids were present in all the samples, while Anthraquinons, alkaloids and Steroid are absent. The results of this work equally confirmed that, the presence of saponnis is at low concentrations in both termite free bark and termite infected bark extract. The amount of flavonoids are higher in the termite free bark extract than the termite infected bark extract. Glycoside is far lower in concentration in the termite infected extract than the termite free extract. Terpenoid is also present at the same concentration in both extracts. Tannins are of equal amount in both extracts. Carbohydrate is present at low concentration in the termite free neem bark extract but is absent in the termite infected neem bark extract. It may be concluded that, activities of termite affects some of the phytochemicals of *A. indica* bark which may in turn reduce the medicinal value of the extract if used for curing certain disease condition as must of the plant extracts are used by herbalist due to the avalanche of bioactive compounds present in the bark of neem tree plants.
Keywords: Neem bark; Phytochemical; Extraction; Propanol; Termites

DETERMINATION OF THE BACTERIOCIN PRODUCTION POTENTIAL OF LACTIC ACID BACTERIA ISOLATED FROM ERZURUM CIVIL CHEESE SAMPLES IN TERMS OF FOOD SAFETY AND THEIR POTENTIAL TO DEGRADE BIOGENIC AMINES AT GENE LEVEL

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ABSTRACT

Erzurum civil cheese is one of the most widely produced and consumed cheese types in Turkey due to its high aromatic profile. Its characteristic features distinguish it from other cheese types from a biochemical and microbiological point of view, and it is also of great importance in terms of harboring GRAS (Generally Recognized As Safe) microorganisms. Lactic acid bacteria (LAB) have been a very important bacterial group in food technology and food microbiology for many years, as they contribute significantly to the nutritional value of products due to their metabolic properties and the metabolites they produce. The preservative properties of LAB in foods and the extension of shelf life come from the antimicrobial metabolites such as organic acids, antibiotics, hydrogen peroxide, acetoin, bacteriocins and biogenic amine groups. Bacteriocins have become very important in the food industry in recent years by being used as natural food preservatives. On the other hand, biogenic amines are biologically active, nitrogen-based, low molecular mass substances and are considered as indicators of food quality and toxicity. Biogenic amines, which are biologically important, may jeopardize health when taken in excess due to their toxic effects. In line with all this information, in the present study, bacteria were isolated from civil cheese samples collected from Erzurum province and the microflora of these samples were determined. Afterwards, potential bacteria with GRAS status were identified in this bacterial group by various methods. For this purpose, the antibacterial activities of the bacteria were determined, it was determined whether they contain genes responsible for bacteriocin production and their potential to degrade biogenic amines was investigated by specific PCR. As a result of the analyses, a total of 27 SE coded bacteria were isolated. Four of them (SE2, SE5, SE7, SE11) were found to have strong antagonistic effects against various food pathogens. Among the molecularly identified

isolates, it was determined at the gene level that SE7 coded bacteria were plantaricin producers and SE2 coded bacteria were brevicin producers. Then, it was determined that both isolates could degrade biogenic amines by specific PCR. API 20E and specific PCR proved that both isolates were negative for decarboxylase enzyme and positive for MCO (MultiCoperOxidase) enzyme.

Key Words: Lactic Acid Bacteria, Bacteriocin, Biogenic Amine, GRAS

EXPLORING THE SAFETY AND TOXICITY OF *ADENOCARPUS DECORTICANS*: BRINE SHRIMP LETHALITY AND ORAL ADMINISTRATION IN *BALB/C* MICE

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ABSTRACT

Introduction and Purpose: Natural products offer a rich source of potential therapeutic agents due to their diverse biological and pharmacological activities. However, it is essential to recognize that these substances may also possess inherent toxicological properties. To ensure their safe and effective application in medicine, recent research has focused on a comprehensive evaluation of both the pharmacological efficacy and toxicological potential of plant-derived compounds.

Materials and Methods: This study aimed to evaluate the acute toxicity of *Adenocarpus decorticans Aiton*, a medicinal plant native to northeastern Morocco, through the use of both alternative biological assays and an animal model. The brine shrimp lethality test, employing *Artemia salina*, was utilized to assess the toxicity of ethanolic stems extracts from E. pinnata. Furthermore, an acute oral toxicity study in BALB/c mice was conducted to determine the safe dosage range. Adhering to OECD guideline 423, male mice were orally administered four doses (350, 700, 1400, and 2000 mg/kg) of the extract. Animals were closely monitored for a period of 72 hours for any signs of toxicity, behavioral changes, adverse effects, and mortality.

Results: The brine shrimp lethality test revealed varying degrees of toxicity among different plant parts of *Adenocarpus decorticans Aiton*. Stem extracts demonstrated the highest toxicity with an LC50 of 660.69 µg/ml, followed by leaf extracts at 972.7 µg/ml, and flower extracts at 1000 µg/ml.

In the animal model, mice were administered four different doses of the extract and monitored for 14 days. No mortality or significant behavioral changes were observed in any of the treated groups. However, animals receiving the highest dose of 2000 mg/kg exhibited mild symptoms such as drowsiness, sedation, and lethargy.

Discussion and Conclusion: Our study demonstrates a strong correlation ($r = 0.85$, $p < 0.05$) between the in vitro brine shrimp lethality test and in vivo acute oral toxicity in mice, highlighting the value of the brine shrimp assay as a reliable and cost-effective tool for preliminary toxicity assessment of plant extracts. By utilizing this approach, researchers can expedite the identification of promising natural compounds while minimizing the risk of adverse effects.

Key Words: *Adenocarpus decorticans Aiton*, *Hydro-ethanolic extracts, Artemia salina, Balb/c, Acute toxicity.*

PHYTOTHERAPEUTIC EFFECTS OF *FICUS CARICA* LINN. LATEX AND ITS BIOCHEMICAL COMPONENTS ON LUNG CANCER

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ABSTRACT

Introduction and Purpose: The healing effects of plants have been utilized since ancient times. Fig, botanical name *Ficus carica* Linn., is used in traditional medicine to treat respiratory disorders. Due to the possible undesirable effects of chemotherapy, which is one of the cancer treatment methods, there is a need to discover or develop plant-based drugs with fewer side effects. In this review, we aimed to summarize the phytotherapeutic effects of fig latex and its biochemical components on lung cancer.

Materials and Methods: Two electronic databases (PubMed and DergiPark) were searched in this review.

Results: In a recent study, high concentrations of fig latex (1/36 and 1/12) significantly reduced the viability of A549 human lung carcinoma cells. The viability of A549 cells was 55.18% at 1/36 concentration and 46.80% at 1/12 concentration. These cytotoxic effects were thought to be related to cysteine protease, ficin, and other compounds in the latex. Another study also found anti-proliferative effects of fig latex. Wang et al. found that β-sitosterol activated SHQ1/UPR signaling and decreased miR-181a-3p expression. Thus, this phytosterol significantly suppressed proliferation and stimulated apoptosis in anlotinib-resistant A549 cells. He et al. found that lupeol inhibited the growth and colony-forming ability of A427 (human lung carcinoma cells) cells in a concentration-dependent manner. Lupeol induced apoptotic cell death via the mitochondria-mediated pathway by increasing Bax and decreasing Bcl-2 expression. The same study observed that this compound decreased mitochondrial membrane potential, inhibited the mTOR/PI3K/Akt signaling cascade, and induced the production of reactive oxygen species.

Discussion and Conclusion: These results suggest that F. carica latex and its biochemical components may exhibit antineoplastic effects on lung cancer. However, further ex vivo and in vivo studies are needed to elucidate the chemotherapeutic effect of fig latex and its ingredients.

Key Words: Lung cancer; *β*-sitosterol; *Ficus carica*; Latex; Lupeol

6 FEBRUARY 2023 STRUCTURAL DAMAGE CONDITIONS OF ELBİSTAN CENTRAL DISTRICT AND RURAL AREAS AFTER THE KAHRAMANMARAŞ EARTHQUAKES

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ABSTRACT

On 6 February 2023, the Kahramanmaras Pazarcık and Elbistan earthquakes, which occurred on 6 February 2023, had devastating effects on a large area in southeastern Turkey. In this study, the structural damage caused by the earthquakes in the district center of Elbistan and the surrounding rural areas is comprehensively investigated. The study was carried out in the light of damage assessment reports, visual inspections, and data obtained from local authorities in order to evaluate the responses of reinforced concrete structures in the central region of Elbistan and masonry building typologies in the shorter region to different damage levels. According to the data obtained, it is observed that structural damages caused by design errors, material, and application problems are common in reinforced concrete systems in Elbistan-Central neighborhoods. In rural areas, it draws attention to the role of traditional building materials and methods in determining the earthquake performance and shows that especially the structures that do not comply with modern construction standards are greatly affected. In addition, the effects of factors such as local soil properties and proximity to fault lines on damage distribution were also analyzed. In conclusion, the study provides recommendations to improve the resilience of the structures in the region and important implications for post-disaster reconstruction processes. In this context, the integration of traditional construction techniques with modern engineering approaches stands out as an important solution in terms of structural resilience and sustainability.

Keywords: Kahramanmaraş Earthquakes, Elbistan, rural areas, structural damages, damage assessment

FROM ANTI-HYPERTENSIVE TO MEMORY BOOSTER: REPURPOSING VERAPAMIL FOR MEMORY ENHANCEMENT AND COGNITIVE FUNCTION

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Drug repurposing is an approach based on discovering new usage of already marketed medications that are currently being used in a number of clinical settings even though they may be ineffective medications. This study is based on the verapamil effect on cognitive functions and memory enhancement. This study explores drug repurposing by examining the effects of verapamil on cognitive functions and memory enhancement in 24 Albino-Wistar rats, divided into four groups (control and three verapamil doses: 0.5mg/kg, 1mg/kg, 1.5mg/kg). Behavioral tests, including the novel object recognition and Morris water maze, were conducted to assess memory, while anxiety-like behavior was evaluated through various tests (forced swim, open field, elevated plus maze, and others). Results showed that verapamil improved spatial and recognition memory, with the 0.5mg/kg dose enhancing recognition memory and the 1.0mg/kg dose reducing anxiety. Neurochemical analysis revealed dose-related effects on neurotransmitter levels. Further research is needed to confirm verapamil's therapeutic potential for memory disorders and anxiety.

Keywords: verapamil, drug repurposing, memory enhancement, cognitive function, Morris water maze, novel object recognition test

MTWIN: A DIGITAL TWIN OF PATIENT'S MENTAL STATE

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ABSTRACT

Digital Twins (DT) are emerging as a transformative technology across various industries, offering a virtual representation of a physical objects, such as machines, cars, industrial robots, processes and even individuals. The present work focuses on a Digital Twin (DT) of a patient's mental state, referred to as the Mental Digital Twin (MTWIN). The MTWIN aggregates personal and medical information, excluding sensitive information like images, providing health professionals with a tool to monitor and evaluate the patient's psychological progress over the course of treatment. Data sources for the MTWIN include manually entered information (e.g., diary entries, medication intake, eating habits, social interactions, and self-reported general health status) as well as sensor data from wearable devices (e.g., physical activity, sleep duration), combined with weather data based on the patient's location. Additionally, the MTWIN integrates predictions from a Machine Learning (ML) model, trained on the TREMO dataset (a validated emotion analysis dataset in Turkish, based on a survey with 4709 participants) and the Turkish Tweets dataset. The model analyzes emotional states such as joy, sadness, fear, anger, surprise, and disgust, based on diary entries. The MTWIN is visualized through mobile, tablet, and web applications, providing the patient with feedback to improve their daily physical activity, sleep duration, and eating habits, while offering healthcare professionals a historical view of the patient's mental health progression. Preliminary results indicate that this approach can effectively track a patient's response to medication and treatment. The Machine Learning (ML) model shows a high accuracy of 93.5% in predicting the patient's daily mental state.

Keywords: Digital Twin; Machine Learning; Telemedicine; Emotion Analysis; Mental Well-being

MORPHO-ANATOMICAL MODIFICATION IN WITHANIA SOMNIFERA (L.) DUNAL FROM PUNJAB,PAKISTAN INSIGHT INTO ADAPTATION

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Abstract

The Solanaceae family, commonly known as the deadly nightshade or potato family, encompasses a wide range of important food plants and medicinal species. Among these isWithania somnifera (L.), also known as Ashwagandha or Winter cherry, an evergreen shrubnative to India, the Middle East, and certain regions of Africa. This study focused on thecollection of plant material from twelve different ecotypes in the Punjab region, includingShadan Lund, Layyah, Kot Adu, Jam Pur, Vodor, DG canal, Kala, Chah Jeand Wala, Faisalabad, DG Khan, Jang, and Multan, to investigate morphological and anatomical variations. Thecollected samples were preserved in a 70% alcohol solution, and freehand sectioning and doublestaining methods were employed. Microscopic examination using a digital ocular camerafacilitated the analysis of various anatomical structures in the roots, stems, and leaves. Morphological and anatomical features were carefully observed and documented. Results indicated that the Jam Pur ecotype exhibited the maximum root epidermal thickness, while the Faisalabad ecotype displayed the largest root radius. Stem characteristics varied significantly among the ecotypes, with the Vodor ecotype exhibiting the highest cortical cell area, Jam Pur ecotype displaying the greatest epidermis thickness, and the Shahdan Lund ecotype showing the thickest sclerenchyma layer. The Vodor and Jang ecotypes had the highest abaxial stomatal area and number of trichomes. Statistical analysis, utilizing Analysis of Variance (ANOVA) at a 5% probability level, confirmed the significance of the observed results in terms of morphology and anatomy.

Key word: withania somnifera, Morpho-Anatomical modification

A BIBLIOMETRIC ANALYSIS ON WOODEN STRUCTURAL MATERIALS

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ABSTRACT

Wood is a natural and renewable resource that has been utilized as a structural element in architecture for thousands of years, owing to its aesthetic and mechanical characteristics. In the contemporary day, as the notion of sustainability gains significance, wooden materials are regaining importance in modern construction technologies and engineering applications. This study employs a bibliometric analysis method to provide a comprehensive examination of the current status and trends in academic studies on wood structural materials. The literature review, obtained from international academic databases such as Web of Science and Scopus, encompasses articles, conference proceedings and review studies published within a specified time interval. The distribution of the number of publications by year, the most contributing authors in the field, the leading universities and countries, the most cited studies, the network of collaborations and keyword analysis were evaluated in detail as part of the bibliometric analysis.The analysis results indicate that research on timber structural materials has intensified recently, marked by a surge in international collaborations and an increase in studies pertaining to sustainable building design. This study highlights the essential characteristics of timber materials from engineering and architectural viewpoints, encompassing mechanical properties, durability, and energy efficiency. This study offers a comprehensive framework for academic research on timber structural materials, intending to serve as a resource to enhance scientific output in this domain.

Keywords: Wood/timber, bibliometric analysis, timber structures, structural materials

A RELIABLE AND SECURE ENHANCED MACHINE LEARNING MODEL TO DETECT MEDICAL DATA HIJACKING IN CLOUD ENVIRONMENT

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Abstract. The significant problem consistently faced in cloud computing is data security. Attackers steal information from the data sources that are weakly secured. Mostly, assailants hack the cloud server from the point where protection is unsecured and unknown leading to information loss. The cloud network is endangered by a remote aggressor present in the network. The entry into the cloud network is established when the invader negotiates with a feeble client hub. The attackers are detected and prevented from hacking the cloud network thereby gaining the confidence of the clients. AI approaches like the K-means clustering algorithm, Naïve's Bayes and Support Vector Machines (SVMs) are usually adopted to sort the cloud-related challenges. The proposed work is successful by using SVM which is a sub-domain of AI which offers security to stored information inside the cloud storage. The cloud framework cannot segregate the hubs as malicious or corrupted. Hence, to offer an optimal solution to this challenge an improvised model using learning algorithms stabilizes itself naturally and offers secured storage of social information. The proposed SVM model can clearly characterize familiar and strange clients. By using this SVM approach, the odd hub is distinguished and identified as whether it is acting as a rivalry hub, wanted or unwanted being crushed by another client hub or an undermined hub occupying the determined trust factor. The proposed model distinguishes the assault of any form and handles it precisely segregating it from a fake one using an alert signal on the cloud service.

Keywords: Cloud computing, K-means clustering, Machine learning, Naive's Bayes and SVM.

THE ROLE OF EU DECISION-MAKING MECHANISMS IN MIGRATION POLICY

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ABSTRACT

Due to the sui generis nature of the European Union (EU), the operational logic of its decision-making mechanisms has been designed in line with this unique structure. Particularly in policy areas concerning national interests, internal discrepancies within the Union become apparent. This is especially evident in domains such as migration policy, where national interests dominate, rendering the Union's coherent and unified stance contentious. Examining the decision-making mechanisms in areas that complicate the establishment of a common foreign policy facilitates understanding the root causes of internal challenges within the Union.

The decision-making mechanisms of the European Union are predominantly shaped by three main institutions. The European Commission functions as the executive body of the EU and holds a pivotal role in its decision-making processes. Serving as both a legislative proposer and an implementing organ, the Commission undertakes numerous tasks that direct the overall functioning and policies of the EU.

The European Parliament's role in decision-making becomes particularly prominent within the framework of the legislative procedure known as the Ordinary Legislative Procedure. The European Council also occupies a significant and strategic position in the EU's decision-making processes. As an institution directly involved in legislative and decision-making procedures, the Council of the European Union (or Council of Ministers) plays an essential role in these processes.

This paper focuses on the process through which the decision-making mechanisms of the European Union contribute to the formation of a common migration policy.

Keywords: European Union, Migration Policy, Commission, Parliament, Council

DFT AND DFT+U ANALYSIS OF STRUCTURAL AND OPTOELECTRONIC PROPERTIES OF SNO_2 SINGLE CRYSTALS WITH THE HCTH FUNCTIONAL

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Abstract

Tin dioxide (SnO_2), also known as stannic oxide or cassiterite, is a key functional material widely utilized in applications such as transparent conducting electrodes, solar cells, and gas sensors. SnO_2 can crystallize in several phases, including $CaCl_2$-type (orthorhombic), α-PbO_2-type (orthorhombic), pyrite-type (cubic), ZrO_2-type (orthorhombic), and cotunnite-type (orthorhombic). Phase transitions between these forms can be induced through the application of pressure, heating, or a combination of both strategies.

In this work, we present an ab initio study of the structural, electronic, and optical properties of tetragonal rutile SnO_2, which is stable at ambient temperature. Calculations were performed using the full-potential linearized augmented plane wave (FP-LAPW) method within the framework of density functional theory (DFT), as implemented in the Quantum ESPRESSO code. Our analysis demonstrates that the optimized structural parameters agree well with experimental data. The computed band structure reveals that SnO_2 has a direct band gap, with values of 0.6 eV using DFT and 3.67 eV with the DFT+U approach, closely matching the experimental value of 3.56 eV. Furthermore, the material exhibits excellent optical properties, including a high absorption coefficient in the ultraviolet region, high transparency in the visible spectrum, and strong reflection in the infrared. These unique properties underscore the versatility and potential of SnO_2 for a wide range of technological applications.

Keywords: DFT; DFT+U; Gap; HCTH ; SnO_2

EXPLORING THE IMPACT OF MEDIA CONSUMPTION ON SOCIAL CAPITAL IN KANO

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Abstract

This study explores the impact of media consumption on the formation and maintenance of social capital in Kano, Nigeria, focusing on how various media platforms influence interpersonal connections, community trust, and civic engagement. As media channels continue to evolve, their role in shaping social dynamics becomes increasingly important, especially in regions with diverse cultural and socioeconomic landscapes like Kano. The research employs a mixed-methods approach, combining quantitative surveys and qualitative interviews to examine the effects of traditional media (radio, television) and digital media (social media, online news) on individuals' participation in community networks, trust-building, and collective action. Results indicate that while traditional media fosters a sense of community in rural areas, digital media significantly enhances social capital in urban areas by facilitating greater engagement and trust across diverse groups. However, the study also highlights the challenges posed by digital divides and misinformation, which can undermine social cohesion. These findings offer critical insights for policymakers and community developers, providing a framework for leveraging media in strengthening social capital in both urban and rural settings of Kano.

Keywords: Social capital, media influence, community trust, civic engagement, Kano.

ABOUT THE IMPORTANCE OF PROCESSES INFORMATION IN CATCHMENT BASINS

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Abstract

There is sufficient information in the scientific literature about water, the hydrographic features of watersheds, and many related issues [ ]. Based on this, there is sufficient data on the processes of water formation.

However, there is a lack of specific information about human intervention and their role in these processes.

It is usually stated that [https://www.usgs.gov] "*We drain water from wetlands for development. We use water from rivers, lakes, reservoirs, and groundwater aquifers. We use that water to supply our homes and communities. We use it for agricultural irrigation and grazing livestock. We use it in industrial activities… We also affect water quality. In agricultural and urban areas, irrigation and precipitation wash fertilizers and pesticides into rivers and groundwater. Power plants and factories return heated and contaminated water to rivers. Runoff carries chemicals, sediment, and sewage into rivers and lakes*."

In connection with the above, it should be noted that the individual watersheds are subject to serious anthropogenic impact (on all components of the environment - air, soil, water), therefore it is reasonable to propose an additional (new) method for assessing anthropogenic impact.

Opportunities for assessing this type of impact can be expressed with an index for ***Environmental anthropogenic impact assessment index***

Environmental anthropogenic impact assessment index

$$Eaiai = \frac{A}{W}$$

Eaiai - Environmental anthropogenic impact assessment index,

A - anthropogenic intervention - for ensuring water use, for purification and removal of wastewater, for land use (cultivation, fertilization and plant protection), for transport (roads, road and railway infrastructure), for waste treatment (production and domestic), noise, etc.(in m^2 or km^2);

W – the natural potential of the given territory (watershed areas - river flow, soils - arable land, pastures, ..., forests, protected territories, national parks, etc.; settlements, etc.), (in km^2).

Note: it is believed that to consider the anthropogenic impact on a given territory, it is most correct to consider the territory of the watershed (regardless of the size of the relevant river - large or very small).

Only within the boundaries of this territory is it possible to (generally) register all anthropogenic impacts on the individual components of the environment - air, forests, soils, biodiversity, waters.

MORPHOLOGICAL, STRUCTURAL AND OPTICAL PROPERTIES OF SNO2 THIN FILM DEPOSITED BY SOL-GEL DIP COATING METHOD

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Abstract
Tin dioxide (SnO2) is considered one of the most important and well-known semiconductors, due to high chemical stability, high electron mobility and good transparency to light with a large band gap energy 3.6-04 eV and tetragonal cristal structure. Various methods have been used to acquire layers of SnO2, such as chemical routes by using sol-gel, thermal oxidation, chemical vapor deposition, chemical spray pyrolysis, sputtering, physical vapor deposition , laser abrasion, sol-gel technic and dip couating method is a straight forward and reasonably priced processing method among these, it produces even and homogenous layers on a variety of glass substrates and can be used to prepare undoped and doped semiconductor thin films, this process enables to control many parameters such us the grain size, the porosity and the thickness of layer. Tin dioxide Have many applications in the manufacturing such as efficient photocatalysts for environmental remediation, uv photodetectors, in batteries, sensors, catalysis, solar cells, water purification, and biomedical applications. In this research work Morphological, Structural and Optical Properties of SnO2 Thin Film deposited by Sol-Gel Dip Coating Method we using a starting solution of 0.3 M tin (II) dichloride dihydrate (SnCl2, 2H2O), ethanol C_2H_5OH, a few drops of MEA, after synthesis the thin film was characterized by x-ray diffraction (XRD), scanning electron microscope (SEM), and films optical characteristics were studied using UV-VIS spectrophotometer.

Keywords: thin film, Sol-gel, SnO_2, XRD, UV-VIS, SEM.

EFFECTS OF TWO TEST ITEMS ARRANGEMENT ON JUNIOR SECONDARY TWO STUDENTS' ACHIEVEMENT IN BUSINESS STUDIES IN WASE LOCAL GOVERNMENT OF PLATEAU STATE, NIGERIA

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Abstract

Business Studies as a subject seeks to provide the orientation and basic skills with which to start an occupation for those who may not have opportunity for further training, however to students are required to undergo series of test before certification, despite the role test play in determining achievement it the nature of test arrangement have varied social implications and limitations students develop a feeling of worry and self-doubt putting pressure to do well in a test on the students which can affect their test taking achievement and make them miserable. This study seeks to determine the effects of two test items arrangement on junior secondary two students' achievement in business studies in Wase local government of plateau state, Nigeria. The study adopted a one short case research design, the sample size includes 120 junior secondary school two from the population of 1,170, two research questions and two hypotheses were raised and tested to guide the study, business studies achievement test arrange in ascending order, descending and order of topic presentation to test the respondents, the reliability of the instrument stood at 0.85. Instrument used for data collection were students test scores. Data collected were analyzed using frequency counts, percentages, mean and standard deviation, while hypotheses were tested using Independent samples t-test at 0.05 level of significance. The findings of the study revealed that majority of the students passed with an 'A' and 'B' when items are arranged in ascending order of difficulty, indicating that majority of the students passed with a 'P' and 'C' when items are arranged in descending order of difficult. The study recommended that: For better students' academic performance in Business studies, teachers and examination bodies should adopt the method of arranging the test items in order of difficulty (simple to complex).Test items in Business studies examinations should be developed to cover the wide scope of course content or syllabus with a focus of providing every learner an opportunity to perform well in the subject.

Keywords: Test, Two Test, Items Arrangement, Achievement, Business Studies

RANKİNG OF INDUSTRİAL SUBSECTORS İN IRAN BASED ON SUSTAİNABLE DEVELOPMENT CRITERIA

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Abstract

The industrial sector plays a pivotal role in the economic development of any nation, making the prioritization of its subsectors crucial for achieving sustainable growth. This study ranks industrial subsectors in Iran based on sustainable development criteria, including employment generation, value-added contribution, foreign exchange earnings, capital productivity, and environmental impact. To evaluate these subsectors, four multi-criteria decision-making methods—TOPSIS, ELECTRE, VIKOR, and SAW—are employed. The Shannon entropy method is used to determine the weights of the criteria, ensuring an objective evaluation. The results from the four methods are aggregated using two ranking aggregation approaches: Borda Count and Copeland Method. Both aggregation methods identified the same top three industrial subsectors: **chemical materials and products**, **basic metals**, and **food products**. These subsectors demonstrated superior performance across the sustainability criteria. This research provides valuable insights for policymakers and investors, offering a comprehensive framework for prioritizing industrial subsectors to achieve sustainable economic development in Iran.

Keywords: Sustainable development, industrial subsectors, multi-criteria decision-making, Shannon entropy, Borda Count, Copeland Method, Iran.

PHYSICAL ACTIVITY TO COMBAT ACADEMIC BURNOUT IN SECONDARY SCHOOL STUDENTS IN MOROCCO

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Abstract

The purpose Academic burnout refers to profound emotional, cognitive, and physical exhaustion which can be mitigated by physical activity interventions. In Morocco, there is a scarcity of empirical evidence regarding the correlation between physical activity and school burnout, particularly at the secondary school level. The current study explores the potential mediating effects of body mass index (BMI) in the impact of physical activity on academic burnout.

Method 1197 participants from public secondary school students from Rabat-Sale-Kenitra Region (Morocco) with a mean age of 17.15 years (SD=1.328), including 59.1% of girls, responded to an Arabic-translated version of the Maslach Burnout Inventory-Student Survey (MBI-SS), the International Physical Activity Questionnaire Short-Form (IPAQ-sf), and standardized questions to calculate BMI. The IBM SPSS statistics 26.0 and IBM SPSS Amos 24 were used to analyze the data.

Results The results indicated a detrimental association between academic burnout, BMI, and physical activity levels. An inverse correlation was observed between physical activity and academic burnout, with BMI functioning as a mediating factor in this dynamic.

Conclusion Regular physical activity mitigates academic burnout by achieving a healthier BMI. These findings can be explored to propose suitable strategies for mitigating academic burnout in secondary school.

Keywords Academic burnout, Secondary school, Physical activity, MBI-SS,IPAQ, BMI, Morocco.

CONTEXTS, CHALLENGES, AND INSİGHTS: BEYOND PHİLOSOPHY AND METHODS OF THE INTERVIEW IN PHENOMENOLOGICAL RESEARCH

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ABSTRACT

Introduction and Purpose: This paper explores the complexities and insights gained from postmodernism, hermeneutic and phenomenological aspects of interviews conducted to investigate the teachers' lived experiences of critical thinking pedagogy. It focused on the participants' context, their perspectives, linguistic and social construction of knowledge, participants' narratives, and hermeneutics. The purpose of this paper is to bring to the fore the researcher's experience and reflection on the participant selection, interview site selection, disruptions, recording the interview, rapport building, and power differentials. The study answers these research questions 1) What are the specific contexts that influenced the research interview? 2)What are the major challenges and the practicalities of the research interview? 3)What are the insights from the research interview?The study highlights the participants' characteristics, inter-relational dynamics, logistics, and spatial-temporal aspects and shows the gap between universal legitimation of philosophy and methods of the interview and the local practicalities of the interview. Beyond the methods, the interview is context-specific that requires holistic use of craft, human sensitivity, and tact to adapt it to "how", "when" and "where" of the interview.

Materials and Methods: The study is grounded in phenomenological interview method to explore the participants' lived experiences. The data collection methods were semi-structured interviews and journaling. During the data collection, six experienced teachers from secondary and higher secondary schools in Nepal were interviewed. This study followed post-modern, hermeneutic and phenomenological approach to the interview.This study is specific to exploring inter-relational and interactional aspects, social and linguistic construction of reality, openness in the participants' experiences, participants' narrative knowledge or personal stories, interpretation of meaning, the interviewer' presuppositions, and local contexts of multiple meanings.

Results: The study found spatio-temporal aspects that included the participants' time (availability and scheduling), interview sites, unforeseen disruptions and any other external influences. These practicalities shaped the participants' interaction and engagement in the interview. The study also brought to the fore that the participants' knowledge and skills of describing lived experiences, motivation, vulnerability and their physical, cognitive and emotional states, wellbeing and other personal characteristics played a significant role in the level of their participation in the interview. In addition, unforeseen disruptions during interviews absorbed the participants' emotional and cognitive energy and distracted their focus.

Discussion and Conclusion: The study revealed that the research interview is a post-modern method and craft of constructing and asking interview questions skillfully and clearly grounded in the participants' characteristics, contexts and inter-relational dynamics and ethical bounds. The quality of the interview can be enhanced by making it educational, relevant and purposeful to both the participants and the researcher. This can help the research to encourage the participants to be actively involved and open about sharing their lived experiences.

Key Words: Post-modernism, Interview, hermeneutic phenomenology, critical thinking, lived experience.

STRATEGIES FOR ENHANCING INCOME THROUGH AGRIBUSINESS VENTURES

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Abstract

Agribusiness ventures hold immense potential to uplift rural economies, diversify income streams, and ensure the economic sustainability of farming communities. This study explores innovative strategies for enhancing income through agribusiness initiatives, emphasizing value addition, market integration, and technology adoption. The growing demand for diversified agricultural products, coupled with advancements in processing, logistics, and digital platforms, presents significant opportunities for farmers to transition from mere producers to active entrepreneurs within the agricultural value chain. Key strategies discussed include the establishment of value-added enterprises such as food processing units, organic product lines, and agro-tourism initiatives. The role of farmer-producer organizations (FPOs) and cooperatives in enabling collective bargaining, reducing input costs, and expanding market access is critically analyzed. Emphasis is placed on integrating digital tools, such as e-commerce platforms and block chain for traceability, to enhance market visibility and consumer trust. The study also highlights the importance of skill development and capacity building through targeted training programs, enabling farmers to adopt innovative practices and manage agribusiness ventures efficiently. Financial inclusion strategies, such as access to microcredit, insurance schemes, and government-backed subsidies, are identified as critical enablers for fostering entrepreneurial activities. Furthermore, the potential of public-private partnerships in bridging the gap between smallholders and global markets is explored. Challenges such as regulatory hurdles, infrastructure deficits, and market volatility are addressed, alongside actionable recommendations for policy interventions to support agribusiness growth. By leveraging these strategies, agribusiness ventures can contribute significantly to income enhancement, rural employment, and the overall resilience of farming communities. This study underscores the transformative potential of agribusiness in achieving inclusive and sustainable agricultural development, urging stakeholders to invest in innovative solutions that empower farmers and promote equitable growth.

Keywords: Agribusiness ventures, Enhancing Income and Farmers

APPLYING TBP TO EXPLAINING CONSUMER FOOD WASTE: THE ROLE OF GREEN SELF-IDENTITY

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ABSTRACT

This study extends previous studies by integrating the concept of green self-identity, operationalized as the self-identity based on environmental values and sustainable behavior in the context of restaurant food consumption, to explain attitudes toward food waste and behavioral intentions to reduce food waste in an extended model of the Theory of Planned Behavior (TPB). The integration of green self-identity as an extended construct, particularly the exploration of the direct and moderating roles of green self-identity in all relationships among components in the TPB model, has provided new insights and significantly increased its explanatory power regarding consumers' behavioral intentions to reduce food waste in restaurants. The PLS-SEM method was used to create the research model and evaluate the hypotheses. Based on a survey of 300 consumers in restaurants in Vietnam, the study results supported most of the hypotheses, indicating that attitudes toward food waste, perceived behavioral control, and social norms all positively influence intentions to reduce food waste. The study not only highlighted the important direct role of green self-identity in shaping attitudes, social norms, and perceived behavioral control, but also shed light on the moderating effect of green self-identity on the relationships among the components in the extended TPB model. This finding underscores the important role of green self-identity in influencing behavioral intentions to reduce food waste in restaurants in Vietnam. Therefore, this study provides further insights into how consumers' self-identification can promote food waste reduction behavior, thereby laying a foundation for interventions to reduce food waste among consumers in restaurants.

Key Words: Food waste; Green self-identity; Theory of planned behavior; Vietnam

AI-DRIVEN CARDIOLOGY: LEVERAGING MACHINE LEARNING FOR DIAGNOSTIC PRECISION AND PATIENT CARE

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The primary focus of this study is the revolutionary relevance of AI and machine learning in medical diagnostics, particularly in the treatment of diabetes and cardiology. In this sense, patient outcomes including early disease detection, effective treatment planning, and means of continuous monitoring have been successfully improved by AI-driven models. These are backed by diabetes diagnosis prediction models that use a multitude of clinical data to attain high accuracy and precision, furthering the use of AI in handling complex medical data. Despite these promising results, there are still problems with the openness, accountability, and generalizability of AI systems in healthcare settings. The results have demonstrated that while AI can greatly enhance diagnostic capacities, it should not be utilized in place of clinical judgment by medical professionals. Collaboration between clinicians and AI tools becomes crucial as these technologies develop in order to ensure the effectiveness of their use. This review emphasizes the necessity of continuous efforts to enhance data collection, ethical practices, and interdisciplinary collaboration in order to make such AI-driven solutions clinically relevant and ethically used. Finally, by making healthcare more individualized and efficient, AI will readily penetrate the sector and enhance the end health outcomes.

Key words: Artificial Intelligence, Machine Learning, medical diagnostics, AI-driven models, technological integration

DETERMINATION OF GRAIN YIELD AND QUALITY CHARACTERISTICS IN BREAD WHEAT (*Triticum aestivum* L.) MUTANT ELITE LINES

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ABSTRACT

Introduction and Purpose: This study aims to determine mutant lines with superior characteristics such as high quality, yield and stability, which are least affected by the environment in terms of sustainable wheat agriculture from advanced lines selected through selection from populations created with gamma ray application.

Materials and Methods: In this research, which was carried out in Tekirdağ Namık Kemal University, Faculty of Agriculture, Department of Field Crops, 15 mutant advanced lines, 8 parents and a total of 23 bread wheat genotypes, which were selected from the mutant lines developed by selection from M1-M4 populations formed by different gamma ray doses applied from cobalt 60 (60Co) source to 5 bread wheat varieties, were carried out in Edirne ecological conditions according to the randomized block design with 3 replications.

Results: In the research, the quality traits of bread wheat genotypes were as follows: grain yield 627.5-886.5 kg da-1, thousand grain weight 32.4-44.0 g, hectoliter weight 73.3-82.2 kg hl-1, grain hardness 64.4-90.1%, alveograph energy value 319-486 10-4 x j, wet gluten ratio 30.1-38.3%, Zeleny sedimentation value 45-73 ml, protein ratio 12.97-16.40%, Quality Index (Zeleny sedimentation value/Protein ratio) 2.75-4.43, lactic acid STK 104.19 - 141.23%, sucrose STK 86.39 - 98.48%, sodium carbonate STK 72.80 - 85.63% and gluten performance index 0.58% and 0.85%.

Discussion and Conclusion: Mutant lines compared to parent and standard varieties had 2.56% higher means for thousand grain weight, 2.16% higher means for grain hardness, 1.52% higher means for alveograph energy value, 1.77% higher means for wet gluten ratio, 1.75% higher means for Zeleny sedimentation value, 0.05% higher means for quality index, 4.70% higher means for lactic acid STK, 1.79% higher means for sucrose STK, 5.48% higher means for gluten performance index and 1.53% higher means for grain yield, while they gave 0.9% lower means for hectolitre weight and 0.24% lower means for sodium carbonate STK. As a result of the general evaluation of the examined traits, Flamura 85 400/1, NKÜ Lider 100/19, NKÜ Lider 200/6, NKÜ Ergene 200/126, NKÜ Lider 200/13, NKÜ Lider 400/4, NKÜ Lider 200/8 bread wheat mutant lines had higher grain yield and quality performances than the parent and standard varieties.

Keywords: Mutant, wheat, quality, yield

INTERNET OF THINGS (IOT) ON THE DEVELOPMENT OF AGRICULTURE 5.0: PROSPECTS AND CHALLENGES

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ABSTRACT

The Internet of Things (IoT) is poised to revolutionize agriculture through Agriculture 5.0, a paradigm shift towards data-driven, resource-efficient, and sustainable farming practices. This study delves into the exciting prospects and challenges of IoT integration within Agriculture 5.0 through a meticulous review of existing literature.

Densely woven networks of interconnected IoT devices, equipped with sensors and communication capabilities, will become the backbone of data collection in Agriculture 5.0. These sensors will gather real-time data on a multitude of agricultural parameters, including soil moisture, air temperature, and crucial crop health indicators. Empowered by this rich data stream, farmers can make informed decisions, optimize resource use (water, fertilizers, etc.), and propel yield increases. Furthermore, Agriculture 5.0 leverages the power of IoT to promote sustainable practices, fostering a more responsible approach to food production.

The convergence of IoT with advanced analytics and automated technologies unlocks a future of enhanced efficiency, sustainability, and automation within the agricultural sector. The emergence of 6G technology acts as a powerful catalyst, offering significant advantages like ultrahigh bandwidth, low latency, and massive machine-type communication capabilities. These advancements are critical for supporting the dense network of sensors envisioned in Agriculture 5.0, enabling real-time data exchange, and facilitating seamless communication across the entire agricultural ecosystem.

However, the transition towards a fully realized Agriculture 5.0 is not without its challenges. Security concerns surrounding sensitive agricultural data necessitate robust protocols and safeguards. Economic considerations, infrastructure limitations in rural areas, and the digital literacy gap among farmers must also be addressed. Collaborative efforts among governments, industry players, and research institutions are crucial for successful IoT adoption in Agriculture 5.0. This collaborative approach will encompass initiatives such as government support, industry collaboration, data sharing and analytics frameworks, capacity-building programs to equip farmers with the necessary skills, and farmer engagement through pilot projects and demonstrations. By harnessing the transformative potential of IoT and fostering collaboration across all stakeholders, Agriculture 5.0 presents a unique opportunity to confront the challenges of the 21st century and pave the way for a future of sustainable and efficient food production.

Keywords: Internet of Things (IoT), Agriculture 5.0, 6G technology, Precision agriculture, Sustainability

A GEOSPATIAL ANALYSIS OF THE PARKS, EMERGENCY ASSEMBLY AREAS, AND URBAN GREEN SPACES IN IZMIR DISTRICTS

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ABSTRACT

Introduction and Purpose: Ensuring equity in the allocation of public resources is a central objective for planners. In the context of planning, equitable distribution involves strategically placing resources or facilities to maximize accessibility for a diverse range of spatially distinct social groups. Equity in resource distribution has been a focal point of interest across numerous disciplines. The equity mapping method, which utilizes visualization techniques within geographic information systems (GIS), serves as a valuable tool for analyzing the spatial equity in the distribution of public resources. In this study, equity mapping was applied to parks, green spaces, and emergency assembly areas - resources of significant societal importance - to evaluate individual accessibility to these public facilities. The fundamental methodological approach to equity mapping involves overlaying the distribution of accessibility measures with socioeconomic data to analyze spatial variations in equity. This approach relies on spatial univariate, bivariate, or multivariate analysis, which examines the mapped data distributions and spatial patterns to identify and characterize spatial associations.

Materials and Methods: This study utilized two primary data types: spatial data and attribute data. Spatial data included Izmir's provincial boundaries, district boundaries, district and neighborhood settlement points, emergency assembly area locations, and park locations. Attribute data encompassed district- and neighborhood-level population data, population data for the 0–19 age group, population data for individuals aged 20 and above, district-level urban green space data, the number of children's playgrounds, and the number of fitness areas. The majority of the data was sourced from the Izmir Metropolitan Municipality's open data portal, while inaccessible data was manually collected using Google Maps. Spatial data and attribute data were transferred to Quantum GIS software and made ready for spatial analysis. The analyses performed can be listed as follows: (1) the number of emergency assembly areas per capita by district, (2) the number of children's playgrounds per capita among the population aged 0-19 by district, (3) the number of fitness areas per capita among the population aged 20 and above by district, (4) the amount of urban green space per capita among the entire population by district, (5) the distance of the nearest emergency assembly area to the district center, (6) the distance of the nearest emergency assembly area to the neighborhood center, (7) the number of parks within reach of the neighborhood center.

At this point, it is also important to define the concept of “accessibility”. There are many definitions in the literature regarding spatial accessibility. Considering these definitions, accessibility can be defined as "places within a distance where neighborhood residents can easily go and return with their children on a regular basis without using a vehicle every day". For this, the average distance accepted in the literature is places with an average distance of 1 mile, with a quarter mile going and a quarter mile returning. Within the scope of the study, this distance was taken as 1 kilometer, with a half kilometer going and a half kilometer returning. In order to find the number of accessible parks on a neighborhood basis, 1 kilometer diameter buffer zones were created around the neighborhood centers and the number of parks within these buffers were obtained through spatial queries.

Results: The findings obtained as a result of the applied spatial analyses are listed below:

(1) The number of emergency assembly areas per capita by district: The average number of emergency assembly areas per district was measured as 80.9. The district with the most emergency assembly areas (164) is Aliağa, and the district with the least emergency assembly areas (23) is Karaburun.

(2) The number of children's playgrounds per capita among the population aged 0-19 by district: Çeşme district has the highest value with 0.003746456 and Menemen district has the lowest value with 5.06389e-05.

(3) The number of fitness areas per capita among the population aged 20 and above by district: Konak district has the highest value with 0.000475177 and Narlıdere district has the lowest value with 1.99156e-05 (Çeşme, Karaburun, Dikili, Foça, Beydağ, Aliağa, Ödemiş, Bergama, Bayındır, Kemalpaşa, Kınık, Selçuk, Seferihisar, Tire, Torbalı, Menderes, Kiraz and Urla districts that do not have park, playground or fitness area information are excluded.)

(4) The amount of urban green space per capita among the entire population by district: Çiğli district has the highest value with 18.21862045 and Buca district has the lowest value with 5.7308e-05 (Çeşme, Karaburun, Dikili, Foça, Beydağ, Aliağa, Ödemiş, Bergama, Bayındır, Kemalpaşa, Kınık, Selçuk, Seferihisar, Tire, Torbalı, Menderes, Kiraz and Urla districts, which do not have information on the amount of parks, playgrounds, fitness areas and urban green spaces, are excluded.)

(5) The distance of the nearest emergency assembly area to the district center: The average distance to the emergency assembly areas closest to the district centers was measured as 0.318247166 km. The district located at the shortest distance to the emergency assembly area (0.0249682584009819 km) is Çeşme, and the district located at the farthest distance (1.39667837620622 km) is Foça.

(6) The distance of the nearest emergency assembly area to the neighborhood center: The average distance to the emergency assembly areas closest to the neighborhood centers was measured as 0.259648186 km. The neighborhood located at the shortest distance to the emergency assembly area (0.00286346333722575 km) is Halilbeyli neighborhood of Kemalpaşa district, and the neighborhood located at the farthest distance (4.29085778756165 km) is Yıldızlar neighborhood of Buca district.

(7) The number of parks within reach of the neighborhood center: The distance that is easily accessible to the residents of the neighborhood was determined as 1 km, considering the values used in the literature. The analyses made using 1 km diameter buffers created around the neighborhood centers are as follows:

- The place with the most parks (13) in a 1 km neighborhood around the center is Ahmet Taner Kışlalı neighborhood in Çiğli district, the places with the least parks (1) are some neighborhoods in Balçova, Bayraklı, Bornova, Buca, Çiğli, Gaziemir, Karabağlar, Karşıyaka, Konak, Menemen and Narlıdere districts.
- The neighborhood with the most children's playgrounds (10) in a 1 km neighborhood around the center is Atatürk neighborhood in Buca district, the neighborhoods with the least children's playgrounds (1) are some neighborhoods in Balçova, Bayraklı, Bornova, Buca, Çiğli, Gaziemir, Güzelbahçe, Karabağlar, Karşıyaka, Konak, Menemen and Narlıdere districts.

- The neighborhood with the most urban green spaces (785615) within a 1 km radius around the centre is Bahçeler neighbourhood of Balçova district, while the neighborhoods with the least urban green spaces (150) are Çınartepe, Ferahlı, Levent, Mehmet Akif, Saygı, Ulubatlı and Zeybek neighbourhoods of Konak district.

Discussion and Conclusion: The inequity patterns obtained as a result of the study are limited to the data used in the study. In the distance measurement phase, the point locations of emergency assembly areas and park areas and the point locations of neighborhood and district centers were used. At this point, it was assumed that the population was mostly located in the neighborhood centers. It can be said that more accurate patterns can be obtained by distributing the population to buildings on a neighborhood basis, obtaining the point locations of the buildings and obtaining the locations of the parks. Obtained fundamental patterns of inequity in the distribution of focused public resources in the study may help the municipalities better understand the current situation, make plans for the following years and ensure a more equitable distribution of public resources.

Key Words: Equity Mapping; Geographical Information Systems; Environmental Justice; Spatial Analysis.

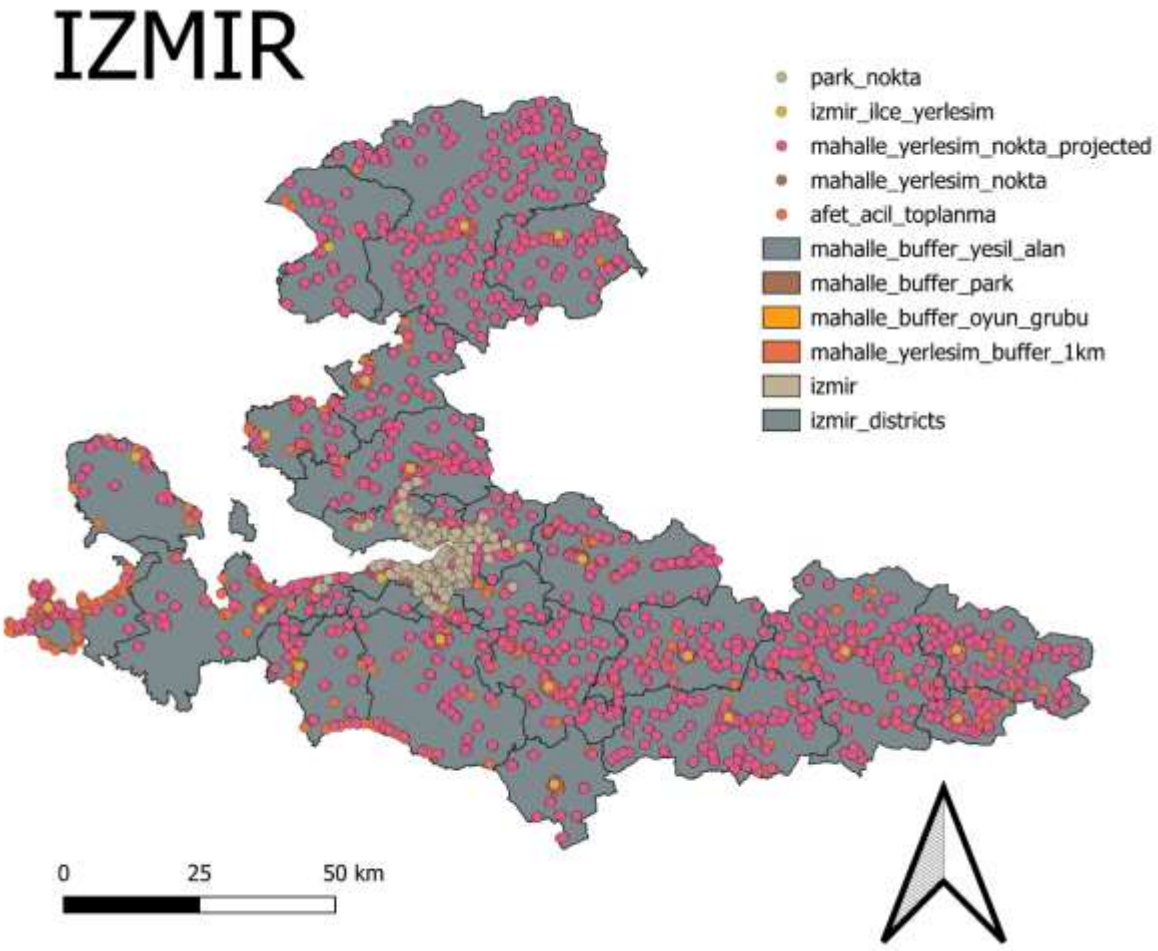


Figure 1 Map Output of the Project

ASSESSMENT OF ENVIRONMENTAL FACTORS AFFECTING PLANT GROWTH AND LAND DEGRADATION IN AYDOS FORESTS: ANALYSIS AND SOLUTION PROPOSALS

AYDOS ORMANLARI'NDA BİTKİ BÜYÜMESİ VE ARAZİ DEGRADASYONUNU ETKİLEYEN ÇEVRESEL FAKTÖRLERİN DEĞERLENDİRİLMESİ: ANALİZ VE ÇÖZÜM ÖNERİLERİ

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ABSTRACT

Introduction and Purpose: This study investigates the reasons behind the presence of bare soil areas within Aydos Forest, focusing on multiple factors such as soil properties, plant growth, microclimate, and human activities. The aim is to analyze and identify the underlying issues contributing to reduced vegetation in certain forest sections and propose sustainable solutions.

Materials and Methods: Data were collected through soil sampling, plant growth measurements, microclimate analysis, and human impact observations. Soil samples were analyzed for nutrient content and physical properties, while plant measurements focused on species diversity and growth patterns. Microclimate factors such as temperature, humidity, and wind were monitored using meteorological data. Additionally, human activities like picnicking and forest usage were documented through field observations.

Results: Preliminary findings suggest that nutrient depletion and compacted soil conditions are significant contributors to vegetation loss. Microclimate factors, including temperature extremes and insufficient rainfall, also correlate with poor plant growth. Human-induced factors such as excessive foot traffic and soil disturbance exacerbate these issues.

Discussion and Conclusion: The results indicate that a combination of natural and anthropogenic factors leads to the formation of bare soil patches in Aydos Forest. Addressing these issues requires a multi-disciplinary approach, including soil restoration, better microclimate management, and strategies to mitigate human impact.

Key Words: Aydos Forest; Soil Analysis; Microclimate; Plant Growth; Human Impact

SOCIAL AND PSYCHOLOGICAL REFLECTIONS OF MATERIALISM ON CONSUMERS

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ABSTRACT

The social and psychological implications of materialism on consumers lead to various negative outcomes at both individual and societal levels by intensifying the desire to possess. Materialism is often shaped during early socialization processes and influenced by changes in family dynamics. Particularly, familial stress and economic hardships experienced during childhood create a foundation for the development of materialistic values. This phenomenon can adversely affect individuals' self-worth and overall life satisfaction.

This study indicates that materialism undermines individuals' psychological well-being and damages social relationships. Idealized lifestyles promoted through social media and advertisements amplify the pressure to own, further fueling the pursuit of material satisfaction. Such psychological effects of materialism often result in lower self-esteem, increased stress, and dissatisfaction, ultimately diminishing individuals' overall quality of life.

Basically, materialistic tendencies not only shape consumption behaviors but also deeply impact psychological health and social harmony. Therefore, further research into the roots and consequences of materialism is crucial for developing strategies aimed at enhancing consumer well-being.

Keywords: Materialism, consumer behavior, psychological effects, social implications, desire for possession, self-esteem, life satisfaction, consumer culture, early socialization, advertising and media influence.

SOCIAL MEDIA AND BRAND EXTERNALITIES

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Abstract

Social media has established a significant presence in the marketing landscape by strengthening the interaction between brands and consumers. However, this process extends beyond economic impacts, giving rise to social and psychological externalities. Young consumers, in particular, are drawn to branded products on social media platforms, influenced by the aspiration to achieve idealized lifestyles and gain social acceptance, which leads to altered consumption behaviors. While this phenomenon can result in social pressure, anxiety, and financial challenges, it also fosters positive effects, such as a sense of belonging through brand communities. This study examines the social, psychological, and environmental externalities created by social media through brands and explores the broader implications of these effects on individuals and society. Additionally, it proposes strategies to mitigate these impacts.

Keywords: Social media, brand, externalities, macromarketing, marketing system, social media

POLITICAL PARTICIPATION IN TURKIYE: PARTICIPATION TRENDS AND RELATIONS OF CONVENTIONAL AND UNCONVENTIONAL POLITICAL PARTICIPATION

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ABSTRACT

Introduction and Purpose: Political participation is a crucial part of the democracies and for a functional democracy it is an indispensable activity. However, since the 70s political participation has undergone significant changes and many studies found that there is a decreasing trend. On the other hand some studies argue that even though conventional political participation decreases, unconventional political participation is increasing. Thus the total amount of political participation stays stable or even increases. Depending on these arguments this study hypothesized that conventional and unconventional political participation has negative correlation.

Materials and Methods: To test this study's hypothesis data obtained from WVS and EVS merged and also voter turnout data obtained from International IDEA. Three different conventional political participation method indicators (voter turnout, being a member to a political party or group and voluntary work for political parties) and five different unconventional political participation method indicators (petitioning, demonstrating, civil disobedience, striking and boycotting) prepared for correlation analysis.

Results: Discussion and Conclusion: Even though the study hypothesizes a negative correlation between conventional and unconventional political participation, there is no meaningful correlation between the two. Between three conventional and five unconventional political participation indicators any meaningful correlation was not observed.

Key Words: Türkiye; Turkey; Conventional Political Participation; Unconventional Political Participation; Trends of Political Participation; Relationships of Conventional and Unconventional Political Participation; Civic Engagement

A BOOKLET ON THE MEASURES TAKEN AGAINST CATTLE PLAGUE IN THE OTTOMAN STATE: SIĞIR VEBASI VE HAKKINDA İTTİHAZI LAZIM GELEN TEDABİR

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ABSTRACT

As in many states and societies, animal diseases had a negative impact on the Ottoman Empire since the early modern period, and the state had to take various measures according to the frequency of such diseases, their locations and the number of animals that perished. Cattle plague, also known as veba- yı bakarî, started to be seen more frequently in Anatolia, especially in the last quarter of the 19th century, and after the 1880s, it became widespread and caused serious livestock losses. In the face of cattle plague and other diseases, the Ottoman Empire started to make some legal arrangements from the 1890s onwards and published the Zabıta-i Sıhhıye-i Hayvaniye Nizamname-i Umumisi in 1893, primarily to prevent the spread of diseases. Despite the state's implementation of such legal regulations, the cattle plague continued to be effective until World War I and the Ottoman Empire had to implement a series of measures against this unstoppable disease, such as the development of vaccines in the Bacteriology Şahâne, quarantine and cordon practices. In this respect, the state enacted the Zabıta-ı Sıhhıye-i Hayvaniye Kanunu Muvakkatı in December 1913, and published the booklet titled *Sığır Vebası ve Hakkında İttihazı Lazım Gelen Tedabir* which constitutes the subject of our research, in 1915 [R. 1331] in order to firstly recognise and prevent the disease. This booklet organised by the Directorate of Umur-ı Baytariye, explained what the disease was, its causes, the measures to be taken against this disease and vaccination studies. This booklet, in which the cattle and sick animals on which vaccination applications were made in the relevant period are presented with a rich visual content, shows how effective and efficient measures the state tried to take against the cattle plague disease at the beginning of the 20th century. Our research aims to introduce this important booklet by making explanations about the general course of the disease in the Ottoman Empire and the measures taken by using this important historical source.

Keywords: Cattle Plague, Disease, Cattle, Vaccine, Veterinary

IMPACT OF AG AND MG SUBSTITUTION ON THE PROPERTIES OF CUZNSNS QUATERNARY SEMİCONDUCTORS FOR OPTOELECTRONİC APPLİCATİONS

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ABSTRACT

Introduction and Purpose: The substitution of elements in quaternary semiconductors can significantly influence their structural, electronic, and optical properties, making them promising candidates for advanced optoelectronic and photovoltaic applications. In this study, we investigate the effects of Ag (silver) and Mg (magnesium) substitution on the CuZnSnS (CZTS) compound. The aim is to understand how the partial replacement of Cu and Zn with Ag and Mg, respectively, alters its crystal structure, bandgap, and electronic properties.

Materials and Methods: 1CZTS and its substituted variants Cu1−x1−xAgxxZn1−y1−yMgyy SnS44 (x = 0.25, y = 0.25) were synthesized using a solid-state reaction method. Structural characterization was performed using X-ray diffraction (XRD) to confirm phase formation and lattice parameter changes. The optical properties were studied using UV-Vis spectroscopy to measure bandgap energy, while electronic structure and density of states (DOS) were analyzed through first-principles density functional theory (DFT) calculations.

Results: Substitution of Ag for Cu led to an increase in lattice parameter, indicating larger ionic radii of Ag compared to Cu. Conversely, the substitution of Mg for Zn resulted in slight lattice contraction. Bandgap analysis revealed that Ag substitution slightly reduced the bandgap energy due to enhanced orbital hybridization, whereas Mg substitution increased the bandgap, improving its suitability for photovoltaic applications. DOS analysis showed that Ag incorporation introduces additional states near the valence band, enhancing electrical conductivity, while Mg substitution reduces defect states, improving structural stability.

Discussion and Conclusion: he dual substitution of Ag and Mg in CZTS demonstrates a tunable approach to optimize its electronic and optical properties. Ag substitution enhances conductivity, while Mg substitution increases the bandgap and stability, making Cu1−x1−xAgxxZn1−y1−y MgyySnS44 a promising candidate for high-performance photovoltaic and optoelectronic devices. Further exploration of doping concentrations and experimental validation of device performance is recommended.

Key Words: CZTS, Ag and Mg Substitution, Bandgap Engineering, DFT, Photovoltaics

INVESTIGATION OF MECHANICAL PROPERTIES OF AL 6061 MATRIX COMPOSİTES REİNFORCED WİTH DİFFERENT B4C AND CNT RATİOS

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ABSTRACT

The properties of Al6061 reinforced with B4C and CNTs are widely investigated. In the present study, the mechanical properties of Al6061 matrix reinforced with B4C and CNTs are investigated due to its higher hardness and lower density properties than SiC and Al_2O_3. Composite samples produced by mechanical alloying method at different weight ratios with the prescription determined by the literature study were investigated by tensile and hardness tests of 3% weight B4C powder and 3,5,7 and 9% CNT powder with an average particle diameter of approximately 10 μm sintered at 550 °C. The mechanical properties of Al6061 alloy were increased by the presence of reinforced and sintered B4C and CNT particles. Measurements of the tensile and hardness properties of the samples of Al6061 matrix composites showed that the tensile values increased and the hardness values increased with the increase in the weight ratio of the reinforcement.

Keywords: Al 6061, B_4C, KNT

FACTORS INFLUENCING SOCIAL FUNCTIONING IN MOROCCAN PATIENTS WITH SCHIZOPHRENIA

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Abstract

Background Difficulties in interacting in and adapting to the social world are the central complaint faced by patients with schizophrenia. These people are often socially isolated, unemployed and may find it difficult to live independently.

Aim this study aims to evaluate the social functioning of schizophrenic patients and to highlight the various factors associated with the alteration of the social functioning of schizophrenic patients.

Methods We conducted a prospective descriptive and analytical study of a population of 72 patients with schizophrenia. These are patients between 19 and 59 years old, clinically stabilized, diagnosed, and followed at the My EL Hassan health center in Kenitra (Morocco). Symptom assessment is measured using a standardized Positive and Negative Syndrome Scale (PANSS), and social functioning is assessed using a Social Functioning Questionnaire (SFQ).

Results Statistical analysis shows that of 72 schizophrenic patients, 33.3% had good social functioning, 59.7% had moderate social functioning, while 6.9% of patients had altered social functioning (the average score of all SFQ items less than 2.4). 6.9% with altered social functioning, are patients aged 19 to 49, were male ($p<0.35$), come from urban areas ($p<0.17$), without professional activity ($p<0.00$), and have a progressive onset of the disease ($p<0.31$).

5.5% (n=4) of them were single ($p<0.12$), caught this disease at an age greater than or equal to 20 years, and have the mixed type of symptoms (positive/negative) ($p<0.15$). The altered social functioning of our patients is correlated to five factors: professional activity ($p<0.00$), family situation ($p<0.03$), family care ($p<0.02$), family awareness ($p<0.01$), and the negative subtype of psychotic symptomatology ($p<0.02$).

Conclusion this study underlines the interest in psychosocial treatment as specific care, which would complement symptomatic treatment and improve the social functioning of patients with schizophrenia.

Keywords: Schizophrenia, Social functioning, Quality of life, Social interactions, SFQ

ON A NOTE SOME NON PERFECT SYMMETRIC NUMERICAL SEMIGROUP WITH MULTIPLICITY FOUR

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Introduction and Purpose:

Let ¥ and ¢ be the sets of nonnegative integers and integers, respectively. The subset S of ¥ is a numerical semigroup if $0 \in S$, $a+b \in S$, *for all* $a,b \in S$, and $Card(¥ \setminus S) < ¥$ (this condition is equivalent to $\gcd(S) = 1$, $\gcd(S)$= greatest common divisor the element of S) . Let S be a numerical semigroup, then $F(S) = \max(¢ \setminus S)$ and $m(S) = \min\{a \in S : a > 0\}$ are called Frobenius number and multiplicity of S, respectively. Also, $n(S) = Card(\{0,1,2,...,F(S)\} \cap S)$is called the number determine of S.

If $x \in ¥$ and $x \notin S$, then x is called gap of S. We denote the set of gaps of S, by $H(S)$, i.e, $H(S) = ¥ \setminus S$ and, the $G(S) = Card(H(S))$ is called the genus of S. Also, It is know that $G(S) = F(S) + 1 - n(S)$. Also, $FH(S) = \{x \in H(S) : 2x, 3x \in S\}$ is called the set fundamental gaps of S.

If $F(S) - x \in S$ then is called symmetric numerical semigroup, for all $x \in ¢ \setminus S$. It is known that if S is a symmetric numerical semigroup then $n(S) = G(S) = \frac{F(S)+1}{2}$.

Let S be a numerical semigroup and $x \in H(S)$. If $x-1, x+1 \in S$ then x is called isolated gap of S. We denote the set of isolated gaps of S, by $I(S)$, i.e, $I(S) = \{x \in H(S) : x-1, x+1 \in S\}$. A numerical semigroup S is called perfect numerical semigrop if $I(S) = \phi$.

Discussion and Conclusion: In this study, we will give some results about isolated and fundamental gaps of symmetric numerical semigroup S_k such that $S_k = < 4, 4k+2, 4k+3 >$ where $k \geq 1$, $k \in ¥$.

Key Words: Isolated gap, Symmetric numerical semigroup, Fundamental gap, Perfect.

HERBAL BIOACTIVE COMPONENTS AND HYPERGLYCEMIA

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ABSTRACT

According to the World Health Organization, the incidence of diabetes and obesity in the world and in Turkey is increasing at rates higher than expected. Hyperglycaemia, which is very common in both of these diseases, leads to serious health problems such as heart, vein and cholesterol, which cause economic and job loss. Different methods are used in the treatment of hyperglycaemia. One of these methods is to reduce or delay the absorption of carbohydrates in the gastrointestinal system. In order for carbohydrates to be absorbed in the intestines, they must be hydrolysed into monosaccharides. The enzyme that catalyzes the hydrolysis of carbohydrates that are digested up to the intestines into monosaccharides is α-glucosidases. Inhibiting the α-glucosidase enzyme, delaying and reducing the absorption of carbohydrates taken orally is used in the treatment of post-meal hyperglycaemia. The α-glucosidase inhibitor used as a drug in Turkey for this purpose is acarbose. Although acarbose reduces post-meal hyperglycaemia, side effects such as nausea and vomiting are frequently seen in patients using the drug. For this reason, researchers have been investigating substances and natural products that can be used as α-glucosidase inhibitors in recent years.

For this purpose, researchers prepare extracts from plants using different methods and investigate the effect of these extracts on the activity of the α-glucosidase enzyme. Although microorganisms are mostly used as enzyme sources in studies, rat intestinal acetone extract is also widely used as a mammalian enzyme source. Although very few, human-derived α-glucosidase (Sucrase-Isomaltase) enzymes are produced from the Caco-2 cell culture line and used as an enzyme source.

Studies have reported that extracts prepared from plants rich in polyphenols are successful in inhibiting α-glucosidase. It has been concluded that it can be used in the treatment of hyperglycaemia by having a synergistic effect with drugs used in the treatment of hyperglycaemia such as acarbose.

Key Words: Hyperglycaemia; α-glucosidase; Herbal Bioactive Conponent; Inhi
bition

EXPLORING THE SAFETY PROFILE OF *SMYRNIUM OLUSATRUM*: TOXICITY EVALUATİON OF FLAVONOİDS AND ALKALOİDS USİNG THE *ARTEMİA SALİNA* ASSAY

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ABSTRACT

Introduction and Purpose: Ensuring the safety of bioactive compounds is a critical prerequisite for their integration into therapeutic applications. Natural products, particularly flavonoids and alkaloids, are recognized for their diverse pharmacological properties, including anti-inflammatory and anti-hemorrhagic activities. However, the potential toxicity of certain medicinal plants necessitates rigorous safety assessments to validate their therapeutic potential. The present study aims to evaluate the toxicological profile of flavonoid and alkaloid extracts from Smyrnium olusatrum, a plant with traditional medicinal uses, using the Artemia salina lethality assay as an in vitro model to assess their safety for future pharmacological investigations.

Materials and Methods: Flavonoid and alkaloid extracts of Smyrnium olusatrum were subjected to toxicity testing using the Artemia salina lethality bioassay. The extracts were tested at concentrations ranging from 10 to 500 µg/mL, with a negative control (0 µg/mL) and potassium dichromate as a positive control. Mortality rates of Artemia salina larvae exposed for 24 hours were recorded, and the median lethal concentration (LC50) values were determined using Probit analysis. All tests were conducted in triplicate to ensure statistical reliability.

Results: The results demonstrated that both flavonoid and alkaloid extracts did not exhibit significant toxicity at the concentrations tested, as evidenced by high survival rates of Artemia salina across all concentrations. The LC50 values for both extracts exceeded 500 µg/mL, suggesting a lack of acute toxicity within the experimental range.

Discussion and Conclusion: This study underscores the importance of conducting thorough toxicological evaluations for plant-based bioactive compounds prior to their use in medical applications. The findings support the safety of Smyrnium olusatrum flavonoid and alkaloid extracts within the tested concentrations, indicating their potential for further investigation as therapeutic agents. Future research is recommended to explore the pharmacological properties of these compounds in more complex in vivo models to better assess their therapeutic efficacy and safety.

Key Words: *Artemia salina*; Flavonoids; Alkaloids; *In vitro* toxicity; *Smyrnium olusatrum*.

DETERMINATION OF PREVALENCE OF EATING DISORDER BEHAVIOR AND AFFECTING FACTORS AMONG SANKO UNIVERSITY STUDENTS

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ABSTRACT

Introduction and Purpose: As young people start university life, they leave the family environment they were used to until that day, their stress levels increase, they become more open to external influences and they start to make their own choices more comfortably, which is why a new era begins in their nutrition. As a result of students eating outside the home, especially fast food, and skipping meals, inadequate and unbalanced nutrition can be observed and changes can occur in students' eating attitudes and behaviors. This study was conducted to determine the prevalence of eating disorder behavior and the affecting factors among students studying at the Faculty of Medicine and Health Sciences at SANKO University in Gaziantep.

Materials and Methods: The study included 291 students from the Faculty of Health Sciences and 70 students from the Faculty of Medicine. A questionnaire consisting of 96 questions including socio-demographic characteristics, eating habits, anthropometric measurements, the Eating Behavior Test (EAT-26) and the Mediterranean Diet Quality Index (KIDMED) was applied to the students.

Results: As a result of the analysis, the statistical difference between the situation of eating between sleep at night and daily sleep hours in university students was found to be significant. ($p=0.017<0.05$). As a result of the analysis, the statistical difference in the distribution of the eating attitude test according to gender was found to be insignificant ($p=0.636>0.05$).

Discussion and Conclusion: Since the eating behavior disorder was found to be lower in students in the study, there was no similarity with the studies conducted. The reason for the lower eating attitude disorder in our university may be due to the fact that students from the Faculty of Health Sciences and Medicine were included in our study. Since the students were informed about eating disorder behaviors, they may have stayed away from eating disorder behavior.

Key Words: University Students, Eating Behavior Disorder, Eating Behavior Test (EAT-26), Mediterranean Diet Quality Index (KIDMED)

THE GENUS AND FROBENIUS NUMBER OF SOME PERFECT NUMERICAL SEMIGROUPS WITH THE DETERMINE NUMBER n(S)=5

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Introduction and Purpose: Let $\square = \{a \in \square : a \geq 0\}$ and $\notin$ be integers set. $f^{1}\ S\ \acute{I}\ ¥$, S is called a numerical semigroup if it satisfied following conditions

1) $0\hat{I}\ S$,

2) $a_1 + a_2\ \hat{I}\ S$, *for all* $a_1, a_2\ \hat{I}\ S$,

3) $Card(¥ \backslash S) < ¥$. (this condition is equivalent to $\gcd(S) = 1$ and $\gcd(S) =$ greatest common divisor the element of S).

We define the following integers for a numerical semigroup S :

$F(S) = \max\{x\hat{I}\ \notin : x\ddot{I}\ S\}$ is the Frobenius number of S ;

$n(S) = Card\left(\{0,1,2,...,F(S)\}\ \text{Ç}\ S\right)$ is determine number of S .

We give following definitions for a numerical semigroup S

$$S_i = \{s\hat{I}\ S : s^{3}\ s_i\} \text{ for } i^{3}\ 0,\ s_i\ \hat{I}\ S;$$

$$S(i) = \{k\hat{I}\ ¥ : k + S_i\ \acute{I}\ S\}.$$

Here, every the set $S(i)$ is a numerical semigroup and we write the following chain:

$S_n\ \grave{I}\ S_{n-1}\ \grave{I}\ ...\grave{I}\ S_1\ \grave{I}\ S_0 = S = S(0)\ \grave{I}\ S(1)\ \grave{I}\ ...\grave{I}\ S(n-1)\ \grave{I}\ S(n) = ¥$.

The number $t(S) = Card(S(1) \backslash S)$ is called the type of S. Likewise, we put, for $i = 1,2,...,n = n(S)$; $t_i(S) = Card(S(i) \backslash S(i-1))$. In this way, it is possible to associate with every numerical semigroup S a numerical sequence $\{t_1, t_2, ..., t_{n(S)}\}$ which is called the type sequence of S. It is known that, $1 \leq t_i(S) \leq t_1(S)$ and $t_1(S) = t(S)$.

Let S be anumerical semigroup. In this case, the elements in $\square$ but not in S are called gaps of S . The set of all gaps of S is denoted by $H(S)$. That is, it is expressed as $H(S) = \{y \in \square : y \notin S\}$.

Let S be a numerical semigroup. If one less and one more of the elements we take from the set $H(S)$ are elements of S, the set formed with these elements is called the isolated set of S. It is denoted by $I(S)$. That is, it is expressed as

$I(S) = \{x \in H(S) : x-1, x+1 \in S\}$.

If $I(S) = \varnothing$ then the numerical semigroup S is called the perfect numerical semigroup.

Discussion and Conclusion: In this study, we will give some results about Frobenius number and genus of some perfect numerical msemigroups with determine number $n(S) = 5$.

Key Words: Perfect Numerical Semigroup, Isolated gap,Genus

DETERMİNATİON OF THE EFFECT OF MİCRO RNA 149 ON MCF-7 BREAST CANCER CELL LİNE

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ABSTRACT

Introduction and Purpose: Breast cancer is one of the most common types of cancer among women worldwide. According to World Health Organization data, 2.3 million women were diagnosed with breast cancer in 2020 and 685,000 people died due to breast cancer. In our country, approximately 15,000 women are diagnosed with breast cancer every year and the annual incidence of the disease is recorded as 40/100,000. In order to prevent the spread of cancer and develop therapeutic strategies, many different biochemical pathways in the cancer formation process can be targeted. In this study, we focused on the process of angiogenesis, one of the important stages of tumor invasion. The aim is to develop a strategy to stop the progression of cancer by suppressing gene expressions that cause angiogenesis.

Materials and Methods: At the beginning of the study, MCF-7 cell line was propagated in cell culture and then miRNA-149-5p was transfected into these cells using a commercial carrier. After transfection, the cells were cultured for 48 hours and RNA was isolated to measure the level of gene repression. The isolated RNAs were translated into DNA with the help of Reverse Transcriptase enzyme and the suppression rate of FUT1 gene was evaluated by qPCR method. ICAM-1 gene expression, which is known to play a role in the angiogenesis process, was also analyzed. With this method, the effects of FUT1 gene suppression on angiogenesis and thus cancer progression were investigated.

Results: The study findings demonstrated that miRNA-149-5p effectively repressed FUT1 and ICAM-1 genes, which exerted an inhibitory effect on the angiogenesis process.

Discussion and Conclusion: It has been suggested that miRNA-149-5p may be used as a potential therapeutic agent in cancer treatment on the angiogenesis pathway. This study contributes to the development of new targets for cancer therapy by demonstrating the effects of miRNA-149-5p on angiogenesis and cancer invasion.

Key Words: Breast cancer, Angiogenesis, FUT1, miRNA-149-5p, Gene Suppression

DETERMINING THE LIGHTING LEVELS AND IMPROVING LIGHTING EFFICIENCY IN A SPORTS HALL FACILITY

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ABSTRACT

Introduction and Purpose: Lighting constitutes a significant portion of energy consumption in almost all facilities. Therefore, substantial energy savings can be achieved by carefully and systematically designing lighting systems, including those in sports halls, and utilizing energy-efficient systems. The aim of this study is to develop a more efficient lighting model for a sports hall, commonly found on many university campuses, by analyzing the performance of the existing lighting fixtures and comparing them with LED floodlights of varying power levels developed using next-generation technology. This comparison is carried out using the DIALux lighting design software, with the findings based on simulation results.

Materials and Methods: The characteristics of 62 projector-type lighting fixtures currently used to illuminate the sports hall, located within the Zeynelbey campus of Hakkari University and covering an enclosed area of approximately 2400 m², were examined. First, lighting measurements were conducted using a lux meter at 40 different points on the ground level and at a height of 80 cm above the floor. These measurements were taken while the 62 projector-type fixtures, installed at approximately 18 m above the sports hall floor, were operational, particularly during dark periods. For each measurement point, at least five measurements were performed on different days and times, and the average illuminance values were calculated from these measurements. Using the obtained data, the sports hall was remodeled in the DIALux lighting design software environment to determine the minimum number of lighting fixtures required for effective illumination.

Results: By utilizing approximately one-fourth the number of lighting fixtures (14 LED floodlights) compared to the currently used 62 fixtures, higher levels of illuminance were achieved. Consequently, illuminance levels meeting the standards required for various sports disciplines were measured.

Discussion and Conclusion: In the lighting measurements conducted at 40 different points within the sports hall, the lowest illuminance was recorded at 119.7 lx in the stands, while the highest illuminance was measured at 416.4 lx at the center of the playing field. Despite utilizing 62 LED floodlights, many measurement points failed to meet the required lighting standards. Therefore, to enhance energy efficiency and conservation, a new lighting design was created for the sports hall using the DIALux lighting design software, employing a minimum number of next-generation LED floodlights. As a result of this design, the optimal lighting model was achieved by using 14 units of 240 W LED floodlights, which provided illuminance levels close to the values specified in the TS EN 12193 "Lighting and Light - Sports Lighting" Technical Standard.

Key Words: DIALux; Energy Efficiency; LED Lighting; Sports Hall; TS EN 12193

BIBLIOMETRIC ANALYSIS OF THE IMPACT OF ARTIFICIAL INTELLIGENCE AND AUTOMATION ON MANAGEMENT CONTROL PRACTICES

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Abstract :
Artificial intelligence (AI) and automation are profoundly transforming the corporate ecosystem, influencing not only basic business practices, but also strategic functions such as management control. Traditionally focused on budget planning, variance analysis and financial performance management, management control is today undergoing a major evolution under the influence of advanced technologies. Whereas these tools were historically manual, the introduction of AI and automation now enables faster, more accurate and far more responsive data management. Companies can exploit massive volumes of data in real time, representing a major shake-up in the way information is collected, processed and used for strategic decision-making.

As these technologies evolve, companies face new challenges, but also unique opportunities to optimize cost management, improve operational performance and adjust their strategies in a more agile way. However, the implementation of these technologies is not without obstacles: initial costs, resistance to change, and data management and cybersecurity issues. In this context, it becomes essential to examine the actual and potential impacts of AI and automation on management control practices.

This paper aims to understand how these technologies influence management control within modern companies, and addresses the following problematic: To what extent does artificial intelligence impact management control within companies? To this end, a bibliometric analysis of the literature review will be carried out, examining the scientific articles dealing with this subject.

Three results are possible in this research:

- First (positive) result: Artificial intelligence supports the controlling department and improves its efficiency.
- Second result (negative): Artificial intelligence has not improved management control efficiency.
- Third result (neutral): Artificial intelligence has no impact on management control.

Keywords : Management control, Artificial intelligence, Bibliometric analysis.

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LEVERAGING GENERATIVE AI FOR THE EVALUATION OF STUDENT EXAMINATION PAPERS

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ABSTRACT

Introduction and Purpose: The purpose of this study is to investigate the potential of ChatGPT, an advanced generative AI model, to redefine academic assessment by offering a consistent, and efficient alternative to traditional human grading. The research aims to address the limitations of human evaluation, including biases and inconsistencies, and to advocate for AI's integration into academic evaluation frameworks.

Materials and Methods: This study uses optical character recognition (OCR) to digitize student exam papers and utilize ChatGPT for evaluation. Rubrics (answer keys) are provided to ChatGPT for evaluation. Python language is used for reading the exam papers and interacting with ChatGPT. ChatGPT is asked to evaluate each question based on the given answer key; and evaluation results are saved in CSV and JSON formats, in addition to student names and IDs.

Results: ChatGPT demonstrated the ability to apply grading metrics consistently, maintain uniformity, and eliminate subjective influences. The AI system provided equitable and reliable assessments across all question types, addressing key limitations observed in human evaluations.

Discussion and Conclusion: The study discusses the implications of leveraging AI models like ChatGPT for academic assessment. It highlights the advantages of AI in enhancing transparency, equity, and reliability while acknowledging the challenges of fully replacing human evaluators, particularly in capturing nuanced reasoning. The research advocates for the integration of AI tools into existing academic frameworks to complement human expertise, proposing a hybrid model as a pathway to more standardized and fair evaluations.

Key Words: Academic Evaluation; Generative AI; ChatGPT; Grading Consistency

REVIEW: FABRICATION AND TESTING OF SOLAR-POWERED WATER PUMPS FOR IRRIGATION FARMERS IN NIGERIA

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Abstract
Agricultural productivity is vital to Nigeria's economy but remains constrained by the reliance on rain-fed farming and inadequate irrigation infrastructure. Diesel-powered water pumps, traditionally used for irrigation, are both environmentally unsustainable and economically burdensome due to rising fuel costs and frequent mechanical failures. Solar-powered water pumps offer a sustainable alternative by harnessing Nigeria’s abundant solar energy resources to support irrigation needs, particularly for smallholder farmers in off-grid areas. This paper comprehensively reviews the fabrication, testing, and deployment of solar-powered water pumps in Nigeria, addressing key technical, economic, and environmental aspects. The paper begins with an analysis of traditional and diesel-powered irrigation systems, their limitations, and the transition towards renewable energy-based solutions. Solar water pumps are detailed, including their components, principles of operation, and efficiency factors such as panel orientation and water demand. The study examines materials and design considerations tailored to Nigeria’s climatic and economic conditions, emphasizing the importance of durability, affordability, and alignment with local crop water requirements. Case studies from Kano and Ogun states illustrate the potential of solar pumps to enhance agricultural productivity, reduce costs, and minimize environmental impact, while identifying challenges such as high initial investment, intermittency of solar power, and technical limitations. Performance testing in laboratory and field conditions highlights factors such as water flow rate, energy consumption, and system reliability under real-world conditions. The study further discusses barriers to adoption, including limited technical expertise, maintenance challenges, and the economic constraints faced by smallholder farmers. Proposed solutions include government subsidies, innovative financing models, local fabrication of components, and capacity-building programs for technicians and farmers. Future directions emphasize integrating hybrid systems, improving energy storage technologies, and fostering public-private partnerships to ensure widespread adoption. This paper concludes that solar-powered water pumps have the potential to revolutionize irrigation farming in Nigeria by providing an environmentally sustainable and cost-effective solution to water scarcity. Their adoption could significantly enhance food security, boost agricultural output, and contribute to rural economic development. However, achieving widespread implementation requires coordinated efforts to address financial, technical, and policy-related barriers.

MICROBIAL SURFACTANTS AS POTENTIAL AGENTS OF GREEN AND BLUE ECONOMY

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ABSTRACT

Surfactants are chemical compounds that are widely used in various sectors such as agriculture, the food industry and cosmetics because of their role as emulsifiers. They are used to reduce surface tension in various systems. As a result, these molecules are in high demand despite their environmental hazards. However, to avoid this major environmental problem, and to ensure better biocompatibility and a sustainable economy, researchers are still looking for biological compounds. Thus, the biological formulation of surfactants called biosurfactants obtained from plants, microorganisms and other biological sources has been an interesting and promising idea. Microbial surfactants are produced by various microorganisms such as bacteria, fungi and microalgae in different ecosystems such as soil, oceans and extreme environments. These biosurfactants have many biotechnological advantages, including their use in the green and blue economies. The green economy consists of any economic (development) activity that protects the environment, such as soil fertility and the reduction of atmospheric carbon. On the other hand, the blue economy refers to development activities that use marine resources without impacting these ecosystems. In this context, this mini review will discuss the use of surfactants derived from microorganisms or microorganisms capable of producing biosurfactants in the sustainability of the green and blue economy. This review will provide a summary of recent studies on microbial surfactant production and submit ideas for future studies on this topic that are considered interesting and insightful.

Key words: Biosurfactant, Microorganism, Green Economy, Bleu Economy

PROTECTIVE EFFECT OF JAMUN SEED (*SYZYGIUM CUMINI*) EXTRACT AND ORANGE PEEL (*CİTRUS SİNENSİS*) EXTRACT AGAİNST CADMİUM İNDUCED ALTERATIONS IN TESTES OF RAT

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Abstract:
Rats were treated with cadmium and investigated histological changes of testes and to demonstrated the protective role of jamun (*Syzygium cumini*) seed and orange (*Citrus sinensis*) peel extracts. Wistar rats were treated as Group A: Control; Group B: cadmium (10 mg/kg b wt.); Group C: cadmium (10 mg/kg b wt.) and jamun seed extract (200mg/kg b wt.); Group D: cadmium (10 mg/kg b wt.) and orange peel extract (200 mg/kg b wt.); Group E: orange peel extract (200 mg/kg b wt.) and Group F: jamun seed extract (200 mg/kg b wt.). under light microscopical studies, testes was fixed on day 7 and 14 following the treatment. In 7 day cadmium (group B) treated rats testes exhibited detached basal lamina and lobule boundary cell degeneration, Disorganized seminiferous tubules and disrupted germinal epithelium with pyknotic primary spermatocytes were also seen. In Cd+ JSE (group C) and Cd+ OPE (group D) treated rats for 7 day, the testes possess little changes as compared to Cd exposed rats. Testes of rats treated for 7 day with OPE (group E) and JSE (Group F) have not shown any remarkable histological alteration. The testes of 14 day Cd (group B) treated rats demonstrated empty lobules, degeneration of germ cell linings of seminiferous tubules, and disrupted germinal epithelium, degenerated Leydig's cells, Sertoli cells, and vacuolation in the interstitial cytoplasm and degenerated spermatogenic cells and wide inter-tubular space show a lack of proper interstitial cells. In Cd+ JSE (group C) and Cd+ OPE (group D) treated rats for 14 day showed similar structure to control rats. In OPE (Group E) and JSE (group F) treated rats for 14 day no histological changes in testes were noticed. In this study, it can be concluded that cadmium caused marked histological changes in the testes of rats. These changes can be protected by providing jamun seed extracts and orange peel extracts because phytochemicals have antioxidant properties as they scavenge free radicals.

Keywords: Heavy metal; cadmium; *Syzygium cumini*; *Citrus sinensis*; Testes; Toxicity

SUPERCRITICAL CO_2 SYNTHESIS AND CHARACTERIZATION OF TITANIUM BASED MXENE

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ABSTRACT

Since its discovery in 2004, graphene has spurred extensive research into two-dimensional (2D) materials, with MXenes emerging as a prominent candidate for energy storage applications. MXenes exhibit remarkable physical, electrochemical, and optical properties, making them invaluable for advanced material applications. However, conventional MXene synthesis methods, such as MILD and HF etching techniques, are often expensive, environmentally hazardous, and time-intensive. This study explores an alternative synthesis approach utilizing a supercritical CO_2-assisted environment to fabricate titanium-based MXene structures. The proposed method yielded MXenes with significantly enhanced properties compared to those synthesized through traditional techniques. Scanning electron microscopy (SEM) analyses revealed more uniform interlayer spacing and enhanced etching, leading to well-defined, layered structures. Brunauer-Emmett-Teller (BET) surface area analyses demonstrated that MXenes synthesized via the supercritical CO_2-assisted approach exhibited larger surface areas and higher pore volumes, attributed to CO_2-induced pore surface expansion. These results suggest that supercritical CO_2 facilitates improved etching uniformity and structural homogeneity. Furthermore, X-ray diffraction (XRD) analysis confirmed higher crystallinity and superior phase purity in the synthesized MXenes.This innovative method presents an efficient and environmentally friendly alternative for producing high-performance MXene materials with improved electrochemical characteristics, making it particularly suitable for energy storage applications. The findings underline the potential of supercritical CO_2-assisted synthesis as a scalable and sustainable technique, paving the way for future advancements in the field of 2D materials**.**

Key Words: Titanium Based MXene, MILD Synthesis Method, Supercritical Synthesis Method, Supercritical CO_2

REVOLUTIONIZING AGRO-ECONOMIES: THE ROLE OF AI IN DISEASE PREDICTION FOR SUSTAINABLE AGRICULTURE

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ABSTRACT

Introduction and Purpose: The rise of Artificial Intelligence (AI) is transforming predictive analytics in farming, especially its implementation in early detection and prevention of genetic diseases in plants. This article explains the usage of AI models for predicting and detection of genetic abnormalities in agricultural crops which assists sustainable farming. AI-based systems can tap into massive genomic data and use ML and DL algorithms to identify possible disease-prone inherited genetic traits. By employing advanced approaches such as convolutional neural networks (CNNs), recurrent neural networks (RNNs), and ensemble learning techniques, the classification and prediction of crop diseases can be accomplished accurately. These models are trained on various data sources such as phenotypes, environmental data, and genetic sequences to improve prediction. Combining AI with next-generation sequencing (NGS) and genome-wide association studies (GWAS) improves precision agriculture.

Materials and Methods:

Artificial Intelligence (AI) in disease prediction in agriculture based on the genetic, phenotypic and environmental information. Such models increase crop tolerance to disease as they provide earlier diagnosis and help develop the variety with resistance to certain diseases.

Results:

The results of the application of the Artificial Intelligence (AI) were promising and the model has a good prospect in predicting genetic diseases in macronutrient-rich crops. The model was trained on a dataset consisting of genomic, phenotypic and environmental features and its performance was evaluated through of Artificial Intelligence (AI) Models.

Discussion and Conclusion: Early disease detection minimizes crop loss, boosts yields, and lessens pesticide use. This work details crucial methods, obstacles, and future paths for AI-driven crop disease prediction, stressing the importance of reliable data, understandable models, and ethical AI use in farming. These advancements could revolutionize crop breeding and disease control, promoting sustainable agriculture to address global food needs.

Key Words: Artificial Intelligence, Crop Diseases, Precision Agriculture, Early Disease Detection

EFFECT OF MICROWAVE COOKING ON THE PHYSICOCHEMICAL PROPERTIES OF POTATOES, CARROTS, AND CULTIVATED MUSHROOMS

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ABSTRACT

Introduction and Purpose: This study examined changes in digestibility, thermal properties, and functional compounds of potato, carrot, and cultivated mushroom samples cooked at different microwave power levels and durations.

Materials and Methods: According to the Central Composite experimental design, colour values (Hunter L, a, b, and ΔE), thermal properties (T_0 and ΔH), total phenolic content, antioxidant activity, glycemic index values, and sensory properties of samples cooked at different power levels and durations were determined.

Results: Analysis results showed that microwave cooking's varying power levels and durations had a statistically significant ($p<0.05$) effect on the physicochemical and sensory properties of potato, carrot, and cultivated mushroom samples. The glycemic index values of microwave-cooked samples increased as power and duration values increased. The total phenolic contents and antioxidant activities of the samples generally decreased with increasing power and time values. According to the sensory analysis results, all samples received average and above-average scores from the panellists, with the highest score in potatoes.

Discussion and Conclusion: Due to the fundamental principle of microwave cooking, the low cooking times and temperatures did not significantly impact the gelatinization onset temperatures and enthalpies of the samples; it was determined that higher energy was necessary for gelatinization. Although variations were noted among the vegetables, the phenolic compound contents of the samples decreased due to heat treatment. The digestibility properties of the samples were influenced by microwave cooking, with glycemic index values increasing with higher powers and longer durations. While the glycemic index values were lower than those associated with traditional cooking methods, they were still considered sufficient for digestibility based on literature data.

Key Words: Microwave cooking; Glycemic index; Functional properties; Thermal properties; Vegetables

ANALYSIS OF FORCED AND FREE CONVECTION IN THE NANOFLUID FLOW OF OXYTACTIC MICROORGANISMS WITH GOLD BLOOD NANOPARTICLES

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Abstract:
The main objective of this research is to analyze the flow characteristics of magnetically influenced Newtonian fluids on a stretchable sheet under the unique influence of Oxytactic microorganisms. The study compares the flow attributes for both free and forced convection. Additionally, the research incorporates gold-blood nanoparticles to realistically examine the changes in velocity, temperature, and concentration distributions, while considering the thermal and mass relaxation parameters of the flow. The governing partial differential equations (PDEs) are transformed into non-linear ordinary differential equations (ODEs) using similarity variables, due to the complexity of the parametrically based differential equations. To solve these equations, a numerical scheme based on the Runge-Kutta approach is implemented using the BVP5C routine in MATLAB. The effects of flow-controlling parameters on the associated distributions are evaluated through the use of graphs and tables. Furthermore, the influence of flow-controlling parameters on the associated distributions is illustrated through comparative pictures for different convection regimes. The research also presents quantities such as heat and mass fluxes, as well as the density of motile microorganisms. The thorough analysis of the investigation reveals that the velocity distribution enhances for both free and forced convection, while the temperature of the fluid decreases under these convective regimes. Additionally, it is observed that an increase in the magnetic field, buoyancy ratio, bioconvection parameters, and Rayleigh number lead to an acceleration of skin friction. However, the behavior is the opposite when the stretching ratio parameter is increased.

Keywords: MHD flow, thermal radiation, Newtonian flow, motile Oxytactic microorganisms, gold blood Nanoparticles.

EVALUATION OF SOME SUNFLOWER VARIETIES FOR YIELD AND YIELD CHARACTERISTICS

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ABSTRACT

Introduction and Purpose: In sunflower cultivation, the use of varieties suitable for the region is one of the basic elements that increase yield and quality, as in other crop plants. This study was carried out to determine the effects of some sunflower varieties on yield and agronomic parameters, to encourage the local people to produce sunflower and to contribute to scientific studies on the subject.

Materials and Methods: This research was established in Batman University Batı Raman experimental area in the 2021 growing season according to the randomized block design with 3 replications. In the experiment, 14 different varieties were used as material: Armada, Sirena, Esbella, Goldsun, Kaan, Sanbro, LG-5485, Sonay, Tarsan, Biser Cl, P-64-LL-62, SY-Cadix, Bosfora and Reyna. In the research, plant height, head diameter, 1000 seed weight, seed yield and oil content values were examined.

Results: In this study carried out for a single year in Batman conditions; the highest plant height was obtained from Esbella variety with 192.85 cm, while the lowest was obtained from Biser Cl variety with 137.25 cm. In terms of head diameter values, the highest was obtained from Armada variety with 21.19 cm, while the lowest was determined from Tarsan variety with 14.09 cm. Among the seed yield values, the highest were Kaan (586.08 kg/da), Goldsun (493.49 kg/da) and LG-5485 (472.26 kg/da) varieties, while the lowest were SY-Cadix (339.97 kg/da), Bosfora (305.28 kg/da) and Reyna (289.30 kg/da). Among the oil content values, the highest was determined from the P-64-LL-62 variety with 53.37%, and the lowest was determined from the SY-Cadix variety with 39.53%.

Conclusion: In terms of yield and yield traits considered in the study, it was determined that Kaan variety showed superior performance in seed yield and P-64-LL-62 variety showed superior performance in oil content compared to other varieties. In addition, it was determined that the results of heat map clustering, Biplot graphics and grouping of relationships between varieties, traits and variety*traits were confirmed.

Key Words: Sunflower, Adaptation, Yield, Variety.

APPLICATION OF MCDM APPROACHES IN THE OPTIMIZATION OF SOFTWARE TESTING STRATEGIES

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ABSTRACT

The rapid development of software technologies makes the testing process more complex and resource-dependent. Selecting the best testing strategy from multiple alternatives is an important task for organizations involved in software development. Furthermore, the decision-making process is often complicated by the presence of several conflicting factors such as costs, time constraints, resources, and desired software quality. Multi-Criteria Decision-Making (MCDM) approaches provide a systematic way to overcome these challenges, enabling the evaluation of various alternatives based on predefined criteria.

The purpose of this study is to analyze how MCDM techniques can be applied to optimize software testing strategies. By integrating MCDM, developers and engineers will be able to make more informed decisions, resulting in a balance of quality, efficiency, and cost, ultimately ensuring better outcomes and significantly lower testing costs.

The research includes the use of several MCDM methods, applied to evaluate various software testing strategies based on their effectiveness, financial efficiency, and resource allocation. The methods are based on data gathered from case studies and expert opinions in software engineering.

Within the study, the MCDM methods are used to assess and perform a comparative analysis of different testing strategies, such as unit testing, integration testing, and regression testing.

The results show that the use of MCDM methods significantly simplified the evaluation and ranking of testing strategies, revealing the most optimal approaches based on the defined criteria.

This research demonstrates the potential of MCDM approaches to improve the decision-making process for selecting software testing strategies. Considering multiple criteria simultaneously ensures more informed and balanced decisions. The application of MCDM in selecting software testing strategies not only helps achieve optimal results but also ensures a structured, data-driven decision-making process. This approach could have a significant impact on the effectiveness and quality of the software testing process, ultimately leading to the development of high-quality software products.

Key Words: Software; Testing; MCDM; Testing strategies; Optimization.

STUDENT VIEWS ON MENTAL IMAGERY APPLICATIONS IN TURKISH LANGUAGE TEACHING

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ABSTRACT

Introduction and Purpose: Language learning is not limited to acquiring grammatical rules and vocabulary; it also involves cognitive and emotional processes that enhance understanding and production. Mental imagery, the ability to form vivid images in the mind, plays a significant role in language acquisition. This study examines how mental imagery techniques can support and enhance language skills such as writing, speaking, and reading in Turkish language teaching. The aim of the research is to explore the effects of mental imagery on students' language skills and creative engagement.

Materials and Methods: The study was conducted with 7th-grade students, with 40 participants involved. Before activities such as storytelling, composition writing, and reading comprehension, mental imagery applications were implemented. To determine students' views on mental imagery applications, a semi-structured interview form was prepared based on the opinions of field experts. Descriptive analysis was used to analyze the qualitative data of the study. Themes related to cognitive engagement, language proficiency, and the impact of mental imagery on learning were identified and evaluated through content analysis.

Results: The findings indicate that students who used mental imagery techniques created more detailed and coherent narratives in their written work. In speaking presentations, students exhibited increased fluency and creativity, and reading activities showed an improvement in comprehension skills. The use of mental imagery allowed students to establish deeper connections with the text, enabling them to imagine scenarios and characters more effectively. This cognitive process is thought to facilitate better understanding of the language and improve retention.

Discussion and Conclusion: This study highlights the importance of mental imagery strategies in Turkish language teaching. It demonstrates that mental imagery can significantly enhance students' creativity, language production, and reading comprehension skills. Educators incorporating these techniques into their lessons can help students form deeper connections with language material and express themselves more confidently. Future studies could examine the long-term effects of mental imagery on language acquisition and its applications in other educational contexts.

Key Words: Mental Imagery, Turkish Language Teaching, Cognitive Engagement.

ENHANCING RESTORATIVE JUSTICE FOR VIOLENT CRIME VICTIMS THROUGH FORENSIC TECHNOLOGY

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Abstract:

This paper delves into the integration of forensic technology within restorative justice programs, which are designed to facilitate healing and closure for victims of violent crimes through mediated interactions with offenders, with a particular focus on their emotional and psychological recovery. The scope of forensic technology, including digital evidence collection, forensic psychology assessments, and virtual reality reconstructions, presents considerable potential to augment these restorative practices.

A thorough evaluation of the current state of restorative justice for violent crimes is undertaken, identifying prevailing challenges and scrutinizing the application of forensic tools in validating victims' experiences, ensuring offender accountability, and supporting comprehensive victim rehabilitation. Case studies are employed to illustrate the successful incorporation of forensic technology, elucidating its benefits and addressing pertinent ethical considerations.

This investigation underscores the relevance of this intersection as a contemporary issue, addressing the evolving needs of victims in an increasingly digital age and highlighting the critical role of innovation within the criminal justice system. The recommendations provided are aimed at optimizing restorative justice practices through multidisciplinary collaboration, while steadfastly ensuring privacy and ethical integrity.

Ultimately, this paper highlights the indispensable role of forensic technology in enhancing restorative justice, contributing to a more compassionate and effective justice system. By prioritizing the well-being of victims, it endeavours to foster a more just and humane society.

“HARNESSING NATURAL COMPOUNDS TO TACKLE ANTIBIOTIC RESISTANCE

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Abstract
The alarming rise in antibiotic-resistant bacteria has resulted in a big challenge to global public health. In response, the search for alternatives has increased interest in natural compounds from plants as a sustainable and effective alternative of bacterial. Plant-derived compounds represent an enormous source of bioactive molecules with antimicrobial properties, and most of them have shown great potential in trying to outsmart the bacteria in their resistance. The following review will discuss various plant-based compounds that have been used against multi-resistant bacterial strains, their mechanisms of action, their impact on bacterial viability, and their possible application as adjunctive or alternative agents to conventional antibiotics. Plant compounds such as alkaloids, flavonoids, terpenoids, and phenolic acids exhibit a wide range of antibacterial activities, targeting bacterial cell walls, disrupting membrane integrity, inhibiting protein synthesis, or interfering with essential enzymatic pathways. Many of these molecules also have the ability to modulate bacterial resistance mechanisms, thereby restoring the efficacy of existing antibiotics. Additionally, their natural origin makes them more environmentally friendly and biodegradable compared to synthetic antimicrobials. This review illustrates that what is needed, if the plant products are to be established as a realistic alternative in the fight against resistant bacteria, is more research and development of the technology, especially on the clinical use of plant products as antimicrobials.
In conclusion, the exploration of plant-derived compounds holds immense potential for the development of novel therapeutic agents, offering sustainable and natural solutions to modern medical challenges.
Keywords: natural compounds, resistant bacteria, infections, public health

ELIMINATION OF CRYSTAL VIOLET DYE CONTAINED IN WASTEWATER BY COMBINING ELECTROCOAGULATION TECHNIQUE WITH BIOCOAGULANTS

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Abstract

The colored solution of crystal violet is treated by electrocoagulation technique with aluminum electrodes by combining with biocoagulants in order to find the optimal parameters with the optimal dose of biocoagulant.

A matrix established by the Box-benhken plan is set up based on pH, current density and electrolysis time. The biocoagulants used are walnuts, banana peel and watermelon peel.

Banana peel gave the best yield of 97.82% with an optimal dose of 1g following a pH of 9, current density of 40 mA/cm2 and an electrolysis time of 30min.

The combination of electrocoagulation technique with biocoagulants has proven to be a cost-effective solution to treat dyes from wastewater with minimum energy and maximum efficiency.

Keywords : electrocoagulation, biocoagulants, dyes.

HPLC METHOD FOR SERUM SPERMIDINE ANALYSIS AND ITS CLİNICAL APPLICATION POTENTIAL

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ABSTRACT

Introduction and Purpose: The analysis of spermidine and other polyamines plays a significant role in the diagnosis and treatment of various diseases in the medical and health fields. This study aims to develop a new modified method for serum spermidine analysis using high-performance liquid chromatography (HPLC). Polyamine biosynthesis is an ancient metabolic pathway found in all living organisms, and maintaining the homeostasis of polyamines is critical for the proper functioning of cells. In the literature, HPLC-based methods for serum spermidine analysis are limited and often lack sufficient explanatory details.

Materials and Methods: In this study, a standard calibration curve for serum spermidine was established, and the method was optimized for validation parameters such as linearity and repeatability. The newly developed HPLC method enables the accurate, reliable, and rapid analysis of polyamines in serum.

Results: The newly developed HPLC method successfully enables the analysis of polyamines in serum with high precision and repeatability. The method is capable of accurately detecting and quantifying spermidine and other polyamines, offering a fast and reliable approach compared to traditional indirect methods.

Discussion and Conclusion: This method has significant potential for clinical applications, particularly in diagnosing specific diseases in individuals with chronic illnesses. Spermidine plays an important role in metabolic pathways such as autophagy, cardiovascular diseases, neurological disorders, and cancer. By activating autophagy processes, spermidine supports cellular health and has shown promising results in the treatment of cardiovascular and neurological diseases. HPLC offers substantial advantages over indirect measurement techniques and has the potential to become the gold standard in serum spermidine analysis, offering an important innovation for medical laboratories.

Key Words: Spermidine; Polyamines; High-Performance Liquid Chromatography (HPLC); Serum analysis; Clinical biochemistry.

THE CONTRIBUTION OF MULTICULTURALISM TO LANGUAGE LEARNING: THE CASE OF ERASMUS STUDENTS

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ABSTRACT

Introduction and Purpose: Language learning is not merely about acquiring grammatical rules and vocabulary but also involves developing cultural awareness, communication competence, and social interaction skills. This multifaceted process becomes socio-culturally enriched in multicultural settings, particularly through exchange programs such as Erasmus. Thus, this study aims to investigate the effects of multicultural environments on the language learning experiences of Erasmus students and to explore how intercultural interactions influence their motivation, challenges, and learning outcomes.

Materials and Methods: This qualitative study was conducted during the 2023-2024 academic year with 20 Erasmus students who participated in an exchange program in Turkey. Data were collected using semi-structured interviews, focus group discussions, and participant observations. The selection of participants followed the criterion sampling method. The data were analyzed using content analysis, with key themes including linguistic development, cultural awareness, empathy, and the role of intercultural interactions in the learning process.

Results: The findings indicated that language skill development accounted for 40-50% of the reported benefits, while cultural awareness and empathy contributed 30-35%. Additionally, intercultural interactions positively influenced learning outcomes by 20-25%. Students highlighted the value of experiencing language within its cultural context and reported improvements in their ability to communicate effectively, understand diverse perspectives, and overcome language barriers.

Discussion and Conclusion: The study underscores the role of multicultural learning environments in fostering not only linguistic proficiency but also social and cultural competence. The findings suggest that intercultural approaches to language teaching can lead to significant improvements in learners' communication skills and cultural understanding. These results emphasize the need for innovative educational practices and policies that integrate multicultural and experiential learning strategies into language education.

Key Words: Language Learning; Multiculturalism; Turkish Teaching.

PREPARATION AND CHARACTERIZATION OF SOLID POLYMER ELECTROLYTE BASED ON PVA/PMDA

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Abstract:

In this work we study the effect of concentration of pyromellitic dianhydride (PMDA) (0,5,10 ,15 and 20) and the effect of acid molarity (sulfuric acid) (0, 5 and 9) on the thermal and wetability properties of the pure Poly(viny1 alcohol) (PVA) and its cross-linked.

The XRD patterns for the pure PVA and crosslinked PVA films showed all polymers have one diffraction peak with a 2θ value of 19.5°.

For pure PVA, the peak is very sharp and strong indicating its high crystallinity, the peak becomes weaker and broader as the crosslinking degree increases.

The thermal behavior of the crosslinked PVA is investigated by DSC characterizations. the Tg values of all crosslinked PVA membranes are lower than that of pure PVA film (Tg = 60.62 ºC). It has been reported that the addition of PMDA as crosslinking into the PVA matrix produces a shift in the melting point, attributed to the increase in crystallization.

The pure PVA has a T_m of 247.4°C, but the T_m of the PVA doped by 5M and 9M H_2SO_4 is close to (246.8 and 246.88) °C, The increase of T_m at 20 wt.% PMDA concentration is attributed to a high content of a uniformly distributed crosslinking phase.

The contact angle slightly decreased from (90.19 for pure PVA to 86.96 for PVA doped by 9M H_2SO_4. PMDA as crosslinker significantly improved the wettability to a strong hydrophobic surface showing 54.54^o of contact angle at 20 wt.% PMDA. SEM image showed that PMDA were approximately implanted uniformly within the PVA matrices and have intimate contact with these polymeric matrices which suggests the existence of strong interfacial bonding among PMDA and PVA.

EFFECT OF DIFFERENT IRRIGATING SOLUTIONS ON THE APICAL SEALING ABILITY OF RESIN BASED ROOT CANAL SEALER

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ABSTRACT

Objective: To assess the effect of different irrigating solutions (Normal saline, 5.25% NaOCl and 90% Ethanol) on apical sealing ability of resin based root canal sealer filled with single cone obturating technique in extracted teeth.

Methods: From March 2022 to September 2022, the Case Control research was carried out at the Department of Operative Dentistry, Karachi Medical and Dental college in Karachi. Sample size of 30 single root teeth were decoronated and roots were divided into Group A and B. Group B is subdivided into two cases according to the type of irrigating solution used. Group A irrigation solutions include 5ml of Normal saline solution, while group B includes 5ml of 5.25% Sodium Hypochlorite and 5ml of 90% Ethanol, solution. Teeth were prepared, obturated, placed in 2% methylene blue dye and extent of dye penetration was done under a Digital stereomicroscope and maximum leakage was measured by using software. Data was analyzed on SPSS version 26.0.

Results: All solutions were normally distributed. While comparing both groups, Ethanol has the lowest mean value of dye penetration i.e. 1.07 ± 0.63 which means that this irrigating solution has least microleakage and provide effective seal of resin sealer to the root canal wall filled by using single cone obturating technique. Case group irrigation solutions has significant p- value i.e. 0.000 which indicates absolute absence of microleakage. Comparison of mean value of sodium hypochlorite and ethanol, ethanol is more efficient irrigation solution as it has shown least dye penetration as compare to sodium hypochlorite.

C**onclusion:** It has been concluded that among all the solutions, Ethanol has proved to be the most effective irrigation solution followed by Sodium hypochlorite showed least dye penetration and hence least microleakage.

Key words: Endodontic, sealer, Resin based sealer (AH Plus), Sodium Hypochlorite (NaOCL).

THE EFFECT OF THE RELATIONSHIP BETWEEN SLEEP DURATION AND DIET QUALITY ON NUTRITION IN SANKO UNIVERSITY DEPARTMENT OF NUTRITION AND DIETETICS STUDENTS

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ABSTRACT

Introduction and Purpose: There are many factors that affect sleep quality, and the deterioration of sleep quality, sleep deprivation and problems negatively affect the daily life and health of individuals. It is stated that university students have irregular sleep times, insufficient sleep durations, poor sleep quality, and take some stimulants to increase their wakefulness. Sleep affects hunger-satiety metabolism, affecting food intake and eating behavior. The aim of the study is to determine the effects of sleep duration and diet quality on nutrition of students of the Department of Nutrition and Dietetics, Faculty of Health Sciences, Sanko University.

Materials and Methods: The study was conducted on students of the Department of Nutrition and Dietetics, Faculty of Health Sciences, Sanko University, during the 2023-2024 academic year. 128 students between the ages of 18-35 were included in the study. A questionnaire form consisting of 43 questions was applied to determine the personal characteristics of the individuals. The Pittsburg Sleep Quality Index scale consisting of 24 questions was used to examine the sleep quality of the students. In addition, a 24-hour physical activity record form was used to measure physical activity levels. A 1-day food consumption record was taken from the students to record the amount and type of food and beverages they consumed during the day.

Results: 128 students participated in the study, 90.6% of whom were female and 9.4% were male. When BMI groups were examined between genders in the study, a statistically significant difference was found ($p<0.05$). No statistically significant difference was found between genders and body weight change in the study. ($p>0.05$). No statistically significant difference was found between genders and regular exercise in the study. ($p>0.05$). When the PAL value was examined, a statistically significant difference was found between genders. ($p<0.05$). When the Pittsburgh score was examined, no significant difference was found between genders. ($p>0.05$).

Discussion and Conclusion: The current study has demonstrated that short-term pre-treatment of rats with HC before transplantation could preserve the ovarian function in terms of ovarian tissue histological evaluations. In conclusion, application of HC before fresh whole ovary transplantation was found to be effective in controlling the formation of necrosis and inflammation in ovarian tissue in rats.

Key Words: Pittsburgh Sleep Quality Index (PSQI), Sleep quality, Sleep duration, Diet quality

THE IMPACT OF GREEN RECRUITMENT AND SELECTION ON ORGANIZATIONAL PERFORMANCE DYNAMICS

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Abstract

For centuries, national, regional, and international organizations as well as private citizens have been concerned about environmental preservation. As a means of halting the environmental deterioration brought on by businesses, green management efforts become a crucial component in forward-thinking industries worldwide. Additionally, industrialization has a big hand in the world's environmental issues.

The present paper intends to look into the relationship of green recruitment and selection on organizational performance. The intent of this study is to analyze the existing literature focusing on the above-mentioned determinants of the organizations.

Green recruitment and selection in conclusion is the core element of Green Human Resource Management. Overall, green recruitment and selection evaluates the candidate’s ability and personality in support of the environmental goals.

Key words: Green Selection, Green Recruitment, Green HRM, Challenges, Review

NAVIGATING AI AND DATA PROTECTION: INSIGHTS ON GDPR AND EMERGING LEGAL FRAMEWORKS

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ABSTRACT

The rapid advancement of artificial intelligence (AI) presents unparalleled opportunities for innovation, but it also raises significant challenges for data protection and privacy, particularly under the General Data Protection Regulation (GDPR). This research paper explores the intersection of AI and GDPR, examining the complex balance between fostering technological innovation and adhering to stringent privacy laws. By delving into the core GDPR principles—such as data minimization, purpose limitation, and the right to be forgotten—the paper highlights the friction between these regulations and the requirements of AI systems, which thrive on large, diverse datasets.

The study integrates landmark case studies, including Google Spain, Clearview AI, and Meta's recent fines, to demonstrate the practical implications of GDPR enforcement on AI-driven applications. With the latest data from 2023-2024, the paper analyzes trends in GDPR fines and compliance challenges faced by AI companies, alongside emerging technological solutions such as federated learning and privacy-preserving algorithms. It also discusses GDPR's influence as a global benchmark for AI governance, shaping regulations in jurisdictions like India and California.

The paper concludes with actionable recommendations to harmonize innovation with compliance, advocating for regulatory sandboxes, clearer guidelines for AI, and collaborative policymaking frameworks. By addressing legal, technological, and ethical dimensions, this study aims to contribute to the global discourse on creating a balanced framework for AI innovation under GDPR.

Key Words: AI innovation, GDPR compliance, privacy laws, automated decision-making, data governance.

IMPACT NKG2D LIGAND POLYMORPHISM IN PROSTATE CANCER IN AN ALGERIAN POPULATION

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ABSTRACT

Introduction and Purpose: Polymorphisms in NKG2D ligands (NKG2DL) are significant in the context of prostate cancer. The NKG2D receptor, found on NK (Natural Killer) cells and CD8+ T cells, plays a crucial role in recognizing and eliminating tumor cells. Its ligands, such as MICA and MICB, are often overexpressed in cancer cells, including those in prostate cancer. However, variations in the genes encoding NKG2DL can impact this immune response. Certain polymorphisms may reduce the binding affinity between NKG2D and its ligands, allowing cancer cells to evade immune detection more effectively. This immune evasion can influence the progression and treatment response of prostate cancer.

Materials and Methods: The aim of our study was to characterize prostate cancer patients and investigate polymorphism in the MICA gene. The secondary objective was to explore associations between clinical and biological characteristics of the disease and the described polymorphism. Patients diagnosed with prostate cancer and followed at the EHU of Oran were included. Demographic, clinical, and therapeutic data were collected. MICA polymorphisms were analyzed using PCR-RFLP.

Results: Our primary results identified the presence of various genotypeso of the MICA-129 Met/Val polymorphism among patients. Comparative analysis of clinical characteristics showed that patients with the Met/Met genotype exhibited faster disease progression compared to those with the Val/Val and Met/Val genotypes. Furthermore, associations between MICA-129 genotype status and certain tumor markers were observed, suggesting that the genotype could serve as a prognostic biomarker in prostate cancer.

Discussion and Conclusion: These findings suggest that immune evasion mechanisms due to failure in activating NK cells by the MICA-129 Val allele may contribute to individual susceptibility to prostate cancer development. Understanding these polymorphisms could help in developing targeted therapies to enhance immune recognition and destruction of cancer cells.

Key Words: NKG2D LIGAND; MICA-129; prostate cancer; polymorphism.

CHARACTERISATION OF ABCB1 POLYMORPHISM AMONG ANKYLOSING SPONDYLITIS PATIENTS IN ALGERIAN POPULATION

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ABSTRACT

Introduction and Purpose: Ankylosing spondylitis (AS), or rheumatic pelvispondylitis, is believed to be the leader in a group of chronic inflammatory rheumatism commonly referred to as spondyloarthropathies.

This work consisted of exploring the association relationship that can exist between ABCB1 C3435T polymorphism and the predisposition to ankylosing spondylitis (AS) in the Algerian population. We compared the frequency of this polymorphism between the group of AS and healthy subjects

Materials and Methods: A case-control study involving 81 AS patients and 98 controls was conducted. DNA genotyping was done using predesigned probe-based allelic discrimination TaqMan® assays. Allele and genotype frequencies were compared between cases and controls and Statistical analyses were performed with SAS software (version 9.1, SAS institute Inc., Cary NC).

Results: No statistically significant differences were observed in the frequencies of ABCB1 genotypes and alleles between AS cases and the control group. In contrast, the recessif model (CC+CT/TT) (OR=8.99 [11.97-40.99], p = 0.004) was significantly associated with mixte form of the disease, and the heterozygote genotype 3435CT protect from Axiel form. Moreover, a

positive association was also founded between the ABCB1 C3435T polymorphism and BMI (OR: 5.19[1.41-19.9], p = 0.01).

Discussion and Conclusion: Results on the association of ABCB1 polymorphisms with susceptibility to ankylosing spondylitis are obtained for the first time in an Algerian population.

They imply that the ABCB1 C3435T SNP do not affect the risk of AS, but rather the form of the disease and BMI.

Key Words: Algerian population, Ankylosing Spondylitis, ABCB1, C3435T

DELAY-AWARE ROUTING ANALYSIS IN VANETS USING MACHINE LEARNING

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ABSTRACT: Vehicular Ad Hoc Networks (VANETs) are an essential component of modern transportation systems, facilitating communication between vehicles and infrastructure to improve safety, traffic management, and real-time functionalities such as accident prevention and emergency communication. Delay is a key factor that impacts the efficiency of these systems, especially for time-sensitive operations. However, the dynamic characteristics of VANETs—such as high-speed mobility, unpredictable topology changes, and fluctuating vehicle densities—make it challenging to minimize delays. This research focuses on delay-aware routing in VANETs, leveraging machine learning (ML) techniques to enhance routing performance and network reliability in dynamic settings. Conventional routing methods, including topology-driven and location-based protocols, often use static strategies that struggle to adapt to rapidly changing network conditions. These limitations can lead to higher delays and degraded service quality. The integration of machine learning offers a solution by enabling dynamic delay prediction and adaptive routing based on current network conditions. This study examines various ML approaches, such as supervised learning for predicting delays, clustering techniques for grouping nodes, and reinforcement learning for creating flexible routing strategies. To perform the analysis, tools such as SUMO and NS-3 were used to simulate realistic network scenarios and gather key metrics, such as vehicle speed, traffic density, and link quality. Algorithms including Random Forest, Gradient Boosting, and Graph Neural Networks were utilized to train models for optimizing routing, while reinforcement learning facilitated dynamic decision-making. The findings reveal that ML-based approaches significantly improve delay reduction, throughput, and data delivery compared to traditional routing techniques.

Keywords: Vehicular Ad Hoc Networks (VANETs), Delay-aware routing, Machine learning (ML), Intelligent transportation systems, Dynamic network optimization.

PLC BASED CONVEYOR SYSTEM WITH STEPPER MOTOR FOR STAMPLING

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ABSTRACT

Introduction and Purpose: With conveyor belts, production lines can automatically move at a certain speed and product consumption and unloading can be achieved. It is aimed to operate the system by allowing the conveyor belt to be seen in the production line and to be evacuated in a shorter time. Motors are needed for conveyor belts to operate automatically. Stepper motors provide precise behavior, rotation at fixed angles, and specific angular movements in one cycle. Therefore, stepper motors were preferred for the implemented system. By integrating a proximity sensor into the conveyor belt, product detection and stamping storage are provided. Pneumatic systems are systems that can create mechanical force and movement with air, frequently used in industry. Unlike electrical systems, the systems do not carry the risk of electric shock, nor do they carry the risk of explosion or explosion if they come into contact with flammable gases, like hydraulic systems.

Materials and Methods: This system consists of a conveyor and stamping mechanism driven by a stepper motor controlled by PLC. In the first phase of the project, the conveyor system was established and the conveyor was operated with a stepper motor. This system was managed through PLC (Programmable Logic Controller), which is frequently preferred among industrial control devices and can be easily programmed. The products carried on the conveyor belt are programmed via PLC to move in the specified alignment and at the desired speed. Pneumatic piston, valve and sensor are integrated into the system. This sensor ensures the correct positioning of the products and also allows the stamping process to be monitored. The proximity sensor used detects the presence of objects without physical contact or when objects approach a distance and sends a signal to the PLC.

Results: Thanks to this project, precise positioning was possible by using a stepper motor and error-free operation of the products was ensured. In addition, by changing the stamp head when necessary, it can be easily adjusted for different products and thus the variety of products produced can be increased.

Discussion and Conclusion: With this project, a flexible and innovative system has been designed that can adapt to different production processes by developing a user-friendly system in the production field, prioritizing occupational safety, which is one of the most important priorities of the system, reducing work accidents, and offering the ability of the stamping process to work in manual and automatic modes.

Key Words: Conveyor belt, PLC controlled system, stamping

PARKINSONS DISEASE DETECTION SYSTEM

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ABSTRACT

Introduction and Purpose: Parkinson's Disease (PD) is a neurodegenerative disorder that poses significant diagnostic challenges due to its diverse motor and non-motor symptoms, often leading to misdiagnosis or delayed intervention. Early detection is crucial for effective management and improved patient outcomes. Therefore, this project hypothesized that employing advanced machine learning (ML) techniques could enhance the accuracy and timeliness of PD diagnosis. The objective of the present study was to develop a robust diagnostic model for detecting PD at early stages using anomaly detection algorithms and feature analysis.

Materials and Methods: The study utilized a dataset comprising 195 voice recordings with 24 acoustic features, collected from Parkinson's and non-Parkinson's subjects. Machine learning methods, including Isolation Forest, Z-Score, One-Class SVM, and K-Means clustering, were applied to identify anomalies indicative of Parkinson's disease. Data preprocessing involved normalization, feature scaling, and handling of missing values. Visualization techniques like box plots and scatter plots were employed to detect outliers. Model evaluation was conducted using metrics such as accuracy, precision, and recall.

Results: The models demonstrated varying levels of effectiveness in detecting PD. One-Class SVM achieved the highest accuracy of 87%, with 18 outliers identified as Parkinson's cases. Isolation Forest and Z-Score techniques effectively differentiated anomalies in the dataset, enhancing the understanding of voice characteristics associated with PD. The analysis revealed distinct patterns in acoustic features, confirming their relevance for early detection.

Discussion and Conclusion: The study confirms the potential of machine learning techniques in improving Parkinson's disease diagnosis by leveraging anomaly detection and feature analysis. The application of these models provides a non-invasive, efficient, and scalable approach to early-stage PD detection. In conclusion, the integration of these methods offers significant promise in clinical diagnostics, enabling timely medical interventions and contributing to better patient outcomes.

Key Words: Parkinson's Disease; Machine Learning; Anomaly Detection; Voice Analysis; Early Diagnosis.

ENCROACHMENTS AND URBAN SPRAWL: UNDERSTANDING NEIGHBORHOOD CHALLENGES IN MARKET PLACES, LAHORE

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Abstract

Unplanned commercialization and encroachments have emerged as significant challenges in various parts of Lahore, posing threats to the safety and well-being of residents. This study focuses on analyzing and documenting the development patterns of Karim Market in Allama Iqbal Town, Lahore, and their impact on the daily lives of nearby residents and the surrounding road network. A qualitative approach is employed, using thematic analysis to explore the issues faced by the community. Interviews with residents highlight the adverse effects of unplanned developments, including challenges for pedestrians, road accessibility, traffic congestion, parking shortages, and encroachments. The study aims to identify the consequences of unregulated commercialization in neighborhood markets and its implications for urban living. The findings reveal significant difficulties in accessibility, walkability, and safety, underscoring the pressing need for better urban planning and management practices.

Keywords: *Neighborhood, Accessibility, Walkability, Safety, Urban Sprawl, Unplanned Commercialization*

IMPACT OF HIGH-PRESSURE AND HIGH-TEMPERATURE ON BULK MODULUS AND PRESSURE DERIVATIVE OF THE BULK MODULUS IN MgCu

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ABSTRACT

Introduction and Purpose: Binary intermetallic compounds are a family of materials, which are usually composed of two metal atoms (sometimes they are composed from a metal and non-metal). Among these materials, copper-based intermetallic compounds, which are composed of copper and other metal (Mg, Sc, Pd,..etc). This study aims to investigate the effect of high-pressure and high-temperature on the adiabatic bulk modulus and the pressure derivative of the isothermal bulk modulus for MgCu intermetallic compound.

Methods of calculation: The effect of high-pressure and high-temperature on the adiabatic bulk modulus as well as on the pressure derivative of the isothermal bulk modulus for MgCu has studied using the quasi-harmonic Debye model. The details on the method of the calculation adopted in this work are presented in J. Magnes. Alloys, 7 (2019) 335.

Results: The bulk modulus decreases with increasing of temperature and increases with increasing of pressure, on the other hand, the pressure derivative of the isothermal bulk modulus decreases with increasing of pressure ranging from 0 to 20 GPa, and increases with increasing of temperature in the range from 0 to 800 K, respectively.

Discussion and Conclusion: At zero-pressure and zero-temperature, our predicted value of the pressure derivative of the isothermal bulk modulus is around 4.36, which is in good agreement with other data of the literature. Furethermore, we used the elastic constants and the lattice parameters of the literature as well as some empirical expressions to predict the Debye temperature and the activation energy for self-diffusion of MgCu intermetallic compound, which are 481 (470) K for θ_D and 2.89 (2.92) eV for Q_{sD}, respectively.

Key Words: High temperature; MgCu intermetallic compound; Quasi-harmonic Debye model; Bulk modulus; High pressure.

THE IMPACT OF EDUCATION REFORM ON WOMEN'S CRIME EXPOSURE IN TÜRKİYE

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ABSTRACT

This study investigates the impact of the 1997 education reform in Türkiye on women's exposure to crime. The reform extended compulsory education, leading to an increase in individuals' educational attainment. Existing literature highlights the role of education in enhancing individuals' socioeconomic status and reducing exposure to risky behaviors. However, the specific impact of education reforms on women's exposure to crime remains not well understood.

This study utilizes a regression discontinuity design approach, where the birth year is used as an instrument to being treated by the education reform using the fact that individuals born in or after 1987 were affected by the reform, while those born earlier were not. Data from the Turkish Statistical Institute (TurkStat) Life Satisfaction Survey from years 2018 to 2022, including information on educational attainment and crime exposition experiences, are used for analysis. The survey allows for an in-depth examination of how the reform influenced women's experiences and perceptions of crime.

The findings reveal that increased education reduces women's exposure to crime. The analysis highlights the beneficial effects of increased education on reducing crime risks for women. This research offers valuable insights into the broader implications of educational policies on individual safety, public health and gender equality.

Key Words: Education Reform; Women's Crime Exposure; Compulsory Education

APPLICATION OF STATISTICAL TESTS AND REGRESSION IN THE ASSESSMENT OF THE ECONOMIC DEVELOPMENT TREND OF THE WESTERN BALKAN COUNTRIES (2012-2023)

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ABSTRACT

Introduction and Purpose: The study analysis of this paper consists of assessing economic performance to determine the economic development trend of six Western Balkan countries during the period 2012-2023. The study analyzes the progress of this economic development based on several variable macroeconomic indicators. By investigating the impact and interaction of the relevant indicators, results and conclusions are obtained, giving conclusions and recommendations.

Materials and Methods: The defined indicators are classified according to two directions: the first direction determines the economic performance index (EPI) obtained through: 1. Economic growth rate (GDP) during the period under study; 2. Fiscal balance (% of GDP); 3. Inflation; 4. Unemployment. The second direction: assessment of the level of labor productivity by analyzing the relationship and harmony between the factors: 1. GDP per person employed; 2. Employment to population ratio, 15+, total (%), 3. Foreign direct investment, net inflows (% of GDP); 4. Trade (% of GDP); 5. Global innovation index. In the study methodology, statistical tests and regression are applied to analyze the development trend of each country.

Results: There are significant differences in both the values of the indicators and the conclusions drawn, so we can say in the EPI assessment assessed at the beginning and at the end of the period and as an average assessment, the values vary from 64.84% to 86.01%. Reflected in the table for the indicators of each country. In the correlation that analyzes the relationships between the variable indicators for the assessment of the performance of the second direction, here too there are very significant differences between the countries of the Western Balkans, which are reflected in the relevant tables.

Discussion and Conclusion: Positive experiences are identified in specific directions and countries of the Western Balkans. Negative aspects and practices are also identified.

Key Words: EPI, economic trend, macroeconomic indicator, correlation, regression, hypothesis testing

PEDAGOGICAL INNOVATION IN SCHOOLS WITHIN THE ARAB SOCIETY IN ISRAEL: MOTIVATIONS, CHALLENGES, AND IMPACTS

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This presentation will focus on the findings from three quantitative and qualitative studies conducted in schools within the Arab society in Israel, where pedagogical innovation was implemented. The studies examined the motivations that drove teachers to apply new pedagogical methods, the challenges they encountered during this process, and the impact of innovation on teaching practices.

The presentation will explore the individual and organizational factors that led educational teams in these schools to initiate pedagogical changes, alongside the challenges they faced, such as resource limitations, resistance to change, and technological gaps within the education system.

This session aims to provide valuable insights into the strategies for successfully implementing educational innovation in schools within the Arab society, focusing on change management, teacher support, and overcoming potential barriers.

Keywords: Pedagogical Innovation, Educational Challenges, Teacher Motivation, Arab Society in Israel, Implementation Challenges.

NO SOCIAL CAPITAL WITHOUT BIODIVERSITY

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ABSTRACT
One of the determinants of a more equal distribution of income in society is social capital, measured by economic connectedness. This can be augmented by improving biodiversity as a necessary condition for the outcome. We find this by employing necessary condition analysis. On the other hand, qualitative comparative analysis results in a lack of sufficiency of biodiversity for the outcome or non-outcome of economic connectedness.

Key Words: biodiversity, social capital, United States

TOXICITY ASSESSMENT OF ETHANOLIC EXTRACT OF ROSMARINUS OFFICINALIS LEAVES IN FEMALE WISTAR RATS

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Abstract

Rosmarinus officinalis (*Rosemary*), an aromatic plant rich in phenolic antioxidant compounds, is widely used in traditional therapy by Moroccan population. The objective of the current study was to assess the acute and subacute toxicity of ethanolic extract of *Rosmarinus officinalis* (EERO) in Wistar rats.

30 rats were divided into 5 groups (control, 1000, 2500, 3500, and 5000 mg/kg dose). Similarly, in the subacute toxicity study, 30 rats were divided into 5 groups (control, 200, 300, 500 and 1000mg/kg dose). The sub-acute toxicity study aimed to identify the NOAEL dose, by following the same signs of toxicity, hematological parameters, biochemical parameters, markers of oxidative stress, and histological analyses were evaluated.

No significant differences were observed in acute and sub-acute toxicity parameters (body weight, food, water), nor acute toxicity was any mortality observed, suggesting that the LD50 is greater than 5000 mg/kg. The sub-acute toxicity study showed no significant differences in hematological, biochemical, and histological parameters, while the extract increased CAT levels and decreased NO in the liver and kidney.

RO extract is non-toxic up to the doses tested and exerts antioxidant activity, manifested by a nitric oxide levels decrease and antioxidant enzyme catalase levels increase in in liver and kidneys.

Keywords: *Rosmarinus officinalis*, hematological analysis, acute and subacute toxicity, catalase (CAT), nitric oxide (NO)

IS ECONOMIC CONNECTEDNESS LIKELY TO RAISE ENVIRONMENTAL FOOTPRINT?

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ABSTRACT

Economic connectedness has been recently found to lower income inequality by rising intergenerational mobility, yet its environmental impacts are less well known. More well-known is the fact that the non-carbon footprint is easier to reach via regulations because its production is domestic. These two problems of income inequality and environmental pollution have echoed in public opinion polls as one of the major current problems in developed countries. We thereby look at the United States on the state level during the last two decades (2010 – 2020) with a Hausman-Taylor estimator for panel data. The choice of the estimator stems from its appropriateness for panel datasets with constant variables. We find that in the United States, economic connectedness between friends, whereby friendships were formed within the same group, may be blamed for the rising environmental (noncarbon) footprint. Noncarbon footprint is, therefore, explained by the bonding social capital, which may restrict innovation. The policy implications are discussed and call for distinguishing social capital types and promoting bridging social capital where bonding social capital is relatively strong.

Key Words: non-carbon footprint; economic connectedness; environment; social capital; Hausman-Taylor estimator

EVALUATION OF ANTIMICROBIAL ACTIVITY OF *Bacillus subtilis* AGAINST *Macrophomina phaseolina* CAUSES DRY ROOT ROT IN BLACKGRAM (*Vigna mungo* L.)

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ABSTRACT

Macrophomina phaseolina, a soil-borne fungal pathogen, causes dry root rot in blackgram (*Vigna mungo* L.), leading to considerable yield losses. This study investigates the antimicrobial activity of *Bacillus subtilis*, a beneficial bacterium, against *M. phaseolina*. In vitro experiments, including dual-culture assays, revealed that *B. subtilis* exhibited strong antagonistic effects, significantly inhibiting the growth of *M. phaseolina*. The antimicrobial activity was attributed to the production of volatile organic compounds, lytic enzymes, and other antimicrobial metabolites by *B. subtilis*. Additionally, greenhouse experiments demonstrated that *B. subtilis* effectively reduced the severity of dry root rot in blackgram plants, promoting plant growth and health. The results suggest that *B. subtilis* holds potential as a biocontrol agent for managing dry root rot in blackgram, providing an eco-friendly alternative to chemical fungicides. Further research in field conditions is necessary to assess its practical application and long-term effectiveness in crop protection.

KEY WORDS: *Macrophomina phaseolina, Bacillus subtilis,* Blackgram.

EVALUATION OF ANTIMICROBIAL ACTIVITY OF *Bacillus subtilis* AGAINST *Sarocladium oryzae* CAUSES SHEATH ROT IN RICE (*Oryzae sativa* L.)

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ABSTRACT

Sheath rot, caused by *Sarocladium oryzae*, is a destructive fungal disease of rice (*Oryza sativa* L.), leading to significant yield losses. This study evaluates the antimicrobial activity of *Bacillus subtilis* against *S. oryzae*, exploring its potential as a biocontrol agent for sheath rot management. In vitro assays revealed that *B. subtilis* effectively inhibited the growth of *S. oryzae* through the production of antimicrobial metabolites, lytic enzymes, and volatile organic compounds. Furthermore, greenhouse experiments demonstrated that *B. subtilis* significantly reduced the incidence and severity of sheath rot in rice plants, improving plant health and growth. These results suggest that *B. subtilis* can serve as an effective, environmentally friendly alternative to chemical fungicides for managing sheath rot in rice. Further research, including field trials, is recommended to assess its long-term effectiveness and applicability in diverse agricultural settings.

KEY WORDS: Sheath rot, *Sarocladium oryzae, Bacillus subtilis*

BIODIVERSITY AND SOCIAL CAPITAL THROUGH THE LENS OF INCOMPLETE CONTRACTS

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ABSTRACT

Terrestrial biodiversity conservation is very limited in the face of limited knowledge of upcoming biodiversity losses. We introduce the use of incomplete continuous contracting theory applied to less or more biodiverse land trading in developed countries where ownership levels between trading parties strongly differ, and thus, social capital is diminished. We find that biodiversity can be preserved (1) when there is one price reflecting the equal cost and value of the land and (2) when price differentials are large and the value is no less than the cost of the land. Biodiversity is harmed when the initial value of biodiversity is higher than the cost of acquiring it, and with repeated contracting, aggrievement and shading occur. These preliminary results show that different outcomes can be achieved with different information about the value of biodiversity, strongly supporting the valuation of biodiversity monetarily.

Key Words: biodiversity; incomplete contracts; social capital.

FOREIGN BODY IN OESOPHAGUS

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ABSTRACT

Introduction: Oesophageal foreign bodies cause approximately 1,500 deaths annually in the USA. Swallowed materials vary by age and region, but is most common in children aged 6 months to 6 years. However, mortality and morbidity ratios increase with age. While many foreign objects pass through the intestines spontaneously, 10-20% of those require nonoperative treatment, and less than 1% require intervention.

Case: A 75-year-old woman presented with several hours of chest pain. Vital signs and examinations were unremarkable. Detailed anamnesis revealed the pain began after dinner. An ECG showed sinus rhythm with normal ST/T segment, and blood tests were unremarkable. However, Thorax CT showed a foreign body in the oesophagus. Subsequently, a nasogastric tube was tried to insert, however, it failed, due to the blockage. Therefore, an endoscopy was done, which revealed that a food product was completely obstructing the lumen just below the upper oesophageal sphincter, 15 cm from the mouth. The foreign body was pushed to the stomach. The patient was discharged from the emergency room with a normal diet.

Results: Foreign bodies in the oesophagus should be considered for patients presenting with dysphagia, hypersalivation, dyspnea, retrosternal pain, vomiting, and cough. Patients reporting foreign bodies with no examination findings shouldn't be discharged without further evaluation of the airway and gastrointestinal system. CT with IV-oral contrast or endoscopy should be conducted if needed.

Discussion and Conclusion: Oesophageal foreign bodies in children are often items like coins, batteries, toys, and safety pins, while in adults, they typically include food, bone fragments, or dental prosthetics. Sharp-edged foreign bodies and batteries pose a higher risk of perforation and can lead to mediastinitis, fistulas, diverticula, pneumothorax, and oesophageal strictures. Treatment options include observation, oesophagoscopy, Magill forceps, IV glucagon, and surgery. Oesophagoscopy are the preferred method to visualise the foreign body and oesophageal damage.

Key Words: Foreign Body in Oesophagus; Endoscopy; Chest Pain

VIRULENCE CHARACTERISTICS IN FLUCONAZOLE-RESISTANT *Candida parapsilosis* complex ISOLATES

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ABSTRACT

Introduction and Purpose: Among *Candida* species, *Candida parapsilosis* is one of the four most common causative agents of candidemia. The study aimed to investigate whether there is a relationship between some virulence factors and fluconazole MIC values in resistant *C. parapsilosis* complex isolates from clinical specimens.

Materials and Methods: 45 fluconazole-resistant *C. parapsilosis* complex isolates from blood samples were included in the study. In our study, fluconazole susceptibilities of the isolates were also determined by liquid microdilution test according to the EUCAST recommendations. Biofilm forming was determined by crystal violet method, esterase by Tween 80 agar, proteinase by bovine serum albumin supplemented agar, phospholipase by egg yolk agar, haemolytic activity by sheep blood and glucose supplemented Sabouraud dextrose agar media. Statistical analyzes were performed with IBM-SPSS. The suitability of the data for normal distribution was checked with the Shapiro-Wilk test and Spearman correlation analysis was performed.

Results: The microdilution test showed that 38 of 45 *C. parapsilosis* complex isolates were resistant to fluconazole. When virulence properties were investigated, it was seen that esterase, proteinase, haemolytic activities and biofilm-forming ability were found as 92.11%, 39.47%, 34.21%, and 84.21%, respectively. No phospholipase activity was observed in any of the isolates.

In the statistical evaluation, a significant relationship was determined between fluconazole MIC values and esterase, while there was no statistically significant relationship between protease, haemolytic activity, biofilm formation and fluconazole MIC values. It was observed that there was

a negative, moderately significant relationship between the capacity to form biofilm and esterase or protease activities.

Discussion and Conclusion: It was observed that biofilm, esterase, proteinase, haemolytic activities may play an important role in the virulence of *C. parapsilosis* complex isolates. A relationship between MIC values and esterase activity and, a negative relationship biofilm forming ability and esterase or protease activities suggested that some protective mechanisms may take over the role of other mechanisms.

Key Words: *Candida parapsilosis* complex; Virulence factors; Antifungal susceptibility

EXAMINATION OF THE EARTHQUAKE PREPAREDNESS OF AFAD AND FIRE BRIGADE PERSONNEL

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ABSTRACT

Introduction and Purpose: Earthquakes are one of the natural hazards that cause the most loss of life, injury and material damage in Turkey. It is possible to reduce the risk of earthquake disasters with the preparations made by all segments of society against earthquakes. The first aim of the study is to determine the earthquake preparedness, perceived difficulty, and perceived usefulness levels of Fire Brigade and AFAD personnel in Samsun and Izmir provinces, the second aim is to reveal the relationship between these three variables, and the third aim is to determine whether the dependent variable of earthquake preparedness level differs according to some independent variables.

Materials and Methods: In the study, relational screening model, one of the quantitative research methods, was used to determine the earthquake preparedness levels of fire brigade and AFAD personnel. In this context, the study sample consists of 600 fire brigade and AFAD personnel working in İzmir and Samsun provinces determined by stratified sampling method. The data were collected through a questionnaire form that included a section asking about personal characteristics and the Mulilsa-Lippa Earthquake Preparedness Scale.

Results: When the results are examined, it is seen that the earthquake preparedness and perceived usefulness levels of the participants are high. The perceived difficulty levels are low, and the relationship between these three variables is statistically significant

Discussion and Conclusion: When the relationship between these three variables is analysed, it is found that there is a negative relationship between the earthquake preparedness variable and the perceived difficulty variable and a weak positive relationship between the perceived usefulness variable and the perceived difficulty variable and there is a moderate negative relationship between the perceived usefulness variable and the perceived difficulty variable. In addition, it was observed that the earthquake preparedness level of the participants did not differ according to the province where they worked and the number of years since the last earthquake. Still, it differed significantly according to gender, age, education level, the institution where they worked, the institution where they worked based on the province, the institution where they worked based on province, the earthquake experience, the earthquake experience based on the institution, and the type of victimization.

Key Words: Disaster, Earthquake, Risk Reduction, Preparedness

SURGICAL MANAGEMENT AND NURSING CARE OF INTESTINAL STOMA COMPLICATIONS

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ABSTRACT

Stoma is anatomically defined as “a opening in the body”. Stomas used to meet the need for excretion are frequently used to provide fecal outflow after surgical treatment of cancer types, malformations, inflammatory bowel diseases and traumas related to the gastrointestinal or urinary system. Permanent or temporary stomas are classified according to the area of the body where they are applied and the type of application. Stoma opening is a common surgical event in both elective and emergency situations. The main purpose of stoma opening is to prevent postoperative complications such as anastomotic leakage. However, despite advances in the creation and maintenance of stomas, stoma-related complications can occur, with morbidity ranging from 20 to 70%. Stoma-related postoperative complications, which can occur within 30 days (early complications) or several months (late complications) after stoma creation, negatively affect the quality of life of stoma patients and significantly increase healthcare costs. Although most stoma complications are managed conservatively, surgical treatment is required when these approaches are not the solution. Complications of stomas that may require surgical intervention include: stoma necrosis, mucocutaneous detachment, stoma retraction, stoma prolapse, parastomal hernia, stoma stenosis and stoma bleeding. The aim of this review is to obtain a comprehensive overview of the incidence, risk factors and management (conservative and surgical) of the main surgical complications of stomas and to provide a resource for future research.

Keywords: stoma, surgery, complications, nursing care

UNVEILING THE ANTIOXIDANT POTENTIAL AND PHYTOCHEMICAL RICHES OF ELDERBERRY AND ELDERFLOWER: A COMPREHENSIVE ANALYSIS OF SAMBUCUS NIGRA *L.* EXTRACTS

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ABSTRACT

Introduction and Purpose: Sambucus nigra L. (black elderberry) is a plant of the Adoxaceae family, native to the northern hemisphere, quite accessible and abundant. The aim of this study was to determine the chemical composition and antioxidant capacity of elderflower and elderberry to guide similar future studies on the formulation of phytotherapeutic products.

Materials and Methods: Ethanol and water extracts of elderberry and elderflower were prepared and volatile organic compounds and phenolic compounds were examined by Gas Chromatography-Mass Spectrometry and Liquid Chromatography-Tandem Mass Spectrometry, respectively. Six-point calibration plots were used to determine phenolic compounds. The correlation coefficient of all components was ≥0.990. Interpretation of GC-MS mass spectra was done according to the National Institute of Standards and Technology and Wiley library database. Antioxidant activity was determined by 2,2-Diphenyl-1-picrylhydrazyl, Ferric Reducing Antioxidant Power and 2,2'-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid).

Results: The antioxidant activity of black elderberry extracts was found to be higher than that of elderflower extracts. The main bioactive compounds in elderflower and elderberry water and ethanol extracts were chlorogenic acid and hesperidin. The bioactive compounds detected in elderflower and elderberry water extracts were 2, 5-dihydroxybenzoic acid, quercetin, hyperoside, protocatechuic acid and pyrocatechol. The bioactive compound detected in high concentration in water and ethanol extracts of elderflower was oleuropein. In addition, it was determined that elderflower ethanol extract contained more volatile organic compounds than elderberry ethanol extract.

Discussion and Conclusion: With the results obtained, it is thought that this study may contribute to similar studies on the content of phytotherapeutic products, since Sambucus nigra L. has a rich content in terms of bioactive components.

Key Words: Sambucus nigra *L.*, Elderberry, Elderflower, Phenolic Compounds, Antioxidant Activity, GC-MS, Phytochemical Contents

DETERMINATION OF BIOLOGICAL ACTIVITIES OF HONEY PRODUCED IN BINGÖL PROVINCE, TURKEY

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ABSTRACT

Introduction and Purpose: In addition to its use as a food product, various types of honey have been shown through research to possess numerous properties, such as strengthening the immune system, aiding in the healing of burns, exhibiting antioxidant activity, and demonstrating antibacterial and anti-inflammatory characteristics. Honey has also been found to help treat stomach and intestinal ulcers or pains. Bingöl, geographically located at the intersection of three different phytogeographic regions, has a rich diversity of plants, which is why beekeeping activities are intensively carried out in the region. Furthermore, the honey produced in Bingöl has been certified as a geographical product by the Turkish Patent and Trademark Office and also holds the status of a geographical indication registered with the European Union.

Materials and Methods: In the conducted study, the total phenolic content (TPC) of honey produced in Bingöl was determined using the Folin-Ciocalteu method, while the total flavonoid content (TFC) was determined using the aluminium chloride method. Antioxidant activity analyses were carried out using various methods: DPPH, ABTS, CUPRAC, and FRAP methods were applied to measure antioxidant activity.

Results: The TPC amount in the honey used in the study was found to be 41.59 ± 0.94 mg GAE/100 g of honey. TFC was determined in mg Q.E./100 g of honey. In the antioxidant activity analyses, DPPH, ABTS, CUPRAC, and FRAP methods were used to determine the antioxidant activity in mg T.E./100 g of honey.

Discussion and Conclusion: The analyzed honey sample demonstrates a significant level of bioactive compounds and antioxidant activity. The TPC value of the honey highlights the substantial presence of phenolic compounds, which possess health-promoting properties such as anti-inflammatory, antimicrobial, and antioxidant effects. This value is consistent with previous studies reporting the phenolic content of honey, emphasizing its role as a natural source of dietary antioxidants.

Key Words: Bingöl Honey, Total Phenolic Substance, Total Flavonoid Substance, Antioxidant Activity.

A REVIEW OF POSTGRADUATE STUDIES EDUCATION AND TRAINING IN TURKEY WITH THE TITLE OF CULTURAL VALUES

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ABSTRACT

Introduction and Purpose: Cultural values are the materialist and moral elements that form the essence of a society through thousands of years of experience. These material and spiritual elements provide societies with the opportunity to learn and teach about the common heritage of the country. Societies transfer this heritage to future generations through education and training. In this study, it is aimed to examine the postgraduate studies on cultural values in education and training in Turkey and to reveal the current situation on the subject.

Materials and Methods: The method of the study is qualitative and designed in the type of basic qualitative research (natural inquiry). The data sources of the study consisted of 11 doctoral and 20 master's theses selected by criterion sampling method from the National Thesis Center of the Council of Higher Education (YÖKTEZ) database. These criteria were determined as; (i) being authorized, (ii) being published as of September 29, 2024, (iii) having "Cultural Values" in the title of the thesis, (iv) being on "Education and Training". Document analysis technique was used to collect the data. The examination of the study data was carried out with the "Review Form for Postgraduate Studies" created by the researchers. During the examination process of the study, each doctoral and master's thesis was re-examined and analyzed by each researcher at different times and comparisons were made between the analyses.

Results: According to the research findings, it is seen that graduate studies on cultural values in education and training have increased in recent years, especially after 2019. Although qualitative and quantitative methods were used equally in the studies, mixed method was used in only five studies. In most of the studies, questionnaires and scales were used as data collection tools, and the number of studies using interviews, observations and research diaries is also high. In addition, the studies were intensively conducted at the primary education level. It was determined that Statistical Package for Social Sciences (SPSS), descriptive statistics and content analysis were generally used in data analysis.

Discussion and Conclusion: Based on the findings of the research, it can be suggested that mixed research designs including both quantitative and qualitative methods should be included more in postgraduate studies on cultural values in education and training, doctoral studies should be increased, the knowledge and competencies of researchers about the subject, method and data analysis techniques should be increased, and the momentum of increase in the number of studies in recent years should be continued.

Key Words: Cultural Values, Master's Theses, Doctoral Theses, Postgraduate Education.

Discussion and Conclusion: Based on the findings of the research, it can be suggested that mixed research designs including both quantitative and qualitative methods should be included more in postgraduate studies on cultural values in education and training, doctoral studies should be increased, the knowledge and competencies of researchers about the subject, method and data analysis techniques should be increased, and the momentum of increase in the number of studies in recent years should be continued.

Key Words: Culture, Cultural Values, Education and Training, Graduate

SOURCE IDENTIFICATION AND RISK ASSESSMENT OF HMS IN THE WATER AND SEDIMENT OF NERODIME RIVER İN MUNICIPALITY OF FERIZAJ – KOSOVO

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ABSTRACT

Introduction and Purpose: The effects of industrialization and artificial growth of urban centers are becoming more and more clear for river ecosystems in the contemporary period. This research examines heavy metal (HMs) pollution in water and sediments of the Nerodime river found in the urban edge of the city of Ferizaj in Kosovo. Six sites were sampled in June and July in the year 2024; inductively coupled plasma-optical emission spectrometry (ICP-OES) was then employed to determine HM concentrations. The concentrations in sediment satisfied WHO recommendations, but it was concluded that water samples contained Zn, Mn, Fe, Ni, and Pb in quantities that exceeded the regulatory criteria of the EU. From spatial analysis, there was a low degree of ecological risk in low reaches, a moderate degree in middle reaches, and high degree in the high reaches. Agriculture run-off, urban residential non-point sources and point sources were important contributors. In regard to land degradation and water pollution, the study recommends sustainable land use planning and wastewater treatment efficiency enhancement.

Materials and Methods: Water and sediment samples were collected in June and July 2024. The water samples were acquired at each site from three positions (left bank, midstream, and right bank) and then combined to form a composite sample. Sediment samples (0-10 cm depth, >1000 g) were comparably obtained, varnished in polyethene containers, and transferred under decoy of the laboratory to safeguard against contamination (Dević et al., 2016; Varol, 2011).

Sedimentary samples were air-dried in a dust-free atmosphere, physically cleaned to remove debris, and sieving was conducted through a 100-mesh nylon screen. Digestion was carried out using the HNO_3-HCl-$HClO_4$ supported mixture of a microwave digestion equipment. Heavy metal concentrations were investigated using the ICP-MS (Inductively Coupled Plasma Mass

Spectrometry; Agilent 7500a), technique, which is identified by strict quality control measures. All reagents were analytical grade, and the recovery rates were preserved at 100 ± 10% to guarantee analytical accuracy (Birch et al., 2001; R. Chen et al., 2021; T. Chen et al., 2009).

Results: Table 4 shows the amounts of heavy metals (HMs) in water samples obtained from six sites along the Nerodime River. The investigation revealed fluctuations in HM concentrations, with the highest values being reported for Zn (5.85 mg/L), Mn (0.07 mg/L), and Fe (0.41 mg/L). Notably, Zn and Fe concentrations at all sites exceeded EU regulation limits, indicating widespread pollution in the river (Ali et al., 2022; Zhao Lei et al., 2015).

The coefficient of variation (CV) analysis showed that Mn, Zn, Ni, and Fe exhibited the most fluctuation, suggesting anthropogenic effects, including industrial discharges and agricultural runoff (V. Kumar et al., 2022; Sojka et al., 2022). The spatial distribution of HMs followed a gradient, with greater concentrations observed upstream (M1, M2) due to localized industrial activity, gradually diminishing downstream (M5, M6) as a result of dilution (Khorshidi et al., 2021). Figure 2 displays the HM concentration patterns, emphasizing increased Zn and Fe levels compared to other elements. The Nemerow Synthesis Index (Pn) suggested that pollution levels ranged from moderate to heavy upstream, shifting to low downstream.

Discussion and Conclusion: This research presents a detailed evaluation of heavy metal (HM) pollution and related ecological concerns in the water and sediments of the Nerodime River in Ferizaj, Kosovo. Results demonstrate geographical heterogeneity in HM concentrations, affected by a mix of anthropogenic activities and natural variables. While sediment HM levels mostly conform with international norms, water tests at some sites exceed EU regulation limits, notably for Zn and Fe, exposing severe water contamination risks.

The ecological hazard assessment indicates a gradient of risk, with upstream locations indicating larger potential dangers due to industrial discharges and agricultural runoff. In contrast, midstream and downstream zones display lower hazards, attributable to dilution and sedimentation. Pb and Fe appear as the most essential contaminants, demanding rapid care.

Principal component and cluster studies show three significant HM sources: industrial and urban runoff (e.g., Fe, Cr, Zn, Cu), geological contributions (e.g., As, Ni, Cd), and vehicular emissions (e.g., Mn, Pb). These findings illustrate the intricate interaction of natural and human causes in creating HM contamination patterns.

To avoid threats and increase water quality, the report advises targeted actions, including enhanced wastewater treatment, stronger control of industrial effluents, and sustainable land use planning. This research presents a core knowledge of HM contamination in the Nerodime River, delivering useful insights for environmental management and policy development

Key Words: River Nerodime, heavy metals, risk assessment, WHO and USEPA-standards.

DEVELOPMENT AND TESTING OF AN ADAPTIVE LEARNING METHODOLOGY FOR PROGRAMING FOR FUTURE COMPUTER SCIENCE TEACHERS IN THE ERA OF EDUCATIONAL PROCESS DIGITALIZATION

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ABSTRACT

Introduction and Purpose. The integration of digital technologies in education has highlighted the critical importance of programming skills for future computer science teachers. Preparing educators for this task requires not only subject mastery but also the ability to tailor instruction to individual learner needs. Conventional methods often fail to address the diverse characteristics of students, reducing their effectiveness. This research addresses the demand for innovative adaptive learning methodologies that accommodate various learning styles and skill levels, aligning with the modern digital educational landscape.

Materials and Methods: To develop and evaluate an adaptive learning methodology for programming, a mixed-methods approach combining both qualitative and quantitative research was employed. A comprehensive literature review was conducted to examine best practices and current trends in adaptive programming education, considering both global and Kazakhstani research. Special attention was given to methodologies that address individual learner needs, including knowledge levels, learning styles, and pace of material acquisition. The adaptive learning model was designed to include three levels of programming competency: beginner, intermediate, and advanced. Each competency level had its own set of modules, with progressively challenging tasks. Adaptation algorithms were integrated into the methodology, adjusting the difficulty of assignments based on real-time learner performance. The primary formula used to calculate the adaptation for each learner was as follows: $A_t=A_{t-1}+k\cdot(S_t-A_{t-1})$. The methodology was tested on 750 students enrolled in computer science education programs at various institutions. The participants were selected based on the following criteria**:** Stratified as beginner (350 students), intermediate (250 students), and advanced (150 students).

Results: There was an average increase of 35% in knowledge retention across all competency levels. For beginner students, the retention rate was 32%, while intermediate and advanced students had retention increases of 36% and 39%, respectively. 87% of participants reported high satisfaction with the adaptive learning approach. Additionally, the level of student engagement increased by 28%, as measured by task completion rates and participation in discussion forums.

Statistical analysis showed a significant improvement in student performance, with the highest improvement observed in the beginner group ($p < 0.05$).

Discussion and Conclusion: The results confirm that adaptive learning significantly enhances the quality of programming education. The personalized approach, tailored to individual learning needs and competency levels, led to notable improvements in knowledge retention, student engagement, and performance. The proposed methodology is both effective and scalable, making it suitable for implementation in educational institutions.

Key Words: adaptive learning, programming education, knowledge retention, performance improvement, personalized learning, future computer science teachers, education digitalization.

NEW STRUCTURAL SYSTEMS

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Abstract

Advancements in structural systems mark a transformative phase in architecture and engineering, prioritizing efficiency, sustainability, and adaptability. These modern frameworks integrate cutting-edge materials and digital technologies, enabling the design of structures that are lighter, more durable, and environmentally conscious. From tensile and membrane structures to composite and funicular systems, each approach offers unique solutions for distributing loads effectively while accommodating contemporary needs for flexibility and resilience. Emerging technologies, such as computational design and finite element analysis, have revolutionized the design process, allowing architects to explore complex geometries and optimize performance with precision. These innovations are complemented by a growing emphasis on sustainability, with practices like Life Cycle Assessments ensuring minimal environmental impact through responsible material use and energy-efficient designs. Despite these advancements, challenges persist. Regulatory hurdles, environmental impact assessments, and the need to align innovative designs with safety standards create complexities in implementation. Furthermore, balancing creativity and cost-effectiveness in high-risk zones, such as seismic regions, demands meticulous planning and adherence to structural integrity principles. The future of structural systems lies in embracing trends like smart materials, artificial intelligence, and collaborative efforts across disciplines. These advancements promise to redefine the construction industry by fostering sustainable practices, enhancing safety, and enabling the creation of iconic architectural landmarks that blend functionality with aesthetic appeal.

ANALYSIS OF THE RELATIONSHIP BETWEEN GREEN BONDS AND CRYPTOCURRENCY MARKETS: CONNECTEDNESS APPROACH

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ABSTRACT

Introduction and Purpose: This study delves into the intricate relationship between green bond and cryptocurrency markets, two asset classes with distinct environmental profiles. Green bonds, designed to finance environmentally sustainable projects in order to mitigate climate change and transition to a low-carbon economy. In contrast, cryptocurrencies have faced scrutiny for their substantial energy consumption and associated carbon emissions.

Our analysis aims to address several key research questions such as the extent to which green bonds and cryptocurrency markets are interconnected, the impact of shock transmissions in one market has on the other, in addition to the implications for systemic risk, and the degree to which volatility fluctuations in one market spill over to the other.

Materials and Methods: To explore the dynamic interplay between these markets, we employ DCC-GARCH model. This econometric framework enables us to analyze the time-varying correlations and volatility spillovers between the two asset classes. By examining the transmission of shocks and the direction of risk contagion, we seek to uncover the underlying mechanisms driving their joint behavior.

Results: The process outlined functions as a method for analyzing how volatility relationships spread between green finance markets—growing in significance in recent years—and cryptocurrencies, which are currently the most liquid digital finance markets in particular. The findings indicate that both markets influence each other in terms of risk. This interplay suggests a potential for using green finance instruments and cryptocurrencies as tools for portfolio diversification.

Discussion and Conclusion: By this study we contribute to the evolving body of literature on the intersection of finance, technology, and sustainability. Our findings provide valuable insights for policymakers, investors, and regulators seeking to understand the potential risks and opportunities associated with these different asset classes. Additionally, our research highlights the importance of considering environmental factors in the development and regulation of both green bonds and cryptocurrencies.

Key Words: Green Bonds; Cryptocurrency; DCC-Garch; Financial Assets; Volatility; Shock Transmission, Risk.

PRACTICAL AND RAPID SYNTHESIS OF VARIOUS CHROMENE-BASED PHARMACEUTICAL PRODUCTS, ASSISTED BY AG@CO_3O_4/ALGINATE AS A HETEROGENEOUS CATALYST, BIODEGRADABILITY, AND EFFICAC

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Abstract :
Here, an alginate-silver (Ag@Co_3O_4/Alg) catalyst system is accurately characterised by various analytical methods and appropriately used to facilitate organic synthesis reactions. In brief, a high reaction yield (97%) was obtained in short reaction times (30 min) in the synthesis reactions of pharmaceutical chromene derivatives, thanks to the application of this highly efficient organometallic catalyst. From a mechanistic point of view, the effective electronic interactions between heteroatoms such as oxygen and the surface of Ag@Co_3O_4/Alg microparticles provide suitable conditions for covalent bonds. The main advantages of Ag@Co_3O_4/Alg include its high catalytic performance after activation of chemical functional groups, its magnetic properties, and its all-natural base (biocompatibility and biodegradability). The highly porous structure means that reagents can be trapped in the tiny pores and activated for covalent bonding. In addition, great convenience in particle separation and high reusability could be mentioned as further excellence for this catalyst.

Keywords: alginate; 2-amino-4H-pyran; oxygen-containing heterocycles; Biodegradability; Recyclable catalyst; green chemistry;

INTEGRATING AI AND MACHINE LEARNING IN CLOUD SECURITY FRAMEWORKS FOR PROACTIVE THREAT DETECTION AND MITIGATION

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Abstract

Abstract In the cloud computing age, Cloud threats have become increasingly complex and sophisticated. AI-powered cloud security has emerged as a transformative approach to address these challenges. This paper explores the integration of Artificial Intelligence (AI) and Machine Learning (ML) techniques to enhance threat detection, prevention, and response capabilities within cloud-based security solutions. The study examines the key drivers behind the adoption of AI-powered cloud security, including the exponential growth of cloud-based data, the rise of advanced persistent threats, and the necessity for real-time, adaptive security measures.

This study explores the practical application of AI-powered security capabilities, including predictive analytics, automated incident response, and self-healing systems, to bolster cloud security. By addressing challenges such as data privacy, model interpretability, and infrastructure integration, this research provides actionable insights for cloud service providers, security professionals, and decision-makers. Real-world case studies illustrate the tangible advantages of AI-powered cloud security, including improved threat detection, reduced response times, and enhanced overall security posture. The findings of this study provide valuable insights for cloud service providers, security professionals, and decision-makers seeking to leverage the power of AI and ML to strengthen their cloud security strategies.

Keywords: Artificial intelligence, Machine learning, Threat detection, Threat prevention, Cloud security, Cybersecurity, Predictive analytics

THE ROLE OF ARTIFICIAL INTELLIGENCE IN STRENGTHENING LEGAL SYSTEMS AND PROMOTING ACCESS TO JUSTICE UNDER SDG 16

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Abstract

Artificial Intelligence (AI) is increasingly transforming legal systems by enhancing efficiency, transparency, and access to justice, thereby contributing to the achievement of Sustainable Development Goal (SDG) 16, which promotes peace, justice, and strong institutions. This paper explores the role of AI in modernizing legal practices, from automating routine tasks such as legal research, document review, and case management to offering innovative solutions for legal advice and dispute resolution. AI-powered tools, including predictive analytics, natural language processing, and machine learning algorithms, are streamlining legal workflows, reducing administrative burdens, and enabling faster, more accurate decision-making. These innovations can significantly improve the efficiency and accessibility of judicial systems, particularly in regions where traditional legal infrastructure is underdeveloped or overwhelmed. Additionally, AI is democratizing legal services by offering affordable and accessible legal advice through chatbots and virtual assistants, which can be a game-changer for underserved populations who might otherwise lack access to legal representation due to cost or geographic barriers. AI-based platforms are also improving legal outcomes by increasing transparency in judicial processes and providing unbiased decision-making support. However, the integration of AI into the legal field also presents challenges, including concerns about algorithmic bias, data privacy, and the need for appropriate regulation to ensure ethical AI use. This paper discusses these challenges and highlights the need for a balanced approach to AI adoption that protects individual rights while promoting efficiency and access to justice. Ultimately, the paper argues that AI has the potential to strengthen legal systems, making them more inclusive, transparent, and accountable, in line with the objectives of SDG 16, by improving both the quality and accessibility of justice in the 21st century.

***Keywords**: Artificial Intelligence, SDG 16, access to justice, legal innovation, legal systems.*

MAIN CHALLENGES OF THE CONCEPT OF FUNDAMENTAL BREACH UNDER THE UNITED NATIONS CONVENTION ON INTERNATIONAL SALE OF GOODS

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ABSTRACT

The United Nations Convention on the International Sale of Goods (CISG) aims to harmonize international commercial transactions, particularly through defining the rights and obligations of parties involved in contracts with foreign elements. However, Article 25 of the CISG, concerning "fundamental breach of contract," has sparked ongoing debates in both academic and judicial circles. This paper delves into the significance of this article and its implications in practice, exploring the challenges in its application and interpretation by courts. Through an analysis of case law, the paper examines the complexity of defining a fundamental breach, focusing on its subjective and objective criteria, including the expectations of the parties and the nature of the breach. Additionally, the paper discusses the legal consequences of such breaches, such as damages, price reduction, contract invalidity, and the repair or replacement of goods. It argues that while the CISG provides a unifying framework, the lack of clear guidelines leaves room for interpretation, with courts often deciding the fundamental nature of a breach on a case-by-case basis. The paper concludes by emphasizing the need for clearer standards to improve the predictability and efficiency of international sales contracts under the CISG.

Key words: CISG, fundamental breach, interpretation

"SHIFTING SANDS: THE EVOLVING POWER DYNAMICS IN SYRIA AND THE MIDDLE EAST"

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Abstract:
The Middle East remains a theater of dynamic geopolitical contestation, with Syria at its epicenter. This research explores the evolving power dynamics in Syria and their broader implications for the Middle East, employing a mixed-methods approach that integrates qualitative and quantitative analysis. Qualitatively, the study examines the strategic interests of key actors, including the United States, Russia, Iran, Turkey, and regional powers, through content analysis of policy documents, speeches, and expert interviews. Quantitative analysis is employed to assess the impact of military interventions, economic sanctions, and refugee flows using data from international organizations and conflict databases. Findings reveal that the Syrian conflict has intensified the regional competition for influence, creating shifting alliances and rivalries. Russia's military intervention has reasserted its role as a key power broker, while Iran's support for the Assad regime has bolstered its regional clout. Conversely, U.S. influence appears to be waning, compounded by inconsistent policies and a strategic pivot to the Indo-Pacific. Additionally, Turkey's involvement underscores its pursuit of regional security and economic interests. The study also identifies the conflict's socioeconomic toll, with over 13 million displaced persons and extensive infrastructure devastation, reshaping regional demographics and economics. The research concludes that Syria's evolving power dynamics are reshaping the Middle East's geopolitical order, demanding comprehensive strategies for conflict resolution, reconstruction, and regional stability.This study contributes to the understanding of power shifts in conflict zones, providing valuable insights for policymakers and scholars navigating the complexities of Middle Eastern geopolitics.

ANTILIPIDEMIC AND NEPHRO-HEPATOPROTECTIVE ACTIVITIES OF *ROSMARİNUS OFFİCİNALİS* ETHANOLİC EXTRACT İN WİSTAR RATS

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Abstract

Rosemary, Rosmarinus officinalis, from the vernacular name Azir, is medicinal plant used by Moroccan population, it contains chemical compounds with great nutritional value and multiple phytotherapeutic virtues. The study aims to assess the effect of ethanolic extract of Rosmarinus officinalis on lipidic status and blood parameters in rats.

Male rats of Wistar strain were divided into 3 groups: control groups and two groups receiving the R. officinalis extract, one fed a standard diet and the other receiving a fat-enriched diet. The ethanolic extract of the Rosmarinus officinalis leaves was administered orally at a rate of 300mg/Kg for the group 2 and 1000mg/Kg for the group3. mg/kg of rat weight for 4 weeks. Serum parameters were measured using a spectrophotometer including: alanine aminotransferase (ALAT) and aspartate aminotransferase (ASAT) at 340nm, creatinine (Cr), cholesterol, glucose, total cholesterol (CHO), triglycerides (TG) at 500nm and urea at 600nm.

The results show that EERO administration for 28 days decreases the levels of ALT and AST urea and glucose ($P<0.05$), indicating a nephron-hepatoprotective activities, and without effect on cholesterol levels in treated rats with 300 mg/Kg and 100mg/Kg in comparison with control rats however, the triglyceride level was decreased in rats treated by EERO indicating a antilipidemic propriety of rosemary.

These findings show that EERO has a benefic effect on lipidemic, hepatic and nephrotic parameters.

KEYWORDS: Rosmarinus officinalis, blood, liver, kidney, biochemical parameter, Rats.

BLACK HOLES

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ABSTRACT:
Black holes are among the most intriguing objects in the universe, characterized by their intense gravitational fields from which nothing can escape. Formed from the remnants of massive stars after supernova explosions. Black holes come in different sizes. Stellar black holes form from individual stars, while supermassive black holes, containing millions to billions of times the mass of our Sun, are found at the centres of galaxies. Intermediate black holes and primordial black holes are theoretical constructs that could fill in the gaps between these two categories.

One of the key phenomena associated with black holes is time dilation, a consequence of Einstein's theory of general relativity. As objects approach the event horizon, time appears to slow down relative to an outside observer. This effect is due to the extreme curvature of spacetime caused by the black hole's gravity.

Black holes also exhibit a feature known as Hawking radiation, proposed by physicist Stephen Hawking. This theoretical prediction suggests that black holes can emit radiation due to quantum effects near the event horizon, leading to a gradual loss of mass and eventual evaporation over astronomical time scales.

Despite their destructive potential, black holes are fundamental to the structure and evolution of galaxies. Their powerful gravitational forces can influence star formation, galactic rotation, and even the distribution of dark matter. The study of black holes challenges our understanding of physics, especially in the realms of quantum mechanics and general relativity, making them one of the most fascinating subjects in modern astrophysics.

Keywords: black holes, stellar evolution, gravitational collapse, event horizon, singularity, general relativity, quantum mechanics, information paradox, gravitational waves, cosmic evolution, galaxy formation.

THE IMPORTANCE OF NUTRITION AND EMOTIONAL INTELLIGENCE IN MODULATING NEUROPHYSIOLOGICAL RESPONSES TO PSYCHOLOGICAL TRAUMA: THE ROLE OF BIOLOGICAL MARKERS IN STRESS ADAPTATION AND THE PREVENTİON OF NEUROTIC DISORDERS

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Abstract

Psychological trauma can significantly alter neurophysiological responses, leading to chronic stress and the development of neurotic disorders. This paper explores the pivotal roles of nutrition and emotional intelligence in modulating these responses. Proper nutritional interventions can influence neurochemical pathways, supporting brain plasticity and reducing the risk of maladaptive stress responses. Similarly, emotional intelligence, encompassing self-awareness and stress management skills, facilitates psychological resilience and adaptive coping mechanisms. The integration of biological markers, such as cortisol levels, inflammatory cytokines, and neurotrophic factors, provides a comprehensive understanding of the stress adaptation process. These markers serve as valuable tools in evaluating the effectiveness of interventions aimed at preventing neurotic disorders. This review highlights the synergistic impact of nutrition and emotional intelligence on neurophysiological regulation, emphasizing their potential as preventive and therapeutic strategies in trauma-related mental health challenges.

Keywords: Nutrition, emotional intelligence, psychological trauma, stress adaptation, neurotic disorders.

OVERCOMING THE CONSEQUENCES OF WAR AND CRISIS IN THE AGRICULTURAL SECTOR OF UKRAINE, TAKING INTO WORLD EXPERIENCE

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ABSTRACT

Introduction and Purpose: The relevance of the study is due to the need to overcome crisis phenomena in the economies of the world and the food sector in their composition and ensure sustainable growth. The war in Ukraine significantly worsened food security in the country and the world, therefore the global anti-crisis experience serves as an effective tool for the revival and growth of modern economies. The experience of overcoming crises by countries around the world at different stages of their development confirms the effectiveness of joint efforts of business, government, and society aimed at improving the performance of the agricultural sector and ensuring the country's food security. The purpose of the work was to generalize the global anti-crisis experience in the economy and the food sector and provide proposals for overcoming modern crisis phenomena and post-war restoration, modernization and further development of the agricultural sector of Ukraine**.**

Materials and Methods: To study approaches to overcoming crisis phenomena in different countries, the method of systemic generalization was used. The indicators of the development of the US economy and the agricultural sector (food industry) of Ukraine were studied using statistical and dynamic methods. Anti-crisis measures were also assessed using the method of comparisons, and by applying the method of strategic planning, the directions of development of the agricultural sector of Ukraine were improved.

Results: The authors summarized the experience of the foreign countries in overcoming crisis phenomena in the economy and the agricultural sector. Measures and normative-legislative acts of the Common Agrarian Policy of the European Union, aimed at overcoming crisis phenomena and sustainable development of countries' economies, are evaluated. The response of the US economy to the crisis was assessed, which confirmed that thanks to effective anti-crisis measures, the country successfully overcame the post-COVID phenomena of 2020. The food industry of Ukraine, after a sharp decline of 21.6% in production indicators, increased food production by 15.6% the following year. Anti-crisis measures and strategic directions for the development of the agricultural sector of Ukraine aimed at overcoming the consequences of the war and further economic growth are proposed.

Discussion and Conclusion: The strategy for the development of the agricultural sector in modern conditions should be focused on waste-free production of products with high added value based on the principles of circular economy, innovative modernization of production facilities, development of small businesses, support for producers and the population, introduction of resource and energy saving measures, digitalization of production and logistics processes, further integration into the European space and expansion of product sales markets.

DEVELOPMENT AND EFFICACY OF A SPECIFIC ANTIVENOM FOR SEVERE SCORPION ENVENOMATIONS IN MOROCCO AND NORTH AFRICA

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ABSTRACT

Introduction and Purpose: Scorpion envenomation is a global health issue, with 1.5 million cases and 2,600 deaths annually. North Africa, particularly Morocco, faces severe envenomations caused by *Androctonus mauretanicus* and *Buthus occitanus*. In Morocco, 30,000–50,000 cases are reported annually, with fatalities mainly among children, and treatment is limited to symptomatic care due to controversies over specific antivenoms. This study develops a monovalent antivenom targeting Androctonus mauretanicus, Morocco's most dangerous scorpion.

Materials and Methods: The monovalent antivenom was developed by immunizing albino rabbits with Androctonus mauretanicus venom. Following subcutaneous injections and monitoring antibody production via immunodiffusion, plasma was collected, and IgG was purified using affinity chromatography. The antivenom's efficacy was tested by determining ED50 in mice and through histological and immunohistochemical analyses to confirm neutralization of tissue damage and receptor-bound toxins.

Results: The developed monovalent antivenom demonstrated high specificity against *Androctonus mauretanicus* venom. Remarkably, it also provided effective cross-protection against venoms from *Buthus occitanus* and *Androctonus australis hector*, two other scorpions implicated in lethal envenomations in North Africa. Histological and immunohistochemical studies confirmed the antivenom's ability to neutralize venom-induced tissue alterations and mitigate toxin activity.

Discussion and Conclusion: This study successfully developed a monovalent antivenom that offers specific protection against *Androctonus mauretanicus* venom and cross-protection against other regional scorpions. The findings represent a significant advancement in scorpion envenomation management in North Africa. This research provides a foundation for more specific and effective therapeutic strategies, particularly in Morocco, where the absence of a dedicated antivenom has long been a critical gap in treatment options.

Key Words: Scorpion venom; Toxicity; Antivenom; Immunization; Neutralization; Cross-reactivity.

THE IMPACT OF POLITICAL CHANGES AFTER 2021 ON WOMEN'S RIGHTS IN AFGHANISTAN

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Abstract:
The political changes in Afghanistan after 2021, particularly following the return of the Taliban to power, have had profound effects on women's rights in the country. After seizing Kabul, the Taliban imposed severe restrictions on women's freedoms, including the ban on women working in government offices, strict limitations on education and training, and social and cultural restrictions. These changes led to a significant reduction in women's participation in public, economic, and political spheres, leaving Afghan women facing human rights crises and violations of their basic rights. While international organizations and human rights bodies strongly condemned this situation, the global response to the Taliban's policies, including sanctions and diplomatic pressures, has not been effective in bringing about substantial changes in the status of Afghan women. This situation has forced many Afghan women to seek refuge or live under difficult conditions within the country. This paper analyzes the impact of these political changes on women's rights in Afghanistan from the perspectives of human rights, education, employment, and social participation.

THE IMPACT OF MONETARY POLICY ON ECONOMIC RECOVERY IN MOROCCO: AN EMPIRICAL ANALYSIS

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Abstract

This study aims to examine the role of expansionary monetary policy implemented by Morocco's central bank, focusing on the short- and long-term effects of the policy's key instruments on the country's economic growth. An AutoRegressive Distributed Lag (ARDL) model is employed for the analysis, covering the period from 1995 to 2020. Using Eviews 10 software, the results were validated through robustness tests, demonstrating a cointegration relationship that positively links the variables in the model.

Keywords: expansionary monetary policy, central bank, economic crisis, economic recovery, ARDL, Morocco.

CORRELATION BETWEEN PROFESSIONAL EXPERIENCE AND TEACHER SELF-EFFICACY

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ABSTRACT

Introduction and Purpose: This study investigates the correlation between professional experience and teachers' self-efficacy, as well as the relationship between the three dimensions of self-efficacy (instructional strategies, classroom management, student engagement) and years of experience.

Materials and Methods: Data was collected from 100 female school teachers through convenience sampling. Ethical considerations were accurately observed, with participants fully informed and their rights respected. The instrument used to measure teacher self-efficacy in this study was the *Teachers' Sense of Efficacy Scale (TSES)*. This scale assesses three dimensions of self-efficacy: instructional strategies, classroom management, and student engagement. The short form of the TSES, consisting of 12 items, was administered to participants. For this study, the reliability of the overall scale was excellent, with a Cronbach's alpha of 0.90, indicating a high level of internal consistency.

Results: The results show a significant and positive relationship between teachers' self-efficacy and their years of experience ($r = 0.26$, $p < 0.05$). The results also reveal significant positive correlations between efficacy in classroom management with increasing teaching experience ($r = 0.31$, $p < 0.01$). However, the relationships between instructional strategies efficacy, student engagement efficacy, with years of experience were not significant.

Discussion and Conclusion: These findings underscore the significant relationship between teacher efficacy and professional experience, emphasizing the importance of ongoing support and development for educators at all career stages.

Key Words: classroom management, correlation, instructional strategies, professional experience, self-efficacy, student engagement

SURFACE-ENHANCED RAMAN SPECTROSCOPY OF CENTRIFUGED BLOOD SERUM SAMPLES OF DIABETIC TYPE II PATIENTS BY USING 50KDA FILTER DEICES

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Blood serum contains crucial biochemical information that is vital for the early diagnosis of various diseases. It is composed of high molecular weight fractions (HMWF) and low molecular weight fractions (LMWF). Disease biomarkers are primarily found in the LMWF proteins but their diagnostic potential is often over shadowed by the dominance of HMWF proteins. Early detection of diabetes is particularly challenging due to the abundant presence of these high molecular weight proteins. In this study surface-enhanced Raman spectroscopy (SERS) was utilized to facilitate the early detection of diabetes. Serum samples were centrifuged using Amicon Ultra filter devices with a 50 kDa cutoff, resulting in two distinct fractions: the filtrate containing low molecular weight proteins and the residue consisting of high molecular weight proteins. SERS analysis was then performed on the LMW fractions from both healthy individuals and patients with diabetes. Distinct SERS spectral bands were identified at 725 cm^{-1}, 842 cm^{-1}, 959 cm^{-1}, 1025 cm^{-1} and 1447 cm^{-1} corresponding to small molecular weight proteins. These biomarkers proved instrumental in the early diagnosis of diabetes. Additionally, advanced chemometric methods including principal component analysis (PCA) and partial least squares discriminant analysis (PLS-DA) were applied to evaluate the efficacy of SERS in differentiating and classifying serum samples. The findings demonstrate that SERS holds significant potential for the early detection and monitoring of biochemical changes associated with type II diabetes.

MEDICINAL PLANTS USED FOR THE TREATMENT OF DIGESTIVE DISORDERS IN THE REGION OF TIARET, ALGERIA

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ABSTRACT

Introduction and Purpose: Traditional medicine constitutes an important source of healthcare for multiple ailments, including digestive disorders. However, little is known about this traditional knowledge and practices in Algeria. The main objective of this study is to document medicinal and aromatic plants used in Algerian ethnopharmacology for the treatment of digestive disorders.

Materials and Methods: Field studies were conducted from December 2018 to May 2020 using semi-structured interviews with 61 herbalists and traditional healers in the region of Tiaret (Algeria). The interviews covered sociodemographic information, popular and vernacular names of plant species, mode of use, dose, and parts used among other data.

Results: The results reveal the use of 52 plant species belonging to 23 families and 48 genera for treating digestive disorders. The most represented botanical families were Lamiaceae, Apiaceae, Asteraceae, and Fabaceae. The most cited plant species were *Senna alexandrina* Mill., *Foeniculum vulgare* Mill., *Rhamnus alaternus* L., *Matricaria chamomilla* L., *Juniperus phoenicea* L., and *Punica granatum* L. These species are used alone or in mixtures of various products from different origins, such as honey, milk, olive oil, and butter. Our findings revealed several new therapeutic uses and new medicinal and aromatic plants that are reported for the first time in the management of digestive disorders in Algeria. Remarkably, *Tetraclinis articulata* (Vahl) Mast., *Marrubium deserti* (Noë) Coss., and *Teucrium polium* L. are endemic to North Africa-Algeria and the central Sahara.

Discussion and Conclusion: The results of this study are relevant for the research of new drugs for gastrointestinal therapy and for safeguarding local knowledge and biodiversity. Further studies on the mechanisms of action of these plant species and their bioactive compounds are needed to validate their widespread use.

Key Words: Traditional medicine; Digestive disorders; Medicinal plants; Tiaret; Algeria

INVESTIGATION OF POTENTIAL FAILURES IN CLEAN WATER NETWORKS USING AHP AND FREQUENCY RATIO METHODS: THE CASE OF MERSİN YENİŞEHİR

This study is derived from the first author's master's thesis at Aksaray University, Institute of Science.

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ABSTRACT

Introduction and Purpose: Water loss in distribution networks is a common issue for many cities and countries worldwide. In numerous countries, including Turkiye, average annual water losses surpass 50%. Due to rapidly increasing water consumption demands and changing climate conditions, drought effects are being experienced in many parts of the globe.

It is crucial to identify loss and leakage rates and to develop methods and technologies aimed at reducing them for the efficient utilization of our water resources.

In this study, an attempt was made to predict water failure points in a distribution network using the Analytic Hierarchy Process (AHP) and Frequency Ratio (FR) methods.

Materials and Methods: Water pipe failure data for Mersin's Yenişehir district was obtained from the Mersin Water and Sewerage Administration.

In the next stage, classification processes were applied to the organized data. The failure point dataset was divided into 70% training data and 30% test data for validation. Raster data for the factors were matched with the training data and tabulated.

Numerical data for the subclasses derived from the factor classifications were tabulated using the FR method. Then, for the AHP, scores were assigned to the main criteria based on a literature review, and a weighting matrix was constructed. The scores are used to generate potential failure susceptibility map of the clean water distribution network using GIS.

Results: The model's predictions were validated against real failure data, achieving an accuracy of 93.87%. Among nine factors, soil type, distance to roads and lineament were found to be the most influential factors.

Discussion and Conclusion: In the study, a novel approach was introduced to the literature by integrating the nine factors used with the FR and AHP approaches, and the model was validated by comparing it with actual failure data.

Keywords: AHP, Frequency Ratio, GIS, Water Management, Water Main Failures.

STUDENT-TEACHER RELATIONSHIP AND CLASSROOM ENGAGEMENT AT UNDERGRADUATE LEVEL IN PAKISTAN

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ABSTRACT

Introduction and Purpose: This study explores how student-teacher relationships influence the classroom engagement of undergraduate students, highlighting that this impact differs significantly between public and private institutions

Materials and Methods: The research population consists of all undergraduate students enrolled in universities in Lahore (N=280,000). A sample of 500 students was selected using cluster sampling from four randomly chosen public and four private universities. Data was collected through Google Forms and in-person visits to the universities. The adapted questionnaires demonstrated a reliability alpha greater than .82.

Results: The study found a modest overall significant effect, pointing to the need for more tailored approaches in different educational settings

Discussion and Conclusion: The results underscore the importance of positive student-teacher interactions in encouraging active class participation. It is recommended that educational policymakers and institutions prioritize professional development programs designed to enhance student-teacher relationships and improve student engagement.

Key Words: *students-teacher relationship, Higher education, public and private sector, classroom engagement, gender comparison*

FABRICATION OF BI-COMPONENT COPPER OXIDE/GRAPHENE OXIDE FLEXIBLE PAPER FOR REMOVAL OF METHYLENE BLUE

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ABSTRACT

Introduction and Purpose: With the increasing world population, dye wastes resulting from industrial activities such as textile, pharmaceutical and leather can cause environmental pollution by mixing with various waters. The development of economically applicable, environmentally friendly and practical methods and materials for the removal of these wastes has increased its importance in recent years. In order to meet this need with the mentioned features, adsorption as a removal method and modified graphene oxide based flexible paper (FGrOP) materials as adsorbers have been investigated in recent years. In this study, it was aimed to FGrOP composite materials by adding economical and environmentally friendly bi-component copper oxide (CuO-Cu_2O) to graphene oxide paper and to investigate its performance in the removal of methylene blue (MB), a cationic dye.

Materials and Methods: Hydrothermally synthesized CuO-Cu_2O was added to GO dispersion and CuO-Cu_2O/FGrOP was produced by practical mold casting method. The produced CuO-Cu_2O/FGrOP was employed as an adsorbent for the removal of MB from aqueous solutions, with its adsorption performance evaluated via UV-Vis. absorption spectroscopy. The characterizations of as-prepared materials were characterized by means of XRD, EDS, and SEM.

Results: As a result of characterization studies, it was determined that both bi-component CuO-Cu_2O and CuO-Cu_2O/FGrOP were successfully obtained. It was revealed that CuO-Cu_2O/FGrOP exhibited higher removal performance than FGrOP in the removal of MB from water.

Discussion and Conclusion: In summary, CuO-Cu_2O/FGrOP was produced by practical mold casting method. Prepared materials were characterized using different techniques. Prepared FGrOP and CuO-Cu_2O/FGrOP were used as adsorbers in the removal of MB from water and UV-Vis. absorption spectra taken after 24 h were compared and presented. As a result of this experiment, it was determined that CuO-Cu_2O/FGrOP exhibited higher dye removal performance compared to FGrOP.

Key Words: Graphene oxide paper; flexible material; CuO-Cu_2O; dye removal.

TACKLING RICE YELLOW MOTTLE VIRUS (RYMV): A COMPREHENSIVE APPROACH TO DISEASE MANAGEMENT

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ABSTRACT

Introduction and Purpose: Rice Yellow Mottle Virus (RYMV) is a major constraint on rice production, particularly in sub-Saharan Africa, where it significantly reduces crop yields and threatens food security. This study aims to explore and evaluate integrated management strategies for combating RYMV, with a focus on genetic resistance, agronomic practices, and innovative molecular approaches.

Materials and Methods: Field trials were conducted across three RYMV-endemic regions to evaluate the efficacy of resistant rice varieties developed through molecular breeding. Additionally, vector management strategies, including biological control agents and pesticide applications, were assessed. Laboratory experiments were performed to develop and validate advanced diagnostic tools for early detection of the virus. Data were collected on disease incidence, severity, and yield performance under various management scenarios.

Results: Resistant rice varieties demonstrated a 40–60% reduction in RYMV incidence compared to susceptible varieties. Integrated vector management, combining biological control and minimal pesticide use, reduced vector populations by 50%, significantly lowering disease spread. Advanced diagnostic tools enabled early detection of RYMV with 95% accuracy, allowing timely interventions. Agronomic practices such as planting schedules and crop rotation further contributed to mitigating disease impact.

Discussion and Conclusion: The study highlights the effectiveness of integrating genetic resistance, vector management, and agronomic practices for RYMV control. The use of resistant varieties and early detection tools proved to be the most sustainable and cost-effective strategies. However, the success of these approaches depends on local adaptation and farmer adoption. This comprehensive approach provides a model for managing viral diseases in rice and ensuring resilient agricultural systems. Future research should focus on enhancing resistance durability and scaling up molecular diagnostic tools for broader accessibility.

Key Words: Rice Yellow Mottle Virus; Vector management; resistant rice; Agronomic practices; Molecular diagnostics

A STUDY ON THE CHALLENGES OF IMPLEMENTATION OF THE SOCIO-ECONOMIC RIGHTS IN THE SAARC COUNTRIES: AN ANALYTICAL STUDY

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Abstract

Socio-economic Rights are known as the Second Generation Human Rights under the Human Rights jurisprudence. These rights are generally thought to be the succedents of the Civil and Political Rights which are legalized in most of the countries as the Fundamental Rights under the respective constitutional legal framework. However, the Socio-economic Rights are attributed with the status of dependent rights as the implementation of the same depends on the availability of resources in each country. However, it is also found that lack of available resources is always not the sole reasons behind the implementation of the Socio-economic Rights, rather, lack of proper Governmental planning, Will of the State and poor administrative communications also result in the deprivation of the Socio-economic Rights of the people at the national levels. The present paper intends to deal with the issue of the basic challenges behind the implementation of the Socio-economic Rights in the SAARC countries under the constitutional legal framework of all the member countries.

Key Words: Socio-economic Rights, implementational issues, challenges, Human Rights and SAARC countries.

EFFECT OF AEROBIC EXERCISE ON SLEEP QUALITY, INSOMNIA AND FUNCTIONAL CAPACITY AMONG POSTMENOPAUSAL WOMEN: A STUDY PROTOCOL

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ABSTRACT

Introduction: The permanent cessation of menstruation is known as menopause. When they reach this stage, over half of women report having insomnia and other sleep issues. Physical inactivity, age-related muscle loss, and an innate decline in aerobic capacity are all factors that contribute to the loss of functional capacity. Therefore, the current study aims to investigate how aerobic exercise affects postmenopausal women's sleep quality, insomnia, and functional ability.

Method: We will recruit 12 postmenopausal women of age 40-60 years; asymptomatic with stable vitals. The functional capacity will be assessed by 6-MWT and sleep quality will be assessed by Pittsburgh Sleep Quality Index (PSQI) and Insomnia Severity Index (ISI) will be used to evaluate insomnia. Participants will receive moderate aerobic training in the form of 30 min of treadmill walking. Warm up and cool down will be performed before and after the exercise session respectively.

Results: It is expected that the results obtained from the present study will provide data on effects of aerobic exercise on sleep quality, insomnia and functional capacity of postmenopausal women. The findings gathered from this study may have positively impacted postmenopausal women's rehabilitation regimen particularly when considering functional capacity, sleep quality and insomnia.

Conclusion: The findings of this study are expected to contribute to the development of new knowledge and improve the rehabilitation of postmenopausal women with loss of functional capacity and impaired sleep quality.

Keywords: 6-MWT, Aerobic exercise, Menopause, Sleep Quality.

EFFECT OF PROCESS PARAMETERS ON MECHANICAL PROPERTIES OF POLYPROPLYENE PART MANUFACTURED BY MOLD OPEN MICRO-CELLULAR INJECTION MOLDING

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ABSTRACT

Introduction and Purpose: Polypropylene materials are widely used in the automotive industry due to their properties such as recyclability, suitability for mass production and low production costs with injection molding. However, due to the decrease in petrochemical resources, increase in raw material costs and the goal of reducing carbon emissions in the automotive industry, weight reduction or providing better mechanical properties at the same weight has become a subject of interest in both academic and industrial fields. In this study, physical microcellular injection foaming (MIF), also known as Mucell, was combined with the mold opening technology to obtain thicker plastic parts with low density. Mechanical properties such as tensile and flexural strength of the foamed samples obtained with different injection parameters were investigated.

Materials and Methods: The plastic part with dimensions of 683x225x2 mm was manufactured by MIF. In this study, polypropylene raw material and nitrogen foaming agent was selected. The weights of the parts manufactured with different parameters such as mold opening distance, holding time, melt temperature and cooling time were measured. Tensile and flexural strength test samples were obtained by cutting from a suitable area on the part and these tests were carried out at room temperature. In addition, the parameters that significantly affect these mechanical properties were determined and the cross-sections of the foam part (skin layer thickness, transition area and center structure) were observed with an optical microscope.

Results: While the increase in the mold opening distance adversely affects the tensile and flexural strength results, the increase in the holding time improved the mechanical properties. It was observed that larger cells increased with the mold opening distance and deformed through mold opening direction. Longer holding time reduced the size and number of "large cells" and increased the skin layer thickness.

Discussion and Conclusion: The increase in holding time, which enhances the skin layer thickness and reduces the size and number of "large cells", has noticeably increased the flexural strength. The increase of the mold opening distance (from 0.5 mm to 1 mm) causes the cells to grow and deform, as a result, the mechanical properties decrease.

Key Words: Polypropylene, mold open microcellular injection foaming, injection parameters, tensile strength, flexural strength

INFLUENCING FACTORS OF SIX-MINUTE WALK TEST ON TYPE 2 DIABETES MELLITUS: A LITERATURE REVIEW

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ABSTRACT

Introduction and Purpose: The metabolic condition known as Diabetes Mellitus (DM) is characterized by high blood glucose levels. Type 2 Diabetes Mellitus (T2DM) has been much more prevalent in recent years, and its presence is linked to serious illness, premature death, and a greater decline in functional ability when compared to healthy individuals. The purpose of the present review is to highlight and discuss the six-minute walk test (6MWT) influencing factors in individuals with T2DM.

Methods: We conducted a literature review of data of the factors influencing the 6MWT in T2DM. A literature search was conducted in the databases like PubMed, MEDLINE, Cochrane till November 2024. We considered studies if the individuals with T2DM performed 6MWT and the factors influencing the test have been discussed in the studies and those articles which were English in language.

Results: Four studies conducted in Nigeria(n=1), Korea (n=1), Indonesia (n=1), North Africa (n=1) were included. The factors found to be influencing the 6MWT were Ankle Brachial Index (ABI), Body Mass Index (BMI), patient's age, hip waist ratio, high fasting glucose, increasing waist circumference, physical inactivity, obesity, smoking, resting oxygen saturation, parity, socio-economic levels.

Conclusion: These are the main factors influencing the six-minute walk test in individuals with type 2 diabetes mellitus, highlighting the need for further large-scale studies to comprehensively determine the influencing factors on 6MWT performance in this population.

Keywords: Functional capacity, Type 2 Diabetes mellitus, Six-minute walk test.

THE MEDIATING ROLE OF FEAR OF MISSING OUT IN THE RELATIONSHIP BETWEEN NOMOPHOBİA AND CYBERLOAFİNG AMONG EMPLOYEES

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Abstract- The rapid advancement of digital technology has given rise to new phenomena and prevalent behaviors in today's digital age, making it essential to investigate and understand these emerging behaviors. Investigating Nomophobia, Fear of Missing out (FOMO), and Cyberloafing in professional settings is crucial due to the rapid growth of smartphone usage and technology-related behaviors. This study employed a correlational research design to investigate the relationships between nomophobia, fear of missing out (FOMO), and Cyberloafing behaviors among employees in Rawalpindi and Islamabad. A sample of 238 employees was recruited through purposive sampling. Data collection involved a demographic form, the Nomophobia Questionnaire (NMP-Q) to assess smartphone separation anxiety, the FOMO scale to measure social media-related anxieties, and the Cyberloafing scale to evaluate online distractions during work hours. The research was conducted in natural settings, considering the participants' work environments i.e. banks, government organizations, IT departments, Administrative institutes, data centers, and call centers. Statistical analyses, including correlation, regression, mediation analyses, t-tests, and ANOVA, were conducted to examine the relationships between variables and the influence of demographic factors. The findings of this study revealed a positive association between Nomophobia and FOMO, FOMO and Cyberloafing, and Nomophobia and Cyberloafing. Furthermore, the study found that Nomophobia significantly predicted FOMO and Cyberloafing, while FOMO significantly predicted Cyberloafing. Interestingly, FOMO did not act as a mediator between Cyberloafing and Nomophobia, which might be due to the presence of cultural and contextual factors. This implies that although FOMO successfully predicts Cyberloafing it does not mediate the relationship between Nomophobia and Cyberloafing activities. The study also highlighted the influence of demographic variables on the study variables, such as gender, education, job type, organization, and marital status. These findings underscore the importance of considering individual differences among employees when addressing Cyberloafing in organizations. In conclusion, the study highlights the complex interplay between Nomophobia, FOMO, and Cyberloafing among employees. Complex dynamics between these behaviors provide valuable insights into psychological factors driving them, ultimately informing strategies to promote healthy technology use & improve productivity. The findings of the study are essential for policymakers, organizations & mental health professionals to address excessive technology use & promote a healthier digital culture.

Keywords: Nomophobia, Fear of Missing Out, Employees, Cyberloafing, Regression Analysis.

EFFECT OF SIMULATION STRATEGY ON ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN ECONOMICS IN MANGU, PLATEAU STATE, NIGERIA

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ABSTRACT

This study investigated the effect of simulation strategy on Economics students' academic achievement in Mangu, Plateau State. The failure rate in some aspects of economics in Mangu LGA has prompted this study. Most conventional teaching strategies have failed to improve the achievement scores of students even when two teaching strategies are combined to produce such improved effects. The study formulated two research questions and two hypotheses to guide the study. A sample of 32 students offering Economics from a population of 2,425 students, was used for the study. The research design adopted for this study was a quasi-experimental one. Data were collected using the Economics Achievement Test (EAT). The statistic adopted for testing hypotheses was ANCOVA, while Mean and Standard deviation were used to compute the research questions. The hypotheses test revealed no significant differences in the pre-test achievement of students in the experimental and control groups. There was a difference in the post-test achievement of students in the experimental and control groups in Economics. It further showed no significant difference in post-test achievement mean scores of male and female students in Economics. Given these findings, it was recommended that the simulation strategy be used by Economics teachers for improved performance.

Keywords: Simulation Strategy, Achievement and Economics

ASSESSMENT OF PHYTOCHEMICALS, PHYSICOCHEMICAL PROPERTIES OF OILS FROM NEEM AND WATERMELON SEEDS FOUND IN JOS, PLATEAU STATE. NIGERIA

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ABSTRACT

The seeds of Neem and Watermelon were collected from two markets in Plateau State. They were prepared by standard methods and oils were extracted as Neem Seed Oil (NSO) and Watermelon Seed Oil (WSO) by cold Press extraction method. The extracted oils were analysed for phytochemicals components, physicochemical properties like moisture, density, specific gravity, saponification, acid, free fatty acid, peroxide, pH values as well as organoleptic properties. NSO was golden brown, had a garlic smell, viscous with a bitter taste, while WSO was golden yellow, with a fruity smell, light and bitter taste. Phytochemicals showed the presence of Saponins, Terpenoids, Tannins and Steroids in both oils while phenols, amino acids and carbohydrates were absent in the oils. Alkaloids were present in WSO only. The percentage yield (73.5% , 77.5%), moisture content (0.045±0.058%, 0.019±0.132%), density (0.752±0.021 gcm^3, 0.795±0.136 gcm^3), specific gravity (0.768±0.003, 0.811±0.001), saponification value (28.05±0.03 mg KOH/g, 64.515±0.06 mg KOH/g), peroxide value (52±1.34, 6±0.56), acid value (5.61±0.73, 2.805±0.15), free fatty acid value (2.805±0.181, 1.403±0.266) while pH (4.43±0.45, 7.21±0.38) for NSO and WSO respectively. The study showed that the oils may not be suitable for the manufacture of soaps but can be suitable for use in cosmetics for the manufacture of skin and hair care products, where it can serve as carrier oils. The presence of flavonoids, terpenoids and tanins in NSO shows its potential use for pesticidal medicinal purposes, the WSO can also be an alternative source of biodiesel.

ESTIMATION OF DAILY AND GLOBAL EXTRATERRESTRIAL SOLAR RADIATION AT MAKURDI BENUE STATE

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ABSTRACT

In this study, estimation of daily and extraterrestrial solar radiation was carried out so as to assess the feasibility of solar energy utilization in Makurdi Benue state. Accumulated data of Extraterrestrial solar radiation, Global solar radiation, Clearness index, Diffuse radiation, Diffuse ratio and Diffuse coefficient were obtain from the NIMET station Makurdi Benue state. The data obtained covered the period of eight years (2007-2014). The Extraterrestrial solar radiation, Global solar radiation, Clearness index, Diffuse radiation, Diffuse ratio and Diffuse coefficient were compared, the daily, monthly and annual variation were also evaluated .

The results revealed that the Extraterrestrial solar radiation, Global solar radiation, Clearness index, Diffuse radiation, Diffuse ratio and Diffuse coefficient varies over the period of the year, the month of April and August have the highest radiation while the month of May and September has the least values . The implication of these results on the effective utilization of solar radiation are discussed, the results in the study serve as very useful information for Engineers and other renewable energy technologists in the process of designing and estimation of performance of solar application system.

UNDERSTANDING THE INDUS SCRIPT, TEXTS, SYMBOLS AND READING THEM WITH CONSISTENCY THROUGH PRIMEVAL KOITOORS' LANGUAGE THEIR UNIQUE SOCIAL STRUCTURE CULTURE AND KNOWLEDGE SYSTEMS

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Abstract: The article examines in brief the attempts and approaches applied by various academicians and linguists worldwide to decode the Indus script, contrasting and supporting the ideas, assertions, and counterarguments put forth hitherto. The problem of identifying the language of Indus civilization remains unsolved even after a century has passed. The Indian subcontinent's Koyas left behind a sociocultural legacy and traditions predate the Indus Valley Civilization. How is the rich sociocultural legacy and language of the largest Koitoors disregarded due to divisions among the groups of major disputes, inconsistencies, and Indian politics? The ancient knowledge system of the Koitoors, their natural origin from Amoorkot, the growth of different clans within their family tree, their understanding of earth geography, the concept of "Trident" was introduced by the first Sambhoo. The philosophy of Munjok, the thought of all people's welfare and the social structure of Koitoor people were established and shaped by their Punem chief preceptor, Pahandi Kupar Lingo into 12 phratries, 750 clans and 2250 totems during the reign of Sambhoo-Gavara, the Koyamoorideep's ruler couple about 6,000 years ago. The goal of article is to bring Kangali's correct identification of individual, combined, paired, and symbolic signs to the attention of the academic community. About 225 signs identified and 200 texts written in Indus script deciphered by him meaningfully in pre-Dravidian Gondi, and each one can be properly interpreted by applying its root morphemes, synonyms and grammatical characteristics to determine which sign in the text has the same phonetic value or another one.

Keywords: Aal (This, Person, King); Aand (Is); Gondola (Community, Social group); Pahandi (Great, Highest); Urkot (Place, Settlement site, Small town).

FROM SHYNESS TO FLUENCY: THE CORRELATION BETWEEN ENGLISH EXPOSURE AND THE FOREIGN LANGUAGE PRONUNCIATION ANXIETY LEVELS OF TURKISH STUDENTS

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ABSTRACT

Introduction and Purpose: The aim of this study was to investigate the relationship between students' levels of exposure to English and their pronunciation anxiety. Additionally, it examined the associations between anxiety and exposure levels and variables such as gender, school level, age at which students began learning English, weekly English hours, and whether they received private English lessons.

Materials and Methods: Data were collected from 468 public school students and analysed using SPSS. The study was designed within a correlational research model, utilizing two scales as data collection instruments; English Language Exposure Scale (Gökcan and Çobanoğlu, 2019), comprising 22 items and the Pronunciation Anxiety Scale (Baran-Lucarz, 2016), consisting of 25 items. Several statistical analyses were conducted in order to examine the research questions. Descriptive statistics were calculated using SPSS. Pearson correlation analysis was employed to estimate relationships between continuous variables. Independent sample t-tests were used to compare mean values across different groups. Structural equation modelling (SEM) was utilized to determine the predictive role of English exposure on pronunciation anxiety.

Results: The findings revealed a statistically significant, direct, and negative effect of English exposure on pronunciation anxiety. Pronunciation anxiety was significantly higher among female students and among middle school students. No significant effect of the age at which students started learning English or whether they received private English courses on pronunciation anxiety was found. Students who began learning English during preschool and those who received private English lessons exhibited higher exposure levels. However, gender and school level were not found to have a statistically significant effect on exposure levels.

Discussion and Conclusion: This study reaffirms the importance of exposure in mitigating pronunciation anxiety and offers valuable insights for educators and policymakers aiming to create inclusive and effective language learning environments.

Key Words: Exposure to English; Pronunciation Anxiety; Foreign Language Anxiety

ASSOCIATION OF TUMOR INFILTRATING LYMPHOCYTES WITH HISTOPATHOLOGICAL PARAMETERS AND RESPONSE TO TREATMENT IN BREAST CANCER RECEIVING NEOADJUVANT THERAPY

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ABSTRACT

Introduction and Purpose: Breast cancer (BC) is the most commonly diagnosed cancer in women in Turkey. Several pathways are present in the pathogenesis of breast cancer. Tumor-infiltrating lymphocytes (TILS) host immune response against tumor cells.

Materials and Methods: Study included 50 patients who were diagnosed with invasive breast carcinoma using core needle biopsy. Patients were treated with neoadjuvant chemotherapy. All specimens of the patients before and after treatment were re-examined by 2 pathologists. Demographic findings were obtained from the hospital information system. Data were analyzed using the IBM Statistical Package for Social Sciences (SPSS) 27 package program.

Results: 23 (46%) cases were hormone receptor-positive (HR+)/human epidermal growth factor 2-negative (HER2−),18 (36%) cases were HER2+ and 9 (%18) cases were triple-negative breast cancer (TNBC).

14 cases had pathological complete response (pCR), 4 cases had partial response minimal residual disease, 20 cases had partial response residual disease, 12 cases had no respond to neoadjuvant treatment.

7 cases were classified as TILS high, 9 cases as TILS intermediate and 34 cases as TILS low.

Among the 14 patients with complete response, 2 (14.3%) patients had high TILS, 3 (21.4%) patients had intermediate TILS and 9 (64.3%) patients had low TILS. No statistically significant correlation was found.

In 23 cases, metastasis was observed in the lymph nodes in the excision materials and TILS was low in 14 (60.8%) of these 23 cases. In addition, TILS was low in 10 (66.6%) of 15 cases with perinodal invasion. No association was observed between lymph node metastasis, perinodal invasion and TILS

Discussion and Conclusion: Breast cancer is the most common cancer in women and to improve survival, pre-operative treatments are now used to reduce the size of the tumor and even eliminate the tumor. TILS is very important for predicting response to neoadjuvant chemotherapy and prognosis.

Key Words: Breast cancer; Neoadjuvant chemotherapy; Tumor-infiltrating lymphocytes

DEPLOYING A STANDALONE FACIAL AND EMOTION RECOGNITION CLASSROOM MANAGEMENT SYSTEM ON RESOURCE-CONSTRAINED ENVIRONMENT

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ABSTRACT

In recent times, it has been proven in most industries that deep learning can play a huge part in the development and automation of processes otherwise performed manually by humans alone. The trend however has encountered more of a shift and tend towards transfer learning where standalone systems can be built on weights that have been extensively trained to be use-case agnostic. This project seeks to address the problem of student truancy. The methodology applied is a combination of a deep learning use-case agnostic weight embedding obtained from a popular network called Face net. Recognition is performed by computing facial distances using the weight embedding. Also addressed is the common reliance on internet for functionality present in most modern-day systems by deploying all the resources necessary on a resource-constrained development board. Emotions during class are also analyzed to improve classroom experience which will be displayed on a web application dashboard powered by artificial intelligence back-end. The results obtained show an above average recognition rate of 0.63 with emotional recognition accuracy of 0.72. The implications of these results are that accurate attendance can be taken in an organization with minor increments to the system such as increased computational capabilities.

Keyword: Deep Learning; Convolutional Neural Network; Emotion Recognition; Facial Recognition; Transfer Learning

MODERN ENVIRONMENTAL ISSUES THAT REQUIRE URGENT SOLUTIONS

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ABSTRACT

Introduction and Purpose: In the contemporary world, environmental issues have escalated to critical levels, demanding immediate and effective solutions. Climate change, pollution, deforestation, and loss of biodiversity are among the most pressing concerns that threaten the health of our planet and future generations. The significance of addressing these environmental challenges lies not only in preserving ecosystems but also in ensuring sustainable development and improving the quality of life for all living beings. As global citizens, it is our collective responsibility to confront these issues head-on and implement strategies that foster environmental sustainability.

Materials and Methods: To understand the scope of modern environmental issues, various research methods were employed, including literature reviews, case studies, and data analysis from environmental organizations and governmental bodies. Key materials involved peer-reviewed articles, reports from the Intergovernmental Panel on Climate Change (IPCC), and statistics from the World Wildlife Fund (WWF). This analysis focused on identifying the most critical environmental threats and evaluating current efforts to mitigate them, as well as exploring innovative solutions from different countries.

Results: The findings reveal alarming trends in environmental degradation. Global temperatures have increased by approximately 1.2 degrees Celsius since the late 19th century, leading to extreme weather events and rising sea levels. Plastic pollution has reached unprecedented levels, with millions of tons entering the oceans annually, harming marine life and ecosystems. Deforestation rates have accelerated, particularly in the Amazon rainforest, which is vital for carbon sequestration and biodiversity. Additionally, species extinction rates have surged, with an estimated one million species at risk due to habitat loss and climate change.

Discussion and Conclusion: The urgent need for solutions is clear. Governments, businesses, and individuals must unite to implement policies that reduce carbon emissions, promote renewable energy sources, and enhance conservation efforts. Strategies such as reforestation, waste reduction, and sustainable agricultural practices can significantly mitigate environmental damage. Public awareness campaigns and educational programs are essential to foster a culture of sustainability and responsible consumption. In conclusion, tackling modern environmental issues requires a multifaceted approach, combining science, policy, and community engagement to create a sustainable future for our planet.

Keywords: Environmental issues, climate change, pollution, deforestation, biodiversity loss, sustainability, renewable energy, conservation, ecological footprint.

AGRO-PHYSIOLOGICAL AND BIOCHEMICAL RESPONSES OF THE 'ANGELINO' CULTIVAR (*PRUNUS SALICINA* L) UNDER CONDITIONS OF DROUGHT AND HEAT STRESS

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Abstract

This study examines the impact of deficient irrigation and high temperatures on the levels of growth, production and physico-chemical quality of the plum cultivar 'Angelino' (*Prunus salicina* L). The study was conducted in the field of the National Agricultural Research Institute (INRA) experimental estate at 'Ain Taoujdate'. Two stress treatments were applied, namely a drought stress (DS) level of 50% of crop evapotranspiration (ETc), and exposure to a heat stress (HS) of 2.5°C, were compared with on-demand irrigation (100% of ETc) not under thermal stress, during the fruit development period from the fruit set stage until harvest time. Observations were made on various traits that could be stress descriptors, including fruit yield, certain vegetative growth characteristics including shoot length, number of leaves and leaf area, as well as physiological characteristics such as stomatal characteristics, leaf proline, cuticular wax and chlorophyll a and b pigment content, with some chemical and biochemical components of plum quality. The results obtained showed that the effect of drought and heat stress reduced plum productivity by a general average of 61%, vegetative growth also declined by 49% and physiological characteristics decreased by 48% except proline and cuticular wax, although the taste quality of plums has been improved thanks to increases in the content of sugars, amino acids and polyphenols. This illustrates the need for agriculture in the study area to adapt to the conditions imposed and predicted by climate change in terms of water resources and high temperatures.

Keywords: *Prunus salicina* L, Drought stress, Temperature, Production, Growth, Quality.

THE ROLE OF NANO IRON (Fe) APPLICATIONS IN PLANT GROWTH AND PHYSIOLOGY UNDER DROUGHT STRESS

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ABSTRACT

Introduction and Purpose: Drought is a major environmental stressor threatening global agricultural productivity by disrupting plant growth, physiology, and yield. Iron, a critical micronutrient for plants, plays essential roles in photosynthesis, respiration, and antioxidative defence systems but is often inaccessible in alkaline soils, which dominate global croplands. Recent advancements in nanotechnology, particularly iron-based nanoparticles (NPs), offer sustainable and eco-friendly solutions to mitigate drought stress. This review explores the potential of iron nanoparticles to enhance plant resilience under water-deficient conditions.

Results: Iron-based NPs improve nutrient uptake, osmolyte regulation, and antioxidant activity while reducing oxidative damage caused by reactive oxygen species (ROS). By stabilizing cellular membranes, promoting chlorophyll synthesis, and enhancing photosynthetic efficiency, they effectively address physiological and biochemical disruptions caused by drought. Their application through foliar sprays or seed priming has significantly improved growth and yield in various crops, including *Phaseolus vulgaris, Glycine max, Triticum aestivum, Oryza sativa, Brassica napus, Pisum sativum, and Sorghum bicolor*.

Discussion and Conclusion: These nanoparticles not only mitigate yield losses but also enhance seed quality attributes such as oil and protein content, contributing to sustainable agriculture under climate change. Future research should focus on optimizing nanoparticle formulations for diverse crops, assessing their long-term environmental impacts, and developing strategies for their safe and effective use. The findings emphasize the transformative potential of iron-based nanoparticles as innovative tools for enhancing plant drought tolerance and ensuring global food security

Key Words: Drought Tolerance; Global Warming; Nano Iron; Antioxidant Defence Mechanisms

WINTER CATCH CROP PERFORMANCE OF SOME FORAGE PEA GENOTYPES IN ESKISEHIR PLAIN

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ABSTRACT:
In Turkey, the proportion and production of high-quality roughage are steadily declining. The main reasons for the decrease in the proportion of high-quality roughage in Turkey include land loss, high costs, and climate change. These factors have made the production of high-quality roughage more challenging, leading Turkey to increasingly focus on the production of pea for fodder as an alternative. The study planned for this purpose was conducted in the experimental field of the Faculty of Agriculture, Eskisehir Osmangazi University, according to a randomized block design with three replications. In this study, a total of 15 genotypes, including 8 lines (EA9, EAM30, EAFYTB, EAM31, EAM8, KARACA, EA35, EA31) and 7 varieties (Şirin, Arda, Gölyazı, Töre, Artık, Milwa, Taşkent), were investigated for green forage yield, NDF and ADF ratios as winter catch crop in the Eskişehir Plain. The results showed that the highest green forage yield was 2538,3 kg/da for the EAM31 line, while the green forage yield was 851,44 kg/da for the Artık variety. The NDF ratios of the genotypes ranged from 29,95% to 44,50%, and the ADF ratios ranged from 21,56% to 31,94%. The results revealed that the effects of genotypes on green forage yield and NDF ratio were significant at the 1% level. However, the effect of genotypes on ADF ratio was found to be non-significant. Evaluating the experimental results, all genotypes were found to adapt well to the conditions of Eskişehir for forage production. Especially for winter catch crop production in the region, the varieties Töre and Şirin, and the line EAM31, can be recommended. These findings provide important data for forage crop production, and future research may more comprehensively assess the potential of different genotypes.

Keywords: Catch crop, Variety, Line, Genotype, Green forage yield, Forage pea

POTENTIAL OF HEAVY METALS TOLERATING AND BIOSURFACTANT PRODUCING BACTERIAL CONSORTIA IN REMOVAL OF CRUDE OIL FROM CONTAMINATED WATER

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Abstract

Petroleum hydrocarbons, commonly released into aquatic environments during crude oil exploration, extraction, storage, and transport, pose significant environmental threats. These hydrocarbons, including aliphatic, branched, and aromatic compounds, are toxic to aquatic life and humans. Oil spills introduce persistent hydrocarbons and heavy metals (HMs) into water bodies, further aggravating pollution. HMs can bioaccumulate and biomagnify in food chains, causing long-term health issues such as neurological damage and cancer. Conventional remediation methods, including physical and chemical treatments, are expensive, complex, and often generate secondary waste. Bioremediation offers a promising alternative by using microbes, especially biosurfactant-producing bacteria, to degrade hydrocarbons and immobilize HMs. Biosurfactants enhance hydrocarbon solubility and microbial breakdown while aiding metal desorption. These properties enable microbes to remain active in metal-contaminated environments. Using bacterial consortia enhances bioremediation due to synergistic interactions, where one species may detoxify by-products or fully degrade pollutants another cannot. This study focuses on heavy metal-tolerant bacteria with biosurfactant-producing capabilities. Objectives include evaluating these bacteria for biosurfactant production, forming consortia, and assessing their efficiency in removing total petroleum hydrocarbons. This approach aims to provide an effective bioremediation strategy, addressing oil and heavy metal contamination simultaneously.

"REDEFINING ENERGY FINANCE GOVERNANCE: PUBLIC AND PRIVATE SYNERGİES"

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Strong and effective systems of governance are required to steer energy finance towards the fulfilment of policy goals around energy security, energy poverty and sustainability. This article assesses and explains the nature of the contemporary governance of energy finance. It first provides a typology and analysis of the different governance dimensions associated with: (i) the public governance of public finance; (ii) the public governance of private finance; and(iii) the private governance of private finance. It then identifies and seeks to account for key cross-cutting trends in these patterns of governance. Overall, while it finds evidence of significant activity in each of these areas, there mains a substantial imbalance towards governance for energy finance over governance of energy finance. This has important implications for constructing effective solutions to the multiple challenges that energy policy currently faces.The procedural aspects of governance strongly affect the distributional elements of governance. Greater attention is therefore required to opening up energy policy making to a broader range of affected stakeholders in order to deepen deliberation around the complex trade-offs associated with different energy financing options.

Keywords: energy finance;public governance ;energy policy ;sustainability

NUMERICAL STUDY OF LEAD-FREE HALIDE PEROVSKITES KSNCL3 SOLAR CELLS USING INSE AS ELECTRON TRANSPORT MATERIALS

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Abstract

The transition metal chalcogenide (TMC) family of materials is highly promising and possesses a broad spectrum of uses.Transition Metal Complexes (TMCs) are highly regarded across various disciplines due to their unique properties. Researchers have thoroughly examined the use of 2D transition metal chalcogenides (TMCs) in perovskite solar cells (PSCs) to enhance device stability and power conversion efficiency (PCE). The impacts on transition metal chalcogenides (InSe) perovskite solar cells, especially concerning the electron-transporting layer (ETL), remain inadequately understood. Our research addresses this knowledge gap by investigating the effects of incorporating InSe nanosheets into the electron-transporting layer (ETL) of perovskite solar cells (PSCs). Enhancing the performance of bifacial (KSnCl3) perovskite solar cells. The InSe nanosheets exhibit a power conversion efficiency (PCE) of 22%, a fill factor (FF) of 57.58%, a short-circuit current density (Jsc) of 44.64 mA/cm², and an open-circuit voltage (Voc) of 0.87 V. This study provides insights into the prospective function of TMCs in promoting PSCs.

Keywords:, Perovskite , lead-free solar cells, optimization ,charge transport layer, TMCs.

NUMERICAL STUDY OF 2D DION JACOBSON-BASED PEROVSKITE SOLAR CELLS USING SCAPS 1D

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Summary.
The current investigation is a thorough investigation of 2D Dion-Jacobson (DJ) phase halide perovskite solar cells (PSCs) that is conducted using sophisticated numerical simulations. Our objective is to examine the impact of a variety of parameters on the efficiency of these devices and to identify the most effective design configurations. As a result of its significant influence on the efficiency of 2D DJ perovskite solar cells, we concentrate on the impact of variations in shunt resistance and series resistance. Furthermore, we present other important investigations that contribute to the improvement of the efficiency of Dion Jacobson solar cells. The performance parameters of the optimized design are exceptional. These results demonstrate the extraordinary potential to improve the efficiency of DJ phase halide perovskite solar cells.

Keywords: SCAPS 1D, Dion-Jacobson, Perovskite solar cells, performance.

PLANKTON AS AN INDICATOR OF FISH FARM PRODUCTIVITY

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ABSTRACT

Aquaculture plays an important role in providing food. Plankton is integral to the aquatic food web and contributes significantly to aquatic biological productivity in freshwater ecosystems. This study investigated the collection and identification of plankton from fish farms in the Tapi District of Gujarat state. Phytoplankton representing green algae, Diatoms, Blue-green algae, Euglenoids, and zooplankton belonging to Rotifers, copepods, and Cladocera were noted. In the present study, Phytoplankton dominated the water body more than zooplankton. The study will help farmers predict the productivity of their ponds.

Keywords: Aquaculture, Phytoplankton, zooplankton, Fish

ETUDE TECHNIQUE ET ANALYSE STATIQUE NON LINEAIRE D'UN BATIMENT EN BETON ARME

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ABSTRACT

This project presents a detailed study of a reinforced concrete structure which consists of two basements used as car parking and a depot, ground floor and a mezzanine for commercial use, plus 8 floors of housing and an accessible roof. The structure is located at the level of the wilaya of Tlemcen in "el kifane", this region is classified according to seismic zone 1 according to the seismic regulation RPA 99V2003.the study is composed of two main parts, the first is a technical study which includes the linear analysis and the dimensioning of the building by applying the construction rules in force (RPA99 / 2003 - BAEL 91 modify in 99) and the second is a nonlinear static analysis of the "Push-over" structure which makes it possible to establish the capacity curve and the damage levels of the structure.

Key words: Reinforced concrete structure; Seismic analysis; Capacity curve; Nonlinear static analysis; RC framed building.

INFORMAL PAYMENTS İN POST-SOCİALİST ECONOMİES İN THE DİGİTAL AGE

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ABSTRACT

Introduction and Purpose:

Informal payments remain a significant challenge in post-socialist economies, particularly in the field of tax administration. With the rise of digitalization, there is an opportunity to reduce informal payments through improved tax systems. The purpose of this study is to examine the persistence and patterns of informal payments, explore the role of digitalization in reducing these practices, and assess variations across sectors and firm sizes in post-socialist economies.

Materials and Methods:

This study uses data from the surveys, focusing on post-socialist countries. The variables derived from the survey include the prevalence of informal payments during tax inspections, the frequency of audits, and the use of digital tax filing and payment systems. The study hypothesizes that informal payments are more prevalent in countries with less advanced digital tax systems and that small and medium-sized enterprises (SMEs) face more frequent informal payment requests compared to larger firms.

Expected Results:

The results are expected to show that firms in countries with less developed digital tax systems report higher incidences of informal payments. Small and medium-sized enterprises are more likely to encounter informal payment requests than large firms. Sectors with higher levels of state interaction, such as construction and public utilities, are expected to have more frequent informal payments. Additionally, a positive correlation is expected between the frequency of tax inspections and the likelihood of informal payment requests. More frequent audits may increase the likelihood of informal payments being requested.

Discussion and Conclusion:

This research highlights the ongoing challenges of informal payments in post-socialist economies and emphasizes the role of digitalization in reducing these practices. The findings suggest that digital tax systems can be an effective tool for minimizing informal payments, particularly for SMEs and sectors with significant state interaction. This study offers recommendations based on the necessity of strengthening digital tax infrastructure to reduce corruption and improve compliance.

Key Words: Informal Payments; Tax Administration; Post-Socialist Economies; Digitalization; SMEs; State Interaction; Regulatory Compliance; Corruption

AN ASSESSMENT OF STUDENT VIEWS ON STEM-FOCUSED COURSE ACTIVITIES

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ABSTRACT

Introduction and Purpose: In recent years, it has been observed in the field of education that STEM-oriented course activities have the potential to have a great impact on students' academic and professional development. This study aims to examine student views on STEM (Science, Technology, Engineering and Mathematics) focused course activities. Qualitative data were obtained through semi-structured interviews organized by the researcher with the help of literature review.

Materials and Methods: The interviews were conducted with 10 randomly selected volunteer 7th grade students. The data obtained from the interview records were coded and grouped into categories using content analysis method. Qualitative data were then tabulated by calculating frequencies and percentages. Coding reliability (percentage of agreement) was calculated for each item.

Results: Through the qualitative analysis process, the reflections of these activities on student views were evaluated. The data obtained show that positive feedback was obtained about the students' enjoyment of the STEM lessons, the comprehensibility of the course materials and the instructive aspects of the activities. Students stated that the activities were not only fun and instructive, but also played a motivating role on their career goals.

Discussion and Conclusion: The findings show the positive effects of STEM-oriented course activities on students. The majority of the students stated that such activities increased their knowledge and skills, strengthened their motivation to learn and helped them to develop their interests.

Key Words: Science Education, STEM Activities, Student Views

AN ANALYSIS OF FACTORS INFLUENCING VOCATIONAL CHOICES OF SECONDARY EDUCATION STUDENTS IN TERMS OF SCHOOL TYPE AND SCIENCE EDUCATION

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ABSTRACT

Introduction and Purpose: The aim of this study is to identify the factors influencing high school students' future career choices. The study examines the effects of school type on students' career preferences using a questionnaire developed within the framework of the ROSES (Relevance of Science Education-Second) Project. ROSES is an international study comparing the effectiveness of science education across different countries. One of its primary objectives is to identify students' career motivations regarding their future professions. In Turkey, the ROSES project is coordinated by the İzmir Provincial Directorate of National Education and Dokuz Eylül University.

Materials and Methods: The study group consists of 1,134 students aged 15–18 enrolled in public and private schools in İzmir during the 2020–2021 academic year. The sections "My Future Job" and "Which Profession Would You Choose in the Future? Why?" from the ROSES questionnaire are used as data collection tools. According to Schreiner and Sjøberg (2004), the founders of the project, these questions provide insights into students' future priorities and enable cross-cultural and group comparisons. The data were analyzed using SPSS 24 and MAXQDA 2024 software.

Results: The participation percentages regarding aspects students find important for their future jobs or professions were calculated, and the results were presented in frequency tables. Students' career goals and the reasons behind them were visualized using MAXMaps illustrations and word clouds and presented in tables.

Discussion and Conclusion: The findings reveal that students place the highest importance on having the ability to make their own decisions regarding their future careers. Private school students were found to value decision-making authority, working in jobs suited to their talents, taking on roles they consider meaningful, presenting new ideas freely, spending time with friends, and pursuing financially rewarding careers more highly than public school students.

Key Words: Science Education, Choice of Profession, ROSES, Relevance of Science-Second

EFFECTIVENESS OF NON-GOVERNMENTAL ORGANIZATIONS (NGOs) ON THE NIGERIAN ECONOMY: A FOCUS ON ITS COMPONENTS OF; POVERTY REDUCTION, SOCIAL PROTECTION, GENDER EQUALITY AND INCOME GENERATION

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Abstract

This study aimed at assessing the relevance and effectiveness of the Non-Governmental Organizations (NGOs) in fostering the Nigerian economy over the years. This is achievable through a critical evaluation of the distinctive effects of some of its components (i.e. poverty reduction, social protection, gender equality and income generation) on the Nigerian economy as a whole. The study adopt the Auto-Regressive Distributed Lag (ARDL) technique of analysis and employed a data range of (1992-2023). Moreover, the study interact poverty reduction and social protection to examine its joint effect on the Nigerian economy. Furthermore, the study computes the marginal effect of poverty reduction at different margins of social protection expenditure and services, respectively. Findings from the study indicates a significant positive change in the Nigerian economy attributed to improved social protection expenditure and services and gender equality. Conversely, poverty reduction (as measured by employment rate) negatively affects the economy as well as income generation. However, the interaction of poverty reduction and social protection have a positive significant effect on the Nigerian economy. On the other hand, the results indicates the marginal effect of poverty reduction to have a greater significant effect on the Nigerian economy at a maximum level of social protection expenditure than at a minimum levels. This study recommends for the Nigerian government intervention and support in executing the NGO projects, programs and policies across the nation for improved outcome. It also recommends for enlightenment and awareness campaigns in rural areas on the need for girls' child equal opportunities through school enrolment, employment rate, economic empowerment and leadership positions.

Keywords; Non-Governmental Organizations, Poverty Reduction, Social Protection, Gender Equality and Income Generation.

RISK MANAGEMENT IN COMPANIES AND FINANCIAL INSTITUTIONS IN ALBANIA

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Abstract

Companies and financial institutions are constantly faced with different risks, which must be faced adequately,so the companies to make the right decisions, should have good final results on the part of risk management. It is important how the risk should be managed on the part of companies and financial institutions, how they should approach these risks, how these systems must have an adequate system for reducing or eliminating them, and how these institutions should identify and deal with these risks to have a good risk management. A good risk management by companies will positively affect the economic development of the country and the creation of financial stability.

Risk management starts with defining what we want to achieve by getting it right internal and external factors that can influence the success of achieving these objectives. Risk management implements the framework of the risk management structure, informs about the status of risks and the level of their management.

The purpose of the study is to explain how these risks are being managed in management levels.

Key words: risk, management, companies

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ECONOMIC COMPLEXITY

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Abstract

This paper aims to highlight all perspectives of contemporary literature regarding the variable of economic complexity, as well as the dynamics of the economic complexity variable in relation to public expenditures. Analyzing the evolution of the Economic Complexity Index (ECI) in relation to public spending is a critical task for understanding the impact of economic complexity on the use of public resources.

Economic complexity is closely tied to public expenditures, as economic development and spending efficiency are key factors for economic well-being. Public expenditures can influence complexity in various ways, including investments in infrastructure, education, healthcare, and economic development.

To understand economic complexity in relation to public expenditures, it is important to analyze the efficiency and impact of public spending in key economic sectors, including job creation, production growth, and improving quality of life. Public expenditures encompass various sectors, some of which are essential for the economic development of a country. Below are some key insights into these critical challenges:

Infrastructure: Investments in infrastructure such as roads, railways, ports, and energy networks can help increase a country's productive capacity. The returns on infrastructure investments are often time-sensitive, leading to a positive impact on various sectors of the economy.

Education: Investments in education are often considered one of the most efficient tools for economic development. The reason is that an educated and skilled workforce is better equipped to contribute to innovation and productivity. Improving access to and the quality of education is crucial for building a strong human capital base.

Healthcare: The health level of a population has a significant impact on productivity and work capacity. Investments in the healthcare system can reduce absenteeism and increase the productive capacity of a society. Healthcare has a direct impact on quality of life and enhances an individual's potential to contribute to the economy.

Economic Development: Policies and measures that encourage economic sectors, innovation, and private investments are essential for economic growth. Development of trade and service sectors, improving the business climate, and utilizing modern technology are key elements of economic development.

Analyzing these challenges through well-managed policies can help improve the economic structure and the quality of life for the population.

Purpose of the Paper

The purpose of this paper is to analyze the dynamics of the economic complexity variable in relation to public expenditures. It aims to provide an overview of the Economic Complexity Index (ECI) trends for Albania and other countries in the region. Through econometric models suggested by various authors, the paper seeks to analyze the relationship between the economic complexity variable and components of public expenditures.

Methodology

The methodology used in this study is primarily descriptive. The data used are mainly secondary. The main sources of data are various scientific articles, which have been gathered through a review of the literature by domestic and foreign authors to understand the theories and data on the

economic complexity variable and public spending figures. Other data have been included from sources such as INSTAT, IMF, OECD, the Observatory of Economic Complexity, The Atlas of Economic Complexity, the World Bank, the Ministry of Economy and Finance, the Ministry of Infrastructure and Energy, the Ministry of Health, etc.

To verify the relationships between variables, a multifactorial econometric regression model is used. This model analyzes the correlation coefficient *R*, which indicates the strength of the relationships between the dependent variable (ECI) and public expenditures.

TO INVESTIGATE THE USEFULNESS OF MINOCYCLINE-LOADED NANOEMULGEL İN TREATİNG "ACNE ROSACEA," A TYPE OF ACNE THAT İS CHALLENGING TO CURE

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Abstract:
Background and Rationale: The disorder known as acne rosacea is defined by signs and symptoms such as erythema, telangiectasia, coarse skin, and an inflammatory papulopustular eruption similar to acne, together with symptoms of face flushing.
Although minocyline is a commonly used medication for acne, research on its effectiveness for acne rosacea is currently ongoing. The current study suggests using minocycline in a nanoemulgel formulation as a way to repurpose it for treating rosacea acne. The assessment of the same in vitro and in vivo has been done to confirm the claimed nanoemulgel, which was optimised by various characterization parameters.
The first-pass metabolism of minocycline greatly affects an effective delivery of drug at the desired site of action. This particularly necessitates investigation and fabrication of a suitable drug delivery system for improved therapeutic efficacy, sustained release and locoregional application. Further, literary evidence suggests a topical administration of minocycline for the treatment of facial papulopustular rosacea. Nanoemulgel is also considered to increase dermal permeation, and retention of poorly lipophilic drugs with fewer side effects
Method: A) *Formation of nanoemulsion and converting it in nanoemulgel:* Minocycline loaded nanoemulsion was formulated by aqueous titration method. For this, selected formulation components based on a pseudo-ternary phase diagram were vortexed for few minutes to obtain a clear, transparent and stable isotropic system which was then converted into a sustained release nanoemulgel using carbopol 940 (gelling agent) at appropriate concentration.
B) Using a semi-permeable dialysis bag with a semi-permeable membrane, an in-vitro drug release profile of an optimised minocycline nanoemulsion and minocycline nanoemulgel equivalently was conducted. For ex-vivo permeation studies a layer of stratum corneum (1mm thickness) was used on a franz diffusion cell with each of minocycline nanoemulgel and minocycline nanoemulsion by placing separately in donor compartment facing towards the stratum corneum of 1mm thickness and receptor chamber filled with 10 ml of phosphate buffer saline of pH 5.5, maintained at 37 ± 1°C.
Result and discussion:
The formulation's numerous characterization parameters show that the nanoemulgel was effectively created and refined. The drug release and permeation profile indicated that extended penetration is caused by a sustained release action, which is required for longer and closer drug interaction with the epithelial surface.
The in vitro release of an optimized minocycline nanoemulsion was comparatively higher than that from nanoemulgel under the same set of experimental conditions, similarly the cumulative amount of drug permeated after 6 hours from minocycline nanoemulsion and minocycline nanoemulgel were 75% and 58% respectively. This indicates that the nanoemulgel shows sustained release behaviour and will give a better result after a long hour of usage on the skin.
Conclusion: The study suggests that a nano-emulgel of minocycline can provide sustained topical release, potentially improving locoregional and targeted drug delivery for acne rosacea treatment..

EFFİCACY OF BİOMASS BY-PRODUCTS ON HEALTH PERFORMANCE OF *CYPRINUS CARPIO*

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Abstract

A major problem nowadays is the proper and sustainable management of agro-waste. Supplementing the several fish feed formulations in this research were Biochar (BC) sourced from a variety of agricultural wastes, including cotton (C), wheat (W), corncob (CC), grass waste (Gw), and green waste (GW), and House wastes (HW). Different diets were administered to *Cyprinus carpio* fish in order to study their impact on growth, digestibility of nutrients and minerals, hematological, and body composition. For sixty days, they were given nothing but 2% biochar supplemented sunflower meal as a based diet. A control diet and six experimental diets were prepared, with each containing 2% of a different BC source: HW, CS, Gw, WS, CC, and GW. Each tank had 15 fingerlings, with three replicates for each test diet, and they were fed at 5% of their body weight. The results indicated that supplementation with CCBC significantly (p<0.05) enhanced the growth performance, digestibility, and carcass quality of Common carp, C. carpio, but HWBC had adverse outcomes. Adding 2% corn cob biochar (CCBC) to the feed of the test fishes resulted in the greatest efficiency in mineral absorption. Additionally, on being administered CCBC, the fish blood profiles shown significant improvements (p<0.05). Supplementing *C. carpio* with CCBC improved its growth, hematological, carcass, digestibility, and mineral status more than any other method.

Keywords: *C. carpio,* Biochar, corncob biochar, Agro-waste

HOLISTIC APPROACHES TO MENTAL HEALTH AND SUICIDE PREVENTION: INTEGRATİNG INDİVİDUAL, SOCİAL, AND ENVİRONMENTAL FACTORS

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ABSTRACT

Mental health problems and concomitant suicide attempts continue to present key challenges for public policy and health services across the globe. The development of suicide risk is complex, involving contributions from biological (e.g., genetics or hormones), psychological (e.g., certain individual predispositions), clinical (e.g., psychiatric illness), social, and environmental factors. While traditional approaches focus more on intra-individual risks, it has become clear that this perspective does not yield satisfactory results, and the need to consider higher-level factors has begun to be emphasized. Potential environmental factors affecting suicide include air pollution and ambient temperature. Recent research reveals that an unfavorable built environment (urbanization) could increase the risks of completed suicide attempts. The importance of green regions, as well as better urban development with morphological (e.g., structural) improvements, has been highlighted to promote both physical and mental health. Changing cultural or social values could also play a significant role in the development of mental health issues. The more people adopt a materialistic lifestyle, the more unhappy and lonely they feel; moreover, loneliness and unhappiness trigger the materialistic lifestyle, creating a vicious circle. In this presentation, all these findings will be evaluated holistically, and it will be emphasized that attempts to improve mental health and reduce the risk of suicide should not remain solely at the individual level but also include systemic applications incorporating social (e.g., values, social connectedness), financial, and environmental elements.

THE ROLE OF MOTHERS EDUCATION IN SELF CONFIDENCE OF GIRL CHILD IN INDIA

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Abstract;

This research underscores the necessity of promoting maternal education as a strategic intervention to empower future generations of women in India, ultimately contributing to broader gThis study investigates the critical role of maternal education in shaping the self-confidence of girl children in India, a country where traditional gender norms often hinder female empowerment. Recognizing that education is a fundamental driver of personal and social development, this research explores how a mother's educational background influences her daughter's self-esteem, aspirations, and overall psychological well-being. Utilizing a mixed-methods approach that includes quantitative surveys and qualitative interviews, the study reveals that mothers with higher educational attainment are more likely to foster environments that promote self-confidence in their daughters.

Educated mothers tend to engage in positive reinforcement, provide educational resources, and advocate for their daughters' rights, leading to enhanced self-worth and ambition. Furthermore, the study highlights the importance of parental involvement in education, demonstrating that mothers who prioritize learning and personal development serve as role models for their daughters. The research also considers the intersectionality of socioeconomic status, cultural beliefs, and community support systems that further impact the relationship between maternal education and the self-confidence of girls.

Findings indicate that when mothers are educated, they are better equipped to challenge societal norms that restrict girls' opportunities, thereby encouraging their daughters to aspire to higher educational and proposals goals . This research underscores the necessity of promoting maternal education as a strategic intervention to empower future generations of women in india. Ultimately contributing to broader goals of gender equality, social justice, and economic development. By addressing the barriers that hinder women's education, society can create a more equitable environment where girls can thrive and realize their full potential.

Keywords: maternal education, self-confidence, girl child, India, gender equality, empowerment, socioeconomic factors, cultural beliefs.

MODELING CRACK PROPAGATION IN POWER MACHINE UNITS

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ABSTRACT. Advanced numerical methods and computer technologies have been developed to analyze crack propagation in the structural components of power machinery. The investigation adheres to a systematic algorithm. Initially, the stress-strain state of the structural element under specified loading conditions is computed to identify the regions with the highest stress concentration. Once identified, a model crack is introduced into these critical zones. Stress intensity factors (SIFs) at the crack tips are then evaluated, followed by solving the fatigue crack growth problem to estimate the number of loading cycles leading to failure. To validate the methodology, a benchmark problem involving a penny-shaped crack in an unbounded domain is analyzed. The study employs advanced numerical techniques, including finite element and boundary element methods, to assess the stress-strain state with high precision. Accurate computation of SIFs at the crack tips is achieved by formulating and solving hypersingular integral equations. The research further examines the mechanical integrity of a steam turbine blade, assessing its strength and analyzing its fatigue behavior under cyclic loading conditions. This approach enables the precise estimation of the residual lifespan of structural elements while accounting for crack-like defects. The practical implications of the study lie in its capacity to provide reliable predictions about the durability of critical components in power systems. The novelty of this approach is rooted in the innovative application of finite and boundary element methods, which significantly enhance the accuracy of residual life assessments for structures containing defects/

KEY WORDS:, finite and boundary element methods, crack propagation, fatigue.

SENSE OF GOD AND MORALS IN DESCARTES

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ABSTRACT

One of the pioneering philosophers of rationalism that played a key role in the decline of scholasticism together with modernism, Rene Descartes succeeded not only in pioneering rationalist philosophy, but also in representing modern philosophy. The thoughts of Descartes who focused on epistemology in his journey that he took for overcoming "skepticism" about knowledge and science and his effort to overcome skepticism with his own method led to the rise of a unique method. Descartes implemented this new method of his successfully in areas primarily such as mathematics, metaphysics, physics, poetry, history and philosophy in an attempt to build a sense of knowledge and science opposing the skeptical point of view.

In the new era starting with Renaissance, Descartes laid the foundations of modern philosophy. During that period, he advocated the experiment method against religious oppression and stressed the necessity of teaching thinking at early ages, which caused him to be criticized by narrow-minded and conservative people. Descartes' insistence about experiments, observations and hypotheses for explaining nature from an analytic point of view resulted in pioneering the natural sciences as in philosophy. In his utterly complex argument that he had built to save the existence of God from skepticism, he built his thought that "God exists" upon solid bases. Accordingly, he made an explanation for his sense of "morals" that he had shaped on mind and using the mind also in line with the obligatory existence of God. In general terms, this study aims to clarify the sense of God and morals on the basis of the works and philosophy of Descartes.

Keywords: Rene Descartes, God, Morals

ASSESSMENT OF CONSUMERS' KNOWLEDGE, ATTITUDES, AND BEHAVIORS TOWARD FOOD SAFETY: A CASE STUDY IN THE CENTRAL DISTRICT OF SİİRT PROVINCE

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ABSTRACT

Introduction and Purpose: Food, beyond being a strategic resource that meets the fundamental nutritional needs of individuals, represents the ultimate output of a complex global supply chain. This chain encompasses the stages of production, processing, preservation, distribution, and consumption, with the reliability of each step directly impacting public health. Food safety refers to ensuring that products intended for consumption are free from physical, chemical, and biological threats, in compliance with international standards, legal regulations, and scientific principles. In this context, food safety is not merely a matter of technical inspection, regulatory compliance, or supply chain performance; it also involves consumers' levels of knowledge, perceptions, and behavioral patterns regarding the issue. From this general perspective, analyzing the knowledge, attitudes, and behaviors of consumers in a specific region concerning food safety provides valuable insights into the local dynamics of the subject. Accordingly, this study aims to examine the knowledge levels, attitudes, and behaviors of consumers regarding food safety, based on data obtained from surveys conducted with 68 consumers in Siirt Province's Central District in 2023.

Materials and Methods: In the study, descriptive statistics, including the frequency and percentage distributions of key variables such as gender, age, and educational status, were calculated to analyze the demographic characteristics of the participants. Additionally, cluster analysis was performed to group consumers based on their demographic characteristics, attitudes, behaviors, and perceptions.

Results: According to the study results, 44.12% of the participants were women, and 55.88% were men, with an average age of 38.41 years. In terms of educational attainment, approximately 13% of the participants had completed primary education, 29% had a high school education, 19% had an associate degree, 24% held a bachelor's degree, and 15% had a postgraduate degree. The analysis revealed that the most recognized standards and certifications among the participants were TSE (85.29%) and ISO (50.00%). In contrast, awareness of food safety management systems such as HACCP (1.47%) and EuroGap (10.29%) was significantly lower. The recognition of organic or ecological product certifications was moderate at 26.47%.

Discussion and Conclusion: These results indicate that participants are generally more familiar with local or national standards, while their awareness of international systems and more specific certifications remains relatively low. This highlights the need for educational and awareness initiatives to place greater emphasis on broader international systems.

Key Words: Food Safety; Consumer Knowledge; Attitudes and Behaviors; Public Health

A NEW APPROACH TO THE PREPARATION OF $CDMOO_4$ NANOPOWDERS WITH METHYLENE BLUE OXİDATİON ACTİVİTY EVALUATİON

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Abstract

The scheelite-type $CdMoO_4$ nanopowders were prepared through calcination of an oxalate precursor in static air at 500 ◦C for 2h. The oxalate precursor was analyzed by Fourier transform infrared spectroscopy (FTIR) and thermal gravimetric analysis (TGA). The as-synthesized cadmium molybdate was characterized by Raman spectroscopy (RS), X-ray diffraction (XRD), Scanning electron microscopy (SEM), and Energy dispersive X-ray spectroscopy (EDX). Its catalytic activity was tested by the oxidation reaction of methylene blue (MB) dye in the presence of hydrogen peroxide. The obtained results showed that $CdMoO_4$ nanopowders have very high catalytic activity with a yield of 98 % during a period of 2h under alkaline conditions at pH 11.

Keywords: Cadmium molybdate MB Nanopowder Oxidation reaction Spectroscopy

AUTOMATIC TRAFFIC CONTROLLER WITH VIOLATION DETECTION SYSTEM

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ABSTRACT

Traffic management and control is one of the primary problems which we have faced in many cities and countries. People at crossroads get tired of waiting for green signal which is a go signal, even if the green traffic signal appears due to heavy traffic only some vehicles are allowed to passed and some vehicles are left to wait for another turn of traffic light to go. This makes people furious and cross the roads without following rules and get subjected to accidents. This system comprises of two controllers each controlling all other devices at the station and the traffic junction. The traffic violation system work by recognizing the movement of vehicles from a road that has been close, that is that particular lane is showing red for a stop, these process is been accomplish by the use of an ultrasonic sensor module working as an input sensor for possible violation, which operate by sending sound pulses at a very high-frequency at regular intervals, if they strike an object, then they are reflected back as echo signals to the sensor, which compute the distance to the target based on the time-span of sending and receiving the echo. At any point of detection of violators, the internet protocol camera (IP camera) take shot of the plate number of the vehicle violating for proper prosecution.

In a system where there no violators the traffic controller opens each road for an allocated time and move to the next road, these processes works continuously.

TISSUE AND ORGAN DONATION THROUGH THE EYES OF NURSING STUDENTS

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ABSTRACT

Objective: This study is the meaning of organ donation in the 4th grade and the development of the role of the Official in this process.

Method: A qualitative research design is used in the study. 60 students who grew up in the 4th grade of the Official section of the study documents were included. A semi-classified four-question form was created by the researchers to provide information about what organ donation provides, suggestions for organ donation, preventing organ donation from being interrupted and the role of the official in the organ donation process, and the approval was requested to fill out this formula. The obtained data was interpreted with detailed analysis.

Findings: According to the data obtained from the answers written by the students, it was divided into four main themes: the meaning of organ donation, how organ donation increases, barriers to organ donation and the role of nurses in removing the barriers. The sub-themes of the main theme of the meaning of organ donation are being a life, being hope; the sub-themes of the main theme of how organ donation increases are media use, education, religious view; the sub-themes of the main theme of the barriers to organ donation are lack of information, fear, beliefs; the sub-themes of the main theme of the role of the nurse in removing the barriers are correct information and effective counseling

Conclusion: Nursing students stated that organ donation is important and necessary, nurses with effective communication skills should provide trainings to increase public awareness and donation rates, patient relatives and their concerns should be eliminated, and clergy should provide information about organ transplantation and lead the way. Nurses have an important role in removing the barriers to organ donation with accurate information and effective counseling.

Keywords: tissue transplantation, barriers, nursing students, facilitators, organ donation

PRODUCTION OF NANOCELLULOSE FROM MICROALGAL CELLULOSE: *CHLORELLA VULGARIS*

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Abstract : Nanocellulose is a biomaterial known for its remarkable mechanical properties and high biocompatibility. Extracting nanocellulose from the microalga *Chlorella vulgaris* presents an innovative and sustainable approach.**Materials and Methods***Cellulose Extraction*: Cellulose is isolated from *Chlorella vulgaris* through purification steps, including delipidation and protein removal.*Nanocellulose Production*: The extracted cellulose is hydrolyzed using sulfuric acid to produce cellulose nanocrystals (CNC).*Characterization by FTIR and NMR*: FTIR spectroscopy is used to identify the functional groups present, while NMR helps study the crystalline structure of the CNC.**Results and Discussion**FTIR analyses reveal the removal of lipid and protein bands after treatment, confirming effective cellulose extraction. Following hydrolysis, the appearance of bands at 1630 cm^{-1} (hydrogen bonding) and 1429 cm^{-1} (C-O bond) indicates successful nanocellulose formation.NMR results demonstrate a high degree of crystallinity, characterized by distinct peaks corresponding to glucose units typical of CNC. The dimensions obtained (20-50 nm in diameter and several hundred nm in length) confirm the nanometric nature of the product, making it suitable for various biomedical and environmental applications.In addition, the mechanical properties of the nanocellulose derived from *Chlorella vulgaris* are promising, indicating potential use in drug delivery systems and water filtration technologies.**Conclusion**The production of nanocellulose from *Chlorella vulgaris* offers a sustainable route to obtain high-performance biomaterials. The FTIR and NMR characterizations validate the efficiency of the extraction and hydrolysis processes, highlighting the potential for diverse applications in technology and medicine.

Keywords : Chlorella vulgaris, nannocelulose , Characterization

STRESS-REDUCING DESIGN PRINCIPLES IN PEDIATRIC PATIENT ROOMS FROM THE PERSPECTIVE OF THE LITERATURE

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ABSTRACT

Introduction and Purpose: Hospital involves unusual, challenging experiences for children. Regardless child's age, developmental level the hospital experience creates stress in child. Staying as inpatient in hospital setting, means staying in a cold, strange, noisy and unknown ward environment, which becomes even more frightening for child. Stress psychology dominates child who has to stay in patient room. From this point study, answer is sought to question of what can be done reduce stress in design of pediatric patient room. For this purpose, literature review was conducted on the subject and design-criteria have been put-forward.

Materials and Methods: As a result of the search in databases of scientific journal indexes such as PubMed, Google Scholar with the keywords "pediatric patient room" "inpatient " "stress" "evidence-based design" "healing architecture", 258 scientific studies were found. Content analysis conducted on full text of 58 studies dealing with relationship between stress. Design criteria were created by grouping stress-balancing interior physical elements.

Results: Interior design strategies aimed reducing stress during hospital stay and contributing to healing process have been discussed under fifteen main headings in literature. These; Security, Dimensional Conformity, Lighting, Daylight, Acoustic/Noise Control, Material, Color, Atmosphere, Play/Play Opportunities, Artistic/Aesthetic Environment, Relationship Nature/Outdoor Space, İnteractive Technologies, Sense of Control, Room Layout/Configuration, Shape/Form. Under these headings, items regarding how patient room should included. These strategic topics provide suggestions how pediatric patient rooms should arranged to provide psychological, physiological comfort.

Discussion and Conclusion: Pediatric patient room should be considered healing part of treatment process. As a result of the study, literature-based design criteria for patient room to reduce-stress in child were put forward, and suggestions were presented how patient room could be designed to meet needs of child. The children's patient room designed with these criteria, will contribute child's development, psychological health and healing process by balancing-stress.

Key Words: Healing architecture, İnpatient child, Pediatric patient room design, Stress.

BARRIERS TO WOMEN'S ADVANCEMENT IN THE WORKPLACE: GENDER PAY GAP, GLASS CEILING, AND STICKY FLOORS

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Abstract

Women in the workplace continue to face significant challenges due to structural and systemic barriers that hinder their career advancement and equitable pay. Despite progress toward gender equality, the gender pay gap remains a persistent issue, with women earning less than men for similar roles. This disparity reflects broader societal and institutional inequalities. Furthermore, the glass ceiling obstructs many women's efforts to reach leadership and executive positions, regardless of their qualifications, while the concept of sticky floors highlights the struggles of women in lower-wage, entry-level positions, where opportunities for career progression are scarce.

Methodology: This study employs a mixed-methods approach to explore the barriers women face in the workplace. A survey of 300 women across various industries was conducted to assess their experiences with the gender pay gap, access to leadership roles, and challenges in lower-level positions. In-depth interviews were also carried out with 30 women in mid-level and senior positions to understand the impact of the glass ceiling and sticky floors. Quantitative data were analyzed using statistical tools, and qualitative data were examined through thematic analysis.

Result and Discussion: The study found a significant gender pay gap, with women earning 22% less than men in equivalent roles. Over 60% of women in leadership positions reported limited opportunities for career advancement beyond mid-management levels, highlighting the persistent glass ceiling. Additionally, 45% of women in lower-wage, entry-level positions reported a lack of upward mobility and few opportunities for skill development, illustrating the impact of sticky floors. Workplace cultures that lack inclusive leadership and mentorship programs were found to exacerbate these barriers.The findings emphasize the need for a comprehensive approach to address these barriers.

Outcomes and Recommendation:Key recommendations include policy reforms for equal pay, the promotion of inclusive leadership, and the implementation of mentorship initiatives. Organizations should prioritize creating supportive workplace cultures that value diversity, recognize women's contributions, and ensure equitable rewards. By adopting these measures, organizations can foster more inclusive environments, reduce the gender pay gap, and promote greater gender equality in the workplace.This research contributes to the existing literature on gender equality and offers practical solutions to address the gender pay gap and remove barriers to women's leadership advancement.

Keywords: Gender pay gap, Glass ceiling, Sticky floors, Workplace equality, Women's career advancement

IMPLEMENTATION OF LEAN PRODUCTION TECHNIQUES IN A FIG PROCESSING COMPANY IN NAZİLLİ

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ABSTRACT

Introduction and Purpose: This study aims to investigate the applicability of lean production techniques in a fig processing company and evaluate the potential benefits these techniques can bring to the business. Lean production focuses on reducing waste, improving processes, and lowering costs, thereby providing a competitive advantage in the food sector. The study targets the fundamental efficiency issues faced by fig processing businesses and aims to demonstrate how lean production practices can address these challenges.

Materials and Methods: The production and processing stages of figs were analyzed using the lean production approach. A field study was conducted to identify sources of waste, and process analysis was performed. Lean tools such as, 5S and Value Stream Mapping were employed to minimize identified waste and enhance processes. Data were collected through employee interviews and observational insights from production operations.

Results: The research revealed that waste in production processes could be significantly reduced, and operations could be made more efficient. The use of lean tools resulted in notable improvements in labor productivity and time management. Furthermore, consistent product quality was achieved, and positive impacts on customer satisfaction were observed.

Discussion and Conclusion: The study demonstrates that lean production techniques are applicable in the food sector and have positive impacts on both operational and financial performance. The adoption of lean production practices in fig processing businesses can enhance overall industry efficiency and support global competitiveness. This research serves as an important example of how lean production can be effectively implemented in the food industry.

Key Words: Lean Production, Fig Processing Company, Waste Reduction, Efficiency, Food Sector

ANTICANCER, ANTIBACTERIAL AND ANTIFUNGAL ACTIVITY OF TRANSITION METAL COMPLEXES WITH COUMARIN SCHIFF BASE DERIVATIVES: DESIGN, SYNTHESIS AND CHARACTERIZATION

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Abstract

A new series of transition metal complexes [M = Cobalt, Nickel, Iron and Copper] of Coumarin Schiff Base Derivatives ligands have been synthesized by conventional methods and under microwave-assisted irradiation. These new metal complexes and Coumarin Schiff base derivatives ligands were characterised by elemental analysis, FTIR, ^{1}H NMR, ^{13}C NMR, UV-vis, mass spectra and powder X-ray diffraction technique. On the basis of the spectral data, we have proposed the structures of metal complexes. Spectral data confirmed a 2:1 (ligand: metal) stoichiometric ratio for all the complexes. The anticancer activity of these complexes was evaluated against lung cancer, breast cancer and colon cancer cell lines through MTT assays and screened for their *in vitro* antibacterial activity against *Escherichia coli, Shigella dysenteriae, Bacillus cereus and Staphylococcus aureus* bacterial strains and for *in vitro* antifungal activity against *Trichophyton longifusus, Candida albicans, Aspergillus flavus, Microsporum canis, Candida glaberata*. The results of these research show the transition metal complexes have hihgher activity than the uncomplexed Coumarin Schiff Bases ligands.

Keywords: Coumarin Schiff base derivatives, Transition metal complexes, Anticancer activity, Antibacterial activity, Antifungal activity.

HALOXYLON SALICORNICUM (MOQ.) BUNGE EX BOISS. A SUCCULENT PLANT, PROMISING CONTENDER FOR PHYTOREMEDIATION OF HIGHLY SALINE SOILS

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Abstract

Haloxylon salicornicum is a xerophyte member of the family Chenopodiaceae. It is usually found in saline deserts. It's a shrub species and has importance for fruiting top, seed as animal feed and used as emergency food, wood as fuel, different plant parts for medicine, and restoration of degraded lands. Moreover, the species is tolerant to saline stress and high temperatures. *H. salicornicum*, is now gaining importance all over the world for phytoremediation as an environment-friendly technique. *H. salicornicum* selected from five different saline habitats of Cholistan, viz., least saline Derawar Fort, moderately saline Trawaywala Toba, and Bailahwala Dahar and highly saline Ladam Sir and Pati Sir to study the morpho-anatomical and physiological adaptations. The root epiblema thickness and the thickness of shoot epidermis was the maximum in Trawaywala Toba and Bailahwala Dahar populations. The thickness of cortex in root was consistently increased with an increase in salinity. The maximum thickness of phloem was observed in Bailahwala Dahar population. The maximum number of stomata was recorded in Ladam Sir population and the maximum root length was recorded in Pati Sir populations for the better absorption of water. The populations collected from the highest saline sites Pati Sir and Ladam Sir had increased accumulation of K^+ and Ca^{2+} along Na^+ and Cl^-, more excretion of Na^+, K^+ and Cl^-. Additionally, higher bio-concentration factor, translocation factor, and dilution factor for Na^+ and Cl^- in Derawar fort population were identified as key phytoremediation attributes. Population from Pati Sir and Ladam Sir were, therefore, more efficient in phytoremediation of saline soils as these populations accumulated and/or excrete toxic salts. These modifications indicate not only better salt tolerance of the Pati Sir population but also better in accumulation and excretion of toxic salts. This population can potentially rehabilitate hypersaline uncultivated lands through green reclamation.

Key word: Phytoremediation, *Haloxylon salicornicum*, Salinity, Desert

COMPUTATIONAL INSIGHTS OF GEOMETRIC AND ELECTRONIC PROPERTIES OF PYROVANADATES

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Abstract

Computational calculations have become an indispensable tool in the hands of researchers for efficiently resolving complex problems. Vanadates have attracted strong attention due to their potential applications in photocatalysis, environmental purifications, water splitting, and electrochemical sensors ascribed to their exceptional photocatalytic and electrochemical properties. This research work provides deep insights into the First-Principle calculations of pyrovanadates (V_2O_7- type). This innovative task has been carried out using the DS-BIOVIA Material studio program package licensed to GCUF. The computational calculations have been performed owing to the DFT-D approach via CASTEP or $DMol^3$ modules by applying multiple functionals such as GGA/PBE, GGA/RPBE, GGA/PW91, and LDA/CA-PZ. This research project includes computational predictions of geometry optimization, band structure, band gap, density of states (DOS), partial density of states (PDOS), elastic constants, and electron density distribution. The geometrically optimized structures of the crystals have been visualized and analyzed using the VESTA program. Moreover, Origin-Pro software has been employed to analyze DOS, PDOS, VBM, CBM, and optical properties. Elastic constants tell about the material's rigidity and stiffness. Population analysis studies give insights into ionic or covalent nature of compounds. This research study provides comprehensive detail of the material properties that make them suitable for functional applications in various emerging fields.

EXERCISE IMPROVES MOTOR FUNCTION IN RATS WITH PARKINSON'S DISEASE

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Abstract

Introduction and Purpose: Parkinson's disease (PD) is neurodegenerative disorder characterized by the loss of dopamine-producing neurons in the brain, leading to motor and cognitive impairments. Exercise improve motor impairments in early stage of PD. The aim of this study is to investigate the effect of exercise on motor function in rats with PD.

Materials and Methods: PD was induced by Medial Forebrain Bundle (MFB) injection of 6-OHDA. A four-lane motorized rat treadmill was used for exercise training for 10 weeks. Developed the motor function deficit evaluated by behaviour test. Prefrontal cortex brain, brown adiposity tissue, and muscle were collected after 10 weeks exercise.

Results: For motoric function, 6-OHDA injection decreased motor function in rotarod test, beam walking test, and grip strength test. Treadmill exercise improves motoric function by beam walk test, and rotarod test.

Discussion and Conclusions: The exercise has protection action in brain cortex against motor deficits. These result identify potential treatment of the PD improvements in motor function that may aid in optimizing rehabilitation strategies for PD.

Keywords: Parkinson's disease, 6-OHDA, exercise,

LEVERAGING DIGITAL TWIN TECHNOLOGY FOR RESILIENT INFRASTRUCTURE DEVELOPMENT

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ABSTRACT

The integration focus digital twin technologies to improve infrastructure systems' resilience is the subject of this study. By enabling constant monitoring, modeling, and analysis, digital twins—virtual representations of real assets—improve the capacity to anticipate and react to a range of stresses. Digital twins provide a thorough knowledge with infrastructure performance under various scenarios by leveraging cutting-edge technologies like artificial intelligence (AI), big data analytics, and the Internet of Things (IoT). The employment in digital twins in vital infrastructure areas including water management, electricity, and transportation is the main emphasis of the study. We illustrate how digital twins may improve resilience by detecting weaknesses, streamlining maintenance plans, and enabling quick emergency responses through in-depth case studies and simulations. The study also looks at the potential and problems that come with using digital twins, including scalability, cybersecurity, and data integration. Our results highlight how digital twins have the potential to completely transform infrastructure management by offering a proactive resilience strategy that can drastically cut downtime and improve the sustainability for infrastructure systems. This study adds to the expanding corpus of research in smart infrastructure and provides useful information for engineers, regulators, and urban planners who want to create infrastructure networks that are more robust and adaptable.

Key Words: Leveraging; Digital Twin; Resilient; Infrastructure; Modeling

PROPOSAL FOR A BUSINESS SYSTEM FOR FASHION PRODUCTS AND TRADITIONAL HANDICRAFTS OF THE DAO ETHNIC PEOPLE LINKED TO COMMUNITY-BASED TOURISM

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Currently, the lack of marketing and distribution channels has limited the accessibility of these traditional products to the broader market. The business system for fashion products and handicrafts not only helps preserve and promote the cultural values of the Dao people but also creates a sustainable source of income for the local community through the production and rental of handicraft products. Additionally, this community-based tourism model fosters sustainable development, offering tourists a unique experience as they have the opportunity to wear traditional costumes and enjoy handcrafted products during their stay. Furthermore, the project enhances cultural awareness and interaction between visitors and local people, fostering connection and mutual understanding. The application of technology to build an online rental system will also facilitate broader customer outreach and simplify the ordering process. As a result, the project has the potential to expand into various other products and services related to ethnic culture, contributing to the overall development of both the community and the local culture**.**

Keywords: Community tourism, traditional clothing, handicraft products, Smart tourism, digital transformation.

JEL Codes: *M10, M11, M21*

USING THE FRACTIONAL DYNAMICAL MODEL OF ACOUSTIC WAVES TO PRODUCE NEW WAVE STRUCTURES

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ABSTRACT

Introduction and Purpose: Scientists have conducted numerous significant studies over time on the use of fractional derivatives (FDs), rather than integer derivatives, to express exact wave solutions for nonlinear models in various fields. (FD) equations offer a deeper physical interpretation of complex phenomena and provide more realistic insights, making them essential tool for analyzing wave behaviors and dynamics. There are many definitions of (FDs), each with distinct forms and areas of application, depending on their properties. One such definition, the conformable derivative (CD), which, unlike many other fractional derivatives, retains the properties of classical calculus, making it highly effective and efficient for practical applications. However, finding wave solutions to various problems whether involving fractional or integer-order derivatives is crucial for explaining complex phenomena. Studies focusing on exact wave solutions often offer both fundamental insights and further clarification for wave approaches.

Materials and Methods: In this study, the exact solutions to the time-fractional model of ion sound and Langmuir waves are investigated within the (CD), utilizing the modified extended tanh-function method. Central to this approach is the use of the Riccati differential equation, which allows for the generation of multiple distinct wave solutions, thus expanding the traveling wave solution of models.

Results: The proposed method generates novel exact solutions expressed through hyperbolic, trigonometric, and rational functions within the nonlinear model. Graphical illustrations are provided to visualize the physical behavior of these solutions, demonstrating the effects of parameter variations. Mathematica software is employed to perform complex calculations, generate graphical representations, and validate the precision and reliability of the results.

Discussion and Conclusion: The study demonstrates the success of the proposed method in solving fractional-order problems, highlighting its effectiveness in advancing our understanding of wave dynamics. The solutions obtained are distinct from those previously published in the literature, offering novel contributions to the field. Furthermore, this methodology has the potential to enhance future studies of fractional derivatives across various scientific domains.

Key Words: Modified Extended Tanh-Function Technique, Conformable Derivative, Ion sound and Langmuir Waves Equation, Exact Solution.

INVESTIGATION OF VINEYARD HOUSE CONSTRUCTION ON AGRICULTURAL LANDS İN ADIYAMAN CENTRAL DİSTRİCT FOLLOWİNG THE FEBRUARY 6, 2023 EARTHQUAKES

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ABSTRACT

Introduction and Purpose: The February 6, 2023 earthquakes caused extensive structural damage in central Adıyaman, prompting many residents to seek safe and alternative living spaces in rural areas. This shift has led to a significant increase in the use of agricultural lands for vineyard house construction. This study examines the vineyard houses, both existing and planned, built on agricultural lands in the neighborhoods of Altınşehir, Alitaşı, Paşamezrası, Karegöl, and Börgenek within Adıyaman's central district.

Materials and Methods: In the neighborhoods and villages within the study area, agricultural parcels subdivided for vineyard house construction were identified using satellite imagery obtained from the General Directorate of Land Registry and Cadastre (TKGM/Parcel Inquiry system). These parcels were individually analyzed to identify the existing vineyard houses and to assess those planned for construction based on the subdivisions within the parcels.

Results: In Altınşehir, 54 vineyard houses currently occupy 114 717.9 m² of agricultural land, with the number projected to reach 130 if all parcels are fully developed. In Alitaşı, 16 vineyard houses are located on 89 776.82 m² of agricultural land, which could increase to 44 with full development. Paşamezrası, the largest area with 520 774.08 m² of agricultural land, hosts 158 vineyard houses, a number that could rise to 534 if all parcels are utilized. Karagöl contains 8 vineyard houses on 24 628.84 m² of agricultural land, with the potential to increase to 19. In Börgenek, 43 vineyard houses currently occupy 447 108.16 m² of agricultural land, and this number could expand to 490 upon full development.

Discussion and Conclusion: The findings indicate that the demand for vineyard houses surged following the earthquake, accelerating the conversion of agricultural lands for residential use. However, this trend poses significant challenges, including the reduction of agricultural land, a decline in agricultural production, and negative ecological impacts. Preserving agricultural lands and establishing sustainable land management practices are crucial to addressing these issues. Local governments and relevant authorities must develop effective policies to balance agricultural production and vineyard house construction while mitigating the long-term effects on the agricultural ecosystem.

Key Words: Agricultural Parcels; Vineyard Houses; February 6, 2023 Earthquake; Land Use; Sustainability

ELECTRICITY GENERATION APPROACHES USING DIFFERENT TURBINE TYPES IN HYDROELECTRIC POWER PLANTS

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ABSTRACT

Introduction and Purpose: Hydraulic energy, as a renewable energy source, is widely utilized in the country and stands as the second-largest energy source for electricity generation after thermal installed capacity. Hydroelectric power plants operate on the principle of converting the potential energy of water into kinetic energy, which drives the turbine, and subsequently transforming the resulting mechanical energy into electrical energy through alternators. This study examines different types of turbines used in hydroelectric power plants in detail and explains the fundamental approaches to their application in electricity generation. By adopting a comparative perspective on turbine designs and operating principles, the study aims to highlight the advantages of various turbine types in terms of performance and efficiency.

Materials and Methods: Reaction turbines (Francis, Kaplan) and impulse turbines (Pelton) are commonly used in dams. Since the characteristics of each hydroelectric power plant differ, the turbines, generators, and electrical equipment also vary accordingly. The selection of the most suitable turbine type for a specific site depends on the site's characteristics, head/flow rate values, and specific speed values. For this reason, the study conducted a detailed review of the literature on four different turbine models used in hydroelectric power plants. Based on the findings from the literature, a comparison was made between the turbine models, identifying their advantages and disadvantages. As a result, the energy production characteristics of hydroelectric power plants an essential energy generation model for our country were determined in relation to the turbine models used.

Results: Turbine types used in hydroelectric systems are classified as high, medium, and low-head machines. At 100% flow rate, the efficiencies of these turbines are generally similar, but between 60% and 70% of the flow rate, Kaplan and Francis turbines tend to have higher efficiencies. In these turbines, the highest efficiency can exceed 90% in small-scale plants. At 65% of full flow, the efficiencies of Pelton, Kaplan, and Francis turbines are generally high, while the efficiencies of Banki-type turbines are lower. Therefore, higher efficiencies can be achieved by using Banki-type turbines at lower flow rates. In high-head locations, Pelton turbines can achieve efficiencies above 90% when operated at 60% of the full flow rate.

Discussion and Conclusion: As a result of the research, it was concluded that the efficiency curves of Kaplan and Pelton turbines do not change significantly from approximately 25–30% flow rate to 100% flow rate. However, the efficiency curves of Francis turbines remain constant between 70–85% of the flow rate. Despite having the lowest efficiency, Banki-type turbines are considered superior to other turbine types due to the flatness of their efficiency curve, which results in stable efficiency at partial loads.

Key Words: Electrical Energy; Energy Production; Hydroelectric Power Plants; Turbine Types

A NEW APPROACH: DENOISING USING TWO STREAM MODELS SUPPORTED BY FUSION TECHNIQUES

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ABSTRACT

Introduction and Purpose: The digital images are sourced from medical, digital, satellite, optical and thermal systems. In this context, a clean image is critical. The denoising process with preserving the details and structure of image is a common solution. The conventional denoising methods may be inadequate. This study addresses the denoising process by combining wavelet convolutional neural networks and autoencoder models, using an attention mechanism and adaptive fusion. The goal of the study is to enhance images with different types and amounts of noise.

Materials and Methods: In this study the BSD300 dataset, containing 300 high-resolution images, was augmented with Gaussian, Speckle, and Poisson noise at SNR levels of 0, 10, and 20. This study intoduces two approaches: Method 1 (MWCNN+AE+AdaptiveFusion) and Method 2 (MWCNN+AE+AttentionFusion). In both, multiscale feature extraction is performed via MWCNN in the first stream, while global structures are acquired with the autoencoder in the second stream. After training with 1800 images, the two methods were evaluated with PSNR and SSIM metrics.

Results: The proposed methods outperformed conventional approaches for all noise types and SNRs. Method 1 (MWCNN, AE and Adaptive Fusion) produced the highest PSNR and SSIM values on Gaussian noise at SNR level of 10, while Method 2 (MWCNN+AE+AttentionFusion) performed best on corrupted images with a SNR of 0, achieving PSNR = 31.985 and SSIM = 0.827.

Discussion and Conclusion: The proposed methods have shown robustness to various noise types and improved image quality preservation. Compared to traditional methods, these models offered improved performance and computational efficiency. Future work will focus on the application of these methods to more complex datasets with real-world scenarios, and the proposed methods will be evaluated using state-of-the-art evaluation metrics.

Key Words: Image Denoising, Deep Learning, Wavelet, Autoencoder, Fusion

DRİVİNG DİVERSİTY: HOW INDİAN CORPORATE LAW CHAMPİONS SDG 5

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Abstract

Introduction and Purpose:

This study investigates the alignment of the Indian corporate legal framework with Sustainable Development Goal 5 (SDG 5) – Gender Equality, focusing on the Companies Act, 2013. It evaluates how legal provisions, such as the mandatory appointment of women directors under Section 149(1) and CSR programs targeting empowerment of women, contribute to achieving SDG 5. The study aims to assess corporate practices, judicial interpretations, and legislative requirements that promote gender inclusion. The primary objectives are to analyze measures addressing gender-based challenges in the corporate sector, explore the role of corporate governance in fostering workplace equity, and identify gaps in the implementation of gender-inclusive policies.

Materials and Methods:

A doctrinal research methodology was adopted, involving a detailed examination of statutory provisions, case laws, and corporate initiatives to evaluate their effectiveness in promoting gender inclusivity. The study critically analyzes the efficacy of these measures in addressing issues like tokenism and unconscious bias, which hinder meaningful representation of women in senior leadership roles.

Results:

The findings reveal that while Indian company law has introduced significant provisions to encourage gender diversity, persistent challenges such as inadequate enforcement, latent biases, and token representation remain significant barriers. Women continue to face limited representation in top-level corporate positions despite mandatory policies.

Discussion and Conclusion:

The study highlights that achieving gender equality in the corporate sector requires stronger enforcement mechanisms, comprehensive inclusivity training, and the integration of gender equality into broader corporate governance policies. These steps are essential to ensure substantive rather than symbolic compliance with legal mandates. In conclusion, promoting gender diversity through Indian corporate law is not only a legal and ethical necessity but also a critical driver of economic innovation and sustainable development, furthering the primary objectives of SDG

Key Words: SDG 5, Gender Equality, Indian Corporate Law, Companies Act, 2013, Gender Inclusivity

TOPOLOGICAL AND BIOMECHANIC OPTIMIZATION OF CUSTOMISED HIGH POROUS NOVEL Ti6Al4V SPINAL CAGE

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ABSTRACT

Introduction and Purpose: Interbody fusion procedures are popular treatment methods for diseases like degenerative disk disease, spondylolisthesis and spinal stenosis. Spinal cage implants are used to restore intervertebral height and stability in interbody fusion treatments. These implants are mostly in a cube or a rectangle shaped geometry and manufactured from various materials like PEEK and Ti6Al4V alloy. The variations in the geometry of the human anatomy and the rectangle shape of the implants can cause some problems like the generation of pressure points which can damage the bone and cause further damage. Also, the uneven surface of the bone can cause shifts in the placement of the implant which can alter the intervertebral height. This study presents a customized high porous novel spinal cage implant to overcome said issues.

Materials and Methods:

Design of spinal cage; Open source STL files of L1 and L2 vertebrae were obtained for the implant design process. A conforming implant geometry was designed with CAD methods. The resulting geometry was shelled in a particular manner to achieve a flexible structure and mounting brackets for the screws were added. The central core and the outer shell of the implant were separated for optimization and imported into nTopology software. Periodic Gyroid TPMS unit cells were utilized to create an optimized cellular structure considering both osseointegration and mechanical strength. The upper and lower inner core was modified with said structure. In the end,

three distinct implant designs were obtained: full solid body, flexible implant geometry and optimized gyroid implant geometry.

Analysis: The implant designs for Ti6Al4V material, were imported to ANSYS software for structural finite element analysis under 900N static compression load for comparison of the mechanical strength. Tetrahedral mesh was selected for the analysis and maximum stress and strain were determined.

Results: It was possible to achieve %11.1 and %37.5 percent weight difference with flexible and gyroid implants respectively when compared to the solid implant. The compression simulation results from finite element method indicated that the designs achieved suitable strength for surgery. The maximum stress value was below the yield strength of the material.

Discussion and Conclusion: This study presents a novel customized porous Ti6Al4V spinal cage implant design and topological optimization process. Implant geometry was modified with gyroid structure for lightweighting applications and high possibility of improved osseointegration. It was observed that the maximum stress was below the yield strength of the material and approximately 38% of weight reduction was obtained which could reduce stress shielding effect for the implant.

Key Words: Topological optimization, Mechanical strength, Spinal cage Finite element Analysis, Ti6Al4V

BIOLOGICALLY ACTIVE PLANT COMPOUNDS AND THEIR MECHANISMS OF ACTION: REVIEW

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ABSTRACT

Introduction and Purpose: Numerous studies conducted over the past few decades have confirmed that active compounds isolated from plants have multiple biological effects, including antioxidant, antimicrobial, anticancer, antiallergic, and anti-inflammatory properties. The primary focus of phytochemical research has been on phenolic compounds and their potential applications in medicine, cosmetics, pharmacy and agriculture.

The aim of this work is to highlight the significance of biologically active components isolated from plants and to clarify their mechanisms of action at the cellular level, with the goal of contributing to the development of plant-based antimicrobial and antioxidant agents.

Materials and Methods: In this scientific paper, we present the research results on biologically active compounds from plants and their mechanisms of action at the cellular level to summarize this field of study and, in part, contribute to the development of biologically active plant-derived compounds. During the database search, we used the following keywords: "biologically active plant compounds," "antimicrobial activity," and "antioxidant properties of plants."

Results: Plants are characterized by a mixture of various active mechanisms with different pharmacological profiles, allowing them to affect multiple diseases, unlike synthetic drugs, which are designed to inhibit or stimulate a single pharmacological pathway. The antimicrobial potential of essential oils and plant extracts is due to the presence of many pharmacologically active compounds, and their mode of action on bacterial cells depends on the concentration of the active substance, the type of microorganism, and the structure of their cell wall. Biologically active

compounds isolated from plants are associated with antioxidant activity in biological systems, as they play an important role in the absorption and neutralization of free radicals.

Discussion and Conclusion: In recent years, significant efforts have been made to isolate and examine biologically active compounds from plants and their antioxidant and antimicrobial properties. Special attention has been given to the mechanisms of action of these compounds on microbial cells. Biologically active compounds affect the transmembrane pH gradient and membrane integrity of microbial cells, causing leakage of intracellular contents, disruption of transport and energy production processes, as well as the respiratory chain, and play an important role in the absorption and neutralization of free radicals. A review of the literature concludes that the plant world represents an inexhaustible source of biologically active compounds with antimicrobial and antioxidant properties, which should continue to be studied to contribute to the development of plant-based antimicrobial and antioxidant agents.

Keywords: Biologically Active Compounds, Antimicrobial Properties, Antioxidant Activity.

OPTIMIZED TASK OFFLOADING FOR IOT USING DEEP Q-NETWORKS: BALANCING LATENCY AND ENERGY CONSUMPTION

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Abstract

The Internet of Things (IoT) is growing fast, which is creating challenges for computing and energy. IoT devices produce lots of data and use a lot of processing power, which can slow things down and waste energy. Task offloading is a solution, but existing strategies often don't optimize latency and energy consumption. However, offloading to another opens up new security and privacy vulnerabilities. Cloud computing, the emerging trend technology is a solution that can help overcome security and privacy issues. This paradigm has emerged as a promising solution to address these challenges by enabling data processing, storage, and achieving objectives regarding trust management and incentive mechanisms. This paper suggests a new way of offloading tasks using a deep Q-network (DQN) to balance important metrics. The proposed framework optimizes real-time task offloading decisions using the DQN's learning capabilities, improving latency and energy consumption. . The proposed algorithm is given as the solution for the research problem. We also compare the proposed DQN algorithm with the best strategy. We show how the proposed DQN framework works in different IoT scenarios. Our results show that choosing the right strategy is important for IoT applications. Finally, we highlight the open research challenges and future direction.

INDEX TERMS: Task offloading, Deep Q-networks (DQN), Internet of things (IoT), Energy consumption, Latency, Fog, Cloud Computing .

HISTORICAL FIGURES IN DOUKAS' “HISTORY OF BYZANTIUM”

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ABSTRACT

Doukas is an important Byzantine historian who witnessed the period of the Byzantine Empire between 1341-1462. The full name of the famous historian who shed light on the last period of Byzantium is Konstantinos Doukas. Doukas recorded his observations about the era in which he lived in detail in his work Historia Byzantina (Byzantine History). Doukas's History of Byzantium covers the important developments between the XIVth and XVth centuries, especially the fall of Constantinople. He also examines the role of historical figures in the events of this period.

Doukas' History of Byzantium provides important information about the last years of the empire and its collapse, but this information is subjective as it reflects Doukas' personal views. The work deals with many factors such as the collapse of Byzantium, the crisis of the throne, social problems, the Ottoman threat, and economic problems from a critical perspective. Although Doukas's evaluations are criticized by academic circles for being subjective, it is a source of history in terms of conveying the political, social and cultural situation of the last period of Byzantium based on observations.

Doukas's time coincides with the rise of the Ottomans and the Byzantine civil wars, and he witnessed the last years of Byzantium and its collapse. As Doukas' most important historical narrative, the work also sheds light on Turkish history in terms of the fall of Constantinople in 1453 and the historical figures involved in these events. The work analyzes in detail the historical figures on the Byzantine and Ottoman thrones. Among these figures, Yıldırım Beyezid, Murat II, Mehmet II stand out as important figures in terms of Ottoman history; Kantakouzenos VI, Manuel Palaiologos II, Konstanrinos I stand out as important figures in terms of Byzantine history. It is also noteworthy that the work includes the Prophet Muhammad, the leader of the Islamic world.

Keywords: Doukas, Byzantium, Constantinople, Historical figures.

DESIGN AND ANALYSIS OF NATURE-INSPIRED VORTEX GENERATORS: BIOMIMETIC APPROACHES AND AERODYNAMIC PERFORMANCE

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ABSTRACT

This study focuses on the geometric and aerodynamic analysis of vortex generators inspired by nature, presenting a detailed examination of designs derived particularly from aquatic creatures in light of existing literature. The methods used in the development of vortex generators with a biomimetic approach were evaluated by focusing on flow regimes at low Reynolds numbers, and the fluid dynamics characteristics of natural structures, such as fish fins, were investigated. Specifically, innovative vortex generators inspired by tuna fish provide significant contributions to design approaches in this field, highlighting the effects of these biomimetic inspiration sources on geometric optimization and aerodynamic performance.

Computational Fluid Dynamics (CFD) simulations, frequently utilized in the literature, along with smoke and oil visualization techniques used in wind tunnel experiments, play a critical role in examining vortex formation mechanisms, flow separations, and high lift performance with low drag. Furthermore, velocity profiles and turbulence intensities obtained through constant-temperature hot-wire anemometry, as well as force measurements, are among the key methods used to quantitatively compare the aerodynamic performance of biomimetic designs.

In this context, it is stated that the biomimetically inspired vortex generator structure, designed by the author based on the tuna fish, aims to fill existing gaps in the literature but has not yet been experimentally tested. This study draws attention to the potential of biomimetic approaches in aerodynamic applications, serves as a guide for future experimental research, and emphasizes the importance of nature-inspired vortex generators in engineering applications.

Key Words: Flow Control, Vortex Generator, Aerodynamic Optimization, Biomimicry.

AN INTELLIGENT MODEL TO PREDICT DIABETIC RETINOPATHY CLINICAL DECISION SUPPORT SYSTEM USING IMAGE PROCESSING TECHNIQUES

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Abstract : A Decision Support System (DSS) is software-based system designed to help decision-makers in making cognizant decisions, scrutinizing data, unravelling problems. It integrates data, models, and user-friendly interfaces to provide insights and support semi-structured or unstructured decision-making processes. DSS is extensively used in various fields, including business, healthcare, and logistics, to improve efficacy, elevate conclusions, and shrink ambiguity in decision-making. By leveraging tools like predictive analytics and simulation, it helps users explore possible scenarios and make data-driven choices.This research is proposed due to the ever rising global health challenge of Diabetic Retinopathy which is a serious vision threatening complication of Diabetes.

From the previous studies it has been identified that DR classification is challenging due to the presences of multiple features and characteristics in the retinal fundus images. The process of data augmentation, feature selection, feature extraction are very important to prepare the image for classification which has not been considered in many existing models. Based on the Literature Review and after analyzing the research gaps, three objectives have been identified for this research. The first objective is to segment the fundus images by using Mathematically Modified Fuzzy C-Means Clustering Techniques. The second objective is to optimize the feature selection and feature extraction process by hybridizing Whale Optimization Algorithm (WOA) and Weight Optimized Particle Swarm Optimization Algorithm (WOPSO). The third objective is to develop and Clinical Decision Support System Model for diagnosing Diabetic Retinopathy using Modified Deep Neural Networks. The main objective of this technique is to enhance the accuracy of diagnosing Diabetic Retinopathy. Furthermore the techniques of feature selection and feature extraction would assist in better interpretability of the model.

The research methodology will comprises of three phases beginning with the Fundus image preprocessing by applying Gabor Filter and Gaussian Filter for filtering the noise and smoothing of the edges.

Keywords : Decision Support System, Diabetic Retinopathy, Fuzzy C-Means, Whale Optimization, Weight Optimized Particle Swarm Optimization.

A GENERAL OVERVIEW OF ARTIFICIAL INTELLIGENCE APPLICATIONS IN PHARMACOLOGY

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ABSTRACT

Artificial intelligence (AI) applications, which have made rapid inroads into many areas in recent years, are also used in the field of pharmacology in various regions, including synthesis, development or discovery of new drugs from substances with drug potential by examining chemical structures, effects of drugs in preclinical and clinical applications, adverse reactions or interactions between drugs, pharmacokinetic predictions covering the stages from absorption to excretion of drugs, personalized drug applications and drug toxicity. On the other hand, with the continuous increase of data related to drugs in the field of pharmacology and toxicology, the processing of big data (Big data-BD) to make predictions about the effectiveness or safety of medicines by analyzing these large volumes of data has also become an important use of artificial intelligence in this field. For the purposes listed, mainly ligand-based models (DNN-Deep Neural Network, LBS-Location-Based Services and RMD-Random Matrix Discriminant, PCA-Principal Component Analysis, LR-Logistic Regression, NB-Naïve Bayes), structure-based models (RFScore-V3, AGL-Score, Kdeep, PLEC-Protein-Ligand Extended Connectivity, AEVs-Atom Environment Vectors, IGN-Interaction Graph Net and GraphscoreDTA), models such as RF (Random Forest), SVM (Support Vector Machine), MGA (Multi-task Graph Attention) in pharmacokinetics, QSAR model (Quantitative Structure-Activity Relationship), ANNs (Artificial Neural Network), CNNs (Convolutional Neural Network) etc. for structure-activity relationships are used. This article provides information about artificial intelligence and its uses in the field of pharmacology.

Key Words: Artificial Intelligence; Pharmacology; Drug; Data

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND METACOGNITION: THE MODERATING ROLE OF MINDFULNESS

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ABSTRACT

Introduction and Purpose: This study examines the relationship between personality traits and metacognition, focusing on the moderating role of mindfulness. It investigates the effects of demographic variables such as age, gender, education level, and therapy experience on this relationship and explores mindfulness as a regulatory factor.

Materials and Methods: Data were collected from 162 Turkish participants (46 men, 116 women) using an online survey. The Five Factor Personality Trait Scale, Metacognition Scale-30, and Mindfulness Scale were employed along with demographic information forms. Parametric (Independent Groups T-Test) and nonparametric (Kruskal-Wallis Test) methods were used for statistical analyses.

Results: Significant differences were observed in personality traits subdimensions—extroversion, agreeableness, conscientiousness, emotional instability, and openness—based on gender. Men scored higher on extroversion and openness, while women scored higher on emotional instability. No significant gender-based differences were found in mindfulness or metacognition scores. Therapy history influenced mindfulness and emotional instability dimensions significantly.

Discussion and Conclusion: The findings highlight the complex relationships among personality traits, metacognition, and mindfulness, demonstrating the potential of mindfulness as a regulatory factor. These insights provide valuable directions for developing psychological interventions aimed at enhancing self-awareness and adaptive cognitive processes.

Keywords: Metacognition, personality traits, five-factor model, mindfulness.

DETERMINATION OF ANTIBACTERIAL AND CYTOTOXIC ACTIVITIES OF ROOTS OF *FERULA ELAEOCHYTRIS*

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ABSTRACT

Introduction and Purpose: Nowadays, plants and their derivatives have gained attention due to their biological activities. The genus *Ferula* belongs to the Apiaceae family and contains about 170 species, which are found from Central Asia to the Mediterranean and North Africa. *Ferula elaeochytris* also grows naturally in the wastelands of the mountainous regions of the eastern Mediterranean coast of Türkiye. Its pharmacological effects are well documented in both veterinary and human practice. Traditionally various species of genus *Ferula* have been used as sedatives and in the treatment of rheumatism, arthritis, digestive disorders, dizziness, headaches, and toothache. Several studies have demonstrated the therapeutic use of *Ferula* and its antibacterial, anti-cancer, anti-ulcer, anti-diabetic, and anti-inflammatory effects.

Materials and Methods: In this study, the roots of *Ferula elaeochytris* were extracted with methanol. Total phenolic content and the antioxidant activity of the extract were determined according to Folin:Ciocalteu and DPPH method, respectively. The antibacterial activity was also evaluated against *Staphylococcus aureus, Pseudomonas aeruginosa* and *Escherichia coli*. SH-SY5Y, T-24, and HeLa cell lines were used to determine the *in vitro* cytotoxic activity via MTT assay.

Results: Total phenolic content was 333.64 mg GAE/g, and the inhibition % was 43.82% for the antioxidant activity. The inhibition zone diameters were measured as 7.53 mm, 7.21 mm and 9.03 mm for *S. aureus*, *P. aeruginosa* and *E. coli*, respectively. The IC_{50} values of the extract against SH-SY5Y, T-24, and HeLa cells were calculated as 59.50 µg/ml, 208.74 µg/ml, and 202.83 µg/ml, respectively.

Discussion and Conclusion: The methanol extract of the roots of *Ferula elaeochytris* had more cytotoxic activity on SH-SY5Y neuroblastoma cell line than T-24 bladder cancer and HeLa cervical cancer cell lines. The extracts showed higher antibacterial activity against *E. coli* than *S. aureus* and *P. aeruginosa.* In conclusion, the extracts demonstrated high cytotoxic and antibacterial activity.

Keywords: *Ferula elaeochytris*, total phenolic content, antioxidant, antibacterial, cytotoxicity

EFFICIENT REMOVAL OF DICLOFENAC FROM WASTEWATER USING MESOPOROUS CALCIUM SILICATE AND IRON-LOADED MESOPOROUS CALCIUM SILICATE

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ABSTRACT

Introduction and Purpose: Wastewater pollution is a critical environmental issue in the worldwide. The increased consumption of pharmaceuticals, such as diclofenac (DCF), a widely used non-steroidal anti-inflammatory drug (NSAID), poses significant threats to aquatic ecosystems and public health. DCF is frequently detected in urban wastewater, surface water, and even drinking water sources, and its endocrine-disrupting properties make it harmful even at low concentrations. Therefore, the removal of endocrine-disrupting chemicals from wastewater has become an important area of research. Adsorption is an effective method for this purpose, and stable, efficient, and cost-effective adsorbents are crucial. This study investigates the both adsorption properties of mesoporous calcium silicate (MCS) and iron-loaded mesoporous calcium silicate (Fe@MCS) materials for DCF removal.

Materials and Methods: MCS and Fe@MCS adsorbents were synthesized using a hydrothermal method with CTAB as a pore-directing agent, TEOS and calcium nitrate tetrahydrate are used as as silicon source and calcium source, respectively. Characterization of the adsorbents showed an increased surface area (from 534 m^2/g) upon iron loading, while both total and mesopore volumes decreased, and micropore volume increased. FTIR spectra confirmed the presence of characteristic silicate functional groups (Si-O-Si, Si–OH, and Si-O) in both MCS and Fe@MCS, which remained intact after iron loading. The effects of contact time, initial concentration, and temperature on adsorption were examined, and adsorption kinetics and isotherms were modeled.

Results: Kinetic studies revealed that the pseudo-first-order kinetic model best described the adsorption process for both adsorbents at two different concentrations. Isotherm data were more consistent with the Langmuir isotherm model, and the maximum adsorption capacities (qm) for MCS and Fe@MCS were 9.084 mg/g and 10.23 mg/g, respectively. Adsorption capacities decreased with increasing temperature, indicating an exothermic and spontaneous adsorption process.

Discussion and Conclusion: The results demonstrate the potential of MCS and Fe@MCS as effective adsorbents for DCF removal from wastewater. Iron loading enhances adsorption capacity, and both materials exhibit favorable adsorption kinetics and isotherm behavior. Further studies on optimizing these materials for practical applications are recommended.

Key Words: Mesoporous calcium silicate; Iron-loaded adsorbents; Wastewater treatment

A CASE STUDY ON THE ALIGNMENT OF ACADEMIC PROGRAMMING COURSES WITH INDUSTRY NEEDS: CURRENT STATUS AND IMPROVEMENT STRATEGIES

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ABSTRACT

Introduction and Purpose: The evolving technological demands of today's business world necessitate reevaluating the alignment of academic programming courses with industry needs. This study analyzes how well academic curricula meet the requirements of the technology-driven job market, focusing on the compatibility between university programming courses and industry-standard tools and languages. It also examines the strengths and weaknesses of academic education in preparing students for professional life, drawing on the experiences of students and graduates. The study offers recommendations for improving curriculum design through collaboration with industry.

Materials and Methods: A mixed-methods research approach was employed, combining quantitative and qualitative data collection processes. Surveys targeting professionals in the technology sector and content analyses of job postings served as primary data sources to evaluate the alignment between academic curricula and industry needs. Furthermore, programming course content from universities was thoroughly reviewed, and interviews focusing on graduates' experiences were conducted. The collected data were systematically analyzed to assess the sufficiency of academic curricula in meeting industry expectations.

Results: The findings reveal that academic programming courses are effective in imparting fundamental theoretical skills but fall short in incorporating modern software development tools and programming languages. The technological gaps faced by graduates in the workplace emphasize the need for curricula to better align with industry requirements. This highlights the importance of increased collaboration with the industry and greater emphasis on practical training.

Discussion and Conclusion: The research findings indicate significant deficiencies in academic curricula in addressing the dynamic needs of the business world. While foundational theoretical knowledge provides a strong base, the lack of training in practical skills and modern technologies hinders graduates' adaptation to professional environments. These results underscore the necessity for universities to collaborate closely with industry and to continually update curricula to equip students with both technical and practical competencies. The study emphasizes the importance of redesigning educational policies and prioritizing practical training.

Keywords: Programming languages, Technological skills, Career readiness, Curriculum

INFLUENCE OF SINTERING REGIME ON THE MORPHOLOGY OF AL BASED HYBRID PARTICULATE REINFORCED COMPOSITE

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Abstract

This study is conducted to study effect of sintering path on properties of Al matrix composites. For experimental study Al matrix is supported by two different ceramic powders including TiC and ZrO_2 at different weight ratios 5 % and 10 %, respectively. To provide homogeneous distribution ingredients are ball milled for ten minutes at 100 rpm. Then powder mixtures are compacted by a hand press under a 300-ton load. After compaction Φ25 x 5 mm sized composite specimens are sintered by 4 different heating paths. SEM and XRD analyzes are conducted on powder mixtures. And properties of the composites are investigated by means of density, porosity, hardness, microhardness and optical microscopy. As a summary, the biggest hardness and experimental density values are observed at Specimen 2 which is sintered by a two-step heating route starting from 300 °C. And the Specimen 1 which is sintered by one step heating shows the biggest porosity and lowest hardness values.

Keywords: Powder Metallurgy, Sintering, Hybrid Particulate Reinforced Composites, Al Based Composites.

EFFECT OF EJECTOR PUNCH ON TOOL LIFE AND COST EFFECTIVENESS IN ULTRA-HIGH STRENGTH STEEL PUNCHING PROCESS

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ABSTRACT

Introduction and Purpose: Lightweighting is an effective method of reducing energy consumption and emissions. The use of ultra-high-strength steels reduces the overall weight of the car body, thereby improving fuel efficiency. Punching these steels is very difficult due to the higher shear forces required. Slug pulling is a major problem that occurs when a sheared slug is caught on the punch face and then carried along. There are different types of solutions to remove the slug from the punch. The purpose of this article is to investigate the effect of an ejector punch on tool life and cost effectiveness when punching ultra high strength steels.

Materials and Methods: In the punching process, a 1.6 mm thick sheet of Docol 1500M martensitic steel was sheared by a press with a capacity of 330 tones. For each hole punching operation, a force of 69.5 kN was applied for 2 seconds. A cylindrical punch and an ejector punch were used to compare the tool life and cost effectiveness. The material of both punches is Uddeholm Caldie ESR and the coating of the punches is Duplex-Variantic. The cutting clearance for hole punching is 0.15 mm. Both punches continued the shearing process until punch failure with visual inspection intervals of 500 holes. When determining the number of punches, it was taken into account that the cylindrical and ejector punches break during the punching process or damage the mould by collecting burrs in the holes. Based on a production run of 100000 units, a cost benefit of €924.56 is anticipated, both in terms of reduced punching costs and reduced downtime.

Results: According to the experimental study, tool life results for both cylindrical and ejector type punches were obtained and reported. The number of holes punched to critical failure was obtained as 22083 and 70624 for cylindrical and ejector punches respectively. It is clear that there is a significant improvement in tool life. This situation was attributed to the perfect removal of the

slug from the punch surface, which prevents possible tool failure or hole surface quality problems. The improvement in tool life led to a reduction in tool maintenance and replacement costs.

Discussion and Conclusion: Tool life and cost effectiveness of ejector punch for hole punching of ultra-high strength steel were firstly investigated in the literature. The obtained results showed that ejector punch is a very effective solution especially for tool life and cost effectiveness during hole punching process of ultra-high strength steel.

Key Words: Hole punching; ejector punch; tool life; cost effectiveness

DETERMINATION OF OPTIMAL METHODS IN THE SYNTHESIS OF SILICON CARBIDE FOAM

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ABSTRACT

In this study, the production parameters of casting filters were examined by coating a polyurethane sponge with silicon carbide (SiC), known for its excellent mechanical and chemical properties. Various methods for producing SiC filters were explored, and the replication method was selected due to its simplicity. During the experiments, polyurethane sponges with different porosities were coated with varying amounts of water, bentonite, gum arabic, and SiC, followed by pyrolysis and sintering. The samples were characterized using weight loss measurements, compression tests, the Archimedes method, and SEM analysis. The results indicated that the highest weight loss, 46%, occurred when 30 mL of water was added to a 30 ppi polyurethane sponge. In the sintering tests, the highest strength of 472 kPa was achieved at a sintering temperature of 1,450 ºC. The same sample showed optimal results with a density of 3.101 g/cm³ and a porosity of 1.24%. At the conclusion of the study, the successfully produced samples were utilized in real casting processes and were found to be effective in filtration.

Key Words: SiC, Foam, Synthesis

EVALUATION OF LIQUEFACTION POTENTIAL AND SEVERITY INDEX DEPENDING ON EARTHQUAKE GROUND MOTION LEVELS

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ABSTRACT

During earthquakes, liquefaction occurring in the soil can lead to damage or even collapse of structures. The condition of soil liquefaction can be analyzed using various evaluation criteria, such as the Liquefaction Potential Index (LPI), Liquefaction Severity Index (LSI), Safety Factor (Fs), and Liquefaction Probability (PL). In this study, the liquefaction condition of the soil was evaluated and compared in terms of LPI and LSI by using earthquake parameters representing different earthquake ground motion levels (DD1, DD2, and DD3). For the analysis, the Moment Magnitude (Mw) values were selected as 8, 7.5, and 7, respectively, for DD1, DD2, and DD3 levels, while the Peak Ground Acceleration (PGA) values were selected as 0.6g, 0.3g, and 0.12g. Regions with "Low" and higher liquefaction risk levels, in terms of both LPI and LSI, were evaluated. It was found that the reduction in earthquake magnitude and ground motion acceleration significantly decreased the liquefaction risk according to both LPI and LSI criteria. However, for all earthquake ground motion levels, more regions were classified as at risk of liquefaction according to LPI compared to LSI. At the DD1 level, 15 regions were categorized as "Very High" risk by LSI, whereas this number was 107 for LPI. The results indicate that liquefaction risk is almost negligible at the DD3 level. At the DD1 and DD2 levels, LPI provides a more conservative assessment compared to LSI. These findings highlight how different evaluation methods can yield varying results in identifying liquefaction risks, emphasizing the importance of selecting appropriate methods for accurately analyzing soil liquefaction.

Key Words: Liquefaction of soil, Liquefaction Potential Index, Liquefaction Severity Index, level of earthquake ground motion, Peak Ground Acceleration

A STUDY ON THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY ADVERTISEMENTS ON CONSUMER BEHAVIOR

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ABSTRACT

Introduction and Purpose: Corporate social responsibility (CSR) advertisements can yield several benefits, including enhanced corporate image, increased customer satisfaction, and higher sales revenue, as consumers become more aware of CSR practices. The aim of this study is to examine consumer reactions to the messages conveyed in CSR advertisements. To achieve this, a real advertising film featuring a CSR message developed by a dishwashing detergent brand, which addresses the social issue of water scarcity, is utilized. This study investigates the impact of participants' skepticism toward the advertisement on their attitudes toward both the cause and the product presented. Additionally, it seeks to uncover the relationships between attitudes toward the cause and product in the advertisement and the intentions related to both the cause and the product.

Materials and Methods: The study sample consisted of male and female consumers over the age of 18, representing various occupations and educational backgrounds. Participants were shown an advertisement film for a dishwashing detergent brand that conveyed a social responsibility message. Data were collected using an online survey method distributed through social media platforms and email. Participants for the survey were selected using a convenience sampling method, resulting in a total of 248 respondents included in the analysis. Confirmatory factor analysis was employed to assess the validity of the research model, while path analysis was utilized to test the hypotheses.

Results: As a result of the study, skepticism toward the advertisement does not affect attitude toward the cause but negatively impacts attitude toward the product. Attitude toward the cause positively influences both attitude toward the product and intention toward the cause; however, it does not significantly affect intention toward the product. Additionally, it was found that attitude toward the product positively affects both intention toward the product and intention toward the cause. Finally, the study concluded that intention toward the cause has no effect on intention toward the product.

Discussion and Conclusion: It is essential to establish a strong connection between the social cause and the product to promote attitude and behavioral changes in consumers regarding the product, ultimately aiming to mitigate the effects of environmental issues. In this context, the product should be assessed holistically, considering all its components, including brand elements, brand image, product features, product benefits, packaging, and labeling.

Keywords: Corporate Social Responsibility, Skepticism Toward Advertising, Attitude Toward Cause, Attitude Toward Product, Behavioral Intentions.

THE IMPACT OF LIFESTYLE MODIFICATION ON CARDIAC FAILURE IN HYPERTENSIVE PATIENTS

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Cardiac failure is a serious and potentially life-threatening condition where the heart is unable to pump enough blood to meet the body's needs. Hypertension is a major risk factor for cardiac failure. While medication and medical treatment are essential, lifestyle changes can also play a crucial role in preventing and slowing the progression of the condition.

Research has shown that lifestyle factors such as physical activity, diet, smoking, alcohol consumptions, poor sleep quality and can significantly impact the development and progression of cardiac failure in hypertensive patients. A sedentary lifestyle, a diet high in salt, sugar, and saturated fats, smoking, and chronic stress can all contribute to the development of cardiac failure.

To prevent and manage cardiac failure, hypertensive patients should make healthy lifestyle choices. Regular physical activity, such as brisk walking, cycling, or swimming, is essential. A healthy diet that is low in salt, sugar, and saturated fats, and high in fruits, vegetables, whole grains, and lean protein sources is also crucial.

Weight management is also important, and hypertensive patients should aim to maintain a healthy weight through diet and exercise. Stress reduction techniques, such as meditation, yoga, or deep breathing exercises, can also help to reduce stress, promote good sleep and overall health and well-being. Smoking and alcohol cessation is also essential.

In conclusion, cardiac failure is a serious condition that can significantly impact quality of life. By making healthy lifestyle choices together with pharmacological treatment, hypertensive patients can reduce their risk of developing cardiac failure and improve healthcare burden their overall health and well-being.

Keywords; Cardiac failure, Hypertension, Lifestyle changes, Physical Activity, Healthy diet

HOW HEALTH OF URBAN PONDS AFFECTS ECOSYSTEM SERVICES?

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Abstract

The previous study frequently addressed how presence of wetland and larger blue space play role toward ecosystem service support but how the health or urban ponds could affect different functional ecosystem services to the urban dwellers were less explored. The present study therefore, tried to do this.

For this work, 50 ponds with different morphological characterts and located in different morphological zones of a small but densely populated urban unit (English Bazar Municiaplity (EBM)) in Eastern India was taken into consideration. Data relating to health and ESV was major collected directly through field investigation. Simple compositing technique was applied for health mapping and ESV was estimated using Rapid Assessment of Wetland Ecosystem Services (RAWES) of the Ramsar Convention. Finally, effect of health of the pond was assessed with Rank correlation based association analysis and ordinary least square regression analysis.

Study explored that 30% pond irrespective of its morphological character possesses good health category and 24% are characterized with poor health. Some smaller ponds even within urban core and densely populated area were found good in health. About 20% ponds with larger in size recorded high ESV. Provisioning services were found more in larger one but other services were found good even in the smaller ponds. OLS clarified that good health status positively influences service supports up to 85% cases. This finding advocates for the restoration of health for more service support.

Keywords: Urban pond, Pond's health, Health Component, Ecosystem service estimation, and Linking health and services.

IMPACT OF THE AUTONOMOUS VEHICLES ON PARTICULATE MATTER EMISSIONS

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A meaningful source of air pollution is due to vehicular emissions that are the consequence of different factors, such as technologies of vehicles and driving habits. Moreover, pollutant agents, especially particulate matter, are shown to have negative effects on human health and overall life quality.

This talk aims to assess the positive impact of autonomous vehicles on air quality. Precisely, we start from real traffic data collected from experiments that shows stop-and-go waves for a fleet of twenty vehicles circulating on a ring road. We prove that the presence of a unique autonomous vehicle, on which control strategies are run, dampens traffic waves, with consequent reductions in particulate matter emissions. To further quantify the potential benefits, we employ an atmospheric chemistry model, based on ordinary differential equations, for the evaluation of concentrations of pollutants at ground level. Such analysis is completed by partial differential equations that model the horizontal diffusion of the pollutant agents, whose dangerous effects are shielded by green barriers. The achieved outcomes indicate real advantages either in improvements of traffic conditions or sustainability.

PERFORMANCE EVALUATION OF GREEN UNIVERSITIES IN TURKIYE

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ABSTRACT

Introduction and Purpose: Sustainability is a priority among today's global concerns, and universities play a significant role in their development. Higher education institutions should serve as a model for society by embracing concepts of environmental, economic, and social sustainability, according to the green university idea, which underlines the importance of such institutions. This study aims to assess the environmental performance of universities utilizing UI GreenMetric indicators and to evaluate these performances through the Data Envelopment Analysis (DEA) approach.

Materials and Methods: This study evaluated the sustainability performance of 97 universities in Türkiye using UI GreenMetric 2023 indicators, which include setting & infrastructure, energy & climate change, waste, water, transportation, and education & research. These six indicators constitute the outputs of the constant returns to scale based data envelopment analysis model, while a dummy input variable is incorporated into the model.

Results: In accordance with the findings of the investigation, only sixteen out of a total of ninety-seven universities were deemed to be efficient, and the average efficiency value was determined to be 0.817.

Discussion and Conclusion: In order to improve the performance of ineffective universities, effective universities that can serve as a reference for improving their own performance and the target output values that they need to achieve were identified. This approach provided institutions with a roadmap to enhance their sustainability performance. In addition to shedding light on the establishment of sustainability policies and contributing to the complete evaluation of green university performances, this research also provides strategic improvement ideas for poor-performing institutions and adds to the evaluation of green university performances.

Key Words: Green University; Performance Evaluation; Data Envelopment Analysis

INCLUSION OF THE SMART BUILDING CONCEPT IN NATIONAL-SCALE CORPORATE REPORT

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ABSTRACT

Introduction and Purpose: Integrating the concept of 'smart', which has become widespread with Industry 4.0, into the management processes of countries is an inevitable necessity to create sustainable and efficient management models of the future. In this direction, guiding changes in public institutions and national policies are vital. Türkiye, as a country trying to adapt to Industry 4.0 technologies, has made adopting the smart concept a strategic goal for the last 15 years. Smart cities, the first application area in this process, include issues such as energy efficiency, automation and digitalization. In this transformation process, which started with smart cities, making buildings, which are of great importance in urban life, smart as well is a critical point in terms of energy saving and sustainability. Implementing these buildings will enable the improvement of both individual living spaces and community services and support long-term development goals.

Materials and Methods: This study aims to examine the concept of 'Smart Building' in our country within the scope of national-scale institutional reports. The words 'smart', 'smart building/structure', 'automation', 'energy', 'saving', 'integrated' and 'sustainable' were determined based on international and national definitions of smart buildings. Then, the number of repeated uses of these words in the content of '2020-2023 National Smart Cities Strategy and Action Plan', '2015-2018 Information Society Strategy and Action Plan' and 10th/11th/12th Development Plans were reached.

Results: According to the analyses and the data obtained, the concept of 'smart building' is included in the reports of the institutions examined. However, in the '2020-2023 National Smart Cities Strategy and Action Plan', both the concept of 'Smart Building' and its components are included in a wider scale compared to other reports. This document is the most comprehensive document on smart cities.

Discussion and Conclusion: Over the years, the words 'smart', 'smart building', 'energy' and 'sustainable' in reports have increased significantly the number of occurrences. This increase is an important indicator of progress towards becoming an advanced and sustainable society. In Türkiye's strategic stance, how these concepts are dealt with is of great importance to increase national competitiveness and improve social life quality.

Key Words: Smart Buildings; Building Automation; National Scale; Corporate Reports

THE INVESTIGATES HOW CONTROLLER-LEVEL CACHING CAN ENHANCE RAID-5 PERFORMANCE BY REDUCING WRITE RESPONSE TIMES AND OPTIMIZING SYSTEM EFFICIENCY IN TRANSACTION PROCESSING ENVIRONMENTS

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ABSTRACT

This paper explores the performance optimization of RAID-5 disk arrays through the implementation of controller-level caching. RAID-5 is widely recognized for balancing reliability and performance but suffers from high update overhead due to parity computations, which significantly impact write operations. Using extensive simulations and empirical analysis, we examine the effects of caching parity and user data at the controller level in transaction processing environments. The results reveal that strategic cache utilization can enhance write performance, reducing response times by 11% to 19% under various workload scenarios. Additionally, we present guidelines for designing optimal caching strategies tailored to diverse transactional workloads, ensuring improved system efficiency without compromising data integrity. This research provides a foundation for developing high-performing and reliable RAID-5 configurations, making them more suitable for online applications with stringent performance requirements.

Keywords: RAID-5, Disk Arrays, Write Performance, Controller Cache, Parity Data, Response Time, Transaction Processing, Update Overhead, System Reliability, Simulation Analysis

TRAFFIC FLOW PREDICTION IN VANET USING ML

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Abstract

This paper investigates the performance of the Simulation of Urban Mobility (SUMO) simulator to predict traffic flow in a Vehicular Ad-Hoc Network (VANET). The objective is to develop a model capable of forecasting traffic conditions in real-time by analyzing vehicle data, including speeds, densities, and flow patterns, simulated within a VANET environment. The project leverages machine learning algorithms such as Random Forest, Support Vector Machines (SVM), and Long Short-Term Memory (LSTM) networks to predict traffic flow and congestion at various intersections and road segments. The data for training and testing the models is collected through SUMO simulations, which model the traffic dynamics of an urban area. The predictive model aims to provide valuable insights for optimizing traffic management, enhancing routing strategies, and improving overall road safety in VANETs. Results demonstrate the effectiveness of machine learning in predicting traffic patterns and adapting to changing conditions in real-time, offering a promising solution for smart transportation systems. This approach can potentially aid in reducing traffic congestion and improving the efficiency of vehicular networks.

Keywords: SUMO, VANET, SVM, LTSM, Random Forest

TUNA PROCESSING WASTE SERVES AS A POTENTIAL NUTRITION RESOURCE IN AGRICULTURAL APPLICATIONS

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Abstract

Tuna and its products are one of the main export items, ranking just after shrimp and catfish in Vietnam. For tuna processing, fillet products are generally the primary output, while a significant portion of the residues (up to approximately 50 - 60%) is usually discarded as fish processing waste (FPW) or used as a low-value material. Disposal of FPW not only causes significant economic losses but also contributes to environmental issues for the tuna processing industry and processors. It is evident that FPW is a valuable raw material that could generate benefits and become an important factor in promoting the sustainability of Vietnam's seafood processing sector. This study aimed to evaluate the potential of utilizing yellowfin tuna processing waste to produce an added-value product, fish fertilizer (FF), and to conduct agricultural trials using FF as an organic nutritional resource for cultivating crops. The results showed that FF was successfully produced from yellowfin tuna dark meat, containing nutritional elements N, P, and K at 3.78%, 0.21%, and 0.54%, respectively. Preliminary agricultural trials on various edible vegetable species demonstrated positive effectiveness, comparable to the application of commercial fertilizers. Our findings reveal the potential of utilizing yellowfin tuna dark meat as a suitable material for producing fish fertilizer, offering a promising solution for agricultural applications.

Keywords: Agriculture, dark meat, fish fertilizer, utilization, yellowfin tuna.

EVALUATION OF UŞAK-ATAPARK IN TERMS OF LANDSCAPE DESIGN PRINCIPLES

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ABSTRACT

Introduction and Purpose: Green lands in cities are decreasing due to population growth and uncontrolled construction although these lands also help improve the urban environment and the physical and psychological well-being of urban people. Therefore, the purpose of this study is to evaluate Uşak-Apapark in terms of landscape design principles.

Materials and Methods: This study was conducted in Atapark, which is located within the administrative and adjacent area borders of Uşak Municipality. Within the scope of the research, fieldwork was firstly carried out in Atapark. In the field work, the park was evaluated in terms of size, suitability for age group, furnitures, disabled use, security, and plant status.

Results: Classic wooden seating elements were preferred in the park. It was observed that they were sufficient. The number of trash cans was insufficient, and they are not modern or sustainable. There are two large playgrounds in the park. Rubber material was preferred for the floors of these areas. Equipments in playgrounds were sufficient. There was an exercise area, sports fields and a skating rink in the park. The parking lot in the park was very small and inadequate. This situation causes great traffic congestion. There is a walking path with red rubber material and bicycle path with a concrete surface in the park. There are tactile floors for the disabled. There is no lighting problem in the park. It is quite sufficient in terms of plant diversity. In the park, a team works around the clock.

Discussion and Conclusion: The park's existing infrastructure was sufficient, especially in terms of playgrounds and sports facilities; however, the insufficient number of trash cans and the small parking area caused to traffic congestion. Therefore, it is recommended to add modern and sustainable trash cans and expand the parking area.

Key Words: Uşak; Green Land; Landscape Design, Furniture

VIETNAMESE LAW ON ENSURING SECURITY AND CONFIDENTIALITY OF ELECTRONIC TRANSACTIONS IN BANKING ACTIVITIES

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Abstract: The rapid development of information technology and the legal recognition of electronic transactions in today's era have allowed Credit Institutions (CIs) to diversify the methods of providing banking products and services to customers through electronic means, known as electronic banking. With the characteristic of operating without being constrained by space and time, the emergence of electronic banking has brought numerous benefits to customers, banks, the economy, and society, aligning with global trends. However, this development trend also creates many risks, particularly in terms of security and confidentiality of information related to electronic banking, as banks are always a target for technology-related crimes, and current security mechanisms have not kept pace with the rapid advancement of technology. Furthermore, the legal framework governing this issue is still under review, modification, and supplementation to adapt to the new context: the 2024 Law on Credit Institutions requires CIs to ensure the security and confidentiality of electronic transactions in banking activities (Article 140); Decision No. 2345/QD-NHNN dated December 18, 2023, on implementing solutions for safety and security in online payments and card payments; the Draft Circular replacing Circular No. 35/2016/TT-NHNN dated December 29, 2016 (amended by Circular No. 35/2018/TT-NHNN dated December 24, 2018) guiding CIs on ensuring safety and security for providing banking services and intermediary payment services on the Internet; have increased the risk of incidents when using banking services through electronic channels. In this article, the author analyzes regulations on ensuring the security and confidentiality of electronic transactions in banking activities by CIs, points out some existing limitations and shortcomings, and proposes solutions to improve Vietnam's legal framework to help protect customers' rights when participating in electronic banking transactions in the increasingly digital era.

Keywords: Security; confidentiality; electronic transactions; banking; electronic banking;

REMOVAL OF METHYLENE BLUE BY SILVER NANOPARTICLES/NANOCOMPOSITES

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ABSTRACT

Introduction and Purpose: Green synthesis is of great importance today because it is an environmentally friendly and sustainable method. This method minimizes the use of toxic chemicals and benefits from renewable resources. For example, it uses biological species, such as more plants and algae. In addition, the method supports production processes that do not harm the environment. In this study, nettle was preferred because silver nanoparticles obtained from nettle by biological methods offer effective solutions in a wide range of applications with environmentally friendly production thanks to their antimicrobial, antioxidant and catalytic properties. Although nanoparticles are effective in adsorption applications due to their high surface areas, they have been limited due to stability problems and recycling difficulties. By making them composite with natural polymers, such as alginate and chitosan, we increase the advantages of these materials. For this reason, composites, such as alginate and chitosan have become both more stable and more advantageous in terms of reuse. Composite structures have provided effective results in the removal of some heavy metals and dyes by both strengthening mechanical strength and increasing adsorption capacities. Chemicals, such as methylene blue, especially those used in industrial processes, pollute water resources and have toxic effects on aquatic organisms when released directly into the environment.

Materials and Methods: Nettle extract was obtained by green synthesis method at room temperature. The obtained extract was combined with 0.1mol/L $AgNO_3$ solution. It was left to stir for about 3 hours. Then it was left to settle. The synthesized silver nanoparticles (AgNPs) were separated by filter paper and dried in the oven. The obtained particles were combined with chitosan and alginate to form AgNPs-chitosan and AgNPs-alginate composites, respectively.

Results: As a result of the research, it has been shown that the adsorption capacities of AgNPs, AgNPs-chitosan composite and AgNPs-alginate composite for methylene blue are found to be 84%, 88% and 90%, respectively. These results clearly show that composites offer a superior solution in terms of both efficiency and sustainability.

Discussion and Conclusion: It has been shown that composite materials have higher adsorption capacity and better results than nanoparticles in removing methylene blue dye. These results clearly show that composites are a superior solution to nanoparticles in terms of both efficiency and sustainability.

Key Words: Nettle; Green synthesis; removal of methylene blue; adsorption

BIOTECHNOLOGICAL IMPORTANCE OF PREDATORY BACTERIA: CASE OF *BDELLOVIBIRO BACTERIOVORUS*

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ABSTRACT

The increase of drug resistance resulted from high synthetic antibiotic uses conduct scientists to the research of new biologically based antibiotics. Predator bacteria are feeding from other cells for their multiplication. Among these bacteria, *Bdellovibrio* and like microorganisms are known for their ubiquitous distribution and their attack on other bacterial cells, with the majority are belonging to Gram-negative. This Gran-negative bacterium is isolated from soil and water environment and their pathogenicity against high organisms' cells is not yet observed. These features make this bacterial group more interested to be used in biotechnological uses like in waste management, probiotic and antibiotic manufacturing for alternative treatment, and food-borne pathogen control. In this review, by focusing on *Bdellovibiro bacteriovorus*, we aimed to resume the biotechnological importance of these predator bacteria which can constitute a base for future studies in this topic. This study is based on new studies conducted using *Bdellovibrio bacteriovorus* as living antibiotic for the treatment of infectious diseases, as pesticide against plant pathogen bacteria, and as antibiotic for the treatment of wasted environments.

Key-Words: *Bdellovibrio bacteriovorus*; predator bacteria; antibacterial agent

VIVACORTEX TURKEY'S DIGITAL QUIZ PLATFORM FOR EDUCATION

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ABSTRACT

VivaCortex is an innovative and interactive online quiz platform designed for teachers and students. Aimed at accelerating digital transformation in education, VivaCortex utilizes gamification elements to enhance student motivation and reinforce knowledge. The platform allows teachers to easily create quizzes, manage exams, track student participation in real-time, and provide instant feedback. Meanwhile, students test their knowledge in a fun and competitive environment, engaging more deeply in the learning process while competing with their peers. VivaCortex fosters interaction at every stage of education, making learning processes more dynamic and efficient. Students test their knowledge in an enjoyable way, while teachers manage their educational processes more effectively in the digital environment. One of the key features of VivaCortex is that it is entirely developed in Turkey and focuses on local educational needs. With Turkish language support and compatibility with the national curriculum, VivaCortex is designed to work seamlessly with the Turkish education system. Additionally, customizable quiz options for all age groups allow teachers to offer the most suitable quizzes to their students. VivaCortex promotes equal educational opportunities by providing digital learning tools for all students, regardless of regional differences. The platform is not just an educational tool but also a strong alternative in Turkey's digital education landscape, raising educational processes to a more enjoyable, effective, and modern level. VivaCortex aims to equip students with skills for the future while contributing to digital transformation in education.

Keywords: VivaCortex, Online Quiz Platform, Digitalization in Education, Gamification, Real-Time Feedback

SMART E-WASTE MANAGEMENT PLATFORM FOR SUSTAINABLE RECYCLING

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ABSTRACT

E-waste (electronic waste) is a rapidly growing environmental issue today. Unused or broken electronic devices are often discarded, causing significant harm to nature. The E-Waste Management Platform is designed to address this problem by providing a solution. This platform ensures the proper collection of electronic waste and its integration into the recycling process. Users can easily view the nearest e-waste collection points on a map based on their location. Additionally, they are informed about waste separation guides and proper disposal methods. Another key feature of the system is its reward mechanism that encourages users. Users earn points for submitting e-waste, which they can redeem for various campaigns. This way, individuals contribute to the environment while being motivated. On the technology side, a user-friendly web interface or mobile application can be used. Google Maps API provides map integration, and a simple database (SQL) can be used to track waste records. The platform can be developed using easy-to-learn languages such as Python or PHP. Through this project, environmental awareness will increase, waste management will become more efficient, and the recycling process will accelerate. This application, which benefits both individuals and society, could be an important step toward a more sustainable future.

Keywords: Environment, Recycling, Sustainability, Responsibility

RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND BURNOUT AMONG MOROCCAN SECONDARY SCHOOL STUDENTS

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Abstract

The purpose Academic burnout refers to profound emotional, cognitive, and physical exhaustion, which physical activity interventions can mitigate. In Morocco, empirical evidence regarding the correlation between physical activity and school burnout is scarce, particularly at the secondary school level. The current study explores the potential mediating effects of body mass index (BMI) on the impact of physical activity on academic burnout.

Method 1197 participants from public secondary school students from Rabat-Sale-Kenitra Region (Morocco) with a mean age of 17.15 years (SD=1.328), including 59.1% of girls, responded to an Arabic-translated version of the Maslach Burnout Inventory-Student Survey (MBI-SS), the International Physical Activity Questionnaire Short-Form (IPAQ-sf), and standardized questions to calculate BMI. The IBM SPSS statistics 26.0 and IBM SPSS Amos 24 were used to analyze the data.

Results The results indicated a detrimental association between academic burnout, BMI, and physical activity levels. An inverse correlation was observed between physical activity and academic burnout, with BMI functioning as a mediating factor in this dynamic.

Conclusion Regular physical activity mitigates academic burnout by achieving a healthier BMI. These findings can be explored to propose suitable strategies for mitigating academic burnout in secondary school.

Keywords Academic burnout, Secondary school, Physical activity, MBI-SS, IPAQ, BMI, Morocco.

ANALYSIS OF STUDIES ON ENVIRONMENTAL GOVERNANCE PERCEPTION IN LOCAL GOVERNMENTS: TRABZON AND ÇANAKKALE EXAMPLES

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ABSTRACT

Introduction and Purpose: Environmental problems are increasingly dragging life on earth into an unfamiliar situation. In the past, international conferences assigned homework to each country individually to tackle environmental problems. However, in the process until today, the fight against environmental problems is not limited to the emphasis on cooperation between countries, but also on the necessity of actors within the country to act in cooperation. It is important that local governments fulfill their duties against environmental problems in order to identify environmental problems and intervene quickly. This is because local governments are an important area and actor of both the governance approach and environmental governance processes, which is a specific type of governance approach. The ability to carry out environmental governance processes depends on local governments having the necessary and sufficient set of tools and characteristics. The first one is that local governments have an effective organizational structure to realize environmental governance, and the other one is equipped personnel who know environmental governance processes and can perceive and manage them correctly.

Methods: In this study, the data obtained from two different studies on Trabzon Metropolitan Municipality and Çanakkale Municipality will be analyzed.

Results: Both studies emphasize the importance of struggle at local, national and global levels in environmental governance processes and point to the existence of a structure that is ready for environmental governance, albeit minimal. On the other hand, the inadequacy of the relevant institutional structure and some deficiencies in the perception of environmental governance are also emphasized.

Discussion and Conclusion: In order for environmental governance to be a tool for solving environmental problems, first, a governance culture must be established in every field; second, citizens should pressure local governments regarding environmental governance; third, local government personnel and departments must be capable of sustaining environmental governance processes; and finally, local governments must receive the necessary support from central governments.

Key Words: Governance; Environmental Goveranance; Local Governments.

DETERMINATION OF NATURAL RADIOACTIVITY IN THE SEDIMENTS OF THE MEDITERRANEAN SEA, TÜRKİYE

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ABSTRACT

The present study aimed to measure the activity levels of the radionuclides ^{226}Ra, ^{232}Th, and ^{40}K in marine sediment samples from the Mediterranean Sea in Türkiye. The radioactivity values were determined using high-resolution gamma-ray spectrometry with a 40% p-type HPGe detector. Sediment samples were collected from the seafloor surface in 2022 using a Van Veen grab from nine locations, with depths ranging from 4.2 meters at the shallowest site to 16.5 meters at the deepest. To prepare the samples for radioactivity measurements, they were dried at 105°C in an oven for 15 hours to remove any moisture. After drying, the samples were ground, homogenized, and placed into cylindrical plastic containers. They were then weighed and sealed with parafilm to prevent the escape of radon gas. To ensure the secular equilibrium of ^{226}Ra decay products, the samples were kept for at least 30 days before measurements were taken. The activity concentration of ^{226}Ra was calculated based on the gamma-ray energies of ^{214}Pb (295.2 keV and 351.9 keV) and ^{214}Bi (609.3 keV). To determine ^{232}Th, the relevant gamma-ray energies of ^{208}Tl (583.2 keV) and ^{228}Ac (338.4 keV and 911.2 keV). The activity concentration of ^{40}K was determined using the gamma-ray energy of 1460.8 keV. The radium equivalent activities of the samples were calculated, and the results were analyzed in terms of radiological assessment.

Keywords: sediment, natural radioactivity, HPGe, gamma ray

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THE IMPORTANCE OF BEING READY FOR POSSIBLE EARTHQUAKE INCIDENTS FOR ANIMAL AGRICULTURE

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ABSTRACT

Earthquake is very important threat for animals as well as humans and other living things. As a zoo technician or animal keeper, we have to practice caring and protecting our farm animals before, during, and after an earthquake event. This may include preparing farm animals by securing them in safe structures, providing them with food and water supplies, and ensuring they are protected from potential dangers such as falling debris. In order to do these, we must have an action plan what should be done, before, during and after with respect to protecting them from death, injury, thirst and hunger, consequently production losses.

When an earthquake occurs, farmers must ensure the safety of their animals and take action to keep them secure, but firstly they must protect themselves from this event. Perhaps, they will transfer animals to an open area away from buildings or constructions, ensuring they have free access to water and feed, and monitoring their welfare condition.

After the earthquake incidences were finished, farmers may need to control their animals with respect to liveness, injuries and still needing help for rescuing them their current situations. If they need, the veterinary medications must be done, especially by the reached veterinary personal or zoo technician or competent person, likely, from AFAD. Animals' houses and feed supplies must be controlled for repairing or obtaining to sustain animal welfare, at least, for survival.

To conclude, precautions, when an earthquake happens, are important in keeping animals alive, safe, healthy, and productive.

Keywords: earthquake, farm animals, feed supply, injuries, buildings, welfare, production

APPEARANCE REJECTION SENSITIVITY IN YOUNG ADULTS: A SCALE FOR THE PAKISTANI SOCIAL CONTEXT

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Abstract

People are motivated and prone to evaluate their social and personal worth by comparing themselves to others on characteristics such as physical appearance. Based on these evaluations, a person becomes sensitive to rejection and a fixation with appearance may increase the risk of emotional problems such as social anxiety and depression. The purpose of this study was to create a measure of appearance rejection sensitivity for young adults in Pakistan's social context. In the initial phase of scale development, 26 semi-structured interviews were conducted with both men and women young adults between the ages of 18-25. A pool of 44 items was created based on participants verbatim, among them, 24 items were chosen discarding slang, imprecise, unclear, or colloquialism items and few were merged to make an appropriate statement that overlapped and had the same meaning. All 24 items were approved after validation by 10 specialists based on connection, similarity, or matching themes and piloted on 10 individuals. To determine the psychometric features of the measure, 221 young individuals (85 men, 136 women) between the ages of 18 and 25 were given the Appearance Rejection Sensitivity measure (ARSS) and Depression, Anxiety and Stress Scale (DASS-21) along with a demographic sheet. The ARSS Principal Component Analysis included two distinct factors: Interpersonal Sensitivity and Emotional Sensitivity. Additionally, ARSS was found to have good internal consistency (.93), and test-retest reliability of .74* ($p<0.05$), split-half reliability of.87 and.91 ($p<.001$), and convergent validity of.53 (<p.001). Furthermore, the findings are analyzed in light of the ARSS component structure, demography, and risk factors as predictors of ARSS in a cultural setting. This tool gives a cultural representation of the phenomenon.

Keywords: Appearance rejection sensitivity, Young adults, Psychometric properties, Anxiety, Stress, Depression, Mental health problems

PERFORMANCE ANALYSIS OF BIFACIAL PHOTOVOLTAIC MODULES UNDER VARIED GROUND ALBEDO CONDITIONS: CASE STUDIES FROM MARRAKECH AND AGADIR MOROCCO

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Abstract

Bifacial photovoltaic (PV) modules have gained prominence in the global solar energy market due to their ability to capture sunlight on both sides, achieving 10–30% additional energy generation compared to monofacial systems. This advantage has made them indispensable in diverse applications, including building-integrated photovoltaic and agrivoltaic. The energy gain from bifacial modules, termed "bifacial gain," depends primarily on the rear-side irradiance, the bifaciality factor of the modules, and the ground albedo, which is the most critical influencing parameter.

This study begins with a comprehensive review of bifacial PV technologies, exploring their types, performance factors, available simulation software, and mathematical models. The findings are supported by experimental studies that validate theoretical approaches. A detailed performance evaluation is then presented for bifacial PV systems installed in Marrakech and Agadir, Morocco. Simulations were conducted under varying ground albedo conditions (0.2 to 0.6), highlighting the impact of this factor on bifacial gain. The results demonstrate a significant increase in bifacial gain from 7% to 22% as the ground albedo increases, underscoring the importance of optimizing surface reflectivity in such systems.

This research provides valuable insights into the application of bifacial PV modules in regions with high solar potential, emphasizing the role of ground albedo and offering recommendations for enhancing system efficiency in real-world installations.

Keywords: bifacial, photovoltaic, ground-albedo, irradiance

Disclaimer: Project funded by the ministry of higher education, in the farmework of the LEAP-RE, European Union's Horizon. The views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor the granting authority can be held responsible for them.

COMPARATIVE ANALYSIS OF ENERGY CHALLENGES AND RENEWABLE STRATEGIES IN MOROCCO AND JORDAN

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Abstract

The MENA region faces critical energy security challenges, primarily due to its heavy reliance on imported fossil fuels. Morocco and Jordan exemplify this dependency while striving to transition toward renewable energy solutions. This study investigates the current energy landscapes of Morocco and Jordan, highlighting the innovative strategies deployed to enhance renewable energy integration and reduce external reliance.

Both countries have adopted ambitious policies to promote renewable energy through diverse sources such as solar, wind, and hybrid systems. For instance, Morocco's Noor Ouarzazate complex and Jordan's Shams Ma'an photovoltaic park are flagship projects showcasing regional advancements. Additionally, the Erasmus+ project "Boosting Innovative Solar Energy Technologies and Applications in Mediterranean Countries Education' (INNOMED) involving these two nations alongside other European partners (Italy, Greece, Cyprus and Austria), underscores the commitment to innovation in the field of solar energy. INNOMED fosters the application of cutting-edge solar technologies, including solar energy (PV and solar thermal), hydrogen production, and AI-driven system optimization, while building capacities among students and professionals in close collaboration with the relevenat stakeholders.

This comparative analysis provides a comprehensive perspective on the opportunities and challenges faced by Morocco and Jordan in their renewable energy pursuits. By exploring financial barriers, policy frameworks, and technological innovations, this research outlines lessons for enhancing energy security and promoting sustainable growth in the Mediterranean region.

Keywords: Energy, MENA, Solar, Wind, INNOMED

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ADVANCED METHODS FOR NEUTRON-GAMMA DISCRIMINATION USING SCINTILLATION DETECTORS

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Abstract. Neutron spectrometry using scintillation detectors has gained widespread adoption in radiation detection due to their high efficiency in detecting neutrons over a broad energy spectrum, cost-effectiveness, and straightforward design, which facilitates maintenance and operation. Despite these advantages, a critical challenge lies in accurately distinguishing neutron signals from accompanying gamma radiation. Addressing this challenge, various techniques have been proposed to differentiate neutrons from gamma radiation. This work reviews neutron-gamma discrimination methods using different types of organic scintillators and compares these methods based on their accuracy and the type of detector used. Additionally, potential recommendations for the research community are provided.

Keywords: Neutron-gamma discrimination, Machine learning, Pulse Shape discrimination, Scintillation detectors

DEPICTING THE SIGNIFICANCE OF SOCIAL MEDIA ENTREPRENEURSHIP AS MODERN DAY TOOL FOR NATIONAL DEVELOPMENT: A CASE STUDY OF NIGERIA

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Abstract

In recent times, the depreciating state of business organizations in Nigeria have attracted huge concerns of its citizens. Companies experience stories of bad customer services and disappointing products in its business teraigns. Thanks to digital technology, social media entrepreneurship has emerged as a pivotal driver of innovation, development and market creation. Leveraging the potentials of social media platforms, businesses can trive positively well. According to Simon (2012), business managers have greater access to different audiences, improved products and services, improved customer service, increased patronage, adoption of favorable pricing practices, and foster digital literacy. This paper is a descriptive review of the the impact of social media entrepreneurship on national development. The paper discusses the role of social media in entrepreneurial development. In order to collect relevant data for this paper, questions were carefully constructed and administered to respondents using online Google form. The responses gathered were subjected to reliability analysis. Finally, the paper concludes that social media entrepreneurship is a viable tool for national development, but requires strategic support from economic stakeholders including policymakers, industry leaders and government officials.

Keyword: Social Media Entrepreneurship, Modern Day Tool, National Development.

DESIGN AND DEVELOPMENT OF NOVEL APPORACH FOR FILE SHARING FOR SECURITY USING BLOCKCHAIN TECHNOLOGY

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Abstract:
File sharing is a fundamental aspect of data management, and it is essential for collaboration, communication, and data exchange. However, file sharing systems are susceptible to security threats and data breaches, which can compromise data confidentiality, integrity, and availability. A novel approach for file sharing using blockchain technology is required which would ensures secure and decentralized file sharing. The novel approach for file sharing would use a hybrid consensus mechanism, combining proof-of-work and proof-of-stake algorithms, to ensure network security and prevent malicious attacks.

It would use multi-layer encryption to enhance file security, where files are encrypted at the user level and the blockchain level. The proposed Novel approach would also incorporates smart contract technology for file access control, where users can set permissions for file sharing and access. The proposed approach was developed and tested using a prototype implementation, and the results show that the system is secure, efficient, and scalable. The system also provides a high level of data privacy and security, making it suitable for various applications, including healthcare, finance, and government.

Keywords: Novel Approach, File sharing; Security; Blockchain, Technology

WATER SCARCITY SOLUTIONS

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ABSTRACT:

Water scarcity is an escalating global crisis, impacting over two billion people and threatening food security, economic stability, and environmental sustainability. This paper examines a range of innovative solutions to mitigate water scarcity, organized into three primary strategies: enhancing water efficiency, advancing water recycling and desalination technologies, and implementing integrated water resource management (IWRM). Firstly, improving water efficiency in agriculture is crucial, as it accounts for approximately 70% of global freshwater use. Techniques such as drip irrigation, soil moisture management, and the cultivation of drought-resistant crop varieties can drastically reduce water consumption while maintaining agricultural productivity. These practices not only conserve water but also enhance resilience against climate change. Secondly, the development and adoption of advanced water recycling and desalination technologies offer promising solutions for urban and coastal regions facing freshwater shortages. Innovative wastewater treatment processes can recycle water for non-potable uses, thereby reducing demand for freshwater. Meanwhile, advancements in desalination technology, particularly in energy efficiency and cost reduction,make seawater a viable source of drinking water for many communities. Lastly, IWRM promotes a holistic approach to water management, emphasizing the integration of social, economic, and environmental considerations. This involves engaging stakeholders across sectors to develop collaborative policies and practices that optimize water use, protect water quality, and ensure equitable access to resources.

Keywords: Desalination, Effective irrigation, Drought resistance crop.

BATCH SIZE OPTIMIZATION IN DEEP LEARNING FOR PREDICTING SURVIVAL FROM COLORECTAL CANCER HISTOLOGY SLIDES

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ABSTRACT

Introduction and Purpose: Colorectal cancer (CRC) is one of the most prevalent cancers worldwide, characterized by a variable clinical course and significant heterogeneity. Histological slides of tumor tissue, routinely collected for CRC patients, represent a valuable resource for prognostic analysis. Advances in deep learning enable the extraction of complex patterns from these histological images. This study hypothesizes that state-of-the-art deep learning models can predict clinical outcomes directly from histological slides, focusing on multiclass classification of tissue types and evaluating the impact of batch size on model performance.

Materials and Methods: This study utilized the PathMNIST dataset, consisting of 100,000 histological image patches (NCT-CRC-HE-100K) and 7,180 image patches from a separate clinical center (CRC-VAL-HE-7K). The NCT-CRC-HE-100K dataset was split into training and validation sets (9:1 ratio), and CRC-VAL-HE-7K was used for testing. We implemented three deep learning architectures—EfficientNet-B0, Swin Transformer (swin_t), and ResNet18—to classify nine tissue types: adipose, background, debris, lymphocytes, mucus, smooth muscle, normal colon mucosa, cancer-associated stroma, and colorectal adenocarcinoma epithelium. Model performance was evaluated using accuracy and area under the curve (AUC) metrics showing the effect of different batch sizes on classification performance.

Results:. Performance differences across models and tissue types underscore selecting an appropriate architecture and batch size for specific tasks. ResNet18 (batch size=256) outperformed EfficientNet-B0 and Swin Transformer, demonstrating better generalization capability (auc: 0.97 and acc: 80%) on test dataset, likely due to its efficient feature extraction and scalability. Swin Transformer performed poorly across all metrics and batch sizes due to inadequate training epochs or suboptimal hyperparameter tuning.

Discussion and Conclusion:

This study demonstrates the feasibility of using deep learning models to classify CRC histological images and predict patient outcomes. The results highlight the critical role of model selection and the optimization of batch size in achieving robust predictive accuracy.

Key Words: Colorectal Cancer (CRC); Deep Learning; Histological Image Classification; Batch Size Optimization

THE EFFECT OF GEOMETRIC AND PHYSICAL PROPERTIES OF BICOMPONENT FIBER ON SPLITTING EFFICIENCY

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ABSTRACT

Introduction and Purpose:

Splittable fibers play a vital role in textile applications due to their ability to separate into finer components, thereby enhancing the properties of the resulting materials. This study investigates the influence of geometric and physical properties of fibers on splitting efficiency, with a focus on the differences between standard partial wrap and hollow partial wrap structures. Structural properties were analyzed to assess their impact on the fibers' capacity for effective splitting.

Materials and Methods:

Four types of PP/PET 16-part splittable fibers were tested: 3.3 × 51 mm hollow partial wrap, 3.3 × 76 mm hollow partial wrap, 3.3 × 76 mm solid partial wrap, and 3.3 × 38 mm solid partial wrap. Fibers with diameters below 8 μm were analyzed using scanning electron microscopy (SEM) to evaluate splitting performance following the carding process.

Results:

Significant differences in splitting efficiency were observed among the fiber types. The 3.3 × 51 mm hollow partial wrap fiber exhibited the highest efficiency at 55.55%, followed by the 3.3 × 76 mm hollow partial wrap fiber at 51.11%. The 3.3 × 76 mm solid partial wrap fiber achieved an efficiency of 42.22%, while the 3.3 × 38 mm solid partial wrap fiber displayed the lowest efficiency at 17.78%.

Discussion and Conclusion:

Hollow partial wrap fibers demonstrated superior splitting efficiencies compared to their solid counterparts, emphasizing the role of geometric design in improving fiber performance. These findings suggest the potential for optimizing material properties through targeted fiber design and structural refinements.

Keywords: Splittable fibers; splitting efficiency; hollow partial wrap; solid partial wrap; fiber geometry; carding process; scanning electron microscopy (SEM).

REVERSING BRAIN DRAIN IN TURKEY: A COMPARATIVE STUDY OF INTERNATIONAL POLICIES

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ABSTRACT

Introduction and Purpose: Brain drain, the migration of highly skilled individuals from one country to another, is a significant phenomenon impacting both sending and receiving countries. While it often results in knowledge and talent loss for the former, it offers economic growth, innovation, and enhanced global competitiveness for the latter. This study aims to analyze the brain drain policies implemented by various countries and evaluate Turkey's existing strategies for addressing this issue. The objective is to assess the effectiveness of these policies in attracting skilled migrants and to propose recommendations for improving Turkey's approach in reversing brain drain.

Materials and Methods: The study compared the brain drain policies of four countries—United States, Germany, United Kingdom, and Canada—with those of Turkey. Data were collected through a review of existing literature, government reports, and policy documents regarding skilled migration programs. A qualitative analysis was performed to identify key policy instruments such as visa programs, incentives for skilled migrants, and international collaborations.

Results: The analysis revealed that countries like the United States and Canada have developed comprehensive strategies for attracting skilled workers through programs such as the H-1B visa and the Express Entry system. Germany has implemented the Blue Card for IT professionals, while the United Kingdom has adopted a points-based immigration system. In comparison, Turkey's policies, such as the Development Plans, TOKTEN program, and Turquoise Card, were found to be less comprehensive and lacking in terms of long-term effectiveness. Additionally, Turkey's TÜBİTAK funding programs for researchers abroad were identified as a key initiative, though they were not widely successful in reversing brain drain due to limited scope and visibility.

Discussion and Conclusion: The study concluded that Turkey's current brain drain policies are insufficient when compared to more effective models in other countries. Short-term solutions and limited programs do not provide the necessary environment to attract and retain skilled migrants. Considering these findings, it is recommended that Turkey develop more robust policies, including the establishment of long-term incentives, international partnerships, and effective retention mechanisms to increase its competitiveness in the global talent market.

Key Words: Brain Drain; Migration Policies; Skilled Immigration Policies

INNOVATIONS IN MATERIALS SCIENCE: UNLOCKING THE FUTURE OF TECHNOLOGY AND SUSTAINABILITY

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Abstract

Materials science is at the forefront of addressing some of the most pressing global challenges, from environmental sustainability to advanced technology development. Recent innovations in the design and application of new materials have opened exciting possibilities across industries such as electronics, energy, healthcare, and environmental management. This paper explores four key areas of breakthrough: nanomaterials, smart materials, sustainable materials, and energy-efficient materials.

Advances in nanomaterials like carbon nanotubes, graphene, and quantum dots are enabling new approaches in electronics, sensors, and energy storage, due to their exceptional electrical conductivity and mechanical strength. Similarly, smart materials that exhibit self-healing, shape-changing, or responsive behavior are driving innovations in robotics, healthcare, and infrastructure, offering solutions like adaptive implants and self-repairing buildings. Sustainability is another critical focus within materials science, with researchers developing sustainable materials that reduce environmental impact while maintaining high functionality. Innovations in biodegradable polymers, recycled materials, and green manufacturing techniques are advancing a circular economy where waste is minimized and materials are reused efficiently. Additionally, energy-efficient materials such as thermoelectric materials and light-harvesting coatings are addressing the global demand for renewable energy and energy efficiency.

This paper reviews these emerging trends, discusses their potential applications across various industries, and considers the challenges of scaling these innovations for commercial use.

Keywords: Nanomaterials, Smart Materials, Sustainable Materials, Energy Efficiency, Materials Science, Graphene, Nanotechnology, Circular Economy, Environmental Sustainability.

CORRECTIVE FEEDBACK AND LEARNER UPTAKE IN ENGLISH-VIETNAMESE TRANSLATION CLASSES: AN EXPLORATORY STUDY

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Abstracts:
Corrective feedback plays a critical role in language teaching and learning, but only limited information is available on teachers' practices of corrective feedback on students' translations and their uptake. To fill the gap, this research reports an exploratory study using the qualitative approach to provide insight into corrective feedback strategies used in translation practice classes and the distribution of student uptake. The data were collected from observations by three teachers and 135 students at a university in the Mekong Delta region. The findings show that explicit correction and metalinguistic feedback were used the most and that elicitation and explicit correction were effective in helping students recognize their errors. The corrective feedback stratergies were found to provide insight into the nature of corrective feedback strategies in the context of translation teaching and learning and illustrate how CF strategies are used in English-Vietnamese translation practice classes.

Key words: corrective feedback, learner uptake, translation practice classes, explicit correction

EVALUATION OF THE RELATIONSHIP BETWEEN E-HEALTH LITERACY AND RATIONAL DRUG USE AMONG UNIVERSITY STUDENTS: THE EXAMPLE OF HAKKARİ

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ABSTRACT

Introduction and Purpose: This research was planned to evaluate the relationship between e-health literacy and rational drug use among university students.

Materials and Methods: The data of our study was conducted with 45 students studying at Hakkari University between September and December 2024. Personal Information Form, E-Health Literacy Scale and Rational Drug Use Scale were used to collect the research data.

Results: In this descriptive study, no sample selection was made and it was conducted with 45 students who agreed to participate in the study. The collected data was analyzed with the SPSS 25.00 package program. 45% of the participants were male and 55% were female. 66% were 2nd year students and participants from other classes were also included. 77% of the students stated that they had not received any training on health literacy before. When the health literacy and rational drug use levels were compared according to the socio-demographic characteristics of the participants, it was determined that there was a statistically significant difference in the health literacy and rational drug use levels according to their gender, age and educational status ($p<0.001$).

Discussion and Conclusion: Obtaining information about health from social media tools, which have a large user base, has been identified as a common behavior in our country as well as in other countries around the world. It has been determined that the participants' health literacy level and rational drug use are at a moderate level. Since it is known that rational drug use will be easier to achieve with a sufficient health literacy level, university students should be supported in developing their health literacy levels.

Keywords: Rational drug use, E-Health literacy, University students

EXAMINING NURSING STUDENTS' OPINIONS ABOUT ORGAN TRANSPLANTATION AND DONATION: A QUALITATIVE RESEARCH

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ABSTRACT

Introduction and Purpose: As is the case all over the world, the need for organ transplantation is among the important health problems in our country. Although the number of patients waiting for organ transplantation increases every day, the number of organ donations remains very low compared to the number of patients waiting for transplantation. For this purpose, it is thought that the positive attitudes of nursing students towards organ donation may also affect the number of transplants to be performed in the future.

Materials and Methods: This research was planned using the phenomenological research design, one of the qualitative research methods. The research data were conducted with 21 students studying at the Department of Nursing, Faculty of Health Sciences, Hakkari University between March and December 2024. "Personal Information Form" and "Semi-Structured Interview Form" were used to collect research data.

Results: Regarding thoughts about organ donation, the majority of participants considered organ donation as a direct contribution to human life, a means of saving lives and providing new hope. Participants stated that this action had important consequences at both individual and societal levels. Participants who see organ donation as a social responsibility as well as saving lives emphasized that this issue should be supported by raising more awareness. It has also been stated that organ donation is scientifically valuable due to its contributions to medical developments and the health system. In addition, some participants expressed their personal fears regarding organ donation.

Discussion and Conclusion: Although the majority of participants had not yet donated organs, they stated that they were considering donating in the future. One participant stated that she made a donation via e-government. The common reason given by participants who did not donate was that they did not have the opportunity to do so before or that they had not encountered such a situation. While some participants highlighted the importance of family consent in the donation process, others expressed a positive attitude towards donating in the future. Participants emphasized that awareness should be raised in society to increase organ donation and drew attention to the importance of tools such as education, public service announcements, seminars and information materials to achieve this. Additionally, eliminating religious concerns and social prejudices is seen as an important step in increasing donation rates.

Key Words: Nursing students, Organ donation, Organ transplantation

THE USE OF AI-POWERED CHATBOTS IN PLANNING GASTRONOMY ROUTES ACCORDING TO GASTRO-TOURIST TYPOLOGIES

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ABSTRACT

Introduction and Purpose: The rapid development of technology has led to innovative applications in many sectors, including tourism. Given the increasing importance of personalized experiences in tourism, artificial intelligence (AI) plays a critical role in creating travel plans tailored to individuals' interests, developing route suggestions, and similar tasks. Gastronomy tourism, a subfield of tourism, has significant potential to benefit from AI-powered solutions. AI enables the design of more targeted and satisfying gastronomic experiences by analyzing tourists' interests, tastes, and travel habits. In this context, this study conducts a comparative case study based on Hjalager's four gastro-tourist typologies, using AI-driven chatbots such as Gemini and ChatGPT. The purpose of the study is to evaluate the ability of these two chatbots to create gastronomic routes in Turkey based on the gastro-tourist typologies and compare the responses generated by the chatbots.

Materials and Methods: In the application, the chatbots were asked to create gastronomic routes for four groups representing Hjalager's gastro-tourist typologies (Existentialists, Experimentalists, Recreationalists, and Diversionaries). Identical input queries were directed to the chatbots, and no prior data or information was provided, ensuring the models operated independently of machine learning inputs. The goal was to have the robots generate suggestions based on their algorithms.

Results: ChatGPT suggested the Eastern Black Sea Region and Eastern Anatolia Region for Existentialists, while Gemini proposed Cappadocia and Southeastern Anatolia, offering different routes. Both chatbots recommended Istanbul for Experimentalists.

Discussion and Conclusion: The results indicated that the gastronomic routes created by both chatbots were aligned with the characteristics of Hjalager's typologies. It was concluded that the routes largely met the interests and expectations of each group. ChatGPT, by offering a broader geographical range and more activities, generated more detailed and richer routes for each typology. In contrast, Gemini presented a more limited set of recommendations, focusing on a narrower scope of locations and activities.

Key Words: Artificial Intelligence, Chatbot, Gastronomy Tourism, Gastro-Tourist, Gastronomy Route

UTILIZING ICT TOOLS TO IMPROVE THE DELIVERY OF TVET CURRICULUM: AN INVESTIGATION INTO ENCOURAGING DIVERSE LEARNING STYLES AND INCREAING STUDENT INVOLVEMENT

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Abstract

This paper assesses the use of information and communication technology tools and platforms in the provision of Technical and Vocational Education and Training curricula with the aim of diversifying learning styles to enhance engagement and participation among students in learning. In the light of addressing various learning styles and motivating participation, this paper reviews how ICT can be applied to identify these needs in the TVET environment. The research quantifies instructors and students of the TVET Colleges. Among the objectives of the study are ascertaining how the ICT tools are put to use, the extent they support varied learning styles, and the impact on students' participation and involvement. A total of 55 questionnaires were administered to the participants; 49 were returned. The data were then analyzed using SPSS version 23. The results have indicated the extent to which ICT platforms and technologies support interactive learning environments, customized learning experiences, and enhanced student engagement in the delivery of TVET curricula. Useful implications and recommendations are provided for educators, curriculum designers, and lawmakers in order to maximize the integration of ICT in TVET programs and to guarantee efficient curriculum delivery that meets the needs of diverse learners.

Keywords: ICT Platform, ICT Tools, Learning Styles, Student Engagement, TVET.

VIEWS OF NEW MANAGERS IN TEXTILE ENTERPRISES ON ORGANIZATIONAL SOCIALIZATION IN THE FIRST TWO YEARS

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ABSTRACT

Introduction and Purpose: The purpose of this study is to examine the experiences of managerial level employees who have work experience in the textile sector and who changed their workplaces and started working in another company during the organizational socialization process deeply. People leave their jobs for many reasons such as mobbing, insufficient salary, family problems, health problems, being fired, retirement, not being able to adapt to the environment, concerns about not being promoted, and so on. Most individuals must work in another job because they have to meet the needs of themselves and their families. When starting a new job, one of the important parts of the process is organizational socialization. In this study, the experiences of managers who have been working in a new workplace and have completed two years are discussed by using the organizational socialization model.

Materials and Methods: In this study, the experiences of managers who have been working in a new workplace and have completed two years of service were discussed using the organizational socialization model. In the study, which is prepared by using qualitative research method, snowball (chain) study group sampling method, one of the purposeful study group methods, was used. The first sample was determined in the study and other managers who had experienced the same process were reached through the current sample. In addition to demographic information, 13 research questions were asked to the 16 samples that were reached in the study. The data obtained by the interviews conducted via telephone were analyzed using the content analysis method.

Results: The research consisted of three main headings as finding the expectation, self-evaluation, and new achievements. The data under the heading of being able to find the expectation reveals that expectations were not met, the data under the heading of self-evaluation reveal that managers tried to increase socialization with their own efforts, and the data under the heading of new achievements reveal the belief that socialization will reflect positively on managerial skills.

Discussion and Conclusion: In the research, the factors affecting organizational socialization were identified. Each topic was addressed with subsets and examined in depth. When evaluated as a whole, it was concluded that managers see organizational socialization as an important tool for self-development. This study was limited to the textile sector, having experience before the workplace change and having completed two years in the new workplace. It is evaluated that the research can be enriched, and a contribution can be made to the literature by changing these limitations.

Keywords: Textile Industry, Manager, New Workplace, Organizational Socialization, Snowball (Chain) Working Group.

A BIBLIOMETRIC STUDY ON THE TRENDS OF CHILDREN'S STUDIES IN THE FIELD OF ARCHITECTURE (1975-2024)

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ABSTRACT

Introduction and Purpose: Childhood is a sensitive period during which individuals rapidly develop physical, social, cognitive, and psychomotor skills. Due to their not yet fully mature nature, children are more susceptible to the effects of environmental factors on emotional and mental processes. These environmental factors, ranging from social relationships to physical space, directly shape a child's development. In this context, examining emerging trends in research on physical environment design provides valuable insights into perspectives on children. Within the scope of this research, articles focusing on children were analyzed to assess perspectives on the physical environment.

Materials and Methods: Within the scope of the research, 504 articles in the Web of Science database from 2011 to 2024 were analyzed using a bibliometric approach. The study aims to shed light on future directions for the field by revealing trends and gaps in the literature on the relationship between children and architecture

Results: An examination of the study's prominent results reveals that, after the 2000s, the importance of the physical environment on children's cognitive, emotional, and social development has become more widely recognized, and the subject has gained significant attention in the fields of architecture and design. While most scientific studies in this area have been concentrated in the USA, it is noteworthy that relatively few studies have been conducted in regions such as South America and Africa. It is observed that themes such as environment, design, physical activity, and health are generally central to child-oriented research

Discussion and Conclusion: The importance of the physical environment in child development is increasing, making this field an increasingly significant area of research for the disciplines of architecture and design. As the impact of the physical environment on children's development becomes more widely understood, architecture and design disciplines require more comprehensive approaches to creating child-centered spaces.

Key Words: Child rights, Child development, Urban design, Space design, WoS Database

THE IMPACT OF NAOH PRETREATMENT, THERMAL PRETREATMENT, AND THEIR COMBINED NAOH-THERMAL APPROACH ON BIOMETHANE PRODUCTION FROM THE ANAEROBIC DIGESTION OF WALNUT SHELLS

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ABSTRACT

Anaerobic digestion (AD) of walnut shells (WS) results in only a limited biomethane yield because of their high fibre content, which ultimately represents an essentially nonbiodegradable lignocellulosic biomass. In the present study, thermal (i.e. 50–250 °C), alkaline (i.e. 1–5% w/w NaOH) and combined alkaline-thermal (i.e. 4% w/w NaOH + 150 °C thermal) pretreatment methods have been applied to increase the anaerobic biodegradation of WS. The highest biomethane yields of 159.9 ± 6.8 mL CH4.g VS–1 and 169.8 ± 6.8 mL CH4.g VS-1 were achieved after pretreatment at both 250 °C and with 4% NaOH. After combined NaOHthermal pretreatments, the AD process showed the largest total VFA concentration (i.e. 1280.1 mg Hac L–1) but a relatively high lag phase (i.e. 3.90 days) compared to thermal and NaOH pretreatments alone, from which the highest biomethane yield (i.e. 192.4 ± 8.2 mL CH4.g VS-1) was achieved at the end of the AD process. The highest biomethane yield from the combined NaOH-thermal pretreated WS was corroborated by the corresponding highest SCOD/TCOD ratio (i.e. 0.37 ± 0.02) and the highest lignocellulosic fibre removal (i.e. 41.1 ± 2.7% cellulose, 35.6 ± 1.8% hemicellulose, and 58.7 ± 3.2% lignin). The cumulative biomethane yields were further simulated via a modified Gompertz model. This study provides a promising strategy in the sense that the biomethane yield of WS containing large amounts of lignin can be significantly increased via thermal, NaOH, and combined NaOH-thermal pretreatment methods.

Keywords: Alkaline pretreatment . Biomethane production . Thermal pretreatment . Lignocellulosic removal . Lignocellulosic biomass . Biogas . Alkaline-thermal pretreatment.

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EFFECT OF WALNUT SHELL POWDERS ON THE MORPHOLOGICAL, THERMAL, AND MECHANICAL PROPERTIES OF POLY(LACTIC ACID)

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ABSTRACT

Poly(lactic acid) (PLA) is an environmentally friendly material; however, its widespread application is limited by its brittleness, slow crystallization rate, and low heat distortion temperature. To address these shortcomings, this study incorporated walnut shell (WS) powders into PLA. The influence of WS powders on the morphology, as well as the thermal and mechanical properties of PLA, was thoroughly examined. Characterization techniques such as differential scanning calorimetry (DSC), infrared (IR) spectroscopy, polarizing optical microscopy (POM), and various mechanical property tests were employed. The findings revealed that WS powders significantly affected the morphology and improved the thermal and mechanical behavior of PLA. The tensile strength, impact strength, and elongation at break of the PLA/WS composites initially increased with rising WS powder content, peaking at 0.5 wt%, where maximum values of 51.2 MPa, 23.3 MPa, and 19.0% were observed, respectively. Beyond this concentration, these properties declined. Compared to pure PLA, the composites exhibited reduced spherulite grain sizes and the formation of irregular polygonal structures during crystallization. Additionally, the melting, cold crystallization, and glass-transition temperatures of the PLA/WS composites were lower than those of unmodified PLA.

Keywords: Poly(lactic acid), walnut shells, mechanical properties, composites, thermal properties.

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JUSTICE AND MORALITY

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ABSTRACT

From ancient civilizations to the present day, many thinkers have tried to find the ideal principles of justice by constructing a theory of justice. Throughout history, justice has been equated with revenge, then associated with social structure and individual virtue, then functioned as a means of legitimizing the political system, reduced to maximizing social benefit, and has a meaning based on human autonomy and uniqueness. Undoubtedly, justice is a concept closely related to morality. The search for justice has emerged due to the conflict of human interests. When people live together, disagreements are inevitable. Morality also regulates social relations in a similar way. There are areas where justice and morality intersect. However, there are also areas where justice and morality diverge. This study focuses on the relationship between justice and morality, which is one of the subjects of political theory. The main purpose of the study is to provide people with tools for critical thinking about many moral debates they encounter in their daily lives. First, concepts and theories related to justice are introduced to achieve this purpose. Secondly, throughout the study, the theoretical framework is applied to current moral debates on justice, such as markets, abortion, euthanasia, torture, the death penalty, animal rights, immigration, global poverty, the duty to help, international aid, and humanitarian intervention. It is thought that the theoretical background provided by the study can enable people to develop their own critical thinking about moral debates. This study argues that people can apply current theories of justice to various moral dilemmas they may encounter in daily life.

Keywords: Justice, Morality, Political Theory, Moral Dilemmas

FEMALE-HEADED HOUSEHOLDS' ADAPTATION STRATEGIES TO HERDERS' FARM INTRUSION IN NSUKKA AGRICULTURAL ZONE OF ENUGU STATE, NIGERIA

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Abstract

The study assessed female-headed households' adaptation strategies to herders' farm intrusion in the Nsukka Agricultural zone in Enugu state, Nigeria. Specifically, the study was designed to describe the socio-economic characteristics of the respondent, ascertain the perceived causes of herders' farm intrusion, determine the effects of herders' intrusion in female-headed household agricultural production, ascertain female-headed household adaption strategies to herders' intrusion, and identify the challenges to the adaptation strategies of female-headed to herders' intrusion. A structured interview schedule was used to select 60 respondents for the study while descriptive statistics was used to analyse the data collected. Results show that all (100.0%) respondents indicated that desertification of the Sahel and Northern Region and movement of herders and their cattle southwards is the perceived major cause of herders' farm intrusion in the study area. Similarly, 98.3% each and 95.0% indicated that herd size, lack of political will of the government to arrest and punish the offenders adequately and herders' inability to control cattle are other major perceived causes of herders' farm intrusion respectively. All (100.0%) of the respondents indicate that the destruction of crops, decrease in output and income of farmers, hostilities between herders and farmers, poverty, reduction in farming activities and food insecurity were the major effects of herders' farm intrusion. Similarly, the major adaptation strategies to herders' farm intrusion as indicated by the respondents were: taking up alternative occupation ($\bar{x}$=4.2), purchasing food on credit ($\bar{x}$=4.1), migration ($\bar{x}$=3.9), diversifying crop production with animal production ($\bar{x}$=3.8), taking loans from friends and families ($\bar{x}$=3.5) and community-based natural resource management agricultural resources ($\bar{x}$=3.4). However, the challenges to the adaptation strategies of female-headed households to herders' intrusion were: limited market access after destruction ($\bar{x}$=4.2), limited land availability due to loss of land during conflict ($\bar{x}$=4.2), no legal sanctions of defaulters ($\bar{x}$=4.1), poor government policies and regulations ($\bar{x}$=4.0) and lack of financial capability to startup business ($\bar{x}$=4.1). The study recommended adequate provision of funds and credit facilities to help female household heads. Also, a collaboration of herders and local authorities is needed to develop sustainable resource management plans (rotational grazing, protected corridors etc) that will help improve female-headed households' adaptation strategies to headers' farm intrusion. Also, the government should arrest and punish the offenders adequately while agricultural extension agents should target these women for capacity-building and advisory services.

Keywords: adaptation strategies, female-headed households, herders' intrusion

PROBLEMS AND SOLUTION SUGGESTIONS REGARDING EDUCATION AND TRAINING IN TURKISH UNIVERSITIES IN THE FIELD OF EMERGENCY AND DISASTER MANAGEMENT

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ABSTRACT

Aims: Purpose of this study is to examine the number and curricula of higher education institutions in the fields of "emergency and disaster management and first and emergency aid" in Turkey and to determine the problems in the field and to offer solution suggestions.

Material and Method: For this purpose, the curricula and quota status of higher education programs named "first and emergency aid, emergency aid and disaster management, emergency and disaster management" providing education in this field were examined and reported via internet documents. This descriptive and cross-sectional study was conducted between August and December 2024. The population of the study consisted of associate and undergraduate programs and graduate programs currently providing education in the field in all universities affiliated with the Council of Higher Education in Turkey. If there was more than one associate degree program in the relevant fields at the same university, it was evaluated as a separate program.

Results: It has been determined that emergency and disaster management associate's degree education is provided in 156 associate degree programs of 135 different universities, 48 of which are private foundation university programs in Turkey. A total of 11291 students were placed in this associate degree in 2024. Approximately 27% (3066) of the placed students were placed in distance/open educational programs. In addition, 485 students were accepted to 22 undergraduate programs in 18 different universities. There are 12 master's and three doctoral level programs in postgraduate education. These higher education institutions have very different education/training types and curricula.

Conclusion: It was detected some problems with educational environments and curriculums. In addition, educational and trainer facilities, laboratory and practical training facilities are not at the same level resources. These differences can create problems in educational period and after the graduation. In this study, some problems experienced have been identified in Turkish emergency and disaster management higher educational system and it is recommended that the curricula be brought into line with international standards.

Keywords: Higher education, emergency and disaster management, problems, solutions

ADOPTION OF ANN ALGORITHMS IN OPTIMIZATION PROCESS OF VEHICLE BREAK PAD MANUFACTURING LINE

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Abstract

The manufacturing industry is constantly seeking ways to improve efficiency and reduce costs in order to remain competitive in the market. One area that has garnered attention is the optimization of production processes, particularly in the vehicle brake pad manufacturing lines which are complex systems with multiple variables that can impact the quality and efficiency of the production process. Traditional optimization techniques may not be sufficient to address the intricacies of these systems, leading to suboptimal performance and increased costs. Therefore, there is a need for advanced optimization techniques that can effectively analyze and optimize the various parameters in the manufacturing line. To address the problem statement, this study proposes the adoption of Artificial Neural Network (ANN) algorithms in the optimization process of a vehicle brake pad manufacturing lines. A thorough review of existing literature was conducted. The search focused on studies that have implemented ANN algorithms in manufacturing optimization, particularly in the automotive industry. Relevant articles, research papers, and industrial reports on ANN algorithms were studied and analyzed to identify the various parameters in the manufacturing line, (such as production speed, material usage, and quality control measures) and optimization for improved efficiency and reduced costs. The findings revealed benefits such as production efficiency in terms of optimized production schedules, minimized downtime, and improvement of overall equipment effectiveness (OEE) in brake pad manufacturing lines. It also indicated quality control in terms of detecting defects, predicting potential failures, and ensuring consistent product quality. This also included cost reduction via predictive maintenance, inventory optimization, and energy efficiency improvements, leading to zero downtime. This suggests that the adoption of ANN algorithms can significantly enhance the productivity and profitability of the manufacturing line.

Keywords: ANN Algorithms, optimization process, vehicle break pad, manufacturing line

ADSORPTION CHARACTERISTICS OF MB DYE ON ALGINATE-SEPIOLITE BIOCOMPOSITE BEADS: STUDY OF ADSORPTION, SPEED, AND SIMULATION

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Abstract

This work is based on the preparation of biocomposite beads Alginate-Sepiolite using a simple preparation method. A series of materials was prepared by varying only the mass of the sepiolite in the biocomposite beads (mass of the sepiolite is varied between 0.5–1.5 g in the reaction mixture). The obtained biocomposites were characterized by XRD, FTIR, TGA, XRF, SEM, and EDX and then tested as adsorbents for the removal of Methylene Blue MB dye in an aqueous solution. To study the adsorption behavior of MB dye on biocomposites, several parameters affecting MB adsorption were investigated and discussed. The results obtained showed that the ALG-Sep composite hydrogels were well formed, and their properties were improved depending on the sepiolite content used. The kinetics and modeling results show that the adsorption process follows first-order kinetics, and the Langmuir model. It was found that the adsorption capacity of MB dye increased with the increase of sepiolite in the composite beads, and adsorption was carried out in the following order ALG-Sep(1.5) > ALG-Sep(1) > ALG-Sep(0.5). The maximum absorption capacity of MB dye on ALG-Sep(1.5) was q_{max} = 55.49 mg.g^{-1}. Among the advantages of this biocomposite is that it is prepared from natural and non-toxic sources, and it is easily separable after adsorption, which makes it an excellent candidate for the elimination of organic pollutants in polluted waters.

Keywords : biocomposite, sepiolite, alginate, adsorption, organic polluants.

EVALUATION OF HEALTH LITERACY OF WOMEN LIVING IN RURAL AREAS AND HAVING A NEW BIRTH IN BİNGÖL

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ABSTRACT

Introduction and Purpose: Health literacy is the ability to obtain, understand, and apply health information to make informed decisions. For women who have recently given birth, health literacy is crucial for providing proper care to their newborns, including addressing common health issues and performing first aid at home. In rural areas, where access to healthcare may be limited, this knowledge becomes even more important. This study evaluates the effect of health literacy education on mothers living in rural areas of Bingöl. The aim of this study is to assess how health literacy training impacts the knowledge and skills of women in rural Bingöl regarding newborn care.

Materials and Methods: This quantitative study involved women who gave birth at Bingöl Women's and Children's Hospital and volunteered for the study. Participants, all residing in rural areas, were provided with health literacy education on newborn care in their homes. "Yenidoğan Evde Bakım Bilgisi Anketi" (YEBBA) was used to collect data before and after the education. The questionnaire, designed to assess knowledge about infant care, was administered both before and after the education. Statistical analysis, including t-tests and One-Way ANOVA, was performed to evaluate changes in knowledge.

Results: Results showed a significant increase in mothers' knowledge of newborn care following the education. Participants demonstrated improved skills in infant feeding, hygiene, and early health interventions. These improvements highlight the positive impact of health literacy on newborn care.

Discussion and Conclusion: The study indicates that health literacy education improves maternal knowledge and skills regarding newborn care in rural areas. Expanding such educational programs could enhance public health outcomes and empower mothers to make better decisions for their children's health.

Key Words: Health Literacy; Newborn Care; Parent Education

THE EFFECT OF PARAMETERS ON THE MATERIAL REMOVAL RATE IN THE SINKING ELECTRICAL DISCHARGE MACHINING OF AISI 1.2738 STEEL

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ABSTRACT

Electrical discharge machining (EDM) is one of the most preferred non-traditional manufacturing methods. In this method, material is removed from the surface of the workpiece by creating electrical discharges between the workpiece and the cathode. In addition, due to its non-contact machining, it is possible to machine workpieces regardless of their hardness. It is widely utilized especially in the medicine, automotive and aviation industries, in the machining of difficult-to-cut materials with complex geometries. In addition, this method has a much more important role in the preparation of dies in the mold making industry. AISI 1.2738 is one of the steels used in mold making and also many traditional and non-traditional manufacturing methods are used to machine this steel. The EDM method is preferred with its advantages of high dimensional accuracy and low surface roughness. There are many parameters such as current, voltage, cathode feed rate, pulse-on time and pulse-off time that affect the output values in EDM. In this experimental study, AISI 1.2738 was selected as the workpiece. Three different parameters were determined as voltage, time pulse-off time and cathode feed rate. These parameters were set as 3 levels within themselves and their effects on material removal rate (MRR) were examined. According to the results obtained, it was determined that MRR increased depending on the increase in voltage value. In addition, the experimental results generally show that there is an inverse proportion between cathode feed rate and MRR. The increase in the pulse-off time also negatively affects the MRR as in the cathode feed rate.

Keywords: Electrical discharge machining, Voltage, cathode feed rate, Pulse-off time, Material removal rate

ARTIFICIAL INTELLIGENCE FOR ENHANCING SUPPLY CHAIN MANAGEMENT IN AGRIBUSINESS

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ABSTRACT

The global agribusiness industry faces increasing complexity and challenges in supply chain management (SCM). These challenges arise from volatile market demands, environmental unpredictability, and the necessity to ensure sustainability. Artificial Intelligence (AI) has emerged as a transformative technology to enhance SCM through advanced analytics, real-time decision-making, and optimization. This review explores recent advancements in AI applications for agribusiness SCM, highlighting their theoretical and conceptual foundations. The discussion emphasizes AI's role in demand forecasting, logistics optimization, risk mitigation, and sustainability. Policy implications and recommendations for integrating AI into agribusiness SCM conclude the paper, offering pathways for maximizing its potential.

Keywords: AI; Agribusiness; Cyber-security; Supply chain; Management

DISCOVERING NOVEL SURVIVIN INHIBITORS: A MULTIDISCIPLINARY APPROACH

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Abstract

The urgent need for the development and discovery of new inhibitors targeting survivin (BIRC5), recognized as one of the most tightly regulated genes in tumor cells, underscores the current research focus. Survivin serves as a specific cancer biomarker and represents a promising target for anticancer medications. This study outlines the design methodology employed for crafting a series of novel and selective survivin inhibitors, drawing inspiration from the hydroxyquinoline framework of our previously documented lead compound, MX-106.

Our investigation identifies nine compounds projected to demonstrate heightened inhibitory potential compared to the most potent member within the studied set. In vitro assays confirmed the effectiveness of these compounds in impeding the proliferation of MDA-MB-435 breast cancer cells. Furthermore, the metabolic stability of these compounds surpassed that of the most active molecule within the test set.

Employing 2D-QSAR methods encompassing multiple linear regression (MLR), multiple nonlinear regression (MNR), and artificial neural networks (ANN), alongside molecular dynamics, molecular docking, and ADMET properties evaluation, we assessed the viability of 31 hydroxyquinoline scaffold derivatives of MX-106 as selective survivin inhibitors. Molecular docking simulations were conducted to gauge the stability of compound C24, revealing the establishment of multiple hydrogen bonds with diverse residues. A subsequent 100-ns molecular dynamics simulation affirmed its sustained stability over the entire duration, indicating their potential suitability for further drug development endeavors.

Building upon the insights garnered from molecular modeling outcomes, we devised nine innovative compounds (Pred1, Pred2, Pred3, Pred4, Pred5, Pred6, Pred7, Pred8, and Pred9), anticipated by MLR models to exhibit potent survivin inhibitory activity. We advocate for a comprehensive evaluation of the ADMET properties of these newly proposed compounds, positioning them as promising candidates for pioneering anticancer agents targeting survivin inhibition akin to MX-106.

Keywords: QSAR, tumor cells, Molecular Docking, Molecular dynamic, ADMET properties, selective survivin inhibitors, cancer, MX-106 hydroxyquinoline scaffold.

OPTIMIZATION OF RED CLAY-BASED POROUS GEOPOLYMER SYNTHESIS AND APPLICATION FOR METHYL ORANGE REMOVAL FROM WASTEWATER

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Abstract :

Discharges of various micropollutants (organic and inorganic) into the environment are on the increase. These pollutants are generally toxic, poorly biodegradable, and cause numerous adverse health effects. In this context, this work focuses on the development of a geopolymer based on red clay waste, with a view to its application as an adsorbent in the treatment of an aqueous medium contaminated by Methyl Orange. The synthesized geopolymer was characterized by various analytical techniques. The raw material and the synthesized geopolymers were characterized by various physico-chemical methods. The results of XRF, XRD, and FTIR confirmed the successful synthesis of geopolymer beads, while the SEM/EDX findings revealed the homogeneous surface of the adsorbents. Adsorption tests were carried out by varying various parameters likely to affect adsorption performance, including adsorbent dose, solution pH, contact time, initial Methyl

Orange concentration, and solution temperature. The kinetic study revealed that the geopolymer eliminates Methyl Orange relatively quickly. The pseudo-second-order model is the most suitable for presenting the adsorption mechanism. The isotherm for Methyl Orange retention on geopolymer is in perfect agreement with the Langmuir model. Evaluation of the thermodynamic quantities showed that the Methyl Orange adsorption process is favorable, spontaneous, and endothermic. The results we have found allow us to predict that the use of these new generations of geopolymers offers great potential for the retention of cationic textile dyes.

Key words: Adsorption; Industrial waste; Geopolymer Beads; Methyl Orange

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THE DEVELOPMENT ENTREPRENEURSHIP SKILLS IN FOOD AND NUTRITION EDUCATION: A PANACEA FOR SUSTAINABLE RETIREMENT

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ABSTRACT

This paper, focus on the development of entrepreneurship skills in food and nutritional on the retirement, Retirement can be explained as an event in an individual's life which marks a withdrawal from active service, life and transiting to new one. It is the stage in which employees have to leave the workforce on a permanent basis so as to prepare for their twilight years. Life after retirement for majority of retirees is not a rosy one owing to ineffective preparation and planning for post-retirement years. Venturing into a business venture at an old age is an interesting phenomenon. Public servants have a variety of economic activities to venture into after retirement and entrepreneurship in Food and Nutrition education is one of those ventures. The conceptual clarification of Food and Nutrition, Retirees and Entrepreneurship; the Place of Food and Nutrition Entrepreneur-ship in economic sustainability during post retirement. These will discuss extensively on ways of Identifying and exploiting the development entrepreneurship opportunities in Food and Nutrition for sustainable economic during retirement. It will also identify some of the challenges of Entrepreneurship skill development in Food and Nutrition Education. Adequate preparations and planning by all employees for post-retirement will curb the effects of postretirement anxiety, financial insufficiency, prevailing cost of living, poor feeding, depression and ill-health. Adequate exposure of employees to skills, knowledge and attitude in food and Nutrition education is will help them to develop strong foundation that will enable them sustain the family's future after retirement.

Keywords: Development, Food and Nutrition Education. Retirement, Post Retirement, Entrepreneurship Skills, Retirement Planning.

AN ANALYSIS OF FACTORS AFFECTING THE ACCEPTANCE AND COMPLETION OF CONSTRUCTION PROJECTS TO PUT THEM INTO USE ON SCHEDULE IN LONG AN PROVINCE, VIETNAM

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Abstract

The construction industry plays a pivotal role as one of the key drivers of the national economy. Despite the significant attention given by the Vietnamese government to enhance the quality of project acceptance. This remains a topic that has received limited in-depth exploration in recent academic literature. This study aims to identify and evaluate the factors influencing the acceptance of construction projects in Long An Province, Vietnam. The research employs a combination of qualitative methods (interviews with professionals in the construction industry), reliability analysis (Cronbach's Alpha), and the Mean value method to rank the influence levels of various factors. Over a two-month period, interviews were conducted with more than fifty participants, including project managers, contractors, government officials, experts, and researchers to assess thirteen identified factors affecting construction project acceptance. The findings reveal seven primary factors and four secondary factors that influence the success of the acceptance process. Among these, the most significant factor is the accurate verification of the boundaries of adjacent properties, followed closely by adherence to construction designs. This research provides a valuable reference for policymakers and relevant authorities, offering a foundation for informed decision-making aimed at enhancing the quality and management of construction projects.

Keywords: Construction acceptance, Project management, Project completion records, Influential factors, Construction works.

ANALYSIS OF YOUTUBE VIDEOS ON TOTAL HIP ARTHROPLASTY REHABILITATION IN TERMS OF RELIABILITY AND QUALITY

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ABSTRACT

Introduction and Purpose: Rehabilitation is important in total hip arthroplasty (THA) surgery. The internet is used to access information about rehabilitation. Many individuals access YouTube to learn about their disease and treatment options. This study aimed to evaluate the quality and reliability of videos about THA rehabilitation on YouTube.

Materials and Methods: In this study, the keywords 'exercise', 'rehabilitation', 'physical therapy' and 'physiotherapy' were used to search Youtube. However, since the terms 'prosthesis', 'arthroplasty' and 'replacement' were synonymous, each term was searched separately. A total of 100 THA rehabilitation videos that met the inclusion criteria were analysed. Global Quality Scale and Modified DISCERN tool were used to evaluate the quality and reliability of the videos. Video sources and video parameters were noted.

Results: Most of the videos (58%) were shared by other healthcare organisations. Of the evaluated videos, 31% were of high quality and 40% were of medium quality. In addition, 23% of the evaluated videos were of high reliability. It was determined that there was a statistically significant relationship between the number of subscribers and the number of daily video views and video quality, and between all video features and video reliability ($p<0.05$). Most of the videos with high reliability (78.3%) were uploaded by other healthcare professionals. There was a statistically significant relationship between video sources and video reliability ($p<0.05$).

Discussion and Conclusion: YouTube can be considered an important source of 'medium-high quality' videos for THA rehabilitation. However, the majority of the videos we analysed were of low reliability. It would be beneficial for physicians, other health professionals and health institutions to upload more reliable videos so that individuals can access more reliable and quality information about diseases.

Key Words: total hip arthroplasty, youtube, exercise, rehabilitation.

ANALYSIS OF YOUTUBE VIDEOS ON TOTAL KNEE ARTHROPLASTY REHABILITATION IN TERMS OF RELIABILITY AND QUALITY

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ABSTRACT

Introduction and Purpose: After stroke, the patient group that physiotherapists rehabilitate the most is arthroplasty patients. Total knee arthroplasty (TKA) is the most common types of arthroplasty. YouTube is one of the most visited internet platforms for health-related information. However, the videos may contain inadequate or inaccurate information because they have not undergone a review process. This study aimed to assess the quality and reliability of videos about TKA rehabilitation on YouTube.

Materials and Methods: In this study, a total of four keywords, “exercise”, “rehabilitation”, “physical therapy” and “physiotherapy”, were identified to review TKA videos. However, since the terms 'prosthesis', 'arthroplasty' and 'replacement' are synonymous, each term was searched separately. A total of 126 TKA rehabilitation videos that met the inclusion criteria were analyzed. The videos were evaluated by 2 independent physiotherapists. Video quality was assessed using the Global Quality Scale and reliability was assessed using the Modified DISCERN instrument. Video parameters and sources were also recorded.

Results: Most of the evaluated videos (43.7%) were shared by other health institutions. 37.3% of the videos were of high quality and 34.1% were of medium quality. However, 73% had low reliability. There was a statistically significant relationship between video sources and video reliability and quality ($p<0.05$). There was a statistically significant relationship between time since upload to YouTube and number of daily likes and video reliability, and between duration, number of daily views, number of daily likes and number of daily comments and video quality ($p<0.05$).

Discussion and Conclusion: Patients' use of YouTube to learn about TKA rehabilitation is controversial due to the low reliability of the videos, although their quality is moderate/high. To increase credible videos, health authorities should upload more credible videos.

Key Words: total knee arthroplasty, youtube, exercise, rehabilitation.

ARTIFICIAL INTELLIGENCE STRATEGIES AND PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

Banks operation in today's world of Technological era is obviously influenced by the Artificial Intelligence Strategies (AIS). Therefore, Artificial intelligence needs to be considered as a significant element in the banks business development and growth. Sequel to the above, this study examined artificial intelligence strategies with a view to determining its effect on performance of deposit money banks in Nigeria. The study adopted both survey method and *ex-post facto* research design. Performance was used as dependent variable and was measured using profit before tax while Artificial Intelligence Strategies such as Virtual Assistants, Expert Systems, Machine Learning Algorithms and Chat Bots were used as independent variables. Secondary sources of data were utilized for a period of 10years spanning from 2014to 2023. Hypotheses were subjected to some preliminary data tests like descriptive statistics, Pearson correlation analysis and Variance Inflation factor (VIF) to produce descriptive and inferential statistics which were used to derive conclusions about the nature of the data. The study conducted a multiple regression analysis to determine the relationship between artificial intelligence strategies and performance of deposit money banks in Nigeria. The regression result above revealed that expert system has positive and significant effect on performance of quoted deposit money banks in Nigeria with a positive coefficient value of 0.38% and t-statistics value of 1.805 and a probability value of 0.0538 which is statistically significant at 5% level of significance while machine learning algorithm also has positive and significant effect on performance of deposit money banks in Nigeria which was statistically significant at 5% level of significance. Based on the above discussions and findings, we therefore recommend that bank managers should endeavor to install the services of expert system in their operation to assist in communication with users while machine learning algorithms, virtual assistants and chatbots should be acquired and installed since it can uncover threats and automatically squash them before they can wreak havoc in order to improve their performance. Generally, we recommend that managers of deposit money banks in Nigeria should adopt the use of artificial intelligence strategies in order to gain competitive advantage over their rivalries and increase banks performance.

Keywords: Banks Performance, Artificial Intelligence Strategies, Expert System, Nigeria
JEL Classification Number-G6000

COMPARISON OF QUALITY ELEMENTS OF BREAD WHEAT TYPES AND LINES

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ABSTRACT

Introduction and Purpose: Wheat plant is the most cultivated and produced plant among the cultivated plants used in human nutrition and is the main food source of approximately 50 countries. It contains 65-75% carbohydrates. Research and studies continue in the world and in our country in order to benefit more from wheat and increase productivity. There are 205 registered bread and 67 pasta wheat varieties in Turkey. The aim of this study is to compare and evaluate some selected wheat varieties and lines in terms of their quality characteristics.

Materials and Methods: In the study carried out in the 2022-2023 production period in the trial area of Dicle University Faculty of Agriculture, 9822, 9835, 9829, 9826, 9821, 9811, 9810, 9827 and 9817 wheat lines and Tosunbey, Bayraktar, Ceyhan-99, Cemre, Zühre wheat varieties were used as material. Quality elements such as protein ratio, grain moisture ratio, hectolitre weight, falling number, ash ratio, gluten ratio and sedimentation value were evaluated through analyzes carried out in private flour factory laboratories.

Results: In the evaluations, it was seen that line 9821 had the highest values in terms of protein ratio, gluten ratio, sedimentation value and ash ratio. Line number 9811 has the highest value in terms of grain moisture content, line number 9822 in terms of falling number and line number 9817 in terms of hectoliter weight.

Discussion and Conclusion: As a result of the study, significant differences in quality were observed in the varieties and lines grown. Among the varieties, Tosunbey, among the lines, lines 9821 and 9810 showed superior features compared to other lines and varieties among the evaluated criteria. It was concluded that these lines are suitable for Diyarbakır ecological conditions and can be evaluated as variety candidates after future studies are completed.

Keywords: Quality, wheat varieties, wheat lines

WEED FLORA OF HISTORICAL SITES IN SOUTHEASTERN ANATOLIA AND THEIR IMPACT ON ECOSYSTEM SERVICES

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Abstract

This study identified the weed species prevailing in historical sites of Şanlıurfa province located in the Southeastern Anatolia region. Furthermore, the impacts of the identified weeds species were assessed on ecosystem services. Surveys were conducted on 19 historical sites across various districts of Şanlıurfa, most of which are either protected or restored. The observed weed species were photographed, and their impacts on ecosystem services were evaluated. The distribution of weed species across the sites was analyzed using Principal Component Analysis (PCA). The survey identified 46 weed species belonging to 17 different families. The families with the highest number of species (60% of the total) were Asteraceae and Poaceae. Families such as Bryaceae and Nitrariaceae were among the least represented. Of the identified species, 75% were annuals, 20% were perennials, and 5% were biennials. According to the Raunkiær classification, therophyte and hemicryptophyte forms were predominant. The most frequently observed species was *Parietaria judaica* (47.37%), which was concentrated in humid and shaded areas. *Sinapis alba* (42.11%) was commonly found in open and sunlit areas. Less frequently encountered species included *Fumaria officinalis* and *Setaria verticillata*. In terms of ecosystem services, most of the identified weed species were found to have negative impacts. The most significant adverse effects were on recreational and tourism services. Weeds were observed to root in cracks or pores in the stones of the structures, causing the stones to disintegrate and reducing the durability of the structures. Perennial species, with their deep root systems, were noted to accelerate the deterioration of historical structures. Regular maintenance and controlled removal of weed species from these areas are necessary to preserve historical sites and protect ecosystem services.

Keywords: Historical sites, Weed flora, damages, survey, ecosystem services

AN INVESTIGATION ON FUNGAL BIODIVERSITY IN COASTAL SOILS OF TAMIL NADU

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Abstract

Coastal soils are considered rich in microbial diversity hosting fungi with great ecological as well as biotechnological potentials. This study aims to investigate the fungal diversity in soils collected from nine coastal places in Tamil Nadu, leading to isolation and identification of 19 species of fungi belonging to the genera *Aspergillus, Penicillium, Cladosporium, Curvularia, Alternaria, Rhizopus,* and *Absidia*. Quantitative analysis indicated variations in CFU counts with *Aspergillus* being dominant contributors to the fungal population with a major contribution. Percentage contribution analysis pointed out site-specific fungal community dynamics that depend on the environment, such as salinity and organic matter. These findings highlights the diversity and ecological importance of fungi in coastal soils with possible applications in decomposition of organic matter, bioremediation and biotechnology. Further molecular and functional studies are necessary to explore novel metabolites and enzymes from these isolates.

Keywords: Coastal soil, Fungal diversity, CFU, Percentage contribution, *Aspergillus*

THE EFFICIENCY OF THE PUBLIC INTERVENTION ON ENVIRONMENT IN KERALA

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The State of Kerala is rich in natural resources, flora, and fauna, which is of considerable economic, social, and cultural significance to its people. However, Kerala's environment is under pressure from the rapid changes taking place in the relationship between society and nature. Though population growth in Kerala has shown a declining trend, the population density is high which puts considerable pressure on the environment. A host of investments in expanding irrigation facilities and improving the energy supply for agriculture have brought about major changes in the landscape and hydrology of the state. Moreover, certain industrial investments in Kerala have also had an adverse effect on the state's environment. Overexploitation of natural resources and air and water pollution are some of the other environmental concerns of the state. The Malmquist productivity index allows one to analyze regional productivity changes, while a post-deal, based upon Samar-Wilson's approach, allows one to explore the factors that affect performance. In general, a particular set of places did better regarding air and water intervention, while the opposite was true regarding biodiversity. The results also indicate a poor rate of technical advancement, particularly in biodiversity. The post-idea suggests that while increased tourist and agricultural output benefit biodiversity, they harm public efficiency regarding air and water quality. Technical subjects in higher education also improve performance.

Keywords: environment, Kerala, natural resources, energy supply

ANTI-MONEY LAUNDERING COMPLIANCE IN BANKS: EXPLORING THE ESSENTIAL ELEMENTS OF ANTI-MONEY LAUNDERING PRACTICES

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Anti-Money Laundering (AML) compliance is critical for banks and financial institutions to mitigate and prevent the risk of illicit financial activities such as money laundering, terrorist financing, and fraud. In recent years, increasing regulatory pressures, global financial integration, and the evolution of financial crimes have necessitated enhanced AML practices. This study aims to explore the essential elements for AML compliance in banks, examining current practices, challenges, and advancements, as well as identifying areas for improvement and the future direction of AML frameworks in banking. The study identifies the core components of Anti-Money laundering (AML) compliance, including Know Your Customer (KYC), Customer Due Diligence (CDD), Enhanced Due Diligence (EDD), transaction monitoring systems, employee training, and the importance of Suspicious Activity Reporting (SAR). In addition, the paper evaluates the increasing role of emerging technologies, in enhancing the effectiveness and efficiency of AML systems, particularly in the areas of transaction monitoring and risk assessment. Despite the advancements, the study highlights challenges, including the complexity of global regulatory standards, high compliance costs, and the risks posed by new money laundering techniques. The paper concludes by offering suggestions for improvement of AML compliance, including the need for greater international cooperation, innovative technologies, and enhanced training programs to address global AML standards and regulatory requirements. Overall, the findings underscore the need for a dynamic, multidimensional approach to AML compliance that balances regulatory demands with the growing capabilities of technology while addressing operational and ethical challenges faced by banks globally.

Keywords: Anti-Money Laundering, Compliance, Customer Due Diligence (CDD), Know Your Customer (KYC), Transaction Monitoring, Suspicious Activity Reporting (SAR),

THE STATE OF WOMEN'S EDUCATION IN AFGHANISTAN: OPPORTUNITIES, CHALLENGES, AND SETBACKS

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ABSTRACT

Women's education in Afghanistan has faced persistent challenges, shaped by decades of conflict, sociopolitical instability, and restrictive governance. Despite periods of progress, systemic barriers and regressive policies have continually undermined educational opportunities for women and girls. Recent developments have seen the closure of secondary schools and universities for female learners, effectively halting their access to education. These restrictions have exacerbated existing inequalities, resulting in significant socio-economic and human rights consequences, such as increased poverty, diminished workforce participation, and the erosion of gender equality.

This study examines the historical and contemporary challenges to women's education in Afghanistan, highlighting the cultural, political, and institutional obstacles that impede progress. Using a qualitative approach, the research draws on academic studies, reports, and other relevant sources to analyze the multifaceted impacts of these barriers. The findings underscore the urgent need for comprehensive interventions to safeguard and restore women's educational rights, emphasizing the critical role of education in fostering development and gender equity in Afghanistan.

Key Terms: Women's Education, Afghanistan, Educational Inequality, Barriers to Education, Socio-economic Impact.

APPLICATIONS OF MICROBIAL ENZYMES IN THE FOOD INDUSRTY

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ABSTRACT

Enzymes are preferred as food additives due to their natural origin and non-toxic nature. Their high specificity distinguishes them from other catalysts, while the form and rate of reactions can be easily controlled by factors such as temperature, pH, and time. The ability of enzymes to function effectively in small quantities, their ease of inactivation, and their operation under ambient conditions provide significant advantages in the food industry.

Enzymes are widely used in the food industry for various purposes. Enzymes such as amylase, pectinases and glucose isomerase serve as reliable, efficient, and eco-friendly alternatives in the food industry. Additionally, enzymes are extensively used to improve production processes, increase efficiency, and enhance product quality. These enzymes can be derived from microbial (microorganism-based), plant, or animal sources. Microbial enzyme production is a more sustainable alternative compared to plant- and animal-derived enzymes, contributing to the conservation of natural resources. Microorganisms are the most preferred sources of enzymes due to their high production efficiency, compatibility with cost-effective production processes, and potential for genetic enhancement. Furthermore, the use of microbial enzymes reduces allergenicity and pathogenic risks compared to animal-derived enzymes. Microbial enzyme production provides an economical solution for large-scale applications due to low-cost culture media and short fermentation cycles. These enzymes also offer advantages such as high catalytic activity, specificity, environmental friendliness, biodegradability, and low energy requirements.

Microbial enzymes provide sustainable, economical, and effective solutions for the food industry. Their flexibility and high performance offer great potential for developing sustainable technologies and improving industrial efficiency. This underscores the strategic importance of microbial enzymes in both food processing and other industrial applications. In this study, it was aimed to contribute valuable information and figure out the status of the microbial enzymes in the industry, list the suggested latest update enzymes to the food industry and academy.

Key Words: beverage, application, bioconversion

BIOLOGICAL CONTROL OF *PENICILLIUM DIGITATUM* AND *PENICILLIUM ITALİCUM* ON POSTHARVEST CİTRUS FRUİTS

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Abstract

Green mold (*Penicillium digitatum*) and blue mold (*Penicillium italicum*) are two of the most economically significant post-harvest diseases affecting citrus fruit worldwide. The widespread economic losses in citriculture caused by these phytopathogens are minimized with the use of synthetic fungicides such as imazalil, thiabendazole, pyrimethanil, and fludioxonil, which are

mainly employed as control agents and may have harmful effects on human health and environment. So far, many non-chemical post-harvest treatments have been investigated for the control of these pathogens.

Biological control of Penicillium in citrus has shown promising results using various antagonistic microorganisms. *Bacillus pumilus* demonstrated significant control of *P. digitatum* on oranges and lemons, comparable to chemical fungicides. Yeasts like *Debaryomyces hansenii* and bacteria such as *Pseudomonas cepacia* exhibited effective antagonism against *P. digitatum* and *P. italicum*. *Pseudomonas fluorescens* significantly inhibited *P. digitatum* growth on oranges, both in vitro and in vivo. The fungus *Trichoderma viride* increased orange resistance to *P. digitatum* when applied preventatively. These studies demonstrate that various microorganisms can effectively control Penicillium in citrus fruits, offering potential alternatives to chemical fungicides. The efficacy of biological control agents depends on factors such as concentration, timing of application, and specific antagonist-pathogen interactions.

Keywords: citrus, *Penicillium digitatum*, *Penicillium italicum*, post-harvest disease, biological control.

COMPARATIVE EVALUATION OF TEN DNA EXTRACTION METHODS FOR THE PYRIFORM SCALE INSECT, PROTOPULVINARIA PYRIFORMIS, INFESTING CITRUS TREES IN MOROCCO

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Abstract

DNA extraction from scale insects is particularly challenging due to their small size and waxy coating. In this regard, a study was conducted between the summer and autumn of 2024 in the

north-west of Morocco to assess the effectiveness of ten DNA extraction methods on scale insects. The target species of this study, *Protopulvinaria pyriformis*, is a major pest of citrus crops in Morocco. The main objective of this research was to identify extraction methods that are quick, cost-effective, and environmentally friendly.

The results showed that fresh samples of *P. pyriformis* provided the best DNA yields. Among the methods tested, the use of NaCl (5M) produced the highest yield, while the Kac and SDS methods yielded moderate results, all while being cost-effective and environmentally sustainable.

The results of this study provide valuable recommendations for selecting the optimal DNA extraction method for *P. pyriformis*. These suggestions can help improve the identification and management of this pest, thereby optimizing pest control and monitoring strategies in agricultural settings.

Keywords: *Protopulvinaria pyriformis*, DNA extraction, citrus, cost-effectiveness, Morocco.

AQUASOMES: A NOVEL DRUG CARRIER SYSTEM

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ABSTRACT:
Aquasomes represent an innovative drug delivery system designed to enhance the bioavailability and therapeutic efficacy of pharmaceutical compounds. Composed of a core structured from biocompatible and biodegradable materials, aquasomes are characterized by their unique water-like properties, which facilitate the solubilization of hydrophilic and hydrophobic drugs. The system utilizes a nanocarrier approach, where the drug is encapsulated within a hydrophilic polymer matrix, allowing for controlled release and targeted delivery. The aquasome technology offers several advantages over conventional delivery systems, including improved stability, enhanced drug solubility, and reduced systemic toxicity. By mimicking the natural hydration properties of biological tissues, aquasomes can effectively navigate physiological barriers, resulting in increased cellular uptake and bioavailability. In preclinical studies, aquasomes have demonstrated promising results in delivering a variety of therapeutic agents, including peptides, proteins, and small molecules, highlighting their versatility across multiple therapeutic areas. Future research will focus on optimizing the formulation and understanding the underlying mechanisms of action to fully harness the potential of aquasomes in clinical applications. This novel carrier system paves the way for advancements in personalized medicine and targeted therapies, promising a new frontier in drug delivery technology.

KEYWORDS: Aquasomes Drug Carrier, Bioavailability, Novel technique.

INNOVATING GREEN FINANCE: SUSTAINABLE STRATEGIES FOR A FRAGMENTED ECONOMY

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ABSTRACT

Introduction and Purpose: The global economy is increasingly fragmented due to economic, political, and social disparities among regions. Simultaneously, climate change and environmental challenges demand collective action and effective financing solutions. Sustainable green financing is essential for transitioning to an ecological economy. However, traditional financial systems often fail to address the scale of required investments, projected to reach $125–275 trillion by 2050. This study explores innovative green financing strategies and their potential to overcome these challenges.

Materials and Methods: The study relies on a comprehensive review of financial reports, regulatory frameworks, and technological advancements in decentralized finance (DeFi), blockchain, artificial intelligence (AI), and the Internet of Things (IoT). Data on global investments in renewable energy and ESG compliance trends were analyzed to evaluate opportunities and barriers.

Results: Green financing innovations, such as DeFi and blockchain, enable resource mobilization, increase investment transparency, and democratize access to funding for sustainable projects. In 2023, global energy investments reached $2.8 trillion, with $1.7 trillion allocated to renewables. However, incidents of greenwashing and a lack of standardized ESG metrics undermine investor trust and hinder progress.

Discussion and Conclusion: This study proposes a conceptual model for integrating decentralized finance (DeFi) into sustainable green financing, addressing the gaps in traditional systems. The model emphasizes three core pillars: 1. Transparent Asset Tokenization - using blockchain to tokenize green assets (e.g., renewable energy projects, carbon credits), making them accessible to a broader range of investors while ensuring transparency and traceability. 2. Decentralized Funding Pools - establishing DeFi-based platforms that enable individuals and institutions to directly invest in sustainable projects through smart contracts. This reduces intermediary costs and enhances the efficiency of resource allocation. 3. Dynamic ESG Monitoring - leveraging AI and IoT to create real-time monitoring tools for ESG compliance, ensuring that green projects meet sustainability criteria and addressing the risks of greenwashing. This model not only democratizes access to green financing but also increases accountability and reduces systemic inefficiencies. By integrating these components, the proposed strategy provides a roadmap for policymakers, businesses, and researchers to optimize the transition to sustainable economic systems.

Keywords: Sustainable investments, Decentralized finance (DeFi), Green digital finance.

CONFLICT-OF-INTEREST MANAGEMENT AND FINANCIAL REPORTING QUALITY OF MICROFINANCE BANKS IN EKITI STATE, NIGERIA

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Abstract

Conflicts of interest pose significant risks to the integrity, accountability, and reputation of individuals, organizations, and institutions. This study examines the impact of conflict-of-interest management on the quality of financial reporting in microfinance banks within Ekiti State, Nigeria. Drawing upon existing literature, the study formulates two research questions and objectives to investigate this relationship, focusing on the accuracy, transparency, and reliability of financial reporting in microfinance banks. Two hypotheses were formulated to test the significance of conflict-of-interest management on financial reporting quality. The regression study examines the impact of conflict-of-interest management practices on the financial reporting quality of microfinance banks in Ekiti State, Nigeria. Results show a strong positive correlation (R = 0.405) between conflict-of-interest management and financial reporting quality, indicating a significant relationship. The study's regression analysis indicates that conflict-of-interest management significantly predicts financial reporting quality (F-statistics = 18.261, p-value = 0.05), with conflict-of-interest management practice explaining 16% of the variance. Each 1% increase in conflict-of-interest management practice leads to a 40.5% improvement in financial report quality. Additionally, correlation analysis suggests a strong positive association (r = 0.465) between conflict-of-interest management and financial report transparency and accuracy, which further supports the study's conclusions.

Keywords: Conflict of Interest, Conflict of Interest Management, Financial Reporting Quality, Microfinance bank

THE ATTITUDE OF RICE FARMERS TORWARDS AGRICULTURAL EXTENSION SERVICES IN LAPAI LOCAL GOVERNMENT AREA OF NIGER STATE, NIGERIA

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ABSTRACT

The study focused on the attitude of rice farmers towards agricultural extension services in Lapai Local Government Area of Niger State. Multistage sampling procedure and purposive selection were used to select a sample size of 100 rice farmers from five districts: Gulu, Ebbo, Birnin maza, Takuti and Muye. Data for the study were obtained using structured questionnaire and Likert type scale. The data were analyzed using descriptive statistics (frequency, percentage and mean). Primary data and secondary information were used for the study. The findings show that farmers in the study area were young and active with mean age of 35 years and extension visit of three times in a month. The study further revealed that the farmers had a positive attitude towards agricultural extension services with the mean of 3.0 and above. The study also reveals that 9.8% of the farmers were using training and education and advisory services respectively, 10.6% uses technology transfer and research and development, 11.8% farmers' cooperatives and association,10.0% market linkage and policy advocacy,8.9% farmers' field school and crop management, 9.4% access to inputs and credits. The study further shows that 50% of the farmers were having constraints related to inadequate access to information, 71.43% poor coordination among agricultural extension providers, 85.71% lack of trust in agricultural extension providers, 70% inadequate training for farmers, 100% insufficient training facilities, infrastructure and lack of fund. Other include: 85.71 %policy inconsistency among agricultural extension services providers. The study recommended that Government should provide training facilities and infrastructure to enhance farmers training. Agricultural extension services providers should be trustworthy to foster positive attitudes towards agricultural extension services.

Keywords: Rice**,** Farmers, Attitude, Agricultural extension, Services,

ASSESSMENT OF THE PLANNING IMPLICATIONS ON HOUSING DEVELOPMENT IN LOKOJA, KOGI STATE

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Abstract

This study explored the impact of planning on housing development in Lokoja Metropolis. It aimed to understand the socio-economic and demographic characteristics of residents, examine the features of houses in the area, evaluate the quality of housing development, and assess the planning implications on housing. Data on demographics, housing characteristics, housing quality, and planning challenges were gathered through structured questionnaires. The analysis was conducted using descriptive statistics, including percentages and charts. The findings revealed that the average household size in Lokoja is eight, with 82.7% of houses consisting of at least three rooms. However, 53.6% of respondents indicated that the national housing policy has a low or very low impact on properties in the area. Interestingly, 92.9% of respondents acknowledged that the national housing policy positively influences property development. On the downside, 60.3% of respondents reported lacking building permits for their homes, and 83% expressed dissatisfaction with the efficiency of government housing agencies, describing their performance as slow and inefficient. To address these issues, the study recommended strict enforcement of building regulations in Kogi State to prevent the use of substandard materials in housing construction. It also emphasized the need for all prospective developers to obtain permits before construction begins, with penalties, including demolition and prosecution, for non-compliance. Furthermore, it suggested that the Building Inspectorate Unit and the Kogi State Town Planning and Development Board should be adequately equipped, trained, and empowered to enforce these regulations effectively.

Keywords: Housing Development, Metropolis, Urban Planning, Urbanization, Zoning Regulations and Land Use Planning

Brief Biography of the First author:

Egunjobi Usman Dimeji is currently engaged in teaching, research, and community service. He is a graduate of Geography with research interests in Urbanization and Sustainable development.

INCIDENCE OF PRESSURE ULCERS AMONG SPINAL CORD INJURED PATIENTS AFTER HOSPITAL DISCHARGE IN NIGERIA

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Background:

Pressure ulcers (PUs) are a frequent and debilitating complication for spinal cord injury (SCI) patients, particularly in Nigeria, where healthcare infrastructure and post-discharge care remain underdeveloped. PUs negatively impact recovery, quality of life, and functional outcomes, with reported incidence rates in Nigeria ranging from 30% to 68% within the first six months after hospital discharge. This review aims to evaluate the incidence of PUs in SCI patients post-discharge, examine the contributing factors, and propose evidence-based interventions to mitigate the burden of PUs in the Nigerian healthcare context.

Key findings:

Regional studies highlight the widespread prevalence of PUs among SCI patients:

- A study in Lagos reported a 55% incidence rate, largely due to inadequate access to wound care resources and pressure-relieving devices.
- In Ibadan and Enugu, 47% and 60% incidence rates were linked to poor caregiver training and limited rehabilitation services.
- Kano recorded the highest incidence at 68%, exacerbated by minimal access to educational materials and follow-up healthcare services.

Commonly identified factors include limited access to affordable pressure-relieving devices, insufficient patient and caregiver education on PU prevention, and inadequate follow-up care. The scarcity of specialized healthcare providers and limited rehabilitation infrastructure further intensify the burden.

Proposed Intervention:

A multifaceted approach is critical to reducing the incidence of PUs among SCI patients in Nigeria. Key strategies include:

1. **Education and Training:** Targeted programs to train caregivers and patients in PU prevention, focusing on skin care, repositioning techniques, and early detection of pressure injuries.
2. **Accessible Pressure-Relieving Devices:** Subsidizing and distributing cost-effective devices such as specialized cushions and mattresses.
3. **Enhanced Follow-Up Care:** Strengthening post-discharge services through home visits, telemedicine, and community outreach programs.
4. **Nutritional Support:** Addressing malnutrition, a significant risk factor for PU development, through dietary counseling and supplements.
5. **Community-Based Healthcare Initiatives:** Empowering community health workers and establishing local support groups to monitor and support SCI patients.

Conclusion:

Pressure ulcers remain a critical challenge for SCI patients in Nigeria, requiring coordinated efforts to enhance prevention and management strategies. Addressing systemic gaps through education, improved resource allocation, and robust follow-up care systems is essential for reducing PU incidence and improving the quality of life and functional outcomes for affected patients.

Keywords: Pressure Ulcers, Spinal Cord Injury, Post-Discharge Care, Nigeria, Preventive Strategies, Rehabilitation.

DESIGN AND PROTOTYPE MANUFACTURING OF DIFFERENTIAL PRESSURE BALANCING VALVE

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ABSTRACT

The hydraulics of heating systems have become a critical point for the users. It is known that inadequately or incorrectly balanced hydronic systems result in problematic operation of circuits, causing economic losses. Unbalanced hydronic heating systems do not operate efficiently in terms of energy and provide users with an uncomfortable experience. Achieving hydraulic balance in the system requires balancing during the design phase and the use of appropriate balancing valves. This ensures that the flow and return water temperatures, flow rate, and pressure differentials are successfully maintained. Heating energy is directed to where it is needed, eliminating issues such as insufficient supply.

This study discusses the origins of hydronic imbalances in heating systems, focusing on flow rates, flow types, balancing, control valves, and rubber materials. Based on this information, the design of a control valve was undertaken, followed by the fabrication of a prototype. Computer-aided analysis programs were employed alongside experimental analyses to compare flow rates and pressure values.

Keywords: Flow rate, Differential pressure curves, Differential balancing valve, pressure balance conditions, hydraulic balancing, static balancing, rubber material research, Membrane, Flow

A CRITICAL EXAMINATION OF THE CITY OF RIO DE JANEIRO IN THE CONTEXT OF SUSTAINABILITY CRITERIA

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ABSTRACT

Introduction and Purpose: In order to safeguard the existing resources of the universe and ensure their transfer to future generations, it is imperative that humanity makes a substantial contribution. It is imperative that these resources be employed to establish and maintain optimal living conditions for humanity throughout its existence. The term 'sustainability' was first used in the early 1970s and was initially expressed in ecological terms. The concept of sustainability, which exists within the ecological system, is essentially defined as economic development based on the use of replaceable, renewable and therefore inexhaustible resources that take into account the environmental consequences of economic activities. The concept was first articulated in the Brundtland Report (1987) as "development that meets the needs of the present without compromising the ability of future generations to meet their needs." It was subsequently incorporated into various reports and adopted on the international agenda. The Rio Declaration, adopted at the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, marked a shift in the conceptualisation of sustainability. It was no longer solely an environmental concept; it was defined as a process that also encompassed economic, social and cultural policies. Furthermore, at the Rio+20 Conference, which was held in the same city, the objectives to be achieved by 2030 were defined. The efficacy of genuine sustainable development will be realised when it is conducted not only with regard to environmental considerations but also with respect to social and economic aspects, which collectively constitute the sustainability triangle. The concept of sustainability is understood to mean that it meets the needs of individuals in settlements without compromising the ability of future generations to reach their full health potential. It is evident that the concept of sustainability is of great importance for individuals in existing settlements to live their lives in a qualified and healthy way. In this context, the study covers the studies in the city of Rio de Janeiro, where sustainability declarations were approved.

The objective of this study is to evaluate the extent to which sustainability criteria are fulfilled in the development of high-quality living spaces within urban environments.

Materials and Methods: The current literature data from studies conducted in the city are subjected to analysis.

Results: The contemporary global context is characterised by a multitude of adverse conditions, including climate change, water scarcity, housing challenges faced by immigrants, and undernutrition.

Discussion and Conclusion: The key issues that must be addressed in urban planning in order to enhance the quality of life of individuals and to safeguard our existing resources are outlined.

Key Words: City, Sustainability, Rio De Janeiro, Architectural Design

THE SIGNIFICANCE OF URBAN HEALTH

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ABSTRACT

Introduction and Purpose: The population of urban areas has increased from industrial cities until 2024, resulting in the formation of disparate settlements due to the exponential growth of the urban population. The issue of housing has become a significant challenge for an expanding population. In order to identify a solution to this issue, individuals have established unplanned settlement areas. The most significant challenge in unplanned settlements is the development of settlements on land unsuitable for construction. In the event of a natural disaster, such as a flood or landslide, the inhabitants of the settlement are adversely affected. The construction of buildings in unplanned areas is typically undertaken using low-quality materials. It has been demonstrated that the use of inferior materials can have adverse effects on human health. In these areas lacking the requisite infrastructure, a multitude of diseases emerge as a consequence of inadequate access to sewage, sanitation and clean water. Furthermore, individuals may be deprived of their fundamental rights as a consequence of the lack of adequate public services. The objective of this study is to highlight the significance of healthy cities.

Materials and Methods: This study analyses the principal factors that contribute to the formation of healthy cities, based on the data obtained from the literature research.

Results: The establishment of settlements in designated areas has been observed to facilitate the physical, spiritual and mental development of individuals. In addressing the housing issue, adequate spatial dimensions are allocated, and individuals are safeguarded from respiratory ailments through the utilisation of superior materials. The planning of infrastructure facilitates the provision of hygienic conditions for individuals through the provision of access to sewage, sanitation and clean water. In this manner, the incidence of infectious diseases can be reduced. The implementation of an effective transportation infrastructure system will result in a reduction in the number of vehicles that are responsible for the emission of poisonous gases into the atmosphere, thereby leading to an improvement in the overall quality of the air. The designation of planned areas serves to preclude the destruction of green spaces. In this manner, the equilibrium of the climate can be maintained. The attainment of social peace and health is contingent upon the provision of education, health care, adequate food access, diversity of employment opportunities and justice for all, which are the fundamental rights of the individual. The health of each

individual resident in an urban area has an impact on the wider society. It is therefore possible to create healthy cities through the promotion of social health. The objective of this study is to highlight the significance of healthy cities.

Discussion and Conclusion: The study highlights the necessity of considering specific parameters in urban planning for the development of healthy cities.

Key Words: Health, City, Healthy City, Architectural Design

ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR ESTIMATION OF AZELNIDIPINE IN BULK DRUG AND PHARMACEUTICAL DOSAGE FORM BY USING RP-HPLC

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ABSTRACT

The development and validation of an analytical method for the estimation of Azelnidipine in both bulk drug and pharmaceutical dosage forms using Reverse Phase High Performance Liquid Chromatography (RP-HPLC) present a crucial advancement in pharmaceutical research. Through meticulous optimization and validation procedures, this method offers a reliable and accurate means of quantifying Azelnidipine, a widely used calcium channel blocker with therapeutic applications in hypertension and related cardiovascular conditions. The RP-HPLC method showcased in this review article demonstrates several key advantages. Firstly, it provides high sensitivity, specificity, and precision in detecting Azelnidipine within complex matrices, ensuring accurate quantification even at low concentrations. Secondly, the method offers excellent selectivity, allowing for the differentiation and quantification of Azelnidipine from potential impurities or excipients present in pharmaceutical formulations. Moreover, the robustness and reproducibility of the method across multiple analytical parameters underscore its reliability for routine quality control and regulatory compliance in pharmaceutical manufacturing.

KEYWORDS: RP-HPLC, Drug, Azelnidipine, Methods, Analytical.

IMPROVEMENT OF WIDER BANDWIDTH USING DUAL E–SHAPED ANTENNA FOR WIRELESS COMMUNICATIONS IN 5G APPLICATIONS

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Abstract:-
In this paper a dual E–shaped patch (ESP) antenna is proposed to enhance the wider impedance bandwidth to be use for wireless communications in 5G applications. The proposed dual ESP antenna performance analysis is carried out with stub in this work. The proposed ESP antenna with stub achieving reflection coefficient below -10 dB for obtained multiple resonant bands. The dual ESP antenna operates at 5.7 GHz,10.1 GHz,15.1 GHz,19.4 GHz and 22.4 GHz obtain reflection coefficient of -44.32 dB, -27.43 dB, -17.0 dB, -50.85 dB and -18.07 dB respectively. The proposed antenna with stub achieves impedance bandwidth of (4.28 GHz–24.06 GHz) with 139.37% enhancement resonate at 19.77 GHz operating frequency. The radiation patterns, current distributions and gain plots are observed at five resonant bands. The simulated results are matched well with the measured results.

Keywords E-shaped patch antenna Wireless applications Rectangular stub.

BLOCKCHAIN SOLUTIONS FOR SUPPLY CHAIN MANAGEMENT: ENHANCING SECURE AND TRANSPARENT TRACEABILITY WITH ADVANCED PRİVACY MEASURES

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Abstract:
Supply chain management is increasingly reliant on blockchain technology to address challenges related to transparency, security, and traceability. However, conventional public blockchains encounter limitations in privacy and scalability, impeding their widespread adoption. This paper proposes a novel approach: hybrid blockchain solutions tailored for supply chain management. Leveraging a combination of public and private blockchains, this hybrid model aims to maintain the integrity and transparency of transactions while integrating advanced privacy measures. Through a thorough review of existing blockchain-based supply chain solutions, this research identifies limitations and explores opportunities for improvement. The theoretical framework presented emphasizes the importance of data partitioning, permissioned access, and consensus mechanisms customized for supply chain environments. This study contributes to the ongoing discourse on blockchain technology's application in supply chain management, providing insights into the potential benefits of hybrid blockchain solutions in achieving secure and transparent traceability. In conclusion, this research underscores the growing significance of blockchain technology in revolutionizing supply chain management by addressing challenges related to transparency, security, and traceability. Recognizing the limitations of conventional public blockchains, this study advocates for the adoption of hybrid blockchain solutions tailored specifically for supply chain applications. By combining the strengths of public and private blockchains, such hybrid models offer a promising avenue for maintaining transaction integrity and transparency while overcoming privacy and scalability concerns. Through a comprehensive review and theoretical framework, this paper contributes valuable insights into the design and implementation of hybrid blockchain solutions, emphasizing the importance of data partitioning, permissioned access, and customized consensus mechanisms. Moving forward, the exploration of hybrid blockchain approaches holds immense potential in enhancing the security and transparency of supply chain operations, thereby advancing the broader discourse on blockchain technology's role in modernizing global supply chains.

Keywords: Blockchain, Supply Chain Management, Traceability, Privacy Measures and Security

COMPARISON OF 2019 TURKISH CURRICULUM AND 2024 TURKISH CURRICULUM

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ABSTRACT

Introduction and Purpose: This study, which compares the 2019 Turkish Curriculum and the 2024 Turkish Curriculum in various aspects, aims to reveal the pros and cons of the relevant programmes. It is thought that determining the similarities and differences of the programs will contribute to the literature in terms of applicability of this data. With the 2024 Turkey Century Education Model, it is aimed to transfer the changes in the 2019 Turkish Curriculum in a better way. With this study, the changes and differences in the Turkish Curriculum will be understood more clearly.

Materials and Methods: Document analysis, one of the qualitative research methods, was used in the study. The object of study of this research is the 2019 Turkish Lesson Teaching Programme and the 2024 Turkish Lesson Teaching Programme. These programmes were prepared by the Ministry of National Education. The data were collected by document analysis and analysed by descriptive analysis technique. In line with the data collected from 2019 and 2024 Turkish curricula, descriptive analysis was made on similarities, differences and applicability. Various topics in the programme were examined comparatively.

Results: When the data obtained regarding the similarities and differences were examined, it was seen that many additions and deletions were made in the programme. In particular, it was seen that new titles such as production workshop, distribution of text structures according to themes, number of theme learning outcomes and duration tables were added. When the differences in the programme were examined, it was seen that the subject of grammar was given by separating it from skills, and the subject of competencies was given by integrating them under different titles in the programme.

Discussion and Conclusion: The new curriculum's more flexible and student-oriented approach may require teachers to use more methods. Teachers may be pedagogically inadequate in relation to the new programme and in-service training may be needed in this field. Since digital literacy

and technology are not at the same level in every school, it may not be implemented at the desired level in this field. However, since the new programme aims to be dynamic and flexible, the orientation process is important for both the teacher and the learner. If we go through this process in a healthy way, the applicability of the new programme will be ensured. With the investments made in education and training in recent years, the new programme will be used more efficiently and more effectively. If the pedagogical competencies of teachers related to the new programme are increased, digital infrastructure is improved and individual support is provided to students, the quality and success in the applicability of the new programme will be increased.

Key Words: Curriculum, Turkish curriculum, Turkey Century Education Model.

EVALUATION OF GRADUATE THESES RELATED TO BILINGUALISM PREPARED BETWEEN 2013-2024 FROM VARIOUS PERSPECTIVES

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ABSTRACT

Introduction and Purpose: Bilingualism refers to the ability or status of an individual or a community to use two different languages in daily communication. Bilingualism includes the ability of individuals to naturally speak two languages, as well as the ability to switch between languages, communicate between the mother tongue and the second language, and use both languages effectively. Bilingualism can occur in different ways. Individuals may grow up in a multilingual society where more than one language is used in the environment in which they were born or raised. In this case, individuals learn and use two or more languages together. In this research, it is aimed to examine the postgraduate theses prepared on the subject of bilingualism and to make suggestions regarding the quality of future studies.

Materials and Methods: Document analysis, one of the qualitative research methods, was used in the study. The object of this research is the postgraduate theses on the subject of bilingualism prepared at the YÖK thesis center between 2013-2024. The data were collected with document analysis and analyzed with the descriptive analysis technique.

Results: In the study, it was found that the most theses (f: 18) prepared on the subject of bilingualism belong to the year 2022 and the least theses (f: 2) were prepared in 2014 and 2024. When the prepared fields were examined, it was seen that the most theses were made in the subjects of Education and Teaching (f: 47), Linguistics (f: 19), Turkish Language and Literature (f: 3), Anthropology (f: 1), English Language and Literature (f: 3), Sociology (f: 1), Folklore (f: 2), Psychology (f: 7), Psychiatry (f: 1); German Language and Literature (f: 2), Communication Sciences (f: 1), Neurology (f: 1), Art History (f: 1).

Discussion and Conclusion: The examination of theses written on bilingualism shows that the experience of bilingualism has a complex effect on the processes of language learning and use. While bilingualism can improve language skills, it can also bring some challenges. It also has effects on cultural diversity and identity formation. This discussion emphasizes that bilingualism can lead to different outcomes depending on individual differences and the language learning context, and that future research should aim to provide more understanding on this issue.

Key Words: Turkish education, bilingualism, postgraduate theses.

ASSESSMENT OF GROUNDWATER QUALITY FOR IRRIGATION PURPOSES IN SIDI SLIMANE, MOROCCO USING THE IRRIGATION WATER QUALITY INDEX

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Abstract

Groundwater pollution is a major problem in most countries, including Morocco. This study was aimed at evaluating the suitability of groundwater for irrigation in Sidi Slimane, Morocco, using the irrigation water quality index (IWQI). Water samples were collected from 20 wells in 2018. Electrical conductivity (EC), sodium adsorption rate (SAR), sodium ions (Na+), chloride ions (Cl-), and bicarbonate ions (HCO3-) were measured, and the parameter values were used to compute and plot the irrigation water quality index (IWQI). The results showed that the average values for EC and SAR of the groundwater samples were 4915±3772 µS/cm and 11.22 ±5.36, respectively. Water toxicity was calculated in terms of sodium ion concentration (Na+), yielding a mean value of 32.09±22.03 meq/L. Furthermore, the average chloride and bicarbonate ion concentrations in the study area were 31.31±22.86 meq/L and 7.568±2.599 meq/L, respectively. The IWQI map revealed that more than 65% of the water samples were in the excellent category, which is dominant in the large areas in the west; 35% of the water samples were in the good category in the center of the study area, and 5% of the water samples were in the poor category in the east of the study area. The findings of this study should be taken into account for the management of groundwater for irrigation in the Sidi Slimane region of Morocco.

Key words : Groundwater quality, Irrigation, Water quality index, Sidi Slimane, Morocco.

BACTERIOLOGICAL AND PARASITOLOGICAL POLLUTANTS ASSESSMENT IN IRRIGATION WATER, SOIL AND CROPS

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Abstract

In response to food needs and the growing desire to exploit local food, urban and peri-urban agriculture is meeting these needs by producing vegetables, fruits and other foods in cities and their suburbs. In addition to the increasing need for water due to droughts, this agriculture provides wastewater (WW) and treated wastewater (TWW) that is used for irrigation. This study was conducted to compare urban irrigation water: water from Oued Fez upstream and well water. As well as peri-urban irrigation water: water from Oued Fez downstream considered as WW and TWW from the treatment plant of the city of Fez. These in comparison with the rural irrigation waters: waters of Oued Bitit.

The microorganisms investigated are total and thermotolerant coliforms, helminth eggs, Salmonella and cholera vibrio. The study took into account the transfer of these pathogenic bacteria at the level of soils and cultivated plants, cardoon and eggplant.

The results showed a contamination out of national and international standards of the two types of coliforms that it is in winter or in summer in the TWW, WW, the water of Oued Fez and the water of wells located upstream of the city. This fecal contamination was found in soils and crops irrigated by urban and peri-urban water. The same was true for helminth eggs, but the number of eggs was greater in winter than in summer for soils. Cholera Vibrio was present in the different types of irrigation water in summer. But still in winter in WW and TWW. This bacterium was also present in soils, cardoons and eggplants irrigated by WW, TWW and Oued Fez waters upstream. Salmonella was present only in the TWW in summer.

Only the plot irrigated with water from Oued Bitit in the rural zone was within the norms on the three levels of irrigated water, soil and plants and in both periods.

Key words : Groundwater quality, Irrigation, Water quality index, Sidi Slimane, Morocco.

ENHANCED DIRECT TORQUE CONTROL FOR DOUBLE STAR INDUCTION MOTORS USING GA-OPTIMIZED PI CONTROLLER

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Abstract

This article presents a novel approach to direct torque control (DTC) for dual-star induction motors (DSIM), where a PI controller is optimized using a genetic algorithm (GA). The primary goal is to fine-tune the PI speed regulator's gains to enhance the stability and performance of the drive system.

Classical DTC for DSIMs is widely recognized for its simplicity and ease of implementation. However, conventional DTC often results in high torque and flux ripples, along with variable switching frequency. To address these issues, the article presents a new hybrid DTC-GA method, combining traditional DTC with a PI controller optimized via a genetic algorithm.

The genetic algorithm serves as an advanced optimization technique to refine the PI controller's gains. A simulation study conducted in a Matlab/Simulink environment demonstrates the effectiveness and robustness of this DTC-GA strategy, showing its ability to maintain high performance even under varying system parameters.

Keywords: Dual-Star Induction Motor , Direct Torque Control , PI Speed Controller , genetic algorithm, Matlab/Simulink Simulation.

NURSES' MENTAL STATUS EXAMINATION AND SPIRITUAL ASSESSMENT COMPETENCIES

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Abstract

Mental status examination is conducted through the evaluation of an individual's mental health via observation and anamnesis. The nurse conducting the mental status examination evaluates the patient's general appearance and behavior using observation and analytical skills. The nurse evaluates the patient's posture, speech, facial expression, clothing, self-care, and motor activity, and identifies any negative conditions.

When taking the patient's medical history, the nurse evaluates the patient's cognitive functions, attention span, short and long-term memory, judgment, planning and abstract thinking, problem-solving, and psychomotor skills. She conducts the evaluation of cognitive functions tailored to the specific patient. When conducting the evaluation, they take into account the patient's physical condition (pain, etc.), mental state (anxiety, etc.), age, and education. During the evaluation of cognitive function, the patient's thought content is also assessed. Orientation, intellectual capacity, and mood also fall within the scope of mental status evaluation.

The concept of spirituality means the individual's understanding and acceptance of their position in the universe, their relationships with themselves and their surroundings, and the meaning of life. It consists of elements that are meaningful to the individual and constitute the purpose of life. Needs such as finding meaning in illness, focusing on non-illness-related matters, forgiveness and being forgiven, and coping with death emerge. The assessment of spiritual status leads the nurse in identifying these needs.

As a result, the nurse evaluates the higher-level functions of the patient's cerebral cortex through a mental status examination and gains a significant advantage in the early diagnosis of potential conditions, while also helping to identify the patient's spiritual needs through a spiritual assessment.

Keywords: Mental Health, Mental Status Examination, Spirituality, Spiritual Assessment, Nursing

THE LEGAL CHALLENGES OF ECOTOURISM: BALANCING CONSERVATION AND COMMERCIAL INTERESTS

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Abstract

Ecotourism, a rapidly growing sector within the tourism industry, aims to promote sustainable travel practices that benefit both the environment and local communities. However, the legal landscape surrounding ecotourism presents significant challenges in balancing conservation efforts with commercial interests. This paper explores the complexities of ecotourism regulations, focusing on the legal frameworks that govern environmental protection, land use, and community rights. Through a comparative analysis of case studies from various countries, the research highlights the effectiveness of different legal approaches in achieving sustainable ecotourism. Key findings indicate that while stringent regulations can enhance conservation outcomes, they may also hinder economic opportunities for local stakeholders. Conversely, lenient laws may boost tourism revenue but at the cost of environmental degradation. The study concludes with recommendations for policymakers to develop balanced legal strategies that support both ecological preservation and economic viability. By addressing these legal challenges, the paper aims to contribute to the discourse on sustainable tourism and provide a roadmap for harmonizing conservation and commercial objectives in the ecotourism sector.

Keywords: Ecotourism, Legal frameworks, Conservation, Sustainable tourism, Environmental protection, Economic viability

EVALUATION OF UNIVERSITY STUDENTS' HEALTH LITERACY AND STROKE AWARENESS RESULTS

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ABSTRACT

Introduction and Purpose: Stroke is a major disease. Although there has been an increase in recent years, stroke can also occur at a young age. Stroke affects young people more as the age of stroke decreases and the need to care for a relative who has suffered a stroke. It is assumed that people with good health literacy can recognise the symptoms of a stroke at an early stage. The aim of the study was to determine the health literacy and stroke awareness of university students.

Material and Methods: The population of the cross-sectional and descriptive study was the students of Çanakkale Onsekiz Mart University, Faculty of Health Sciences, Education and Engineering. The data of the study were collected using the “Student Information Form, Turkish Health Literacy Scale, Stroke Awareness Assessment Form”.

Results: 488 students participated in the study. Most of the students reported that they had seen brochures, posters, etc. about stroke (69.1%) and that they were not aware of stroke (74.6%). In addition, the majority of students stated that they had never come into contact with a stroke patient (78.9%). The average health literacy score of the students was at an adequate level of health literacy, albeit slightly above the threshold. The vast majority of students reported knowing what a stroke is (90.6%). It was also found that almost half of them knew that stroke is preventable (42.6%) and the majority knew that stroke is a disease that requires emergency care (70.3%). The vast majority of students stated that they knew what a stroke was (90.6%). It was also found that almost half of them knew that a stroke is preventable (42.6%) and the majority knew that a stroke is a disease that requires emergency care (70.3%). When asked "What do you do if you notice the first symptoms of a stroke?", the vast majority of students chose the most appropriate course of action, which was to call an ambulance (112) (85.9%), "while 9.6% said they would do nothing. When asked about current risk factors for stroke, 10.5% of students had high blood pressure and 24.4% had a history of stroke, transient ischemic attack or heart attack in themselves or in their family. A significant difference was found between the students' health literacy and stroke awareness. It was also found that those who knew what a stroke was had better health literacy.

Discussion and Conclusion: Stroke is a disease that requires immediate medical attention when noticed. Those with good health literacy can recognise the symptoms of a stroke early and seek medical help quickly. This increases the likelihood that treatment will be successful. Therefore, it is important to determine the level of awareness in university students in order to take the necessary steps.

Key Words: Students, health literacy, stroke, awareness

NURSING CARE FOR ANXIETY LEVEL IN PATIENTS BEFORE SURGERY

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ABSTRACT

Preoperative anxiety is a known phenomenon in patients undergoing preoperative evaluation. It refers to a process that gradually intensifies from the decision of a specific operation to the beginning of the operation.

Anxiety occurs weeks before surgical interventions and symptoms intensify in the hours before hospitalization, leading to physiological and emotional effects during surgery. This is the main reason why patients are informed before entering the operating room. When the phenomenon of preoperative anxiety is examined in surgical patients, it is seen that this anxiety continues until the period after surgery and is seen together with symptoms such as high blood pressure, sweating or headache, and can delay recovery and prolong the hospital stay.

It has been observed that the nurse's meeting with the patient and establishing good communication before the surgery significantly reduces anxiety. The training provided increases the patients' self-care skills and compliance and helps patients reduce their anxiety. Reducing the anxiety of the individual by providing nursing care according to their anxiety level reduces the complications that may arise against the surgery and contributes to the reduction of cancellations or postponements of surgical interventions.

Keywords: Preoperative, Anxiety, Nursing Care

PHYTOCHEMICAL ANALYSIS OF TRADITIONALLY USED MEDICINAL PLANTS

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Abstract

Medicinal plants have long been a source of bioactive compounds with therapeutic potential. This study aimed to evaluate the phytochemical constituents of medicinal plants commonly used in traditional medicine. The qualitative techniques for phytochemicals were carried out in ten medicinal plants each belonging to different families. Ten medicinal plants including *Cassia auriculata* L., *Eucalyptus globulus* Labil., *Leucas aspera* Spreng., *Ocimum sanctum* L., *Polyanthia longifolia* Thw., *Punica granatum* L., *Ricinus communis* L., *Solanum nigrum* L., *Solanum Xanthocarpum* L., and *Vitex negundo* L. were used for the study. Phytochemical screening was performed on methanol extracts of the plant using standard qualitative tests for Alkaloids, Cardiac Glycosides, Coumarins, Flavonoids, Phlobatannin, Quinones, Saponins, Stereiods, Tannin, Terpenoids. The results revealed the presence of medically active compounds in most of the plants. Some species showed unique compounds, such as alkaloids, terpenoids in *Cassia auriculata L.* and saponins in *Leucas aspera* Spreng. These findings suggest that the selected medicinal plants contain bioactive phytochemicals, which may contribute to their therapeutic efficacy. Further studies are needed to isolated and characterize there compounds for potential pharmaceutical applications.

Keywords: Traditional Medicine, Bioactive compounds, Phytochemistry, Medicinal Plants, Therapeutics

BIBLIOMETRIC ANALYSIS OF POSTGRADUATE THESES ON 'CLEAR ALIGNERS' IN ORTHODONTICS DEPARTMENTS IN TURKEY

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ABSTRACT

Aim: Doctors who wish to specialize in orthodontics either pursue a doctorate in this field or take the dentistry specialization exam to become specialist dentists. At the end of both training processes, doctors must present their own theses. When selecting thesis topics, doctors are motivated by a desire for development, change, and staying up-to-date. Clear aligners have become one of the most current treatment methods in orthodontics due to the increasing demand. The aim of this study is to determine how frequently the topic of clear aligners appears in theses published at the end of orthodontic specialization/doctoral education in Turkey.

Method: In November 2024, theses on the subject of 'Clear Aligners' in the Department of Orthodontics at the National Thesis Center of the Council of Higher Education were searched using the keywords 'clear aligner,' 'aligner,' and 'Invisalign.' Data such as the year of publication, thesis type, study type, page count, university affiliation, publication status were recorded in Microsoft Excel. Chi-square test was used to compare categorical data.

Material: Of the 1,923 theses published in the Department of Orthodontics between 1968 and November 2024, 44 theses on 'Clear Aligners' were identified. The first thesis on clear aligners was published in 2015. No theses were written on this topic in 2016, 2017, 2018, and 2020. The number of theses on this subject has increased since 2021. Of the theses, 56.8% were specialization theses, 40.9% were doctoral theses, and 2.3% were master's theses.Clinical studies were the most common, while surveys were the least preferred. The publication rate was 15.9%.

Results: Since the first thesis in 2015, clear aligners gained momentum post-pandemic and peaked in 2023. This indicates that clear aligners will continue to be a prominent topic for theses and research in the coming years due to their growing preference in orthodontic treatments.

Keywords: clear aligners, orthodontics, postgraduate theses, bibliometric analysis

CONVERSION OF PLASTIC WASTE INTO BAMBOO-TYPE CARBON NANOTUBES AND HIGH-QUALITY OIL USING BIOCHAR AS CATALYST

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The conversion of plastic waste into high-value products such as carbon nanomaterial is of recent interest. In this study, the non-condensable pyrolysis gases, produced from Polypropylene Copolymer (PPC) feedstock, were converted into bamboo-type carbon nanotubes (BCNTs) through catalytic chemical vapor deposition using biochar. Experiments were conducted in a three-zone furnace fixed bed reactor, where PPC was pyrolyzed in the second zone and carbon nanotubes (CNTs) growth was eventuated in the third zone. The effects of different growth temperatures (700, 800, 900℃) and biochar particle sizes were investigated to optimize the production of hydrogen and the yield of carbon nanotubes on the biochar surface. Biochar samples used in the synthesis of CNTs were obtained from the pyrolysis of sawdust at 800℃ in a muffle furnace. Analyses performed by using Scanning electron microscopy, Transmission electron microscopy, X-ray diffraction, and Raman spectroscopy techniques suggested that the best crystalline structure of CNTs was obtained at 700℃ with nano-sized biochar as a catalyst. The nano-sized biochar increased hydrogen production at 900℃ and reduced the polycyclic aromatic hydrocarbon content in oil to only 1%, which is advantageous for further utilization. Therefore, the production of high-value CNTs from waste plastic using low-cost biochar catalysts can be a sustainable approach to the management of waste plastic while participating in the circular economy.

Keywords: Carbon nanotubes, Biochar, Waste management, Circular economy.

EVALUATION OF ANXIETY IN CHILDREN WITH HEART DISEASE AND THEIR PARENTS: A BIBLIOMETRIC ANALYSIS OF NATIONAL GRADUATE THESES

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ABSTRACT

Introduction and Purpose: This study aims to retrospectively perform a bibliometric analysis of graduate theses conducted in our country that evaluate anxiety in children with heart disease and their parents, providing insight into the literature based on the findings.

Materials and Methods: The search was conducted retrospectively from the Higher Education Council National Thesis Center between November 15–25, 2024, without any time limitation. The terms "child," "heart disease," and "anxiety" were used to identify all related theses conducted nationwide, regardless of year, field, topic, or population. These theses were grouped and subjected to bibliometric analysis.

Results: Nineteen theses were identified from the Higher Education Council National Thesis Center. Four were excluded due to incompletion or ongoing processes. Thirteen theses that met the inclusion criteria for bibliometric analysis were categorized under five headings: year, type, child-parent populations, fields, and measurement tools used. An analysis of distribution by years showed that the first thesis was a master's thesis in Nursing completed in 2005. Over time, an increasing trend in the number of theses was observed, with approximately half of all theses (52.6%) completed in the last five years. Of these recent theses, 90.0% were specialization in medicine theses, and 10.0% were doctoral theses. Grouping by child or parent population revealed that the majority of theses focused on parents (53.8%), while only a limited number assessed anxiety in both children and parents together (15.4%). All theses, except those in the field of medical specialization, were conducted in the field of Nursing. The most frequently used measurement tools were the Anxiety Disorders Screening Scale for children (30.8%) and the State-Trait Anxiety Inventory for parents (23.1%).

Discussion and Conclusion: Although anxiety in children with heart disease and their parents is a critical parameter increasingly studied, it has not received adequate attention. Educational or interventional studies aimed at alleviating anxiety remain scarce. All studies unanimously emphasized that managing the anxiety of children with heart disease and their families is a vital component of disease management. Future research should address this topic in more detail. This finding is highly significant for healthcare professionals. Hence, the bibliometric analysis is expected to shed light on the existing literature and serve as a foundation for future research.

Key Words: Anxiety; Child; Heart Disease; Disease Management; Graduate Theses

TELEHEALTH APPLICATIONS IN DIABETES MANAGEMENT

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ABSTRACT

Introduction and Objective: Diabetes Mellitus (DM) is a chronic and global disease that arises due to the pancreas's inability to produce sufficient insulin or the body's inability to effectively use the insulin it produces, requiring continuous medical care. It is one of the most significant causes of morbidity and mortality among non-communicable diseases worldwide and in Turkey, recognized as a serious public health issue. Due to its complications and long-term effects, diabetes reduces individuals' quality of life and imposes heavy social and economic burdens on healthcare systems. The primary goals in diabetes management are to achieve glycemic control, promote lifestyle changes, and enhance individuals' self-management skills. In this context, nurses play a critical role in supporting treatment adherence, preventing complications, and providing education. The success of treatment depends on proper guidance and regular follow-up.

In recent years, technological innovations have offered significant opportunities in diabetes management. Particularly, telehealth applications have enabled the remote monitoring of individuals with diabetes by increasing the accessibility of healthcare services. Technologies such as mobile applications, web-based platforms, and text message reminders not only enhance treatment adherence but also allow healthcare professionals to monitor patients more effectively. Telehealth facilitates the treatment processes of individuals living in regions with limited access to healthcare services or those with restricted mobility. These methods play a critical role in achieving glycemic control, preventing complications, and maintaining individuals' quality of life.

Results: Telehealth applications improve individuals' quality of life and reduce the burden on healthcare systems. Expanding the use of these applications holds great potential for effective diabetes management. This review aims to examine the impacts of the increasingly widespread telehealth applications in diabetes management and to discuss examples of telehealth applications provided for individuals with diabetes globally and in Turkey.

Key Words: Diabetes, Telehealth, Telemedicine, Nursing

THE ROLE OF THE NURSEIN THE PREVENTION OF DELIRIUM IN INTENSIVE CARE UNIT

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Introduction and Objective: Delirium is defined as an acute disturbance in attention and cognition that can develop over a short period of time and fluctuate markedly from day to day. Delirium is one of the most common complications for patients in the intensive care unit. Delirium affects 12.5 million patients and causes a financial cost of approximately 152 billion dollars each year. It is crucial that nurses have a comprehensive understanding of how to assess and manage delirium. Given their constant presence with patients, nurses play an important role in the early detection of delirium. This review was conducted to examine the scales used in the early detection of delirium in patients hospitalized in intensive care unit and non-pharmacological nursing practices that can be used to prevent delirium.

A number of screening tools have been developed and validated for the assessment of delirium in intensive care. Once delirium is confirmed, nurses play a vital role in implementing both non-pharmacological and pharmacological interventions to address and treat the condition. There is no established pharmacologic therapy for the treatment of delirium, so non-pharmacologic interventions are the main approach.

Conclusion: Non-pharmacological interventions include provision of physiological support, early mobilization, sleep quality, orientation, cognitive stimulation, noise and light reduction, family involvement, and other non-pharmacological interventions described in the literature.

Keywords; Intensive care, Delirium, Nursing practices

BIBLIOMETRIC ANALYSIS OF GRADUATE THESES ON THE USE OF PICTURE ANALYSIS METHODS IN CHILDREN IN TURKEY

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ABSTRACT

Introduction and Purpose: This study aims to retrospectively perform a bibliometric analysis of graduate theses conducted on picture analysis methods and to contribute insights to the literature based on the findings.

Materials and Methods: The search was conducted retrospectively from the Higher Education Council National Thesis Center between October 15–November 15, 2024, without any time limitation. The keywords "picture analysis," "expression through drawing," and "child" were used to identify theses conducted in Turkey across all years, fields, topics, and populations. These theses were grouped and analyzed bibliometrically.

Results: The search identified 63 theses from the Higher Education Council National Thesis Center. Twelve theses were excluded for not meeting the inclusion criteria, and nine were restricted. Forty-two theses were grouped by year, type, and academic discipline. The distribution by year revealed that the earliest thesis was a master's thesis in Educational Sciences completed in 2001. Over time, the number of theses showed a marked increase, with 65.1% conducted in the last five years. Among these recent theses, 85.0% were master's theses, 10.0% were doctoral theses, and 5.0% were proficiency in arts theses. The most common application observed was using picture analysis to express a topic from the child's perspective. However, some studies used picture analysis not for expression but as a tool to evaluate other parameters such as cognitive levels or problem-solving skills in children.

Discussion and Conclusion: The picture analysis method is a vital tool for evaluating children's perspectives on concepts, diseases, or situations across all age groups. It has been applied in various fields, from pandemics to wars and illnesses. All studies highlight this method as an effective way for children to express themselves comfortably and reflect their subconscious. The bibliometric analysis is expected to provide valuable insights to the literature and guide future research on the subject.

Key Words: Child; Graduate Theses; Drawing; Picture Analysis; Expression Through Drawing

A REVIEW OF POSTGRADUATE STUDIES EDUCATION AND TRAINING IN TURKEY WITH THE TITLE OF CULTURAL INTELLIGENCE

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ABSTRACT

Introduction and Purpose: The research aims to examine postgraduate studies on "cultural intelligence" in the field of education and training in Turkey.

Materials and Methods: The research methodology is qualitative. It is designed based on the fundamental qualitative research model (natural inquiry). The data sources for the research are doctoral and master's theses on "Cultural Intelligence" in the field of "Education and Training", which are accessible in the database of the Council of Higher Education National Thesis Center. Document analysis technique was used to collect data. Criterion sampling, one of the purposeful sampling methods, was used when selecting data sources. As the criteria of the research; It has been determined that a)it should be published as of September 28, 2024, b)should be on leave, c)should be in the field of Education and Training, and d)the words "Cultural Intelligence" should be included in the thesis title. In line with these criteria, 12 master's theses and 1 doctoral thesis were determined as data sources. "Review Form for Graduate Studies" was prepared and the data was arranged in accordance with this form. Descriptive content analysis was used to analyze the data.

Results: It was understood that there were similarities between the theses in terms of subject, method and analysis techniques used, and out of a total of 13 theses, 10 used quantitative, 1 qualitative and 2 mixed methods. Studies have shown that cultural intelligence levels are high and that being abroad stands out as an element that improves cultural intelligence.

Discussion and Conclusion: It has been concluded that the subject of cultural intelligence was discussed once in the theses in 2023 and 2024, and that more research should be done on this subject, considering the recent years of intense immigration, and that increasing qualitative studies in research may be beneficial for examining the subject in depth.

Key Words: Cultural Intelligence, Master's Theses, Doctoral Theses, Postgraduate Education.

MICROSTRUCTURE ANALYSIS OF AL 6061 ALLOY REINFORCED WITH DIFFERENT B4C AND CNT RATIOS

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ABSTRACT

Aluminum matrix composites are emerging as advanced engineering materials due to their high specific strength and hardness, good wear resistance and high temperature properties. The properties of Al6061 reinforced with B4C and CNTs are widely investigated. In the present study, the mechanical properties of Al6061 matrix reinforced with B4C and CNTs are investigated due to its higher hardness and lower density properties than SiC and Al_2O_3. Composite samples produced by mechanical alloying method at different weight ratios with the prescription determined by the literature study were investigated by tensile and hardness tests of 3% wt. B4C powder and 3,5,7 and 9% CNT powder with an average particle diameter of approximately 10 μm sintered at 550 °C. The mechanical properties of Al6061 alloy were increased by the presence of reinforced and sintered B4C and CNT particles. Measurements of the tensile and hardness properties of the samples of Al6061 matrix composites showed that the tensile values increased and the hardness values increased with the increase in the weight ratio of the reinforcement.

Keywords: Al 6061, B_4C, KNT

THE SEARCH FOR DEFECTIVENESS IN ABSTRACT GEOMETRIC ARRANGEMENTS: BUBI

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David Hayon, known by his pen name Bubi, has an artistic practice based on the structuring of waste materials in a way that is far from symmetry and perfection. His works consist of geometric forms with a relief effect. The unique style created with materials and techniques is actually his life adventure. The subtext of his works includes concepts such as uncertainty, randomness, self, search, and existence. The artist does not use forms that have a counterpart in nature or that are based on any description. Unforeseen possibilities are part of his picture. Most of the forms he uses in his paintings can be considered as the result of emotional transitions. Issues such as belonging, identity crises or adapting to the society one lives in are situations that affect the emotional world of the artist. In this study, Bubi's art practice was evaluated through his paintings and why he cared about imperfection was investigated. This research, which was conducted using literature review and work reading techniques, examined the motivations behind the artist and art practice creating a message. Bubi is an artist who combines his spontaneous style with waste materials and fearlessly leaves the unconscious on a two-dimensional plane. His works have generative qualities that produce their own derivatives. The search for form, shape and meaning in the work is related to the artist's emotional world. In the research, Bubi's emphasis on abstract geometric arrangements and his war on perfection were examined.

Key Words: Collage, Abstract art, Waste object, Bubi

EVALUATION OF PROJECT SELECTION CRITERIA IN THE AVIATION INDUSTRY THROUGH FUZZY AHP

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ABSTRACT

Introduction and Purpose: In both daily life and professional settings, individuals frequently face decision-making processes and must choose among multiple alternatives. Making the right decisions in a professional environment is crucial for improving current conditions and achieving strategic objectives for the future. One of the most significant decision-making challenges within an organization is prioritizing projects to be implemented in alignment with limited resources and strategic goals. Prioritizing projects is a critical step in achieving goals more efficiently. Thus, selecting the right project can be addressed as a Multi-Criteria Decision-Making (MCDM) problem. This study focuses on the project selection problem in an aircraft maintenance facility. By prioritizing existing projects correctly, the aim is to apply the solutions to a greater variety of aircraft types in a shorter time frame and reduce aircraft ground time. The study aims to contribute to the organization's decision-making processes.

Materials and Methods: The criteria to be used in the selection process of five alternative projects (Project 1, Project 2, Project 3, Project 4, and Project 5) were determined by five experts in the field. These criteria include "hangar capacity," "workforce capacity," "priority level assigned by senior management," "material availability," and "documentation availability." The weights of these criteria were determined using the Fuzzy Analytical Hierarchy Process (FAHP), a MCDM method.

Results: The highest-priority criterion was identified as "hangar capacity," with a weight of 0.39. Conversely, "workforce capacity" ranked last, with a relative weight of 0.07.

Discussion and Conclusion: This study determined that an aircraft maintenance facility, playing a critical role in supporting operations, should prioritize "hangar capacity," followed by "material availability," "documentation availability," "senior management priorities," and "workforce capacity" when selecting among five different projects.

Key Words: Multi-Criteria Decision-Making (MCDM); Project Prioritization; Fuzzy AHP (FAHP)

THE EFFECT OF SOCIAL MEDIA ON CHOCOLATE: THE SAMPLE OF DUBAI CHOCOLATE

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ABSTRACT

The origin of chocolate in Latin America, approximately 4000 years ago. First consumed as a beverage by the Mayans and Aztecs, chocolate is now in demand as a pleasure-oriented product. According to the data provided by the World Population Survey, it has been determined that the average person consumes approximately 8.8 kg of chocolate each year. Dubai chocolate, which has become popular in recent years, was discovered by British entrepreneur Sarah Hamouda and quickly became known with viral chocolate videos shared on social media. Consumption has been an important activity required to meet various needs since the beginning of human history. In our world where globalization has taken a new form, consumption patterns and culture have been changing rapidly for generations. (Altuntuğ, 2012).

This study was conducted using the literature research method and aims to analyze the effects of fast-moving consumer culture, social media influence and marketing strategies on the perception of chocolate by examining the popularization process of Dubai chocolate.

Key Words: Chocolate Consumption, Social Media, Gastronomy

INVESTIGATION OF THE RELATIONSHIP BETWEEN HEALTH LITERACY AND HUMAN PAPILLOMAVİRUS (HPV) KNOWLEDGE AND HEALTH BELIEFS REGARDING HPV AND VACCINE AMONG PHYSIOTHERAPY STUDENTS

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ABSTRACT

Introduction and Purpose: Health literacy can be a crucial factor that is often overlooked but has a tremendous impact on preventive behaviors like Human Papillomavirus (HPV) vaccination. Therefore, the aim of this study was to examine the relationship between health literacy and HPV knowledge and health beliefs regarding HPV infection and vaccination among physiotherapy students.

Materials and Methods: Fifty-four physiotherapy students participated in the study. The students' socio-demographic characteristics, sexual experience, HPV virus and HPV vaccination status were questioned. The health literacy level of the students was evaluated with the Turkish Health Literacy Scale-32 (THLS-32). The Human Papillomavirus Knowledge Scale (HPV-KS) was used to assess students' knowledge levels about the HPV virus, and the Human Papillomavirus Infection and Vaccination Health Belief Model Scale (HBMS-HPVV) was used to assess students' health beliefs about HPV infection and vaccination.

Results: The average age of the students was 21.56±2.26 years and 74.1% were female. Furthermore, 79.6% of the students stated that they had heard of HPVand its vaccine and 42.6% of them had heard of the Pap-Smear test. The rate of those who have received the HPV vaccine was 5.6%, and 61.1% of the students stated that they wanted to get the HPV vaccine. The students' THLS-32 average score was 34.06±10.53, HPV-KS average score was 12.90±5.82, and HBMS-HPVV average score was 34.77±9.87. There was a significant relationship between the students' THLS-32 scores and HPV-KS total ($r=0.551$, $p<0.001$) and HBMS-HPVV total scores ($r=0.377$, $p=0.005$).

Discussion and Conclusion: The current study has demonstrated that as students' health literacy level increases, their HPV knowledge level and attitudes and behaviors towards HPV vaccine will also improve. Therefore, we recommend that health literacy-related curricula be adjusted and supported with scientific events and seminars to increase HPV awareness and vaccination rates among physiotherapy students.

Key Words: Health Literacy; Human Papillomavirus; HPV Vaccine; Physiotherapy Students

BIODEGRADABLE ELECTRONICS FOR ENVIRONMENTAL SUSTAINABILITY

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ABSTRACT:
With the rapid increase in electronic device consumption, electronic waste (e-waste) has become a critical environmental challenge. Traditional electronics contain toxic metals and non-biodegradable materials that contribute to pollution and human health risks when disposed of improperly. Biodegradable electronics, a novel field within sustainable technology, offer a promising solution to these issues by designing devices that decompose naturally after their use. These eco-friendly devices utilize organic and bio-derived materials, such as cellulose, silk proteins, and polylactic acid (PLA), for substrates and encapsulation, as well as biodegradable conductors like magnesium and zinc. Unlike conventional electronics, these devices are designed to maintain functionality during their operational life but break down safely in composting conditions or when exposed to moisture and natural enzymes in the environment.

The potential benefits of biodegradable electronics extend beyond waste reduction; they align with principles of a circular economy by eliminating hazardous materials, conserving finite resources, and promoting renewable resources. However, challenges persist in balancing the durability needed for reliable performance with the desired biodegradability. Organic materials often have lower conductivity and durability than traditional components, making performance optimization a key research focus.

As the demand for sustainable solutions grows, biodegradable electronics represent a forward-thinking approach to responsible consumption and environmental protection. By integrating these devices into applications requiring disposability, society can mitigate the ecological footprint of short-term electronics while ensuring environmental integrity. The development of high-performing, cost-effective biodegradable electronics could transform sectors dependent on temporary electronic devices, supporting a cleaner, healthier future.

Keywords: E-waste reduction, Sustainable technology, Biodegradable electronics

VENTRAL BULLA OSTEOTOMY IN A CAT

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ABSTRACT

Ventral bulla osteotomy (VBO) is a surgical procedure that involves opening the middle ear (tympanic bulla) to remove a polyp (benign tumor), tumor or infected tissue. This case report is a 6-month-old, 1.9 kg, female, mixed-breed cat that was brought to Siirt University Animal Health Application and Research Center with a complaint of discharge from the left ear that had been ongoing for approximately three weeks. The patient was first examined in general and no pathology was found. Then, an otoscopic examination of the patient was performed and it was determined that there was severe discharge from the left ear, the eardrum was not visible and there was growth in the ear canal. After the otoscopic examination, medio-lateral and ventro-dorsal head radiographs of the patient were taken and it was determined that there was increased opacity in the left bulla and thickening of the bone tissue. In addition, the patient's left ear canal was visualized with a bronchoscope and it was clearly determined that there was a growth that was thought to have come from inside where the eardrum should be. The patient, who was diagnosed with inflammatory polyp in the left ear, was started on medical treatment and called for a check-up one week later. The patient who came for a control visit approximately 2 weeks later was re-examined. In the examinations, it was determined that the patient had a general deterioration and a shaky gait. Since the inflamed polyp in the left ear was gradually disrupting the patient's general condition and coordination, it was decided to perform an operative intervention on the patient. The patient, who was put under general anesthesia appropriately, was approached to the left tympanic bulla from the ventral side according to the technique. The inflamed growths in the opened tympanic bulla were first removed with a forceps, then the remaining polyp tissue pieces were irrigated with isotonic and aspirated with the help of an aspirator device. The ear canal was completely cleaned and the patient was closed according to the tympanic bulla technique. The patient, who had hypothermia and general condition deterioration in the postoperative period, died on the 4th day. In this case report, it was demonstrated that the ventral bulla osteotomy was successfully performed according to the technique, but the chance of success decreases in cases where the general condition deteriorates to the extent that it deteriorates.

Keywords: Bulla, Cat, Polyp

EFFECT OF BISPHENOL A ON ENZYME ACTIVITIES IN *Danio rerio*

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ABSTRACT

Bisphenol A (BPA) is an industrial synthetic chemical widely used in the production of polycarbonate plastics and epoxy resins. The widespread use of BPA increases the amount of waste to the environment and the rate of its mixing into the aquatic environment. Pollutants mixed into the aquatic environment have harmful effects on aquatic organisms. In this study conducted to examine the effects of BPA on aquatic organisms, *Danio rerio* was selected as a model organism. It was aimed to investigate the enzyme activities of Superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase (GPx) by taking samples at 24 and 96 hours from D. rerio exposed to Control (C0), Solvent (C1) (1ml/100 ml) and 10 µg/L (C2) BPA for 24 and 96 hours, using whole body tissues.

When the study results were examined, it was observed that BPA caused oxidative stress in the organism by causing decreases in CAT, SOD and GPx enzyme activities in *D. rerio* individuals.

Keywords: Bisphenol A, *Danio rerio*, Oxidative Stress, Enzyme Activity

FOOD SAFETY AND BLOCKCHAIN IN AGRIBUSINESS

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ABSTRACT
Food safety is a critical concern globally, with increasing consumer demand for transparency in the supply chain. Blockchain technology has emerged as a transformative solution to enhance traceability, accountability, and efficiency in agribusiness. This review explores the intersection of food safety and blockchain, examining recent advancements, theoretical and conceptual frameworks, and real-world applications. It discusses challenges, policy implications, and recommendations for broader adoption in agribusiness systems.

Keywords: Agribusiness; Blockchain; Cyber security; Food safety

PULVINAR THALAMI VOLUME AND ASYMMETRY IN PATIENTS DIAGNOSIS OF MIGRAINE

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ABSTRACT

Introduction and Purpose: Pulvinar thalami is the largest thalamic nucleus located in the diencephalon. Although its function is not clearly known, it is known to be connected to the visual system. Studies have shown that there is an anomaly in the thalamo-visual connection in patients diagnosed with migraine. Intolerance to light and the perception of visual stimuli as painful sensations in migraine are particularly related to abnormal sensory processing in the pulvinar thalami. Therefore, this study aims to evaluate the volume of the right and left pulvinar thalami and the asymmetry between them in patients diagnosed with migraine by comparing them with healthy individuals.

Materials and Methods: This study was conducted using cranial MR images of patients diagnosed with migraine and healthy individuals between 2023-2024 at Balikesir University Training and Research Hospital. 40 women diagnosed with migraine between the ages of 20-49 and 30 healthy women between the ages of 22-47 were included in the study. Cranial MRI images of the individuals were transferred to VolBrain software and the total volume of the pulvinar thalami, right and left volumes and the asymmetry between them were examined morphometrically. The obtained data were statistically analyzed using SPSS 25 software. In the

analysis, the means of the data were compared with the Independent Group T-Test, while the correlation with age was evaluated with the Pearson Correlation test.

Results: According to the results obtained from the study, no significant difference was found between the total, right and left pulvinar thalami volumes of patients diagnosed with migraine and healthy individuals ($p>0.05$). It was observed that the asymmetry between the right and left pulvinar thalami in patients diagnosed with migraine was negatively correlated with age ($r=-0.34$), ($p=0.04$).

Discussion and Conclusion: This study shows that migraine has no effect on the pulvinar thalami, but with aging, asymmetry is observed between the right and left pulvinar thalami volumes in patients diagnosed with migraine. Although there is no significant difference in the pulvinar thalami volumes in patients diagnosed with migraine, the pulvinar thalami is located at the center of the thalamo-visual system and increased activation is seen in the pulvinar thalami in this system. Therefore, the pulvinar thalami should also be evaluated within the visual system and its contribution to migraine pathogenesis should be reconsidered.

Key Words: Migraine; Pulvinar Thalami; Asymmetry; Morphometry

ISOLATION OF BIOACTIVE COMPOUNDS OBTAINED FROM *CARICA PAPAYA* TO TREAT MALARIA AND VARIOUS OTHERS FOR HUMAN HEALTH

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ABSTRACT

The tropical fruit Papaya is rich in Vitamins A, B, C, D and E, fiber as well as bioactive plant components. It also contains papain enzyme which is used to tenderize meat and which also aids the digestion process. The antioxidants present may help reduce the oxidative stress and thereby reduce the risks of other diseases. In addition, it may also help against sun damage. Papaya is delicious when eaten ripe, alone or it can also be easily combined with other foods. Papaya has multifarious health benefits. Previous studies have shown that the plant extract effectiveness in the treatment of malaria. Not only the fruit is beneficial but also the extracted papaya leaf juice has antimalarial activity. It has several properties such as anti-mutagenic, anti-inflammatory and anti-cancer, which help in maintaining optimum health. Moreover, the papaya fruit is also highly effective for healthy skin with anti-wrinkle, anti-acne properties.

Keywords: Carica Papaya, Papain, leaf extract, Phenolic extract, Human health.

CARBARYL INDUCES ADIPOGENESIS IN 3T3-L1 ADIPOCYTE CELLS

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ABSTRACT

Introduction and Purpose: Obesity is a global public health problem that has increased in recent years. The potential effect of exposure to pesticide residues on glucose and lipid metabolism dysregulation has attracted intense attention in recent years due to its major threat to food safety and human health. The aim of the study was to investigate the possible effects of carbaryl, a carbamate pesticide, on adipogenesis in adipocyte cells.

Materials and Methods: Commercially obtained 3T3L-1 cell line (ATCC® CL - 173) was transformed into adiposity cells. Adipocyte transformation was detected by oil red o staining. Cytotoxic activity in adipocytes was determined by xCELLigence system. Different doses of carbaryl were applied to 3T3-L1 adipocytes for 48 hours and IC50 value was calculated. CCAAT/enhancer binding proteinα (C/EBPα), peroxisome proliferator activated receptors (PPARγ), leptin and adiponectin gene expressions were examined by qPCR.

Results: As a result of 48 hours of carbaryl application to adipocytes, the IC50 value was found to be 1.48 μM. Carbaryl application increased C/EBPα, PPARγ and leptin gene expression in adiposity cells.

Discussion and Conclusion: In conclusion, our research indicates that carbaryl is cytotoxic to adipocyte cells. Lipid metabolism is impacted by pesticide exposure. To learn more about how pesticide exposure affects obesity, further mechanistic research is required.

Key Words: 3T3-L1 adipocyte, Adipogenesis, Carbaryl

ATM CARD SCAM IN NIGERIA AND THE WAY OUT. A PROPOSED FRAMEWORK

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Abstract.
A card scam is the illegal act of stealing finance from another person account using ATM card. This particular type shades of scam is among the most rising cybercrimes in Nigeria. This type of scam is done by stealing, cloning, or jamming another person's ATM cards in other to access the funds from that particular account either online, on an ATM machine or POS device. An ATM (Automated teller machine) card is a payment card design with a magnetic chip which house the holder's account details and enable customer to instantly access their financial accounts from anywhere around the globe. An ATM machine is a banking device which purpose is to dispense & collect cash from customers, the ATM machine is design to accept and read the ATM card to perform transaction, while, a POS (point of sale) machine is a portable device design to read an ATM card which only purpose is to transfer (receive and send) money from one account to another without dispensing cash from the device. The aim of this paper is to propose a counter measures in other to curve the rampant threats of ATM cards scams in our community. Since the adoption of ATM cards in early 2000 in Nigeria, the rate of scam have never rose to such extent like the current period which warrants investigation & additional counter measures. The study propose three counter protective modules, one of withdrawal, and two of user access which include six digits PIN, OTP, and fingerprint authentication. The purpose of this three modules is to improve the safety net within the system, limit intruder access, and to curve the constant threats of this particular cybercrime. With the adaptation of these proposed module, the rise of ATM scam in Nigeria is expected to be curve down to its minimum.

CARDIOVASCULAR DISEASE IN WOMEN 'S AND RISK FACTORS

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Abstract

In the United States, cardiovascular diseases—particularly coronary heart disease and cerebrovascular illness—are the main causes of mortality for women. claim the lives of more white and black women. more than the combined effects of diabetes, cancer, and accidents.Over 236 000 women lose their lives to heart attacks every year. attack, and stroke claims the lives of almost 87,000 women.Preventing cardiovascular disease in both men and women requires action before the disease's symptoms or a myocardial infarction manifest.There is a stroke or dial infarction. Avoidance isCrucial since women account for 40% of all coronary incidents. Are lethal; 67% of women's unexpected deaths happen in Those who have never had coronary heart disease. The leading cause of mortality and disability for older women is coronary heart disease (CHD). A woman over 50 has a 46% chance of developing CHD and a 31% chance of dying as a result. A higher risk of cardiovascular disease in the future is linked to early and late menarche, polycystic ovary syndrome, infertility, unfavorable pregnancy outcomes (such as hypertensive disorders of pregnancy, gestational diabetes, preterm delivery, and intrauterine growth restriction), and not breastfeeding. This review include the cardiovascular related problems in women and various risk factors are affected on the women's .To maximize women's long-term cardiometabolic health, a history of reproductive risk factors offers the chance for thorough risk factor screening, improved cardiovascular disease risk assessment, and the use of primordial and primary prevention.

Keywords:- cardiovascular disease, Pregnancy, risk factors , women

SMOKING PREVALENCE AND DETERMINANTS AMONG NURSING STAFF AT THE REGIONAL HOSPITAL CENTRE (RHC) AL FARABI

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Abstract

Smoking is a preventable global cause of mortality. This study aimed to assess the prevalence of smoking among nursing staff at CHR Al Farabi in Oujda, as well as their smoking habits, knowledge, and attitudes. A cross-sectional survey was conducted, involving 155 participants (51% women and 49% men), using a structured questionnaire.

The findings revealed an overall smoking prevalence of 20%, with 20% among men and 0% among women. Among smokers, 16.1% reported starting regular smoking before the age of 20. Key factors driving smoking included work-related stress (18.9%) and occupational challenges (17.6%). Of those smoking in caf s (42.9%), half preferred coffee as their beverage. Moreover, 71% of smokers initiated smoking before entering the workforce, and 77.4% reported no pre-

existing health issues. However, 75% noted an impact of smoking on professional performance. Early smoking behavior was evident, with 38.7% smoking their first cigarette within 30 minutes of waking and 67.7% reporting increased consumption over time. Despite these trends, 96.8% were aware of the risks of smoking, and 70% expressed a desire to quit.

In conclusion, participants highlighted the need for initiatives such as complete smoking cessation, promoting physical activity, reducing cigarette consumption, and avoiding environments that encourage smoking, like ca s.

Keywords:
Smoking; Prevalence; Cross-sectional study; Tobacco use; Nursing staff; Public health.

ADVANCED APPROACHES TO THE SYNTHESIS AND STRUCTURAL CHARACTERIZATION OF PHOSPHATE COMPOUNDS

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Abstract

The synthesis of nanomaterials, particularly nanoparticles, has garnered significant interest over the past few decades due to their unique properties and potential applications across various fields of science and technology. This work focuses on the development and characterization of $Na_2Ni_{0.5}Cr_{0.5}P_2O_7$ synthesized via the citrate pathway reaction method. Sol gel reaction techniques are among the most widely used approaches for preparing such materials, as they provide a straightforward and efficient means to achieve the desired compounds starting from diverse precursors.

The resulting $Na_2Ni_{0.5}Cr_{0.5}P_2O_7$ was indexed within the $P2_1/n$ space group, which confirms a monoclinic distortion in its crystal structure. Comprehensive characterization was carried out using X-ray diffraction (XRD), Fourier-transform infrared spectroscopy (FTIR), and UV-Visible spectroscopy. These analyses revealed the formation of a single-phase material, confirming the high purity and successful synthesis of the phosphate.

Morphological studies of the synthesized powder demonstrated a heterogeneous microstructure with grain micrometrics sizes. This variation in particle size highlights the diverse nature of the microstructure, which could influence the material's physical and chemical properties. The results from this study provide valuable insights into the structural and morphological characteristics of $Na_2Ni_{0.5}Cr_{0.5}P_2O_7$, paving the way for potential applications in various technological domains.

Keywords: Citrate pathway, Characterization; P21/n; Monoclinic, Morphology.

CHALLENGES IN ZEBRAFISH BREEDING

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ABSTRACT

Introduction and Purpose: The zebrafish (*Danio rerio*) is a frequently preferred model for biomedical, genetic and neurobiological analyses. This fish species is an important laboratory research animal due to its transparent embryos, rapid reproductive cycle and genetic similarities. Maximising the reproductive efficiency of zebrafish increases the accuracy of scientific and biological research while directly impacting the welfare of the fish under laboratory conditions. The aim of this research is to investigate environmental, genetic and social factors that affect zebrafish reproduction and to explore possible solutions to problems that may arise in laboratory environments.

Materials and Methods:

Reproduction of zebrafish (*Danio rerio*) is strongly influenced by environmental factors such as the light-dark cycle, water temperature, pH and diet. The aim of this study was to investigate the effects of environmental conditions on the reproductive cycle of zebrafish and the impact of these factors on potential genetic diversity and social interactions. In particular, it was found that tubal blockages in female zebrafish after the 16th month have negative effects on fertility. This situation is considered a potential problem. This situation is considered a potential problem that may jeopardise the reproductive performance and genetic diversity of zebrafish.

Results: Reproductive success is significantly influenced by environmental factors, especially water quality and lighting. The incidence of tubal blockage in female zebrafish increases after the 16th month. This can lead to a considerable drop in egg production. As the maximum reproductive performance begins to decline after the 12th month, new breeding animals must be prepared in laboratories.

Discussion and Conclusion: The optimization of environmental conditions, the improvement of social structures and the maintenance of genetic diversity are necessary to increase the reproductive performance of zebrafish. Proper regulation of these factors improves the welfare of zebrafish in the laboratory environment and increases the reproducibility and quality of biomedical research.

Key Words: Zebrafish; Reproductive efficiency; Environmental factors; Genetic diversity; Animal welfare in the laboratory; Ovarian duct obstruction

ADVANCED OPTIMIZATION OF ANAEROBIC CO-DIGESTION PROCESSES: BIOMETHANE GENERATION FROM POULTRY BY-PRODUCTS AND CHICKEN MANURE

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Abstract

Anaerobic co-digestion of animal waste is a promising strategy for improving biogas production, contributing to clean energy solutions and sustainable urban environmental management. This study focuses on the biomethanation of two types of animal waste: poultry by-products (PBP) and chicken manure (CM). Using response surface methodology (RSM) integrated with a central composite design (CCD), key process parameters were optimized to maximize methane production. Five independent variables were considered: temperature (X1), substrate quantity in volatile solids (VS) (X2), substrate to feedstock proportion (SPV/FP) (X3), inoculum-to-substrate ratio (I/S) (X4), and the percentage of IN2 (a Marrakesh inoculum pre-conditioned in an anaerobic digestion reactor) blended with an inoculum derived from the initial digestion of SPV (X5). The methane yield (PBM, expressed as L $CH_4 \cdot kg^{-1}$ VS) served as the response variable. RSM analysis

identified optimal conditions for maximum methane production: a temperature of 35°C, a substrate quantity of 2.5 g VS, an SPV/FP ratio of 3.00, an I/S ratio of 3.00, and an IN2 percentage of 79.09%. These parameters achieved a peak methane yield of 78.68 L $CH_4 \cdot kg^{-1}$ VS, demonstrating the potential of tailored co-digestion processes for advancing sustainable energy solutions in urban and rural settings. This research underscores the role of optimized anaerobic digestion in supporting renewable energy generation and environmental resilience in sustainable cities

Keywords: Anaerobic digestion. Chicken waste. Pretreatment. Methane production. Bioenergy.

CHEMINFORMATICS

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ABSTRACT:

Cheminformatics, the intersection of chemistry and information technology, is a field dedicated to the storage, analysis, and manipulation of chemical data through computational methods. As the volume of chemical data grows exponentially, cheminformatics provides essential tools and techniques for managing, analysing, and interpreting this information, facilitating discoveries across pharmaceutical, materials science, and environmental research. By leveraging databases, molecular modelling, and machine learning, cheminformatics aids scientists in predicting chemical properties, identifying potential drug candidates, and understanding complex molecular interactions.

One of the core applications of cheminformatics is in drug discovery, where it accelerates the identification of promising compounds by analysing large datasets of chemical structures and bioactivity. Virtual screening, quantitative structure-activity relationship (QSAR) modelling, and molecular docking are among the computational approaches that streamline drug design, significantly reducing costs and time associated with laboratory testing. Beyond pharmaceuticals, cheminformatics is also instrumental in materials science, helping researchers develop new materials with specific properties by predicting molecular behaviours and interactions. With advancements in machine learning and artificial intelligence, cheminformatics has become increasingly powerful, allowing for predictive modelling that assists in environmental monitoring, toxicity prediction, and sustainability efforts. Open-access chemical databases and collaborative platforms further enhance the field by fostering data sharing and improving accessibility to chemical knowledge.

Despite its progress, cheminformatics faces challenges, such as handling the sheer complexity of chemical data and ensuring data accuracy and consistency. Addressing these challenges requires continued development of algorithms and data standards, as well as interdisciplinary collaboration. In summary, cheminformatics is a transformative field that harnesses computational power to unlock new insights in chemistry, accelerating innovation and supporting a wide range of scientific advancements in a data-intensive era.

Keywords : Cheminformatics; Chemical Data; Drug Discovery; Molecular Modelling; Machine Learning.

WHAT HELPS AND HINDERS THE IMPLEMENTATION OF HOTELS' GREEN PRACTICES IN DEVELOPING COUNTRIES

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ABSTRACT

Introduction and Purpose: Academic studies on exploring the issue of sustainability in the hospitality industry have increased significantly over the last few years. It has been asserted that a hotel's green practices would enhance customer satisfaction and loyalty; employee loyalty, pro-environmental behavior, job satisfaction and organizational commitment; and firms' competitiveness. Green hotels' social attributes align with Sustainable Development Goal (SDG) 11 in making cities and human settlements inclusive, safe, resilient, and sustainable; and SDG 12 in ensuring sustainable consumption and production patterns. Therefore, implementing activities towards sustainability has become a strategic choice for hotel businesses. However, there is a lack of empirical research in underdeveloped and developing countries where the SDGs are highly focused. To bridge this academic gap, this study aimed to examine motivations and challenges of green practices implementation in hotels in Vietnam, a dynamic tourism destination, by applying the Institutional and Resource-Based View theories and a phenomenological qualitative approach.

Materials and Methods: The study applied a qualitative approach using in-depth semi-structured interviews. Adopting a purposive, snowball sampling approach, 4 high-level hotel managers and owners of three-to-five-star hotels in Khanh Hoa, Vietnam, were interviewed. Interviews followed a semi-structured protocol inviting participants to provide their opinions about green practices implemented in the hotel, green practices' role in the hotel operation, and any internal motivations, external opportunities, or challenges that would encourage or discourage hotels' implementation. New probe questions were added to address specific issues from the primary protocol. Applying thematic analysis (Clarke et al., 2015), data was analyzed through 6 stages to generate categories and themes. Adopting the criteria for qualitative quality from Tracy (2010), the quality of this study was ensured by rich rigor, sincerity, credibility, methodological significant contribution, and ethics.

Results: Results identified two themes presenting drivers and barriers to hotel pro-environmental activities, such as internal resources and external pressures. Drivers were divided into internal resources which can be tangible (e.g. energy savings, cost savings, and well-invested buildings and equipment) and intangible (e.g. employee cooperation, employee training, and brand green image), and external pressures including governance (e.g. following government and corporation's regulations, preventing fines if violation, and encouragement from the local government) and customers (e.g. awareness of the environment). Barriers were divided into internal resources which also can be tangible (e.g. high financial investment in equipment, buildings, and employee training) and intangible (e.g. time and effort consuming, cost-effectiveness consideration, service quality concentration, and limited awareness of managers and employees of the environment), and external pressures also including governance (e.g. lack of information about eco-labels and registration procedure), partners (e.g. limited suppliers'/partners' awareness of the environment) and customers (e.g. limited customers' awareness of the environment).

Discussion and Conclusion: The study supported existing evidence that external institutional pressures and internal resources are both drivers and barriers to hotels' sustainable activities. The current study expanded the current literature by conducting qualitative research to deeply understand about motivations for hotel green practices implementation in developing countries. In addition, the research not only focused on drivers of hotels' implementation of green practices but also highlighted barriers that prevent the implementation. Based on the findings, this research proposed practical suggestions to promote green tourism and sustainable development in the hotel industry.

Key Words: Green tourism; Qualitative study; Hospitality; Sustainable development

CLIMATE RESPONSIVE DESIGN, GUIDELINES FOR PRACTITIONERS IN PAKISTAN

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Abstract:
The growing desire for thermally comfortable living has focused attention on failure of modern architecture in providing comfortable living conditions, particularly in Lahore's climate. It is critical that residential architecture in Lahore be better understood in light of the city's climatic circumstances, such as variations in the seasons and humidity levels. The study investigates the failure of modern housing to achieve thermal comfort and not applying bioclimatic design principles effectively. By focusing on the interaction between design practices and environmental concerns, the study contributes to the discussions about sustainable housing in Lahore. The study employs a mixed-methods approach, including structured questionnaires addressed at the residents to collect firsthand information about thermal comfort. In addition, interviews and conversations with architects and regulatory authorities were performed to better understand the practical issues and perspectives around bioclimatic design. This meticulous methodology allowed for a multifaceted knowledge of the challenges at stake. The findings show a considerable gap between bioclimatic design principles and their use in modern homes. A lot of residents claimed thermal discomfort as a result of poor design decisions, such as inadequate orientation and ventilation. Furthermore, a significant lack of understanding among people about bioclimatic ideas restricts successful implementation. While architects encounter challenges in implementing these principles, regulatory frameworks fail to address bioclimatic design concerns, resulting in inadequate allowances for green areas and sustainable urban development. The study emphasizes the need for more public knowledge, updated legislation, and better incentives to encourage bioclimatic design in Lahore's housing sector.

Keywords: Thermal Comfort, Climate, Design, Pakistan

COMPARISON OF THE FLOW STRUCTURE OF NACA 6409 AIRFOIL UNDER DIFFERENT ANGLES OF ATTACK USING WIND TUNNEL AND NUMERICAL SIMULATION

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ABSTRACT

In this study, the flow structure around the NACA6409 airfoil was investigated both experimentally and numerically at a Reynolds number of 50.000 under angles of attack ranging from 0 degrees to 20 degrees, with 2 degree increments. In the experimental analysis, flow lines were observed using the smoke visualization technique, where paraffin dripped onto a heated resistance wire was evaporated, within a low Reynolds number open-type wind tunnel. The experiments were conducted with the airfoil sized to maintain a blockage ratio of less than 10%. The observed flow structures, including separation points, vortex formations, and turbulence regions, were compared with data obtained through an appropriate numerical solution method. Additionally, the lift coefficient (C_L) and drag coefficient (C_D) were calculated in numerical analyses. The findings revealed the similarities and differences between the experimental and numerical methods, analyzing the aerodynamic behavior of the NACA6409 airfoil under various angles of attack. The C_L value increased up to a 14° angle of attack, reaching a maximum value of 1.47. Beyond this angle, a decrease in C_L was observed. The C_D value, on the other hand, increased steadily with the angle of attack, reaching a maximum value of 0.38. These results indicate that the effects of separation and turbulence intensify at high angles of attack.

Keywords: Flow Visualization, Computational Fluid Dynamics, Wind Tunnel, Airfoil.

COMPASSIONATE USE OF ELEXACAFTOR/TEZACAFTOR/IVACAFTOR IN CYSTIC FIBROSIS PATIENTS WITH RARE MUTATIONS

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Introduction. The triple combination of elexacaftor/tezacaftor/ivacaftor (ETI) has dramatically improved the outcome of patients with cystic fibrosis (pwCF) with at least one F508del mutation. However, carriers of rare *CFTR* variants are not candidates for this innovative treatment.

Methods. In this observational study, we report the results of the compassionate use of ETI in 10 pwCF carriers of rare mutations after 2 months of treatment. Rectal organoids and short-term cultures of nasal epithelium obtained from rectal suction biopsies and nasal brushing were obtained from 4 subjects.

Results. Mean age of patients (4 males) was 30.1±13.3 years. At baseline, 3 patients were on long-term oxygen. Of these, one required non-invasive ventilation (NIV) and was enlisted for lung transplantation. After 2 months of ETI all patients showed significant increase of FEV_1 % predicted values [+ 8.0 (3.5-12.7) %, p <0.010], BMI [+0.85 (0-1.22) kg/m^2, p <0.020] and CFQ-R [+19.5 (6.3-29.2) points, p < 0.009]. A significant decrease of sweat chloride concentration [–11.2 (–1.7- –34.0) mmol/L, p <0.020] and exacerbations [–1.5 (–2 - –1), p <0.008] was also recorded. Overall, 7 out of 10 participants were considered as full responders. All patients reported cough disappearance (n=3) or reduction (n=7). Long-term oxygen was discontinued in 2 out of 3 patients and one also stopped NIV and was removed from lung transplantation waiting list.

Conclusions. Despite the limited number of cases, our results support the use of CFTR modulators in patients with rare CFTR variants that are not currently approved for ETI in Europe.

Keywords: cystic fibrosis, rare mutations, modulator, organoid, cell culture

COMPREHENSIVE CALIBRATION OF A 5.08 CM × 5.08 CM NAI (TL) DETECTOR FOR GAMMA-RAY SPECTROMETRY ACROSS 59.5–1332.5 KEV, USING PRIMARY GAMMA EMISSION LINES

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Abstract

Gamma-ray spectrometry is an indispensable tool in environmental monitoring and radiation protection, providing accurate insights into radionuclide concentrations and their spatial distribution. The NaI (Tl) scintillation detector, renowned for its high sensitivity, robustness, and cost-effectiveness, remains a cornerstone in these applications. Achieving reliable radionuclide quantification necessitates meticulous calibration over a comprehensive energy spectrum. This study presents an extensive calibration of a 5.08 cm x 5.08 cm NaI (Tl) detector across the energy range of 59.5 to 1332.5 keV, utilizing primary gamma-ray emitters such as Americium-241, Cesium-137, and Cobalt-60. These sources encompass critical energies relevant to environmental radiation analysis. Calibration parameters, including energy response and Full-Energy Peak Efficiency (FEPE), were systematically characterized to enhance detection accuracy. Corrections for systematic uncertainties, such as dead-time and pile-up effects, were automatically handled by the spectrometer. Additionally, the study investigated the influence of source-to-detector geometry on the detector's efficiency. The findings establish a robust calibration protocol, enabling precise and reliable field measurements for environmental contamination assessment. This advanced calibration methodology enhances the utility of NaI (Tl) detectors in radiation monitoring applications, thereby supporting informed decision-making for public health and environmental safety.

Keywords: Gamma-ray spectrometry; NaI (Tl) detector calibration; Full-Energy Peak Efficiency (FEPE); Environmental radiation monitoring; Radionuclide quantification.

EFFICACY OF BIOFEEDBACK TREATMENT MODALITY ON CLINICAL SYMPTOMS OF ANXIETY DISORDERS: INTERVENTION-BASED STUDY AT A TERTIARY CARE CENTER IN NORTHERN INDIA

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Abstract

Background: -Anxiety presents a complex cognitive, affective, physiological, and behavioral response that is related to potential harm (real or perceived). It is associated with intense fear, characterized by a fight or flight response. *Biofeedback* is one of the most valuable adjuncts in treating physiological hyperarousal episodic and chronic *anxiety disorders.*

Aims and objectives: - This study aimed to evaluate the efficacy of biofeedback treatment modality on clinical symptoms of anxiety disorders with other parameters.

Material & methods: - This longitudinal, interventional study was conducted at a tertiary care center at Jawaharlal Nehru Medical College and Hospital; the psychiatric unit of 76 patients (outpatients) with anxiety disorder was included in the study by fulfilling inclusion and exclusion criteria. After that, a self-prepared sociodemographic and clinical profile questionnaire was applied to all the patients to know information like name, age, sex, triggers, the intensity of pain, etc., with other tools such as the Hamilton anxiety scale, Headache impact test, and World Health Organization QoL instrument, short-form (WHOQOL-BREF), was also applied to assess the severity of the symptoms with other parameters.

Results: - In total patients, most of the patients were female (61.20%), most of them (54.90%) were from the age group 25-45 years, housewives (31.25%), and employed (57.67%), having education up to primary level (37.25%), residing in sub-urban areas (59.45%) and belongs to middle socioeconomic status (55.39%). Patients with anxiety disorder improved significantly with biofeedback intervention as compared with the waitlisted group with a sound effect size. The mean QoL-BREF score was also improved after intervention in the intervention group.

Conclusion: - Patients with anxiety disorder were showing severity of anxiety symptoms as well as poor quality of life. Anxiety is more common in females and individuals between the ages of 31 and 45 years. It is more prevalent in lower education and less common in higher socioeconomic status. Future studies are required to understand the efficacy and effectiveness of biofeedback therapy.

Keywords: Anxiety disorder, biofeedback, clinical profile, triggers, episodes, therapeutic alliance.

AVAILABILITY AND UTILIZATION OF INSTRUCTIONAL MATERIALS IN TEACHING MATHEMATICS IN PUBLIC SECONDARY SCHOOLS IN OGBA/EGBEMA/NDONI LOCAL GOVERNMENT AREA OF RIVERS STATE

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Abstract

The study investigated the Availability and Utilization of Instructional Material in Teaching Mathematics in secondary schools in Ogba/Egbema/Ndoni Local Government Area of Rivers State. Specifically, this work sought to; identify the available instructional material for teaching mathematics in secondary schools in Ogba/Egbema/Ndoni Local Government Area, examine the extent to which the available instructional materials are utilized in teaching mathematics in secondary schools in Ogba/Egbema/Ndoni Local Government Area, among others. A descriptive survey design guided the study. A population of 202 mathematics teacher's was used for the study. Four research questions and hypotheses were answered and tested at a 0.05 level of significance respectively. The instrument that guided the study was 'Availability and Utilization of instructional Material Survey Questionnaire'. This instrument was partitioned into four sections, structured in the pattern of 5 point Likert rating scale of agreement. The instrument was face validated by the research supervisor and two others. The reliability of the instrument was established using Cronbach Alpha Reliability Coefficient. The reliability coefficient achieved was 0.84. Mean and Standard Deviation were used to answer the research questions while Z-test was used to test the hypotheses. The study found among others that instructional materials such as textbooks, pictures, charts, chalkboard, electronic calculator, geometric shapes, four figure tables, mathematical sets, laboratory, coins/dice, magnetic flannel board/marker pen were available and was utilized in mathematics teaching. It was recommended among others that instructional materials such as computer programs, overhead projectors, models, simulation, PowerPoint among others should be provided, and that at least mathematics teachers should undergo in - service training once every year to enable them acquires the technical skills in handling instructional materials. This will encourage them to utilize instructional materials in their classes.

MOLECULAR ANALYIS OF SINGLE NUCLEOTIDE POLYMORPHISMS IN THE COMPLEMENT COMPONENT 5 GENE OF MASTITIC BUFFALO

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Abstract

Pakistan ranks 4th globally in milk production, following India, China, and the USA. Buffalo is a well-known dairy animal with unique features that have earned it international recognition. Dairy buffalos are susceptible to a variety of health problems, including mastitis, reproductive troubles, lameness, birth difficulties, gastrointestinal ailments, and metabolic and nutritional abnormalities. Mastitis is one of the most common illnesses in buffalo, characterized by an inflammatory reaction in the afflicted gland. This condition leads to substantial financial losses in the dairy industry worldwide due to the high costs associated with treatment, reduced milk yield, discarded milk, and culling. The aim of this study was to sequence and analyze the entire coding region of the C5 gene in buffalo, identify single nucleotide polymorphisms (SNPs), and assess the association between the C5 gene and mastitis susceptibility in dairy animals. The sequence analysis of the C5 gene could serve as a molecular marker for mastitis resistance, potentially aiding in the selection of more resilient dairy herds.

Key words: Mastitis, Milk, polymorphism, buffalo

THE LEARNING EFFECTS OF FLIPPED CLASSROOM ON NURSING STUDENT'S VITAL SIGNS KNOWLEDGE, SKILL, AND SATISFACTION: POST-TEST ONLY CONTROL GROUP STUDY

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ABSTRACT

Aim/Background:

The Traditional lectures optimize the passive learning, where students attend passively, however, lacking a deep understanding of the lecture material. Consequently, an innovative teaching approach is necessary to develop student engagement, active learning, and critical thinking skills. The aim of the study is to evaluate the effect of flipped classroom on knowledge, skill, and satisfaction about vital signs nursing procedure.

Methods: A post-test only control group design study was carried out in College of Nursing, Muhayil. King Khalid University, Kingdom of Saudi Arabia, during October 2023. The study population consisted of 63 second year Baccalaureate nursing students. A Simple random sampling technique was adopted to recruit samples in an experimental and control group. An Experimental group received flipped class model teaching and the control group received traditional method of teaching about vital signs nursing procedure. Knowledge was assessed using self-reported questionnaire, and skill by checklist also Satisfaction about the teaching method was assessed using 5-point likert scale.

Results: It is shown that there is a significant difference in the scores for skill (M=9.87, SD=.42), Knowledge (M=7.68, SD=2.24) and satisfaction (M=43.07, SD=5.65) among traditional and Flipped class students.

Conclusion: This study suggests that the teachers can be implement flipped classroom technique along with the traditional method of teaching.

Key Words: Flipped classroom, nursing students, vital signs, knowledge, skill, satisfaction.

THE POETIC PRESENTATION OF THE SABIR CHARACTER IN AZERBAIJANI HISTORICAL POEMS

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Introduction and Purpose:

Among the numerous literary works that feature the creation of characters of prominent literary figures or are dedicated to our poets and writers, historical poems dedicated to writers of the early 20th century who played an important role in the historical fate of our people, worked tirelessly for the enlightenment of the nation, and dedicated their lives to the cause of their people, stand out with their literary and aesthetic value. In this context, the historical poems in which the character of Mirza Alakbar Sabir, the prominent satirist and representative of the Molla Nasreddin movement, is created, attract attention with their literary and theoretical significance. Studying and analyzing these poems in the light of national thought remains relevant and important.

Material and Methods:

Rəsul Rza's "Xalq Şairi" (People's Poet), which portrays the character of Sabir, is notable for its original structure and artistic qualities. The poem describes Sabir as a teacher in a village who, with great effort, thinks of ways to educate the nation's children and open their eyes. To express Sabir's way of life, Rəsul Rza uses moments from Sabir's own poems, thus enhancing the artistic depth of the work.

One of the significant examples of Azerbaijani historical poetry is the poem "Ağlar Güləyən" (The One Who Laughs and Cries) by People's Poet Bəxtiyar Vahabzadə, where the satirical poet Sabir's character is created. Written on the 100th anniversary of Sabir's birth in 1962, the poem is divided into four parts. In each section, the author focuses on a specific period of Sabir's life and environment, using verses from Sabir's own poems as epigraphs to enrich the content of the narrative. Bəxtiyar Vahabzadə, who deeply explores Sabir's environment and creative path, expresses the friendship, sincerity, and loyalty between Sabir and Abbas Səhhət, two giants of Azerbaijani literature.

Bəxtiyar Vahabzadə's "Ağlar Güləyən," where the character of Sabir is created, remains one of the most notable examples of historical poetry and retains its literary and theoretical value today, symbolizing deep respect for Sabir's legacy.

Another valuable artistic example that discusses Sabir's life and character is the historical poem "Mən də insan oldum" (I Have Become a Human) by People's Poet Məmməd Araz. In this historical poem, Araz skillfully reflects on Sabir's life and work, drawing from the great poet's creative path.

One more example that attracts attention with its interesting plot, event dynamics, writing style, and stylistic features is Nariman Hasanzada's poem "Heybədə Gəzən Şeir" (The Poem Wandering in the Bag). This poem is another valuable artistic work that draws from Sabir's life and reflects on the poet's creative journey.

Results: In the history of Azerbaijani literature, there are many artistic works that depict the character of Mirza Alakbar Sabir. However, historical poems in which Sabir's literary personality is created or addressed stand out for their unique artistic qualities, craftsmanship, and literary significance.

Key words: Historical poem, Sabir character, artistic work, creative path, respect.

EXAMINATION OF VOCATIONAL HIGH SCHOOL TEACHERS' SELF-EFFICACY IN DEVELOPING DIGITAL EDUCATIONAL GAMES

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ABSTRACT

Introduction and Purpose: Today's technological developments have led to significant changes in the field of education, and traditional teaching methods have begun to give way to more interactive and digitally focused methods. In this context, the use of digital educational games has come to the fore. In vocational high schools that aim to provide their students with expertise in a specific profession, great importance is given to practical training as well as theoretical knowledge, and digital educational games can be used as an important tool to increase the quality of education provided in these schools. These games can be an important support tool for vocational high school teachers in fulfilling their duties, as they help students acquire theoretical and practical knowledge about their professional fields, as well as developing their professional competencies. Therefore, it is of great importance for teachers to have the competence to develop digital educational games. In this context, the purpose of the current research is to determine the level of self-efficacy of vocational high school teachers in developing digital educational games and to reveal whether their self-efficacy levels differ significantly according to gender, age and seniority variables.

Materials and Methods: The research was conducted based on the descriptive survey method, one of the quantitative research methods. The participants of the research were 240 teachers working in secondary schools providing vocational and technical education in Hakkari province, determined by the criterion sampling method, one of the purposeful sampling methods. Data were collected with the digital educational game development self-efficacy scale developed by Kelleci and Kulaksız (2020). The analysis of the data was carried out using the independent sample t-test and one-way analysis of variance.

Results: The findings of the study revealed that vocational high school teachers' self-efficacy in developing digital educational games was at a moderate level ($\bar{x}$=3.42). The difference between the mean scores of male teachers ($\bar{x}$=3.61) and female teachers ($\bar{x}$=3.23) was statistically significant (p=.000). It was observed that teachers with 1-5 years ($\bar{x}$=3.57) of professional seniority and 21 years and above ($\bar{x}$=3.83) had higher digital educational game development self-efficacy than teachers with 6-10 years ($\bar{x}$=3.23) of professional seniority (p=.000). As a result of the comparison made according to the age variable, it was determined that there was a statistically significant difference between the average scores of teachers aged 40 and over ($\bar{x}$=3.66) and the average scores of teachers aged between 30 and 39 ($\bar{x}$=3.31) (p=.001).

Discussion and Conclusion: As a result of the research, it was determined that vocational high school teachers have a moderate level of digital game development self-efficacy. It was observed

that male teachers' digital educational game development self-efficacy was higher than female teachers. It has been determined that teachers who are at the beginning of their careers and have been working for more than 20 years find themselves more competent in developing digital educational games. It has also been concluded that teachers aged 40 and over have higher self-efficacy levels than teachers aged between 30-39.

Keywords: Digital Educational Games, Self-Efficacy, Vocational High School Teachers

A ROBUST APPROACH TO DETECT FRICTION FACTOR IN HEART VALVE DESIGNS

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ABSTRACT

In recent years, modeling and simulation of biomechanical systems have been increasing its impact in the fields of medicine and engineering. The heart valve design model is of critical importance in the analysis of deformations and stresses under hemodynamic loads. In the study, the finite element method was used to evaluate the mechanical performance of prosthetic heart valves and to investigate the effects that occur due to friction conditions. The material properties and surface friction conditions of prosthetic valves were examined in the simulation. The effects of friction on stress distribution and material deformations were investigated in detail. In the model created using ANSYS software, viscoelastic and hyperelastic properties of valve surfaces were defined and analyses were performed with high-resolution mesh structures. Tetrahedral elements were used to optimize density and model deformations. As a result of the simulation, it was determined that the friction force Vonmises stresses concentrated on the valve edges increased. It was determined that the geometric variations used in the design were an important factor in optimizing valve performance. It was observed that the preference of low-friction materials in the model design and the inclusion of surface modifications in the design were beneficial. This study, unlike the existing approaches in the literature, presents an innovative study by examining the friction effects, mesh structure and material conditions in the design model in detail. In future studies, it is aimed to produce comprehensive solutions specific to the patient with modeling and real-time simulation techniques.

Key Words: Heart Valve, Friction Coefficient, Finite Element Analysis, Mesh Optimization

SYMPTOMATIC DEPICTIONS IN ARTWORKS

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ABSTRACT

From a morbid fascination with physical deformities to a genuine expression of compassion for their suffering, society has always shown great interest in the pathological. Since the beginning of recorded history, narratives and depictions of diseases and their consequences have been repeatedly addressed in artistic and literary efforts. There are aspects of existence such as illness, health, life and death that science alone cannot explain. From a humanistic perspective, patient experiences cannot be measured, weighed or dissected. In this connection, art has been in an important position in revealing the gaps that remain outside the boundaries of medical science. Works that provide a psychological, sociological and biological perspective on the physical ailments of patients have been processed throughout the ages. This is due to the artist's unique perspective of looking at the world through his lens. The work expresses more than the external appearance of the objects depicted. The elements in the work reveal what is characteristic beyond the form. For this reason, it is possible to analyze the symptoms specific to diseases and see the diagnosis of the disease in the works.

Given the uncertainty of tomorrow, the best thing we can do when thinking about the future is to examine the past in search of context and perspective. Medical history, especially preserved in art, is an example of this. Among the images created by artists, even before the dawn of civilization, there are lessons learned and then forgotten. According to medical history, art depicts the striking scientific truths of clinical practice, the difficulties, tragedies, miracles and beauties of patient care, throughout the centuries. The research focuses on the traces of the artifacts regarding diseases and the scientific truth revealed. The extent to which they reflect the ideals and sensibilities of the time in which they were created has been examined in terms of formal, moral and/or scientific values. The potential of clinical signs and collective values as an archive of medical history have been taken into account in the works.

Keywords: Art, symptom, medicine, science.

MINDFULNESS-BASED PRACTICES IN WOMEN'S HEALTH

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ABSTRACT

Introduction and Purpose: Women's health is a holistic concept encompassing not only physical well-being but also psychological and social well-being. Biological processes, psychosocial changes, and environmental factors significantly impact women's health throughout their lives. Stages such as pregnancy, childbirth, and menopause present various physical and psychological challenges, and the effective management of these processes plays a critical role in supporting women's health. Mindfulness, a practice developed by Jon Kabat-Zinn, emphasizes living in the moment and accepting thoughts and emotions without judgment. It has gained attention as an effective method for stress management and enhancing well-being. This approach helps women cope with life's challenges through mindful awareness and acceptance. Recent studies have shown the positive effects of mindfulness-based practices on women's health, garnering increasing interest in this method.

This article aims to examine the impact of mindfulness on women's health and explore its potential benefits in gynecological, obstetric, and psychosocial processes. The role of mindfulness-based practices in enhancing the ability to cope with mental health issues such as stress, anxiety, and depression, as well as their contributions to physical health, will be evaluated. In this context, the integration of mindfulness into a holistic approach to women's health and strategies that health professionals can adopt in this area will be discussed.

Materials and Methods: This study is based on a literature review examining the effects of mindfulness-based interventions on women's health. The literature review utilizes various research articles, randomized controlled trials, meta-analyses, and systematic reviews assessing the benefits of mindfulness on women's health, gynecological processes, obstetric processes, and general health. The studies were collected from various electronic databases, including PubMed, ScienceDirect, Google Scholar, and EBSCOhost. Keywords such as mindfulness, women's health, gynecology, obstetrics, stress management, depression, and anxiety were used for the search.

Results: Mindfulness-based practices have been found effective in reducing pregnancy-related anxiety and stress. It is known that stress during pregnancy can lead to adverse obstetric outcomes such as miscarriage, preeclampsia, preterm birth, and low birth weight. Mindfulness training during this period has been shown to improve maternal mental health and reduce pregnancy-specific stress factors. In high-risk pregnancies, mindfulness-based interventions have alleviated symptoms of depression and anxiety, significantly reducing pregnancy-related anxiety levels. Mobile mindfulness-based interventions during the antenatal period have been associated with a reduced risk of emergency cesarean sections and higher Apgar scores in newborns. Mindfulness

practices were also found to reduce stress and anxiety related to childbirth, improving maternal well-being. They were effective in reducing the risk of perinatal depression and alleviating symptoms of depression. Additionally, early interventions have the potential to improve neonatal health.

Mindfulness-based cognitive-behavioral therapies have reduced sexual distress and improved general sexual functioning (except for pain). Significant differences were observed in the perception of genital arousal. Mindfulness practices have improved perceptions of sexuality in women experiencing issues with sexual desire and arousal, with more pronounced improvements seen in women with a history of sexual abuse. In women with sexual desire disorders, mindfulness has led to significant improvements in satisfaction and overall sexual function, reducing difficulties with orgasm and depressive symptoms. In women diagnosed with vulvar vestibulitis, mindfulness-based group therapies have enhanced pain management skills, reduced rumination and feelings of helplessness, and improved sexual functioning. In women who had completed treatment for gynecological cancer, mindfulness practices reduced sexual distress and depression levels, while increasing relationship satisfaction and body awareness.

Discussion and Conclusion: Mindfulness is defined by Jon Kabat-Zinn as "paying attention in the present moment, without judgment." This technique is a process that allows individuals to notice what is happening in the present and accept their thoughts, feelings, and sensations. Mindfulness-based interventions, while providing stress management and physiological benefits, stand out as an effective method for helping women cope with various challenges throughout their life cycle. Rooted in Buddhist teachings, mindfulness is an approach that improves both psychological and physical health. The core attitudes of mindfulness, such as non-judgment, acceptance, patience, and non-striving, help individuals enhance their attention skills and emotional awareness.

Mindfulness practices can positively affect the birth experience by reducing negative mental states such as stress, depression, and anxiety during pregnancy and childbirth. Research has shown that mindfulness-based practices reduce stress and anxiety during pregnancy, enhancing positive mental states. Mindfulness-based interventions in pregnancy have been found effective in preventing adverse obstetric outcomes that may affect maternal and fetal health. Various studies have demonstrated that mindfulness interventions reduce pregnancy-related anxiety, prevent perinatal depression, and improve obstetric outcomes. These practices contribute to mothers feeling a greater sense of control during childbirth, reducing fear of childbirth, and increasing self-efficacy. Additionally, mindfulness has been shown to enhance breastfeeding self-efficacy and promote oxytocin release, strengthening the mother-infant bond.

Studies in the field of gynecology highlight the positive effects of mindfulness on women with sexual dysfunction. Randomized controlled trials have demonstrated that mindfulness practices have beneficial effects on sexual desire, arousal, satisfaction, and overall sexual functioning. Moreover, mindfulness interventions for issues like hot flashes, menopausal symptoms, and sexual discomfort have been shown to improve quality of life. In conclusion, mindfulness offers a holistic approach to women's health that not only helps manage stress and anxiety but also contributes to improving physical health and well-being. It is an accessible and promising tool that can be integrated into healthcare services, offering support to women in addressing their unique health challenges.

Key Words: Mindfulness, Women's Health, Gynecological Health, Obstetric Processes, Stress, Depression, Anxiety,

THE ACUTE EFFECT OF MIRROR THERAPY ON SENSATION, HAND FUNCTION AND REACTION TIME FOLLOWING FLEXOR TENDON REPAIR

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ABSTRACT

Introduction and Purpose: Mirror therapy(MT) is a neurorehabilitation technique that involves moving the intact limb while observing its reflection in a mirror to evoke the sensation of movement in the affected limb. It is known that MT can improve motor function in healthy individuals. However, no studies investigating the efficacy of MT in individuals who have undergone flexor tendon repair of the hand have been identified in the literature. This study aimed to investigate the acute effects of MT on sensation, hand dexterity, and reaction time following hand flexor tendon repair.

Materials and Methods: Our study included patients with Zone 4-5 flexor tendon injuries of the forearm who were in the postoperative period between weeks 8 and 12, accompanied by nerve injuries. All participants performed functional exercises(paper flipping, drawing rectangles, range of motion exercises, clip attachment, screw rotation) with their intact extremities in front of a mirror for 10 repetitions. Sensory assessments included the monofilament test and proprioceptive position sense test. Hand dexterity was evaluated using the 9-hole peg test, upper extremity reaction time was assessed with the HumenBenchmark test, joint range of motion(ROM) was measured with a goniometer, and pain was assessed using the Visual Analog Scale(VAS). Evaluations were performed both before and immediately after the intervention.

Results: The study was completed with 16 participants. Comparisons of pre- and post-intervention assessments revealed significant improvements in proprioceptive position sense during flexion(p=0.02) and extension(p=0.001), reaction time(p=0.001), extension ROM(p=0.003), and the 9-hole peg test results(p=0.001). No significant differences were found in the monofilament test(p=0.21); flexion(p=0.16), radial deviation(p=0.18), and ulnar deviation ROM(p=0.06); or pain(p=0.16).

Discussion and Conclusion: MT was found to have significant acute effects on flexion and extension position sense, reaction time, extension ROM, and hand dexterity following hand flexor tendon repair. These findings suggest that MT can be a beneficial component of early rehabilitation strategies.

Keywords: Flexor Tendon, Mirror Therapy, Reaction Time, Rehabilitation.

ENHANCING ENERGY EFFICIENCY IN WIRELESS MESH NETWORKS: A HYBRID APPROACH FOR POWER CONTROL AND ADAPTIVE ROUTING

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The demand for energy-efficient solutions in wireless communication systems has grown significantly, particularly in the context of wireless mesh networks (WMNs). The networks equipped with multi-hop communication structure, offer flexibility, scalability, and robust coverage for various applications which is characterized by their decentralized nature. However, managing energy consumption in WMNs remains a major challenge due to the continuous communication requirements and the energy constraints of the nodes, especially in scenarios where battery-powered devices are involved. This paper explores energy-saving strategies for enhancing the performance and sustainability of wireless mesh networks. We present a comprehensive review of existing techniques, such as energy-efficient routing protocols, sleep scheduling, and power control mechanisms, which aim to minimize energy consumption while maintaining network reliability and throughput. Additionally, we propose a hybrid approach that combines dynamic power scaling and adaptive routing to optimize energy usage in WMNs. Simulation results demonstrate the effectiveness of the proposed method in reducing energy consumption compared to traditional approaches. Our findings suggest that by adopting a combination of network-aware power management techniques and efficient data transmission protocols, significant energy savings can be achieved without compromising network performance. This research contributes to the growing body of work aimed at realizing more sustainable, energy-efficient wireless communication systems in the context of WMNs.

Keywords: Wireless Mesh Networks, Energy Efficiency, Routing Protocols, Power Control, Energy Saving, Sustainability, Simulation.

THE IMPACT OF DIGITAL WALLETS ON STUDENTS' IMPULSIVE PURCHASE DECISIONS

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Abstract

The rapid evolution of digital payment systems, particularly e-wallets, has significantly transformed consumer spending behaviors, notably influencing impulsive purchase tendencies. This study explores the relationship between digital wallet usage and impulsive buying behavior among college students in Chennai, India, emphasizing the driving factors, demographic variations, and psychological underpinnings of such behaviors. Impulsive buying, characterized as unplanned and emotionally driven, is increasingly prevalent among the younger generation due to the convenience, immediacy, and enjoyment associated with e-wallet transactions.

Using descriptive research and a structured questionnaire, data were collected from 110 students through random sampling. Statistical analyses, including ANOVA, Chi-square, and T-tests, were employed to assess variations in impulsive buying behavior across demographics, including gender, educational qualification, and frequency of e-wallet usage. Findings reveal that impulsive buying is strongly associated with e-wallet usage, with gender playing a significant role in purchasing patterns. Women showed higher susceptibility to impulsive buying, often driven by emotional and identity-related motivations, while men leaned toward gadget and vehicle purchases.

The study highlights the increasing reliance on digital wallets for their ease of use, security, and promotional incentives, which amplify unplanned spending among youth. Businesses are encouraged to leverage these insights to refine marketing strategies, enhance consumer engagement, and address the psychological dimensions of impulsive buying. The research concludes that while e-wallets offer unparalleled convenience, their role in fostering impulsive purchases necessitates mindful consumer usage and responsible business practices

APPLICATIONS OF PROPOLIS IN POSTHARVEST APPLES BLUE MOLD DISEASE MANAGEMENT

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ABSTRACT

Introduction and Purpose: Postharvest diseases, particularly blue mold caused by *Penicillium expansum*, significantly impact apple quality and shelf life. With the increasing demand for sustainable and eco-friendly agricultural practices, natural products like propolis have gained attention for their potential to manage postharvest pathogens. The objective of this study was to highlight the antifungal efficacy of propolis extracts against *Penicillium expansum in vivo* on apples.

Materials and Methods: A comprehensive bibliograhic search was performed to gather data about *in vivo* tests conducted by applying propolis extracts to apples for their protection from blue mold caused by *Penicillium expansum*.

Results: Laboratory tests revealed that propolis effectively exhibited a marked decrease in lesion size and fungal spread compared to the untreated controls. The preservation of fruit quality was also observed in the treated apples.

Discussion and Conclusion: The present findings indicate that propolis is a promising natural antifungal agent for postharvest disease management, effectively controlling *Penicillium expansum* and preserving apple quality. Propolis offers an eco-friendly alternative to synthetic fungicides, with potential for large-scale application in commercial settings. Further research should explore the chemical composition variations of propolis, optimal application methods, and its synergistic effects with other biocontrol strategies.

Key Words: Propolis, *Penicillium expansum*, Blue mold, Postharvest disease management, Antifungal properties, Natural preservative, Flavonoids, Phenolic acids, Sustainable agriculture, Eco-friendly solutions.

VIRTUAL REALITY AS A TOOL FOR THE REHABILITATION OF OFFENDERS

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ABSTRACT

Introduction and Purpose: Virtual reality is becoming increasingly popular in our daily lives. The popularity of VR started mostly with gaming environments. Although VR technologies are mostly used for entertainment, they might be used in different areas and even offer a solution to problems society such as criminality. There might be many ways to fight against different forms of criminality; but when the offender is incarcerated, corrections system is responsible for rehabilitating this person.

Rehabilitation of offenders has always been an important topic of criminal law. Preparing the inmates to their life after release and providing the help they need are considered to be the most important purposes of the correction system. Using VR as a tool for this purpose is becoming more popular and research have been made for a considerable time.

This presentation discusses how this new tool would help solve this ancient problem. Within this scope key concepts such as VR and rehabilitation will constitute the first discussion. After clarifying the main concepts; the areas that VR is used in rehabilitation will be mentioned. The main areas of VR use in rehabilitation can be summarized as risk assessment, rehabilitation, and integration.

VR Technologies are becoming more and more popular in the therapy of inmates with mental health issues. This interactive technology helps professionals to help treat inmates. Studies and results in this area will be presented shortly.

The main focus of this presentation is the legal aspect of the topic. Using VR as a risk assessment tool is a controversial area for lawyers. Using VR for risk assessment brings up the problem of bias. The system used might lead to biased results just as predictive algorithms. So the system and the methods should be carefully designed. Another question is the legality of the execution principle, especially for continental European systems. Is it possible to use a VR system to determine the recidivism risk of an offender? This question will be mostly discussed within the scope of the Turkish Legal System.

Integration constitutes an important area where VR is used. There are several projects in the US to help offenders adapt to their lives after release. These projects enable the offenders to experience their lives after release in a VR environment. This might be a beneficial method.

Recidivism rates which are an important indicator in determining the efficiency of a corrections system are also a concern of experts who work in the field of VR and rehabilitation. There are several studies to reduce recidivism with the help of VR. These studies will also be open to discussion.

The last part of the presentation will be an overview of the advantages and disadvantages of using VR tchnologies in rehabilitation. These technologies might bring ethical and technical risks. Also, they require an expensive technical infrastructure and very well-educated staff.

Otherwise, VR technologies might cause more harm than good. On the other side, the efficiency of this technic might be worth all this investment.

-What are the overall advantages and disadvantages of using VR in rehabilitation?

Materials and Methods: The presentation aims to discuss examples in different legal systems. Wtihin this regard the main focus will be on American law and projects carried out by American Universities.

Discussion and Conclusion: This presentation discusses how this new tool would help solve this ancient problem. Within this scope, this presentation is seeking answers to these questions:

-What are the methods used to make VR a part of rehabilitation?

-How can VR technologies help offenders with mental health issues?

-Can VR be used as a risk assessment tool?

-Does the Continental European system allow VR technologies to be used in rehabilitation? If yes to what extent?

-Can VR technologies be used to reduce recidivism?

-What are the legal, ethical, and technical risks of using VR in rehabilitation?

-What are the overall advantages and disadvantages of using VR in rehabilitation?

Key Words: Criminal Law, Rehabilitation, Correctional Facility; Law of Execution

CHARACTERIZATION OF LACTIC ACID BACTERIA AS BIOCONTROL AGENTS IN AQUACULTURE

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Abstract:

As the global aquaculture industry continues to expand, it has increasingly encountered serious challenges, particularly due to the spread of infectious diseases. Vibriosis is one of the most prevalent bacterial infections, leading to high mortality in aquatic environments. Antibiotics and chemicals are commonly applied to combat these diseases. However, these treatments have been widely criticized since they represent a potential risk to aquatic species, consumer and the environment. Therefore, the research of novel, natural and potent antimicrobials, offers a sustainable alternative to minimize the use of aqua chemicals in aquaculture.

In this context, a bacterial strain has been isolated from the gastrointestinal tract of marine fish and identified based on its morphological, phenotypical and biochemical features using gram staining, catalase test, kligler test and simmon citrate test, as well as on the phylogenetic analysis of the 16S rRNA sequencing. The cell-free supernatant (CFS) of the bacterial strain was subsequently evaluated for its capacity to inhibit the *in-vitro* growth of *Photobact. damselae subsp. damselae* and *Vibrio mediterranei* that are common pathogens known to cause vibriosis in fish.

The selected strain was identified as *Streptococcus bovis*, and it showed important antibacterial activity against the two pathogens. The results suggest that the isolated strain may play an important role in the control of vibriosis caused by *Photobact. damselae subsp. Damselae* and *Vibrio mediterranei* in aquaculture.

Keywords: Lactic acid bacteria, antibacterial activity, vibriosis, aquaculture

DESIGN AND IMPLEMENTATION OF A 24V-DC ELECTRO-THERMAL ACTUATOR FOR UNDERFLOOR HEATING SYSTEMS

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Abstract

Introduction and Purpose: This study focuses on developing a 24V DC electro-thermal actuator designed for underfloor heating systems, addressing the limitations of traditional 220V AC actuators in terms of energy consumption, flexibility, and durability in high-pressure environments. The actuator is intended to support both residential and industrial applications with compatibility for 24V AC/DC, enhancing versatility. It integrates a paraffin-based heat transfer mechanism, high-precision DS18B20 temperature sensor, and a microcontroller-based control system, aiming for greater energy efficiency, lower operational costs, and domestic production to support local manufacturing.

Materials and Methods:The actuator's design incorporates a paraffin-based mechanism to utilize phase change for thermal expansion and a DS18B20 sensor for precise temperature measurement. A PIC18F45K22 microcontroller manages system operations, ensuring responsive and accurate temperature control. The system was manufactured using 3D-printed components, Proteus-designed PCBs, and locally sourced materials. Testing included temperature response, power consumption, and durability assessments to confirm performance across varied conditions.

Results

The 24V DC actuator achieved significant energy savings, consuming only 38.4W, a notable reduction from the 3150W of standard 220V AC actuators. The DS18B20 sensor provided accurate temperature feedback within ±0.5°C, and the actuator demonstrated reliable performance under high-pressure conditions, validating its durability for industrial environments.

Discussion and Conclusion

This project presents a cost-effective, energy-efficient alternative to traditional actuators, supporting both domestic production and long-term use. The results underscore the potential of the 24V DC actuator as a versatile solution, particularly in sustainable heating systems. Future developments aim to enhance functionality through IoT integration and wireless control, expanding its applicability within smart homes and automated industrial environments.

Keywords: 24V actuator, electro-thermal actuator, underfloor heating, energy efficiency

ASSESSMENT THE IMPACT OF CLIMATE CHANGE AND LAND USE/COVER ON WATER BALANCE İN THE UPPER OUM ER RABIA CATCHMENT USİNG HYDROLOGICAL MODELING

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ABSTRACT:

Water resources, particularly in semi-arid areas like Morocco, are significantly impacted by changes in climate and land-use/land-cover (LULC). These alterations affect crucial hydrological elements, putting additional pressure on freshwater ecosystems and supplies. Such changes not only influence water availability but also affect ecosystem health, agricultural output, and human water requirements. This research seeks to assess the effects of climate and LULC changes on the water balance in the upper Oum Er Rabia watershed using the SWAT+ model. The study focused on three specific years: 2000, 2010, and 2020. To simulate water balance components for these years, the researchers utilized LULC maps derived from LANDSAT imagery, along with meteorological and soil data.

The findings indicate that between 2000 and 2010, there were increases in annual streamflow (0.35%), wet season streamflow (1.85%), surface runoff (14.5%), and water yield (0.4%). Conversely, dry season streamflow, evapotranspiration, groundwater flow, percolation, and lateral flow all decreased. These trends became more pronounced from 2010 to 2020, with a notable decline in streamflow.

Despite an overall decrease in annual streamflow, the wet season streamflow exhibited a minor upward trend, though at a considerably slower pace than in the previous ten-year period. Notable increases were observed in surface runoff (16.3%) and water yield (0.6%), while more substantial declines were seen in groundwater flow (11%) and lateral flow (5.3%). The downward trajectory of dry season streamflow persisted during this timeframe.The transformation of natural landscapes into agricultural and urban areas, coupled with the loss of vegetation cover, are the primary catalysts for these hydrological shifts, interfering with the water cycle's natural processes.

These findings underscore the critical importance of implementing conservation measures for soil and water resources. Such initiatives should encompass sustainable land management practices, reforestation efforts, and improved water utilization techniques. These interventions play a crucial role in alleviating the adverse effects of land use and land cover (LULC) modifications and safeguarding the long-term viability of water resources within the watershed ecosystem.

Keywords: water balance, climate change, land use/land cover, SWAT+

DEVELOPING FOREIGN LANGUAGE COMMUNICATION SKILLS USING ARTIFICIAL INTELLIGENCE

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ABSTRACT

Introduction and Purpose: Since Artificial intelligence (AI) offers innovative methods for developing language skills, this study aims to evaluate how such tools foster learner engagement, improve speaking and listening abilities, and promote overall language proficiency. The findings seek to provide insights into the potential of AI-driven technologies to revolutionize language learning and support educators in integrating innovative resources into their teaching practices.

Methodology: The research employed a qualitative approach to investigate the efficacy of developing foreign language communication skills through two AI-powered platforms: English Central and Lessons Worth Sharing | TED-Ed. Data collection involved analyzing the interactive features, learning pathways, and user engagement mechanisms of these platforms. Participants were a group of English learners with varying proficiency levels who engaged with these platforms over a 16-week period. Data were collected through pre- and post-intervention language assessments, user experience surveys, and observational logs of learners' interaction with the tools. The analysis focused on tracking improvements in overall confidence in communication, as well as examining the role of AI features in fostering learner autonomy and motivation.

Results: AI-powered platforms proved to provide adaptive learning opportunities, enabling students to choose materials suited to their level and gradually advance their skills, offering tailored recommendations. The role of AI in personalizing learning is significant, as it provides real-time feedback, adjusts task difficulty, and caters to individual needs. Additionally, interactivity and gamification features motivate students to engage regularly, encouraging consistent practice and progress.

Discussion and Conclusion: Artificial intelligence, combined with innovative educational platforms such as English Central and TED-Ed, offers unique opportunities for developing communication skills. These platforms help students tailor learning to their needs, provide effective feedback, and stimulate the development of critical thinking. However, educators must consider the challenges associated with the use of AI and find a balance between technology and traditional teaching methods.

Key Words: AI-powered educational platforms, learner engagement, adaptive learning opportunities, interactivity, motivation

MONITORING THE DYNAMICS OF HYDROLOGICAL RESOURCES WITHIN THE BASIN: A CRITICAL APPROACH FOR SUSTAINABLE WATER MANAGEMENT

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ABSTRACT

Introduction and Purpose: Tracking the dynamics of hydrological resources within a basin is crucial for the optimal management of future water supplies, planning the water potential of the basin, and ensuring equitable allocation of water demands across various sectors. This study focuses on the conservation and effective management of hydrological resources in the Bala district of Ankara, located within the Middle Kızılırmak Sub-basin of the Kızılırmak Basin, aiming to enhance the efficient use of these resources for maximum benefit.

Materials and Methods: The primary objective of this research is to evaluate potential hydrological resources and determine the optimal cropping pattern that maximizes farmers' income based on the amount of water allocated to the agricultural sector. The study considers changes in cultivated crops over the past seven years and statistical data from the Turkish Statistical Institute (TÜİK) within the boundaries of the Bala district.

Irrigated areas were analyzed using Geographic Information Systems (GIS), and irrigation groups were formed based on meteorological stations covering the district. Subsequently, drought severity and drought years, classified as mild, moderate, severe, and extremely severe, were determined using the Standardized Precipitation Index (SPI) method.

Crop water consumption and irrigation schedules were established for both full and deficit irrigation scenarios under normal and drought conditions. Water-income relationship formulas were developed accordingly. For each irrigation group, optimal cropping patterns, irrigation water requirements, and net income for a 100-decare (da) farm were calculated under both normal and drought conditions.

Results: By 2035, the net income is projected to reach $48,000, with the total water demand estimated between approximately 174,000 and 207,000 m^3.

Keywords: Optimal cropping pattern, water-income relationship, drought

INVESTIGATION OF SOIL MOISTURE DYNAMICS UNDER SUBSURFACE DRIP IRRIGATION IN SILAGE MAIZE UNDER WATER-LIMITED CONDITIONS

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ABSTRACT

Introduction and Purpose: Efficient water management is a critical factor in sustainable agricultural production, particularly in arid and semi-arid regions where water scarcity poses a significant challenge. Subsurface drip irrigation (SDI) has emerged as an advanced irrigation method that delivers water directly to the root zone, minimizing evaporation and improving water use efficiency. Understanding the soil moisture distribution under SDI systems is essential for optimizing irrigation practices. This study aimed to evaluate soil moisture dynamics in silage maize grown under SDI with varying water application levels.

Materials and Methods: The experiment was conducted during the 2017 and 2018 growing seasons at the Haymana Research and Application Farm of Ankara University, Faculty of Agriculture. The experimental soil had a heavy clay texture. Four irrigation treatments were established based on water application levels corresponding to 125% (S1), 100% (S2, control), 75% (S3), and 50% (S4) of the crop water requirement (ETc). SDI laterals were installed at a depth of 40 cm below the soil surface. Reference evapotranspiration (ET_0) values were recorded daily from an automatic weather station and adjusted using the crop coefficient (Kc) to determine ETc. At the end of each 5-day irrigation interval, cumulative ETc values were calculated after subtracting effective rainfall, and the corresponding irrigation water amounts were applied accordingly.

Results: The results indicated that no significant changes in soil moisture occurred within the surface layer (0-10 cm), demonstrating that the water supply from SDI did not reach the soil surface, thus preventing evaporation losses. In contrast, the dripper zone at 40 cm depth exhibited notable changes in soil moisture content before and after irrigation, confirming the system's effectiveness in targeting the root zone. Soil moisture at depths below 60 cm remained near field capacity due to the high water-holding capacity of the heavy clay soil.

Discusion and conclusion: These findings highlight the potential of SDI systems to enhance irrigation efficiency in water-scarce environments by ensuring precise water delivery to the root zone while minimizing surface evaporation and deep percolation losses. The integration of accurate irrigation scheduling based on ETc calculations and the appropriate installation depth of laterals is critical to achieving optimal crop productivity and resource conservation.

Keywords: Optimal cropping pattern, water-income relationship, drought

"INTEGRATING ARTIFICIAL INTELLIGENCE IN KYRENIA'S URBAN SUSTAINABILITY: A ROADMAP FOR THE FUTURE"

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ABSTRACT

This paper explores how Kyrenia, a Mediterranean city with a rich cultural and ecological heritage, can harness Artificial Intelligence (AI) to redefine sustainable urban development. AI offers transformative solutions for urban challenges, including infrastructure optimization, resource management, climate resilience, and participatory governance. Predictive maintenance systems safeguard historical architecture, while AI-assisted zoning and land-use models ensure balanced growth without ecological disruption. Sustainable mobility solutions, such as AI-driven traffic management and electric vehicle networks, promise to reduce emissions and improve urban connectivity also advance resource efficiency through smart grids and waste management systems, enabling Kyrenia to conserve energy and water while addressing the demands of its growing tourism industry. Urban afforestation and biodiversity enhancement are facilitated by AI tools that map green spaces and recommend species for reforestation. Furthermore, AI-powered disaster management systems mitigate risks from coastal flooding, while heat distribution analysis combats the urban heat island effect. Governance stands to benefit significantly, with AI-driven platforms promoting citizen engagement and transparent policymaking. However, ethical concerns such as data privacy and algorithmic bias require careful regulation. The study concludes with actionable recommendations for integrating AI into Kyrenia's urban policies, inspired by the European Union's AI Act and global best practices. By embracing AI, Kyrenia can balance economic growth with environmental stewardship, positioning itself as a model for sustainable Mediterranean cities.

Keywords: Artificial Intelligence, Sustainable Urban Development, Kyrenia, Climate Resilience, Green Mobility.

IMPACT OF OPTIMIZED AGROTECHNICAL MEASURES ON THE DEVELOPMENT OF SYMPODIAL AND MONOPODIAL BRANCHES AND THE SHEDDING OF GENERATIVE ORGANS IN COTTON VARIETIES IN AZERBAIJAN

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ABSTRACT

Introduction and Purpose:

The strong development of sympodial and monopodial branches in cotton varieties is the basis of high productivity. The main purpose of this study was to analyze the effect of optimized agrotechnical measures on the development of sympodial and monopodial branches and shedding of generative organs in cotton varieties Ganja-103 and Ganja-110.

Materials and Methods: The study was carried out by the employees of the Department of General Agriculture, Genetics and Selection in accordance with the approved thematic plan for 2021-2023 of the Azerbaijan State Agricultural University. The study was carried out using the methods developed by Dospekhov, Baranov and Allahyarov, adopted for

agrotechnics of cotton growing on a farm in Guneshli settlement of Beylagan district. In the field of study was conducted on 36 plots, consisting of 8 variants and each variant with 4 repetitions.

Results: Positive results were obtained by conducting multifactorial study, which is of particular importance. The indicators in the Ganja-110 variety were higher than in the Ganja-103 variety.

Discussion and Conclusion: In the Ganja-110 variety, the sowing scheme of 90x10x1 (111 thousand plants), the fertilizer rate of $N_{120}P_{75}K_{50}$, the top dressing on August 01 and the harvesting on September 25, the monopodial branches in the flowering phase were 1.2 and 2.1, and the sympodial branches were 7.2 and 16. In the 90x15x1 (74 thousand plants) sowing scheme, the fertilizer rate of $N_{120}P_{75}K_{50}$, the top dressing on August 12 and the harvesting on October 15, the same indicators were 1.2, 2.2, 7.6 and 18, that is, slightly higher.

Key words: Cotton, harvest time, planting methods, fertilization methods, sympodial, monopodial, generative organs.

FORMAL STRUCTURES IN DEVRİM ERBİL'S ISTANBUL LANDSCAPES: IDEALIZATION AS A TOOL OF RESTORATIVE NOSTALGIA

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ABSTRACT

Devrim Erbil's Istanbul Landscapes occupy a significant place in Turkish painting by presenting an idealized representation of the city's cultural heritage and historical texture. These works not only reflect the artist's personal creative vision but also reproduce the aesthetic codes of cultural capital in a broader socio-cultural context. This study aims to examine how the formal arrangements in Erbil's Istanbul-themed artworks contribute to the idealization of the city's image and how this idealization transforms into a nostalgic narrative that overlooks the social and spatial problems caused by modernization. The research employs a visual analysis of Erbil's artworks, focusing on compositional structures, use of color, and formal arrangements. The relationship between these aesthetic elements and concepts of cultural capital and nostalgia is critically assessed through the lens of art sociology and aesthetic theory. The findings reveal that Erbil's works heavily idealize the urban fabric of Istanbul. The formalist approach in his compositions reduces the city's historical and cultural identity to a decorative representation, creating a visual utopia detached from the complexities of modern urban life. Nostalgia in these works functions not only as an aesthetic invocation of the past but also as an ideological tool, distancing the viewer from contemporary social tensions and urban realities.

The formal idealization present in Devrim Erbil's Istanbul Landscapes portrays the city as a utopia cleansed of the destructive forces of capitalism and modernization. This transforms the works into ideological instruments of cultural capital, positioning the artist not merely as a creator but as an "aesthetic entrepreneur" who reproduces and reinforces the dynamics of the cultural field.

In this context, Erbil's artworks contribute to the aestheticization of longing for the past while simultaneously obscuring the contradictions and challenges posed by urbanization and modernization processes.

Key Words: Devrim Erbil; Painting; Landscapes; Idealization; Nostalgia

STUDY OF FAILURE OF KEVLAR/EPOXY COMPOSITE LAMINATES

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ABSTRACT

This work consists of the study of the mechanical behavior of unidirectional Kevlar / epoxy composite laminates according to different failure criteria.

The change in the value of the strength parameters makes it possible to compare the ultimate mechanical characteristics obtained by the criteria of Tsai-Hill, Norris, Fisher, Ashkenazi and Tsai-Wu.

The epoxy matrix of the material in question is reinforced to 60% of its volume by aramid fibers. The stack of the four layers composing the arbitrarily oriented and alternating $[+\theta/-\theta]_S$ materials constitutes balanced symmetrical laminates.

The laminate is subjected to uniaxial tensile membrane forces, of which the prediction of their ultimate values, the plotting of the rupture envelopes and the determination of the various modes of damage of the material by the theory of the maximum stress, constitutes the axis principal of this study.

The different components of the deformation vector of the composite are represented by different orientations of fibers.

Keywords: Unidirectional composite, Failure criterion, Membrane stress, Deformations

PROVISIONS ON SEAFARER'S RIGHT OF REPATRIATION IN THE MARITIME LABOUR CONVENTION 2006

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ABSTRACT

The work carried out at sea has very different characteristics and unique difficulties from the work carried out on land. One of these difficulties is that seafarers working on ships engaged in long voyages are away from their homeland for long periods of time. For this reason, the right of seafarers to repatriation is one of the fundamental rights recognised in national and international texts on maritime labour law. The repatriation of seafarers is a concept that mostly refers to the transfer of seafarers from their home country to their home country due to the expiry of their contracts or for other reasons. The repatriation of seafarers is important in terms of ensuring that their basic labour rights are protected and that they reach their home countries in a healthy and safe manner. This process is also followed by international maritime organisations and maritime unions.

The Maritime Labour Convention 2006 (MLC 2006), adopted by the 94th Conference of the International Labour Organization in Genoa in February 2006, is the latest convention revising and consolidating all previous conventions in the maritime sector. Conference of the International Labour Organization in Genoa in February 2006, the 'Maritime Labour Convention 2006' (MLC 2006) is the latest convention that revises and consolidates all the conventions previously adopted by the organisation in the maritime sector. MLC 2006 aims to guarantee the fundamental rights and freedoms of maritime workers. Although the Law dated 02.03.2017 and numbered 6898 on the ratification of the MLC 2006 was published in the Official Gazette dated 25.03.2017/30018, the effective procedure of the Convention has not yet been completed. However, the fact that the enforcement procedure of the Convention has not been completed does not relieve the operators of ships flying the Turkish flag from liability. In this study, the rules and principles regarding the repatriation of seafarers within the scope of the provisions of MLC 2006 will be tried to be put forward with concrete facts and justifications.

Keywords: Seafarer, Maritime Labour Convention 2006, International Labour Organization, Repatriation.

EVALUATING THE MECHANICAL PROPERTIES OF LOCALLY PRODUCED BRICKS TO SUPPORT SUSTAINABLE BUILDING PRACTICES IN A SUBURBAN SETTING

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ABSTRACT

Introduction and Purpose: This study begins by examining current construction practices and future needs in Imrahor Valley, a suburban area of Ankara. The region currently supports four main activities: building new small-scale village houses, refurbishing abandoned structures, constructing barns and barracks for dispersed farming, and developing large-scale housing and recreational areas extending from the urban center.

Materials and Methods: Village houses, barns, and barracks in the area show potential for load-bearing masonry construction due to their low-rise nature, and refurbishment projects could similarly benefit from this approach. Given the earlier presence of a small brick factory in the valley producing fired bricks from local riverbed clay, this study examined the mechanical properties of 36 load-bearing bricks obtained from this factory in a reputable university laboratory.

Results: Tests conducted on these bricks assessed shear and compressive strength and unit strength, with results offering reasonable levels when compared to the requirements and similar studies in the literature.

Discussion and Conclusion: The findings support reactivating this closed factory to meet local building needs, reducing long-distance material transport and promoting sustainable, locally sourced production for the area's suburban developments.

Key Words: Brick strength, local production, sustainability.

DEPLOYMENT OF REGENERATIVE AI APPROACH IN CONVENTIONAL MANUFACTURING PROCESSES

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Abstract
The conventional manufacturing industry faces increasing pressure to improve efficiency, reduce waste, and minimize environmental impact. Traditional manufacturing processes often rely on outdated technologies and practices that are not sustainable in the long term. The integration of regenerative AI approaches presents an opportunity to address these challenges by optimizing production processes, reducing energy consumption, and enhancing overall sustainability. However, the successful deployment of regenerative AI in manufacturing requires overcoming various obstacles, including data security concerns, workforce training needs, and initial investment costs. This paper employs a literature review approach to examine the current state of regenerative AI in manufacturing and its potential applications. The review includes studies on the benefits, future and challenges of implementing regenerative AI in traditional manufacturing processes, as well as studies on successful adoption and implementation these approaches. By synthesizing information from various sources including online databases and reports on regenerative AI, this study aims to provide a comprehensive analysis of the opportunities and challenges associated with integrating regenerative AI into conventional manufacturing practices. Findings of the study revealed that the deployment of regenerative AI in manufacturing processes offers significant benefits in terms of efficiency, sustainability, and competitiveness. Companies that have implemented regenerative AI approaches have reported improvements in production output, reduced waste, optimized production processes, enhanced resource utilization and aid manufacturers meet the growing demands of the market while minimizing environmental impacts. However, challenges such as data security concerns, workforce training needs, and initial investment costs have been identified as barriers to widespread adoption of regenerative AI in manufacturing. Addressing these challenges is crucial and can aid in harnessing the power of regenerative AI to drive innovation and transformation in conventional manufacturing processes.

Keywords: Regenerative AI, manufacturing processes, improved efficiency, energy consumption

INVESTIGATION OF PHYSICAL ACTIVITY, PAIN, AND QUALITY OF LIFE IN INDIVIDUALS AGED 65 AND OVER LIVING IN RURAL AND URBAN AREAS

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ABSTRACT

Objective: This study aimed to investigate the relationship between physical activity, quality of life, and pain in individuals aged 65 and over living in rural and urban areas.

Materials and Methods: The study included voluntary participants aged 65 and over living in rural and urban areas of Balıkesir province. A total of 256 participants were reached, and 256 survey forms were evaluated for analysis. Data collection tools included a sociodemographic characteristics form, the International Physical Activity Questionnaire-Short Form (IPAQ-SF), the Short Form of the McGill Pain Questionnaire, and the WHOQOL-OLD Quality of Life Assessment Module for older adults.

Results: The study was conducted in two distinct areas, with 80% of the participants residing in urban areas and 20% in rural areas. The mean age of participants in rural areas was 69.18±4.28, while in urban areas, it was 71.06±5.69. When comparing scale scores by region, significant differences were found in the McGill-Melzack Pain Questionnaire scores and the sensory abilities, death and dying, and intimacy subdomains of the WHOQOL-OLD scale ($p<0.05$). However, there was no significant difference between the two groups in terms of IPAQ-SF scores ($p>0.05$).

Discussion: These findings suggest that the living environment may influence pain perception and quality of life, but it does not significantly affect physical activity levels. Urban residents may benefit from better access to healthcare and social support, contributing positively to their quality of life. In contrast, rural residents may face environmental challenges and limited resources, negatively impacting their quality of life and pain management.

Keywords: Rural Area, Urban Area, Pain, Quality of Life, Physical Activity

DESIGN AND PERFORMANCE ANALYSIS OF HYBRID POWER PLANT CONTROLLER

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ABSTRACT
The growing need for sustainable and reliable energy solutions in limited-capacity grids has accelerated the development of hybrid power systems integrating solar, wind, and battery storage. This paper presents the design and performance evaluation of a hybrid power plant controller specifically tailored for a limited Mega Watt (MW) grid. The proposed controller employs advanced algorithms for load forecasting, energy allocation, and real-time monitoring to optimize power generation and distribution across the hybrid energy system. By dynamically adjusting the contributions of each energy source based on environmental conditions and load requirements, the controller reduces energy waste and enhances grid stability. The controller's effectiveness is validated using a simulated model of the hybrid power plant, operating under varied scenarios to measure response time, energy efficiency, and power quality. Results indicate substantial performance improvements over conventional control methods, highlighting the potential for such control strategies to enhance reliability and efficiency in constrained-capacity renewable energy systems.

Keywords: Power Plant Controller, Hybrid Energy Source, Grid Stability.

THE INFLUENCE OF 'DE STIJL' MOVEMENT PRINCIPLE ON MODERN FURNITURE

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ABSTRACT

'De Stijl' had its significant role on the modernist architects, many famous architects and designers had been influenced by this style in design. The paper aims to identify the penetration of 'De Stijl' principles into the furniture design and its influence on modernist furniture designers. The similarities and differences between 'De Stijl' styles and modernist movement designs have been evaluated through several indicators which formulated based on theoretical analysis of the literature. The study analyzed many modern furniture designs by several famous modernist designers. The study focused on the chair design by famous modernist architect designers, like Alvar Aalto, Marcel Breuer, and Le Corbusier. A comparative analysis has been carried out between these furniture designs and 'De Stijl' furniture. The result demonstrated that there is a great influence for 'De Stijl' movement principles into modernist furniture movement.

Keywords: De Stijl Movement, Modernist Movement, Modernist Chair Design.

DETERMINATION OF CONDITION FACTOR IN TILAPIA FISH (*OREOCHROMİS NİLOTİCUS*) FEEDING WITH DIFFERENT RATIOS OF ARONIA EXTRACT

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ABSTRACT

Introduction and Purpose: Tilapia is a species of fish native to Africa that lives in fresh water. Tilapia fish, which can be intensively farmed, grows quickly and is a cheap source of protein compared to other seafood, is cultivated in more than 135 countries, with China being one of the leading countries where it is farmed. The flavour of tilapia fish can vary depending on the environment and water quality in which it is farmed. Like other fish, it is an important source of protein and its meat contains vitamins and minerals such as choline, niacin, B_{12}, vitamin D, selenium and phosphorus. Thank you to these vitamins and minerals, tilapia has many health benefits, such as reducing the risk of cancer and protecting heart health.

Materials and Methods: In our study, the relative condition factor for the growth performance of Nile tilapia (*Oreochromis niloticus*) fed with different amounts of chokeberry extract was evaluated. An experimental diet was prepared with five different doses of chokeberry extract (control, A250mg, A500mg, A750mg and A1000mg). Each group was set up with seven replicates and 56 fish per aquarium. At the end of the 20-week experiment, the weight and standard length of the fish were measured and the condition factor was calculated using the formula $CF = {Weight}/{Length^3} \times 100$.

Results: The condition factor calculated for *Oreochromis niloticus* was given as 3.94 Control, 3.67 A250, 3.62 A500, 3.48 A750 and 3.35 A1000. Statistical analysis showed that the conditioning factor was significantly higher in the control group and the A250 dose than in the other added A500, A750 and A1000 doses ($p<0.005$). No difference was found between the A500, A750 and A1000 doses used ($p<0.005$). In addition, all values obtained showed that the fish were

well fed during the experiment, their health status was good and the desired isometric growth of the fish was achieved during the experiment.

Discussion and Conclusion: It was found that the extract from the aronia plant used in our study had no negative effects on the diet of the Nile tilapia fish. Since the average values of the condition factor were higher in all added ratios (K>1), it can be assumed that the aronia plant can be added to the feed rations prepared for these fish.

Key Words: Nile tilapia; Aronia; Condition factor; Growth performance

DETERMINATION OF QUALITY AND YIELD ELEMENTS OF EINWEAT WHEAT

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ABSTRACT

Einkorn wheat (Triticum monococcum), one of the most important of our ancestral wheats, is grown today in the north of Turkey and the northern transition regions, especially in Kastamonu.

In this research, some vegetative and quality characteristics of Einkorn wheat were investigated in the Trial Area of Dicle University Faculty of Agriculture in the 2022 Diyarbakır ecological conditions wheat production season and compared with Tosunbey, Bayraktar, Zühre, Cemre and Ceyhan-99 bread wheat varieties widely grown in the region.

In this study, quality analyses of which were carried out in the laboratory of the private flour factory in Diyarbakır, it was determined that the average plant height of the plant traits in Einkorn wheat and 5 bread wheat varieties was (91.83) cm, the longest plant height was in the control variety Bayraktar (113.00 cm), the shortest plant height was in Einkorn wheat (72.33 cm), the average number of grains per spike of the genotypes was (66.9), the highest grain number value was in the Tosunbey cultivar (90.67), and the lowest grain number was in Einkorn wheat (15.50). While the average grain weight per spike of the genotypes was (0.84) g, the highest grain weight per spike was found in Ceyhan-99 variety (1.18 g), the lowest in Einkorn wheat (0.32 g), the average spike length of the genotypes was (10.15 cm), the highest spike length was found in Bayraktar variety (13.63 cm), and the lowest spike length was found in Einkorn wheat (4.90 cm). While the average single plant yield of the genotypes was (5.17 g), the highest single plant yield was in Einkorn wheat (6.43 g), the lowest single plant yield value was in Zühre (3.87 g) cultivar, the average thousand grain weight was around (31.53 g), the highest thousand grain weight was in Cemre (33.98 g) cultivar and the lowest thousand grain weight value was in Tosunbey (27.62 g) cultivar. The average hectoliter weight of the genotypes was (71.30 kg), the highest hectoliter weight was in Ceyyhan-99 (75.80 kg) cultivar, the lowest hectoliter weight was in Einkorn wheat (53.10 kg), the average grain moisture content was around (11.20 %), the highest grain moisture content was in Einkorn wheat (11.73 %) and the lowest grain moisture content was in Zühre (10.95 %) cultivar.

Among the quality features, while the gluten value average was (29.89%), the highest gluten value was found in Zühre (37.43%) cultivar, the lowest gluten value was found in Einkorn wheat (2.90%), the gluten index average was (83.51), the highest gluten index was found in Tosunbey (94.23), the lowest gluten index value was found in Einkorn wheat (38.33), the sedimentation value average was (33.88%), the highest sedimentation value was found in Tosunbey (46.33%) cultivar, the lowest sedimentation value was found in Einkorn wheat (8.67%).

According to the research results of einkorn wheat, it has been concluded that the cultivation areas should be increased due to the reasons such as the high single plant yield due to high tillering, the high bran content in terms of mineral substances due to its hull structure and the fact that it is preferred in human nutrition in terms of bread quality due to its low gluten ratio.

Key words: Einkorn Wheat, Bread Wheat Varieties, Plant Properties, Quality Properties

DETERMINATION OF SAMPLE SIZE AND SAMPLING METHODS IN APPLIED RESEARCH

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Abstract:
Sample size, sampling method and sampling technique plays a major role in social sciences, business, health science, agricultural science research and survey research. If the sample size is inappropriate it may lead to wrong inferences on the population. Precise sampling techniques are used for specific research problems because one technique may not be appropriate for all problems. Significant factors considered for the estimation of sample size were population size, confidence level proportion of outcome in case of categorical variables, standard deviation of the outcomes in case of ordinal variables, essential precision from the research. The present paper gives an outline of commonly used techniques in the research to find out the sample size precisely. Probability sampling techniques are more suitable for health science related research. Sampling method and sample size in research play a vital role in research. Based on the collected sample data, researcher has to draw the inference on the population, if the sample itself is insufficient the inference will lead misinterpretation about population, at the same time if the sample size is too big, it leads to excessive utilization of resources like manpower, time, cost etc. the present paper is an attempt to suggest the generalized sample size technique for social sciences, business, health science, agricultural science research and survey research.

DEVELOPING VOCATIONAL EDUCATION THROUGH SCHOOL-ENTERPRISE LINKAGES IN KHANH HOA AND NINH THUAN, VIETNAM

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Abstract: Integrating vocational education with enterprise needs is a key strategy to enhance the quality and relevance of vocational training in Vietnam, particularly in Khanh Hoa and Ninh Thuan region, Vietnam. This study examines the current state of school-enterprise collaboration in these regions, focusing on how vocational schools align their training programs with industry requirements and how businesses actively participate in the training process.

Using a mixed-methods approach, the research collected data from 200 survey participants, including educators, enterprise managers, and policymakers, along with 25 in-depth interviews with key stakeholders. Findings reveal gaps in coordination, mismatched expectations, and limited resource sharing between schools and enterprises. Successful cases of collaboration highlight the potential for improving workforce readiness and innovation through structured partnerships.

Based on these insights, the study proposes targeted solutions to strengthen vocational education: creating formal agreements between schools and businesses, co-developing industry-aligned curricula, and providing government incentives to foster partnerships. These recommendations aim to build a sustainable model of vocational education that meets the dynamic demands of regional labor markets in Khanh Hoa and Ninh Thuan region**,** Vietnam

Keywords: Vocational education, school-enterprise collaboration, workforce development, Khanh Hoa and Ninh Thuan, innovation.

DEVELOPMENT OF A BRIDGE DEVICE FOR THE INTEGRATION OF KNX AND MATTER PROTOCOLS

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ABSTRACT

Development of a Bridge Device for the Integration of KNX and Matter Protocols

The primary aim of this project is to develop a bridge device that enables the integration of KNX and Matter protocols. Matter is a widely adopted new standard for smart home and Internet of Things (IoT) devices, ensuring interoperability between devices. KNX, on the other hand, is a protocol used for automation in buildings, managing systems like energy management, climate control, security, and lighting. This project seeks to make KNX devices compatible with Matter, facilitating interaction among devices from different platforms.

The proposed bridge device will enable the integration of KNX devices with smart home platforms such as Apple HomeKit, Google Home, Amazon Alexa, and Samsung SmartThings via the Matter protocol. This will allow users to control various systems through a single application, thereby increasing the flexibility of KNX systems and enhancing energy efficiency. Another significant benefit of this project is that the integration of KNX and Matter protocols will enable remote monitoring and management of devices.

The project includes the development of hardware and software for a bridge device that supports both KNX and Matter protocols. The scope involves making KNX accessories compatible with the Matter protocol and developing a device that enables control and monitoring through Matter. This device will provide users the flexibility to use wired (KNX) and wireless (Matter) devices simultaneously.

Keywords: KNX, Matter, Smart Home, IoT, Automation Systems

DOPLOMATOC RELATOONS BETWEEN ROMANOA AND TURKEY

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Abstract:
This paper explores the diplomatic relations between Romania and Turkey, two significant states in Southeast Europe and the Black Sea region. Throughout history, their interactions have been shaped by a complex mix of cooperation, competition, and geopolitical considerations. The analysis begins with the Ottoman Empire's influence on Romania and traces the evolution of bilateral relations through the 19th and 20th centuries, focusing on key events such as Romania's modernization efforts, World War I, and the Cold War. In the post-1989 era, both countries have increasingly sought to strengthen their political, economic, and security ties, particularly within the context of NATO and the European Union's enlargement process. This paper examines the mutual interests that have led to greater collaboration in trade, energy, military cooperation, and regional security. It also highlights the challenges and occasional tensions that have arisen due to divergent foreign policy goals, particularly with regard to regional conflicts, migration, and the balance of power within the Black Sea. By assessing historical trends, current dynamics, and future possibilities, this paper aims to provide a comprehensive understanding of Romania-Turkey diplomatic relations and their impact on regional stability and international diplomacy.

BIOCHEMICAL AND HISTOPATHOLOGICAL INVESTIGATION OF THE POSSIBLE PROTECTIVE EFFECTS OF TARAKASTEROL-ACETATE ON OXIDATIVE STRESS DAMAGE DURING RENAL ISCHEMIA-REPERFUSION IN RATS

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ABSTRACT

Introduction and Purpose: Ischemia reperfusion injury may occur in the kidney during surgical procedures such as kidney surgery, kidney transplantation, and aortic aneurysm, and may increase mortality by causing renal dysfunction and acute kidney injury. During ischemia and reperfusion, so many molecular mechanisms play role: ATP depletion, increased Ca^{2+}, Na^{+}, H^{+} ions, activation of proteases, xanthine oxidase, neutrophil infiltration, released free radicals and oxidative stress occurred. Some antioxidant and/or anti-inflammauars are used for prevention of oxidative stress. In our study, we investigated the effect of taraxasterol acetat which is triterpenoid of some plants, on renal ischemia reperfusion (I/R) injury.

Materials and Methods: Male rats are divided into three groups (n=6-8). In Group-I rats dissected without any surgical procedure. In Group-II rats dissected after 45 min renal ischemia and 24h reperfusion. In Group-III rats received taraxasterol acetate (10 mg/kg, i.p) before surgical procedures and were trigerred I/R. Blood samples, renal tissues were taken for biochemical and histopathological analysis. For histopathological analysis, H&E staining was made. For biochemical analysis, BUN and CRE parameters are read with otoanalyzer.

Results: In histopathological results; tubular cells deformation, dilatation in capsular space, immune cell infiltration, vacuolizations were determined in I/R Group rats. In Group-III (TXA+I/R), normal structure of tubular cells and bowman capsula are preserved better than I/R Group (Group-II). Capsular spaces aren't dilated like I/R Group. In biochemical analysis, TXA decreased BUN and CRE values, significantly. Decreased CRE values in Group-III were closer to the control group. Histological and biochemical similar with each other.

Discussion and Conclusion: According to histological and biochemical analysis results; TXA has protective effect on renal I/R injury. More researches are necessary for investigation of molecular effect mechanisms of TXA. The effect of different dosages of TXA on renal I/R is intriguing.

Key Words: Taraxasterol acetat, kidney, rat, ischemia/reperfusion

FOOD SAFETY PRACTICES AMONG GROUNDNUT PROCESSORS IN NIGER STATE, NIGERIA

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ADBSTRACT

The study examines food safety practices among groundnut processors in Niger, Nigeria. Multi-stage sampling techniques were employed to select 225 respondents on which primary data were elicited from the respondent with the aid of a structured questionnaire complemented with interview schedule using kobo tool box. Data collected were analyzed using descriptive statistics (such as mean, frequency distribution count and percentages) and inferential statistics (such as ordered logit regression model). The study revealed that groundnut processors had good knowledge of all the positive knowledge indicators such as the use of aprons, gloves and caps during groundnut preparation prevent foodborne illness (75.9%), typhoid fever, Cholera and bloody diarrhoea can be caused by eating contaminated processed groundnut (57.7%). It also revealed that groundnut processors had good attitudes to all the positive attitude indicators. However, negative attitudes and practices still existed, such as touching food with bare hands, using nylons for preparing and packaging kulikuli. Most significant factors influencing food safety practices included access to food safety knowledge (2.68, $p<0.01$), attitude (2.15, $p< 0.05$) and processing experience (3.54, $p<0.01$). The study recommended that Federal Government should implement continuous food safety training programmes for groundnut processors, emphasizing the risks associated with negative practices like touching food with bare hands and using inappropriate packaging materials.

KEYWORDS: Food, Safety; Groundnut; Processors and Practice

DUCHENNE MUSCULAR DYSTROPHY: CARDIOVASCULAR EFFECTS AND ELECTROCARDIOGRAPHIC FINDINGS IN CHILDREN

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ABSTRACT

Introduction and Purpose:

Duchenne muscular dystrophy (DMD) is a genetic disorder caused by mutations in the DMD gene on the X chromosome. It leads to progressive muscle weakness and loss, typically diagnosed in early childhood. The dysfunction of the dystrophin protein can result in various cardiovascular pathologies and electrocardiographic (ECG) abnormalities. This study presents clinical and laboratory findings, focusing on ECG changes and cardiovascular issues in children with DMD.

Materials and Methods:

We reviewed 25 male patients diagnosed with DMD, followed by the pediatric cardiology department at our hospital. A retrospective analysis was conducted to examine ECG parameters (heart rate, V1R/S ratio, QT interval, QRS-T angle, and ventricular repolarization heterogeneity) and echocardiographic (ECO) findings (ejection fraction, fractional shortening, diastolic peak velocities, and tricuspid annular plane systolic excursion) with abnormalities.

Results:

The average age of the patients was 11.44 ± 0.935 years, with a mean age of diagnosis of 4.84 ± 0.53 years. Of the 25 ECGs, 16 (64%) were normal, 6 (24%) showed pathological Q waves, 1 (4%) had T-wave inversion, 1 (4%) had supraventricular tachycardia, and 1 (4%) had right bundle branch block. Regarding ECO, 21 (84%) were normal, while 1 (4%) had mitral valve prolapse with mitral regurgitation, 1 (4%) had left ventricular systolic dysfunction, 1 (4%) had both left ventricular systolic dysfunction and dilated cardiomyopathy, and 1 (4%) had tricuspid regurgitation.

Discussion and Conclusion:

DMD patients often experience cardiovascular abnormalities, detectable through ECG and ECO assessments. ECG can reveal arrhythmias and electrical issues, while ECO detects structural changes such as heart muscle weakening and dilation. Early detection of these issues is crucial for managing both muscular and cardiac aspects of the disease.

Key Words: Duchenne Muscular Dystrophy, Electrocardiography, Echocardiogram

EVALUATION OF TEMPORAL CHANGE IN KÜLDAĞI POND AND PRESSURES IN THE BASIN

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ABSTRACT

Factors such as global warming, climate change, industrial development and population growth cause continuously increasing water consumption and great pressure on surface and groundwater resources. The usable water resources are decreasing due to these pressures Therefore, protection of water resources and more effective management are becoming more important Scientific studies conducted in recent years have shown that the water quality and ecological status of the Küldağı Pond, which was formed by the accumulation of rainwater for years in the area where the ash and slag resulting from the burning of coal used in the thermal power plant in Yatağan, Muğla, were dumped, is increasingly threatening. In addition, it has been revealed that drinking the pond water or entering the water is dangerous for health. Within the scope of this study, the pressures in the Küldağı Pond basin will be determined and the effects that these pressures may have on the ecological status of the pond will be revealed. For this purpose, land uses in the water basin, point and non-point pollution sources will be determined. In addition, changes in the surface area of the pond will be examined temporally using satellite images taken at different times since 2004. In line with the findings obtained, suggestions will be presented in the study for controlling pollutant sources and water management practices. Evaluating the pressures and the temporal changes of the pond is quite useful for designing targeted and proportionate measures and evaluating the effectiveness of the precaution programs. The findings obtained have shown that there has been a decrease in the lake surface area in the last twenty years. This situation may be due to the prevention of rainwater entering the area by making a channel for interception. Due to the detection of heavy metals in the Küldağı Pond, it is thought that regular monitoring of the pond water quality is important in order not to negatively affect the ecological life in the surrounding area.

Keywords: Küldağı Pond, pressure analysis, temporal change

THE EFFECT OF WATER CONTENT ON THE COMPRESSIVE STRENGTH OF VOLCANIC ASH-BASED GEOPOLYMER MORTARS

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ABSTRACT

Geopolymer binders are obtained by activating powder materials rich in silica and alumina, such as metakaolin and fly ash, with alkalis like sodium hydroxide and sodium silicate. Mortars and concretes made with these binders are increasingly used in structures requiring special performance, such as resistance to high temperatures or acid attacks. However, in line with sustainable environmental goals, the use of geopolymer binders as a replacement for Portland cement is expected to become more widespread. Additionally, within this context, the use of natural materials such as volcanic ash as a powder binder in geopolymers is encouraged. Studies on volcanic ash-based geopolymers show that while these binders achieve high strength levels, they experience significant strength losses when wet. Furthermore, laboratory studies on geopolymers typically involve curing under heat or at ambient temperature, with specimens left exposed to laboratory conditions until testing. This process can cause significant variations in the moisture content of the specimens at the time of testing. Differences in water content can lead to misleading results, particularly in volcanic ash-based geopolymers, which are more susceptible to water absorption. This study aims to determine the effect of water content on compressive strength and highlight the importance of standardized testing conditions for volcanic ash-based geopolymers. In this context, the compressive strengths of volcanic ash-based geopolymer mortars were measured at water contents corresponding to 0%, 25%, 50%, 75%, and 100% of their water absorption capacities. The study shows that as the water content increases, the compressive strength decreases continuously, with strength loss reaching up to 60.3% when fully saturated.

Keywords: Geopolymer; Volcanic ash; Water effect; Water content; Compressive strength

THE OPINIONS OF PARENTS OF STUDENTS TAKING AMATEUR PIANO EDUCATION LESSONS ON OUT-OF-CLASS STUDIES

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ABSTRACT

Purpose

The aim of this study is to determine the opinions of parents of students who take piano education in amateur music education institutions regarding out-of-class piano studies. For this purpose, "Whether students have a suitable piano practice environment at home, whether parents help with piano homework and how this situation is distributed according to parents' instrument playing status, at whose request the student starts piano education and how this situation is distributed according to parents' instrument playing status, whether the student continues piano lessons willingly and needs motivation to study and how this situation is distributed according to gender and age level" were examined.

Materials and methods

The study group consists of 23 parents of students in an institution providing amateur instrument training in the Altıeylül district of Balıkesir. The data collection tool was prepared by the researchers and expert opinions were obtained regarding the applicability of the survey. The data were analyzed with the SPSS 25 (IBM SPSS Statistics 25) program and the results were presented in tables using simple statistical techniques such as frequency distribution and crosstab analysis.

Findings

The majority of students have suitable study environments and facilities at home. The majority of parents help students with their piano homework. The majority of students started piano education of their own volition. Parents have stated that more than half of the students have lost the excitement and enthusiasm they felt when they started their education, and most of them need motivation to study at home.

Result

It is seen that the majority of the students participating in the research are at preschool and primary school levels. Students in this age group are likely to expect support from their parents regarding their homework. For this reason, homework tracking and parents' assistance to students during the education process are considered important for student development. It is known that disciplined work is a prerequisite and gain for the success of instrument education. In this case, it is recommended that parents organize their time management and create a consistent weekly plan for students in the younger age group.

Key Words: Amateur piano education, opinions of parents, out-of-class studies.

ENHANCING COMMUNICATION SKILLS IN VETERINARY EDUCATION THROUGH VIDEO-BASED LEARNING TOOLS: A FLEXIBLE AND ACCESSIBLE APPROACH

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ABSTRACT

Introduction and Purpose: Educators utilize a variety of digital teaching materials to capture students' attention and enhance their motivation. Among these technologies, video-based methods aim to support learning processes through the use of videos. In this context, the project aims to develop video-based educational materials that provide an accessible, flexible, repeatable, cost-free, and independent learning environment for communication education.

Materials and Methods: This project was supported under the TÜBİTAK 2209-A University Students Research Projects Support Program (project number:1919B012216446) with the first author as the project coordinator and the second author as the advisor. The project was completed in September 2024. In the project, short educational videos were produced to facilitate the development of communication skills among veterinary students.

Results: A total of 24 videos focusing on communication skills were developed. The first three videos provide introductory information, while the remaining 21 cover key communication skills, barriers of communication, empathy, conflict resolution, body language, avoiding medical terminology, factors influencing the veterinarian-client relationship, and anamnesis-taking skills. The duration of the videos ranges from 43 seconds to 1 minute and 37 seconds. As of December 2024, the videos have been viewed an average of 139 times each, with a total of 3,337 views on the LearnFlex YouTube channel.

Discussion and Conclusion: The project demonstrated that video-based learning tools provide students with a flexible learning environment by eliminating time and space constraints. The videos were produced to effectively reinforce theoretical knowledge through visual and auditory methods. The concise and clear design of the videos may have contributed to high viewership rates, and it demonstrates their popularity and potential as a learning tool. Consequently, this project highlights the potential of video-based learning to improve communication skills in veterinary medicine.

Key words: veterinary education, video-based learning, communication skills

ECONOMIC ANALYSIS OF LEAFY VEGETABLE MARKETING IN OYO STATE

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ABSTRACT

The study examined the economic analysis of leafy vegetable marketing in Oyo State. A simple random sampling technique was employed to select 120 respondents as the population of the study. A structured interview schedule was used to collect needed information from leafy vegetable marketers. Descriptive statistic was used to describe the socio-economic characteristics of leafy vegetable marketers, Budgetary analysis was used to estimate the cost and return structure of leafy vegetable marketing, and Gross margin and Marketing margin was used to determine the factors affecting leafy vegetable marketing in Ibarapa Central Local Government Area of Oyo State. The results showed that 56.67% of respondents were male with 48.33% being farmers with a mean age of 51 years. The budgetary result revealed that leafy vegetable marketing in the study area is profitable with Gross margin of #29,202.25 and labour cost constituted about #34,427.92 of the total variable cost of leafy vegetables. The study recommends that Government and Non-Governmental Organizations should provide incentives such as (loans, fertilizers and storage facilities) for leafy vegetable marketers and there should be up-to-date extension services for leafy vegetable marketers to improve their marketing experience and to maximize profit on leafy vegetable marketing.

Keywords: Gross margin; Profitability; Marketing; Maximaize

EFFECT OF PLASTIC POLLUTION

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ABSTRACT:
Plastic pollution has a range of significant effects on the environment, wildlife, and human health. It poses serious threats to marine life, as animals often ingest plastic or become entangled, leading to injury or death, while microplastics infiltrate the food chain. Ecosystems are disrupted, with plastics altering habitats and introducing toxins that harm biodiversity. Human health is at risk as chemicals from plastics can leach into food and water supplies, raising concerns about the long-term effects of microplastics. Economically, industries like tourism and fishing face substantial costs due to pollution, with clean-up efforts and environmental damage impacting livelihoods. Additionally, the production and incineration of plastic contribute to greenhouse gas emissions, exacerbating climate change. The aesthetic damage caused by littered landscapes detracts from natural beauty and limits recreational opportunities. Finally, plastics persist in the environment for hundreds of years, creating ongoing pollution challenges that will affect future generations.

Keywords:**Microplastics,Food Chain,EcosystemDisruption,Biodiversity**

EFFECT OF POLYPROPYLENE FIBER LENGTH MODIFIED WITH ETHYL CHLOROFORMATE ON STRENGTH PERFORMANCE OF CEMENTITIOUS SYSTEMS

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ABSTRACT

Introduction and Purpose: Various fibers are used to improve the inherently low tensile strength of cementitious systems. It has been reported that the adhesion at the fiber-matrix interface is one of the key parameters affecting fiber performance. To enhance this adhesion, various approaches have been employed, with the most common method involving mechanical treatments to alter fiber shape and increase surface roughness. It has been emphasized that fibers with hooked ends, rough surfaces, or crimped shapes exhibit significantly higher adhesion to the matrix compared to straight fibers. However, it has also been noted that applying hooking and bending processes to microfibers presents challenges in terms of feasibility. Consequently, in addition to physical modifications, chemical treatments have also been applied to create a high-affinity fiber-matrix interface. In this study, the effect of the length of chemically surface-modified polypropylene fibers on the compressive and flexural strength of mortar mixtures was investigated.

Materials and Methods: Chemical surface modification using ethyl chloroformate was applied to polypropylene fibers with lengths of 6 mm and 12 mm. In addition to the control mix without fibers, four fiber-reinforced mortar mixtures were prepared by substituting 0.5% of the total

volume with either modified or unmodified fibers. For all mortar mixtures, the water-to-cement ratio, sand-to-binder ratio, and flow diameter were kept constant at 0.485, 2.75, and 200±20 mm, respectively. To achieve the desired flow value, varying amounts of a single-type polycarboxylate-ether-based high-range water-reducing admixture were added to the mixtures. CEM I 42.5 R type cement was used as the binder, and crushed limestone aggregate was used as the fine aggregate in all mixtures.

Results: Regardless of the fiber type, the addition of fibers to the mixture increased the need for a water-reducing admixture to achieve the target flow value. This effect became more pronounced with the increase in fiber length.

Discussion and Conclusion: It was found that the surface activation process slightly improved the flow performance of short fibers, while it had no significant effect on long fibers. In short fibers, the surface activation process increased the flexural strength, but it did not have a significant impact on the compressive strength.

Key Words: Polypropylene Fiber, Surface Modification, Ethyl Chloroformate, Compressive Strength, Flexural Strength

IMPACT OF $AgNO_3$ ON ETHYLENE INHIBITORY EFFECTS REDUCTION OF UCB-1 PISTACHIO ROOTSTOCK VITROPLANTLETS

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ABSTRACT

Introduction and Purpose: In Tunisia, pistachio tree (*Pistacia vera* L.) is a fruit crop with high economic incomes and great ecological interests, especially in the western centre of the country. It contributes widely to the valorisation of arid and semi-arid zones due to its agronomic capacities. Only that its productivity remains very low, due mainly, to the limited diversification of rootstocks. The new hybrid rootstock, UCB-1 (*Pistacia atlantica* x *Pistacia integerrima*), is strongly recommended for producers for its exceptional vigour and resistance to chilly and diseases. It also ensures high yields and anticipates entry into production to 4-5 years. Optimization of *in vitro* multiplication of UCB-1 rootstock newly introduced in Tunisia would thus allow its rapid and mass propagation for professional and development sectors. A micropropagation protocol of UCB-1 rootstock was successfully optimised. Only that ethylene released by vitroshoots is harmful for their vegetative evolution.

Materials and Methods: Glass jars containing vitroplants of UCB-1 in multiplication stage are used. The detection of ethylene in the containers by GAZTEC column proves its existence at levels of 1 to 5 ppm. Attempts to attenuate the inhibitory effects of ethylene on the UCB-1 vitroshoots evolution were undertaken by (i) using perforated jar cups and (ii) the addition of $AgNO_3$ to the culture media at 0, 2, 4 and 6 mg.

Results: Perforated jars present no ethylene content and no symptoms of stressed plantlets were registered. The UCB-1 vitroshoots propagated on POM medium supplemented with different doses of $AgNO_3$ (0, 2, 4 and 6 mg) are healthy. The maximum multiplication rate (MR), 2.4, is reached with 2 mg dose. The doses 4 mg and 6 mg of $AgNO_3$ have reduced apical necrosis and the yellowing of the vitroshoots.

Discussion and Conclusion: It is known that ethylene is harmful for vitroplantlets evolution. Same results were noticed for the propagation of UCB-1 vitroplantlets in containers with ethylene. $AgNO_3$ at 2 mg/l was very efficient in the reduction of toxic effects of ethylene on UCB-1 vitroplantlets.

Keyword: UCB-1, ethylene, $AgNO_3$, necrosis, vitroshoots, stress.

RELATIONSHIP BETWEEN URBAN RESILIENCE AND URBAN DENSITY AGAINST EARTHQUAKE RISK IN DISTRICT CENTER URBAN SETTLEMENTS IN TURKIYE

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ABSTRACT

Introduction and Purpose: Urban resilience refers to the ability of cities to resist earthquakes, minimize potential damage, and recover quickly. In today's cities, building regulations play an important role in increasing resilience. However, ignoring the resilience parameters in these regulations increases the vulnerability of cities to earthquakes and increases possible risks. The main purpose of this study is to determine the necessary elements to increase the resilience of cities against earthquakes and to analyze the relationship between building density regulations and urban resilience and to offer suggestions to minimize risks.

Material and Method: In this context, thirty-seven district centers, determined by 5% random sampling method from all over Turkey, were examined. In each district, one hectare size study areas with three different urban functions (residential, working and central areas) were selected.

Results: The findings obtained within the scope of density rates reveal that economic advantages are primarily evaluated in urban planning processes and durability and security elements are not sufficiently taken into consideration. It is anticipated that this situation may cause significant structural and security problems in the future.

Discussion and Conclusion: As a result, it is understood that economic and social dimensions in urban development processes should be addressed with a more comprehensive and sustainable approach. In decision-making processes, long-term risk reduction priorities should be taken into account instead of short-term economic benefits. This approach will allow for the construction of safer and more resilient cities against earthquakes and other natural threats. The study emphasizes that planning processes and construction policies should be reconsidered with a holistic approach in order to increase urban resilience.

Keywords: Earthquake, District Center, Urban Resilience, Urban Density.

A REVIEW OF HEAVY METAL ACCUMULATION IN FISH AND SHELLFISH TISSUES IN THE EASTERN BLACK SEA REGION, TURKIYE AND HUMAN HEALTH RISK ASSESSMENTS OVER THE PAST DECADE

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ABSTRACT

This study consolidates information from 15 research completed in the past decade, examining heavy metal concentrations in fish and shellfish from the Black Sea and their possible health concerns to consumers. The fish species examined comprise anchovy (Engraulis encrasicolus), whiting (Merlangius merlangus), red mullet (Mullus barbatus), horse mackerel (Trachurus mediterraneus), and turbot (Scophthalmus maximus). Furthermore, shellfish like the rapa whelk (Rapana venosa) and Mediterranean mussel (Mytilus galloprovincialis) were analyzed for metal buildup.

The primary metals examined in these research are cadmium (Cd), lead (Pb), mercury (Hg), chromium (Cr), copper (Cu), zinc (Zn), and iron (Fe). The methodologies utilized, including Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and Atomic Absorption Spectrophotometry, yielded accurate quantifications of metal concentrations in consumable tissues and muscles, liver, gills, and gonads.

Research demonstrates that liver and gill tissues frequently acquire greater quantities of metals than muscle tissues, which are commonly ingested by humans. Although sporadic elevated concentrations of certain metals were detected, including lead in horse mackerel and zinc in anchovy, the majority of levels remained within the international safety limits set by the Food and Agriculture Organization (FAO), the World Health Organization (WHO), and regional regulations. Seasonal fluctuations and geographic disparities affected metal concentrations, with certain regions exhibiting elevated pollution as a result of local human activities.

Health risk assessments, incorporating metrics such as the Target Hazard Quotient (THQ) and Estimated Daily Intake (EDI), consistently indicated minimal risks for both carcinogenic and non-carcinogenic effects associated with the eating of these species. Shellfish, especially mussels and whelks, exhibited site-specific fluctuations in metal concentration but were generally deemed safe for restricted ingestion.

In conclusion, despite anthropogenic pollution in the Black Sea, the seafood examined in these research is predominantly safe for human consumption. Ongoing surveillance and enhanced environmental management are advised to uphold safety and mitigate potential localized pollution.

Key Words: Heavy Metals, Health Risk Assesment, Black Sea, Commercial Fish

EDUCATION IN ADANA (1960-1980)

Buçalışma Kafkas Üniversitesi BAP Koordinatörlüğü tarafından desteklenen 2017-SB-69 nolu “Adana Vilayeti’nin Sosyo-Kültürel, Ekonomik, İdari ve Siyasi Yapısı (1960-1980)” adlı Doktora tezinden türetilmiştir.

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ABSTRACT

During the Republican Era, significant steps were taken to modernize education and increase school enrollment. The Law on the Unification of Education was enacted in 1924. The Compulsory Education Law came into effect in 1939, requiring all children of primary school age to attend school. As a result, the number of schools rapidly increased, leading to significant progress at the primary, secondary, and high school levels. Vocational schools were established to train skilled workers in industry and agriculture. The agricultural and industrial schools founded in Adana enhanced the region's agricultural and industrial potential. The economic hardships resulting from World War II also affected the education sector, causing a decline in school enrollment rates.

In the post-war period, with increased investments, the number of schools and enrollment rates rose again. The literacy rate, which was 30.6% in 1950, reached 65.7% by 1975. Investments in village schools between 1960 and 1980 aimed to improve educational opportunities in rural areas. The number of primary schools increased from 550 in 1960 to 934 in 1970, and to 1,072 in 1980. New secondary schools were opened. Alongside public schools, private schools also served the community. Generally, these schools operated as primary-secondary or secondary-high schools. There were also vocational technical schools at the secondary and high school levels. Due to advancements in agriculture and industrialization, schools such as Imam Hatip Secondary School, Girls' Art Secondary School, and Teacher Schools were established at the secondary level. The number of teachers increased from 1,740 in 1960 to 6,554 in 1980. Substitute teachers were employed to address the teacher shortage. The opening of private schools added diversity to the education sector. This played a significant role in the socio-economic development of Adana.

Keywords: Republican Era, Education, Adana

SOCIOECONOMIC AND CULTURAL DETERMINANTS OF PUBLIC HEALTH

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ABSTRACT

The main socioeconomic and cultural determinants that determine public health are summarized below: Economic Status: The distribution of wealth in society; whether income is sufficient for housing, nutrition, clothing. Family Structure: Whether families are large or nuclear; the degree of interaction and the bond and mutual support between family members; whether individual success or family success is important; the responsibility of raising children; how tasks such as protection, caring for the elderly, the weak, and the sick are shared among family members. Gender Roles: The division of labor between the sexes; who is working, who is at home, who prepares meals and who takes care of children; expectations, responsibilities and social rights of both sexes, cultural beliefs about the behavior of each sex can affect health. Marriage Patterns: Polygamous, monogamous marriages, endogamous exogamous marriages, consanguineous marriages can affect health. Preventive Patterns: How cultural attitudes towards birth control, contraception and abortion affect women's health, attitudes towards the use of contraceptive methods, behaviors such as the spread of sexually transmitted diseases vary according to the culture of the society. Population Policy: Includes beliefs about optimum family size and the sex of the child. Pregnancy and Birth Practices: Includes changes in behaviors related to nutrition and clothing during pregnancy. Changes in Body Image: Includes images and changes related to the body that vary according to culture. For example, the effect of cosmetics, the effect of cosmetic surgery, views on body shape such as thinness and height among women include cultural values. Nutrition: How food is prepared, preserved, cooking methods, tools, distinction between food and non-food, hot and cold foods, understanding of nutritional values, etc. Clothing: Cultural perceptions of women's and men's clothing styles, how to dress in certain places, dressing fashions, whether these are related to certain diseases, etc. Other major factors include: Personal Hygiene, Housing Arrangements, General Health Arrangements, Professions, Religion, Habits, Culture-related stress, Immigrant status, Substance use, Leisure habits, Pets and Birds, Self-medication strategies and Therapies. The purpose of this report is to evaluate the socioeconomic and cultural determinants of public health.

Keywords: Public Health; Socioeconomic Determinants of Health; Cultural Determinants of Health

INFLUENCE OF TECHNİCAL COLLEGE TEACHERS' ENGAGEMENT WİTH SOCIAL MEDIA ON PROFESSIONAL DEVELOPMENT AND PRACTICES' EFFECTIVENESS

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Abstract

Introduction and Purpose:
Social media is becoming a prominent element of digital technologies as a result of its potentials, opportunities offered and widespread utilization and as such, fast expanding into the field of education. It therefore becomes bonded on technical teachers to quickly harness for their professional development and not left it to chance. The study explores the connections between teachers' engagement with social media in their professional development and their practices effectiveness.

Materials and Methods:
Descriptive survey of the correlational design was adopted for the study. Multi-stage sampling technique was used for the study in which sixty-one teachers participated. Questionnaire on the Influence of Social Media on Teachers' Professional Development and Practices Effectiveness (QISM-TPDPE) was the main instrument for data collection. Face validity was conducted on the instrument by three experts in the fields of educational technology and three experts in technology education. The internal consistency of the instrument yielded 0.89, 0.77 and 0.85 for sections A, B and C respectively using Cronbach alpha reliability statistical formula. Frequency count and percentages were used to answer research questions while the hypotheses were tested using Pearson r correlation co-efficient.

Results:
The findings of the study revealed that teachers' frequency of engagement with social media have moderate and significant influence on their professional development and classroom practices effectiveness.

Discussion and Conclusion:
Premised on the findings of this study, it could be concluded that the frequency of teachers' engagement with social media for the purpose of professional development, classroom practices effectiveness and personal consumption is moderate; teachers' professional development and their classroom practices effectiveness are influenced significantly by their engagement with social media. Hence, the study recommend among others that teachers should be availed the opportunities for training on how to effectively infuse social media technologies in teaching and learning as well as professional development.

Keywords: Social Media Engagement, Teachers' Professional Development, Practices Effectiveness, and Technical College.

A FRAMEWORK FOR RUBRIC ASSESSMENT USING AN ONTOLOGY-BASED APPROACH

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ABSTRACT

Introduction and Purpose: As the field of computing education continues to evolve, the development of standardized rubrics for assessing programming concepts remains underexplored. Moreover, traditional rubric creation processes are often manual, requiring multiple iterations of validation by experts and faculty, which can be time-consuming. To address these challenges, this paper introduces a novel framework for creating rubrics that assess psychomotor skills in programming.

Materials and Methods: The framework leverages an ontology-based approach to define and represent the various levels of psychomotor learning, encapsulated in the Psychomotor Learning Domain (PLD) Ontology. Additionally, the framework integrates Part-of-Speech (POS) tagging and POS pattern matching techniques to enhance the precision and reliability of the rubric assessment. To streamline the rubric creation process, the framework is implemented through a web-based tool, enabling automation and reducing manual effort.

Results: The results of this work provide valuable insights for improving rubric models and offer practical support for their implementation in computing education, fostering more effective and efficient assessment of programming skills.

Discussion and Conclusion: With this findings, the ontology addresses the identified gap by providing a standardized and reusable model for rubric-based assessments in psychomotor domains. The used of PLD ontology model, Part-of-Speech (POS) tagging and POS pattern matching techniques indicate that the web-based tools is effective in supporting educators to design and implement rubrics more efficiently while maintaining consistency and accuracy. In conclusion, this web-based tool application will offer a suitable rubric to help teachers enhance the quality of their classroom instruction and assessment. Future work will focus on refining the ontology's application in real-world scenarios and extending its capabilities to other learning domains.

Key Words: Assessment; Rubric; Ontology; Framework; Part-of-Speech

A CRITICAL ANALYSIS OF EPDAD ACCREDITATION PROCESS: THE CASE OF SCIENCE TEACHING UNDERGRADUATE PROGRAM

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ABSTRACT

Introduction and Purpose: The purpose of this study is to critically analyze the accreditation process carried out by the Association for Evaluation and Accreditation of Teacher Education Programs (EPDAD) for the programs in faculties of education. The analysis is based on the Self-Evaluation Report (SER) of an evaluation process for the Department of Science Teaching.

Materials and Methods: The method of the study is document analysis. The document analyzed is the SER report adopted by EPDAD and prepared by the department. Some problems identified from the researcher's perspective based on his/her experiences and observations in the SER process and suggestions for these problems are presented. These problems were identified in relation to the standards in the SER. A total of seven standards in the SER are discussed separately and some evidence-indicator suggestions are included.

Results: Accordingly, the main problems identified are the submission of repetitive and similar indicators-evidence, the request for generic evidence that is disconnected from the relevant program for some standards, and the unbalanced distribution of the amount of indicators-evidence across standards.

Discussion and Conclusion: Regarding these problems, there were suggestions for simplifying similar and repetitive indicators-evidence, having some standard guidelines for the indicators-evidence requested in the SER, and developing a scoring system according to the scope and intensity of each standard. In addition, holistic recommendations were made for all programs within faculties of education and for the Science Teaching Undergraduate Program.

Key Words: Science Teacher Education Undergraduate Program, Accreditation, EPDAD

DESIGN AND DEVELOPMENT OF AN AUTOMATION SYSTEM FOR HUMAN-CENTERED LIGHTING IN INDUSTRIAL FACILITIES

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Abstract

In this study, the design and development of an automation system for human-centered lighting applications have been conducted. It is a well-established fact that light has a significant impact on people, and thus, effective lighting can enhance both work performance and efficiency. Especially in labor-intensive production systems, optimal lighting conditions are expected to contribute meaningfully to efforts aimed at improving productivity and operational efficiency. Within this framework, the study aims to implement effective lighting control to enhance production efficiency in industrial facilities. To accurately determine the control parameters, it is essential to first collect and evaluate data related to the production process. Accordingly, a PLC-based automation infrastructure was developed to accommodate the facility's working conditions, gathering data from humidity, temperature, and noise sensors while monitoring process durations within the production cycle. The collected data was stored in an SQL database for analysis, forming datasets that contain critical parameters such as processing time for each production stage. During preprocessing, outliers were removed to create the final dataset. The performance index calculated from this data enabled performance analysis based on process durations for each production stage, showing that ensuring optimal lighting conditions positively affects both worker performance and production efficiency. These findings suggest that enhancing lighting conditions with a human-centered approach in labor-intensive industrial facilities supports productivity.

Keywords: Human-centered lighting, Automation system, Industrial facilities, Work efficiency, PLC-based control.

WHAT MAKES A GOOD TEACHER IN THE ERA OF 21st CENTURY SKILLS: PERCEPTIONS OF PRE-SERVICE ENGLISH AS A FOREIGN LANGUAGE TEACHERS

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ABSTRACT

Introduction and Purpose: The question of what constitutes a good teacher has been a topic of debate in teacher education. In the 21st century, effective teachers must possess a range of skills beyond traditional pedagogical expertise, including digital literacy and adaptability. These skills enable teachers to respond to the evolving needs of the modern classroom. Exploring the perceptions of pre-service teachers (PTs) is crucial for the development of effective teacher education programs to equip them with 21st century skills. Therefore, the aim of the present study was to find out the PTs' perceptions on what makes a teacher a good teacher. More specifically, the study aimed at exploring to what extent the PTs' perceptions overlap with 21st century teaching skills.

Setting and Method: The study took place in the Department of English Language Teaching of a highly competitive state university in Istanbul, Turkey. A total of 120 PTs of English as a foreign language (EFL) voluntarily participated in the present study. Data collection instrument was an open-ended survey question which asked the PTs their perceptions on the features of a good teacher. Data gathered from the survey were then analyzed by using MAXQDA data analysis software.

Results: The results of the study will be discussed in the light of the perceptions of PTs on what makes a teacher a good teacher and the 21st century teacher skills.

Discussion and Conclusion: The current study has demonstrated what PTs think on how to be a good teacher and whether the PTs' perceptions overlap with 21st century teaching skills. In conclusion, exploring the perceptions of EFL PTs is crucial for the development of effective teacher education programs that prepare them for the challenges and opportunities of the 21st-century classroom.

Key Words: English as a foreign language; Pre-service teachers; Teacher education; 21st century skills; Teachers' perceptions

EXAMINING THE OPINIONS AND METAPHORICAL PERCEPTIONS OF PROSPECTIVE TEACHERS REGARDING MICRO TEACHING PRACTICES

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ABSTRACT

Purpose: In this study, it is aimed to determine the opinions of prospective teachers about the practices carried out within the scope of micro teaching course they take during the undergraduate education process and to determine their metaphoric perceptions.

Methods: In the study, the fenemonology model, one of the qualitative research patterns, was used. The study group of the study constitutes 26 teacher candidates studying at the Faculty of Education. The data is like a "survey form" and "micro teaching… consisting of open -ended questions. Because it was collected through a "metaphor form ve and the content analysis method. The hand -seized data were interpreted according to the themes determined in accordance with the codes.

Results: As a result of the analyzes; teacher candidates as positive opinions about micro-teaching practices; within the scope of the theme of "information and skills", they stated that they often have gained gains such as "effective lectures, to apply various methods and techniques, to prepare and control class plan, to manage and control, prepare and realize efficiency". Within the scope of the theme of "sensitive features, attitudes", they stated that they have gained gains such as "increase in self-confidence, love, wanting, excitement, increase in motivation". As negative opinions on micro-teaching practices, they often answered "no", as well as their "concern of teaching, excitement, fear, stress and tension". Within the scope of the theme of the forced situations, they often stated that "plan preparation, material preparation and selecting appropriate methods for the subject". In addition, it was seen that teacher candidates for the concept of "micro teaching" produce 20 different metaphors. Of these, the concepts of "trailer (3), pre -internship (3) and rehearsal (2)" are the most produced metaphors. The specified metaphors; "Experience, Art, Sports, Education, Guide, Human and Mechanical" element was found to be collected in 7 themes.

Key Words: Micro teaching, teacher education, metaphor.

TEACHERS' VIEWS ON EFFECTIVE LEARNING-TEACHING ENVIRONMENTS: A SWOT ANALYSE

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ABSTRACT

Purpose: In this study, it is aimed to determine the opinions of teachers working in secondary school for effective teaching environments in the classroom.

Methods: The model of the study is the phenomenology, one of the qualitative research patterns. The study group of the study consists of 12 teachers working in different branches. The semi - structured interview form consisting of open-ended questions has been used as a data collection tool. The data obtained has been analyzed by SWOT analysis method.

Results: As a result of the analyses, in the theme of "strong points," teachers have mostly mentioned "personal strengths" such as "efforts to improve oneself, professional experience, participation in various in-service training related to teaching, being open to innovations, being able to adapt quickly, and managing the classroom." As for "physical strengths," they have mentioned "having a small class size, having a smart board, having technological resources, and having various teaching materials." In the sub-theme of "personal weaknesses" under the theme of "weaknesses," teachers have mostly mentioned situations such as "students' reluctance to learn, low teacher motivation, students' anxiety about the future and lack of future goals, and the teacher's anxiety or inability to feel comfortable in the classroom when students are unable to learn." In the sub-theme of "physical weaknesses," teachers have mentioned "having a large class size" and "technological inadequacies." In the sub-theme of "personal opportunities" under the theme of "opportunities," teachers have mostly used expressions such as "support from administrators, support from parents, and having a small or ideal class size." In the sub-theme of "physical opportunities," teachers have mentioned "good physical conditions, having a smart board and internet, and having a sufficient socio-economic level." In the sub-theme of "personal challenges" under the theme of "threats (difficulties)," teachers have mostly mentioned situations such as "the lack of parental involvement affecting the students, students' reluctance to learn, and the economic difficulties they experience." In the sub-theme of "physical challenges," teachers have mentioned "physical difficulties, impossibilities, and economic inadequacies." Finally, regarding creating an effective teaching and learning environment, teachers have mostly suggested measures such as "ensuring collaboration among stakeholders, staying hopeful, making an effort, maintaining effective communication, raising awareness among parents, motivating students, and providing enjoyable activities that capture students' interest."

Key Words: Effective Learning-Teaching Environment, Features of Effective Teaching, SWOT Analysis.

DETECTION OF STRUCTURAL DAMAGES WITH ARTIFICIAL INTELLIGENCE: TECHNOLOGICAL DEVELOPMENTS AND FUTURE PERSPECTIVES

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ABSTRACT

Introduction and Purpose: Building damage detection is a critical process to ensure building safety and resilience. While traditional methods can often be time-consuming, expensive and error-prone, the development of artificial intelligence (AI) technologies offers revolutionary solutions in this field. This paper focuses on AI-based detection methods for structural damage and explores technological advances in this field.

Materials and Methods: Advanced techniques such as artificial intelligence, image processing, deep learning and machine learning have been used in recent years to analyze the physical condition of structures. In particular, AI-enabled systems can detect damages at early stages by processing data (e.g., images, vibration data, sensor readings) obtained from buildings or structural elements. By quickly analyzing large datasets without human intervention, these systems can detect structural weaknesses, cracks, deformations and other types of damage. They even provide support mechanisms to decide the final condition of the structure.

Results: This study also addresses the advantages and challenges of AI-based damage detection systems. The ability of these systems to detect damage accurately, quickly and economically is a great benefit in terms of security. However, there are also some challenges such as the accuracy of the algorithms, data quality and training of the algorithms. In the future, with the further development of these technologies, AI-based building health monitoring systems are expected to become widespread.

Discussion and Conclusion: In conclusion, advances in artificial intelligence will play an important role in improving the safety of structures and the potential of this technology will lead to significant innovations in the engineering and construction industries.

Keywords: Damage Assessment, Reinforced Concrete Buildings, Artificial Intelligence, Machine Learning, Image Processing Algorithms

THE ROLE OF PREDICTIVE ANALYTICS IN RISK ASSESSMENT AND PREMIUM CALCULATİON İN THE INSURANCE INDUSTRY

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Abstract

The purpose of this paper is to explore the application of predictive analytics in the insurance industry, specifically focusing on its role in risk assessment and premium calculation. By leveraging advanced statistical models and machine learning algorithms, predictive analytics provides insurers with the tools to more accurately predict potential risks and set premiums accordingly.

This research employs a mixed-methods approach, combining quantitative analysis of historical insurance data with qualitative interviews with industry experts. The quantitative component involves the use of regression analysis, decision trees, and clustering techniques to identify patterns and correlations in the data. The qualitative aspect includes insights from professionals on the practical challenges and benefits of implementing predictive analytics in their operations.

The importance of this paper lies in its potential to demonstrate how predictive analytics can enhance the efficiency and accuracy of risk assessment processes, leading to more fair and competitive premium pricing. This, in turn, can improve customer satisfaction and retention, as well as the overall profitability of insurance companies.

The conclusion of the paper highlights the significant impact of predictive analytics on the insurance industry, emphasizing the need for continuous innovation and adaptation to new technologies. The recommendations suggest that insurance companies invest in training and development for their staff, adopt a data-driven culture, and collaborate with technology providers to stay ahead in the competitive market.

Keywords: Risk Assessment, Premium Calculation, Data Analysis, Predictive Modeling, Insurance Underwriting, Customer Segmentation, Ethical Considerations.

THE USAGE OF ELLIPSIS IN DISCOURSE

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Abstract

The term of discourse develops the analysis of language, especially its ability to create new truths and new worlds. Discourses are the basement for understanding and directing different domains of social action. They are not only related to the specific vocabularies and rhetorical techniques, but also modes of thinking, grammars, rationalities, and even specific material practices that represent, interpret, and create new types of reality.

Many linguists view text and discourse analysis as the same process, while some use the two terms to define different concepts.

It seems that ellipsis can be used not only in sentence but in a text. While using ellipsis in texts, some punctuation marks should be used. Most of these punctuation marks are used as a dash and 3 dots. The dash can also be used to indicate a break in dialogue.

"What the — ?" [1, s. 280].

... It had probably been then that he had spoken aloud. ... Just a bit farther ... for he could feel his conscious self struggling to wake ..." [2, s.682].

Thus, only two functions can be distinguished, depending on whether the ellipsis is classified as a discourse marker that limits a discursive unit or indicates a relationship between them. These are the functions of ellipsis as an interruption of the flow of thought or speech tone, and the functions of ellipsis as a marker of omitted words or phrases.

Various types of ellipsis are used quite often in discourse. Despite the omission of various parts of the sentence, all of them can be easily restored from the context without impairing understanding. Thus, ellipsis is a characteristic means of expression as a syntactic device and contributes to the overall coherence of the text.

Key words: discourse marker, ellipsis, punctuation

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EMERGING TECHNOLOGIES IN THE EXTRACTION OF LYCOPENE FROM TOMATO PROCESSING BYPRODUCTS

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ABSTRACT

Lycopene ($C_{40}H_{56}$) is a type of carotenoid that mainly exists in many photosynthetic plants, such as tomato, watermelon, gac fruit and grapefruits, and is manifested as red and orange color in plants. Especially, it accounts for nearly 80% of the total carotenoids in fully ripe tomatoes. Lycopene is used in the food industry as a natural coloring agent due to its strong color, non-toxicity and fat solubility. The processing of tomatoes results in the huge amount of byproducts having high lycopene contents. Valorization of lycopene from byproducts is necessary. The extraction of lycopene from waste is a promising strategy, for its application in food, pharmaceutical and cosmetic industries.

Conventional extraction techniques have long been utilized to extract the lycopene from food materials, but these techniques have several drawbacks. Novel techniques such as ultrasound-assisted extraction, microwave-assisted extraction, pulsed electric field-assisted extraction, ohmic-assisted extraction, enzyme-assisted extraction, high hydrostatic pressure-assisted extraction, and super-critical fluid extraction provide higher extraction yields as compared to conventional extraction techniques, by minimizing the amount of solvents. These techniques offer improved efficiency, reduced extraction time, increased selectivity, minimized degradation, preserved bioactivity of lycopene, and environmental friendliness. The yield of extraction can be increased by novel extraction methods in the range of 89.4%-99.0% compared to the conventional techniques. In this study, it was aimed to contribute valuable information and figure out the status of the emerging methods of lycopene extraction from tomato processing by products, list the suggested novel technologies to the food industry not only as a unit operation method, but also a circular economy approach.

Key Words: colorant, natural, circular economy

DISTANCE LEARNERS' TIME MANAGEMENT SKILLS IN OPEN AND DISTANCE HIGHER EDUCATION

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ABSTRACT

Introduction and Purpose: Distance education has gained a growing demand from graduates and undergraduates in higher education institutions so it has become an important method of learning delivery. As distance education provides flexibility in time, time management in open and distance education at the tertiary level is considered to be an effective factor in students' success. This study explores the role of time management as one of the self-regulation strategies in distance education environments. It examines time management skills employed by distance learners and delves into the positive effect of time management on their academic achievement, learning process, and self-regulation. Besides, it focuses on distance learners' time management skills and strategies and the factors underlying the lack of time management in the context of distance education.

Materials and Methods: A literature review was administered and articles, books and theses, related to the aim of the current study were examined by using the descriptive analysis method within the framework of study purpose.

Results: This study paves the way for future investigations into the time management practices in distance learning environments and it suggests training programs in time management for distance education students.

Discussion and Conclusion: It is concluded that in open and distance education, an organized online course should contain clearly stated expectations and instructions. Instructors' detailed instructions regarding activities and assignments provide help for learners to assist their time management for the completion of work and avoid misconceptions. The readiness of faculty to teach online includes managing time effectively as the online faculty members are required to prepare the course design before the beginning of the term.

Keywords: Distance education, distance learners, higher education, open and distance education, time management

EMPOWERING VISUALLY IMPAIRED USERS THROUGH ACCESSIBLE E-TRANSPORTATION APPLICATION DESIGN

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Abstract

In the rapidly evolving digital world, mobile applications have become essential for managing daily activities, including transportation. However, many e-transportation applications overlook the needs of visually impaired individuals, who face significant challenges due to visually focused designs. This gap highlights the urgent need for innovative and inclusive solutions prioritizing accessibility and usability.

This study examines the influence of visual, navigation, and informational design on the competitive advantage of e-transportation mobile applications. Based on a survey of 357 visually impaired users in Jordan, the research identifies key challenges and gaps in current applications. Through a user-centered design approach, the study develops a mobile application specifically designed to address the unique needs of this user group.

The findings demonstrate that intuitive interfaces and voice-activated controls significantly improve accessibility and user satisfaction. These enhancements empower visually impaired users by fostering independence and confidence and provide e-transportation companies with a competitive edge by addressing critical design deficiencies. This study bridges the divide between theoretical insights and practical applications by highlighting the transformative impact of inclusive design. It concludes that prioritizing accessible and user-centered design is vital for creating effective, inclusive applications, enabling equitable access to transportation services, and setting a new benchmark for innovation in the e-transportation sector.

Keywords: Accessibility, E-Transportation, Visually Impaired, User-Centered Design

A COMPARISON OF UNCERTAINTY METHODS ON PROSTATE SEGMENTATION

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ABSTRACT

Introduction and Purpose:

Prostate cancer is one of the most frequently seen cancers, whose diagnoses can be made by analyzing MRI images. The automatic segmentation of the prostate with deep networks can facilitate its diagnosis and treatment plans. Despite the high performance of such networks, they can fail silently for out-of-distribution (OOD) datasets, whose distribution is different from the training set. To improve the thrust to such networks, it is important to detect regions highly likely to be wrong. Therefore, we compare the behaviors of different uncertainty methods on prostate segmentation to highlight these regions and see which method is better to indicate them.

Material and Method: We use Monte Carlo Dropout (MCDO), Test-Time Augmentation (TTA) and Snapshot Ensembles (SE) to generate uncertainty maps for segmentation masks generated by the UNet, which is a well-known segmentation network for medical image segmentation. We use ECE, MCE and Entropy metrics to quantify uncertainty scores per image. NCI-ISBI 2013 and I2CVB datasets were used for training the UNet and PROMISE12 dataset was used for performance evaluation on OOD datasets.

Results: We found that the lowest mean ECE, MCE and Entropy scores are obtained by TTA; though, the largest mean IOU scores are produced by SE.

Discussion and Conclusion: This work compared the performance of uncertainty methods of MCDO, TTA and SE on the segmentation probability maps generated from the prostate in MRI images. We observed better calibration properties are produced by TTA while the most accurate segmentation is achieved by SE. Visual results also confirm that TTA is better at showing uncertain regions in segmentation masks due to missing or falsely detected structures while the other methods only focus on segmentation boundaries. Future work will focus on improving the TTA to indicate missing and false detections in uncertainty maps.

Key Words: Monte Carlo Dropout; Test Time Augmentation; Snapshot Ensemble; UNet

"ENERGY STUDIES": ESTABLISHING A NEW DISCIPLINE

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Abstract:
This paper presents a review of activities to establish a new discipline "Energy Studies" to deal with energy issues from interdisciplinary perspectives. The proposed concept is based on the conviction that science should continue providing the society with integrated scientific knowledge as a basis for the development of sustainable energy strategies by promoting a new interdisciplinary process around the theme of "energy." It is also expected that the proposed approach would necessitate and encourage closer collaboration among researchers from different disciplines as well as dialogues between various stakeholders in the society. First the need to develop energy engineering education is documented, and its historical evolution is reviewed. Then energy engineering education at undergraduate and postgraduate levels are considered separately, and the characteristics of energy engineering syllabuses are identified. Finally, there is a discussion about possible perspectives for energy engineering.

ANALYSIS OF ENERGY EFFICIENCY IN FORMATION MODELS OF SWARM UAVs AND SELECTION OF OPTIMAL FORMATION MODEL USING AN AI-BASED DECISION MECHANISM

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ABSTRACT

Introduction and Purpose: This project provides a framework to identify the most suitable formation model for Unmanned Aerial Vehicles (UAVs) in swarm systems, aiming to enhance mission success and operational efficiency through an AI-supported decision mechanism. The developed algorithm incorporates critical factors such as energy efficiency, operational effectiveness, field-of-view optimization, communication, and coordination. It also establishes a comprehensive dataset that evaluates the performance of formation models, contributing to the literature.

Materials and Methods: The AI-based decision mechanism recommends the optimal formation based on mission type, number of UAVs, and operational conditions. It utilizes AI libraries like Scikit-learn and TensorFlow/Keras, operates using Python, and executes in the Gazebo simulation environment with the ROS-2 Humble robotic operating system. Integration with PX4-Autopilot provides UAV movement and mission control, delivering a dynamic simulation experience.

The interface allows users to input their formation model, UAV count, and mission requirements to observe the formation in the Gazebo simulation. This setup analyzes the operational efficiency of different formations under various scenarios. The data collected improves mission performance and operational efficiency.

Results: The results provide an analysis of the operational efficiency of various formation models, evaluating their effectiveness in specific mission scenarios. The AI mechanism demonstrates its ability to recommend the optimal formation model based on user inputs and simulation results.

Discussion and Conclusion: This research provides enhancements in the efficient and reliable use of swarm UAVs in missions and offers innovative solutions through high-accuracy data analyses in a simulation environment. The data and findings are expected to expand the scientific knowledge in this field.

Key Words: UAV Formation Models, Energy Efficiency; Swarm UAVs; AI Decision Mechanism

ANALYSIS OF LEARNING OUTCOMES AND PROCESS COMPONENTS IN THE 2024 MIDDLE SCHOOL TURKISH LANGUAGE CURRICULUM AT 5TH AND 6TH GRADES ACCORDING TO THE REVISED BLOOM'S TAXONOMY

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ABSTRACT

Introduction and Purpose: The purpose of this research is to determine the taxonomic levels of the learning outcomes in the Secondary School 5th and 6th Grade Turkish Curriculum published by the Board of Education and Discipline in 2024, according to the renewed Bloom Taxonomy.

Material and Method: The research was examined within the scope of qualitative research and the data was obtained through document analysis. The research data was obtained from the learning outcomes of the Secondary School Turkish Teaching Program updated in 2024. In the study, the taxonomic levels of 200 learning outcomes and 600 process components in all skill areas in the Secondary School Turkish Course Curriculum (5th and 6th Grades) published in 2024 were determined according to Bloom Taxonomy. The achievements at the determined grade level were examined according to Bloom's Taxonomy, and the continuity of the data was ensured by tabulating the learning outcomes and process components according to the sub-steps of the taxonomy.

Findings: According to research findings; While it was seen that the 5th and 6th grade level learning outcomes in the Secondary School Turkish Curriculum were mostly included in the analysis step, no data could be obtained on the remembering step. It was found that the process components at the 5th and 6th grade levels were mostly at the evaluation stage among the cognitive process dimensions. When the research findings were examined again, it was determined that no process component regarding the remembering step could be obtained.

Discussion and Conclusion: Such studies are important for program development and modification studies. The need for studies to examine the learning outcomes and process components in the Turkish Curriculum according to the Revised Bloom Taxonomy makes this study important and provides a guiding feature.

Keywords: Learning Outcome, Process Component, Turkish Curriculum, Bloom Taxonomy.

ANALYSIS OF LEARNING OUTCOMES AND PROCESS COMPONENTS IN THE 2024 MIDDLE SCHOOL TURKISH LANGUAGE CURRICULUM AT 7TH AND 8TH GRADES ACCORDING TO THE REVISED BLOOM'S TAXONOMY

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ABSTRACT

Introduction and Purpose: The purpose of this study is to classify the learning outcomes and process components in the 7th and 8th grades of the 2024 Turkish Language Course Curriculum according to the Revised Bloom's Taxonomy

Materials and Methods: The study is qualitative in nature, and the data were obtained through document analysis. The data for this study were derived from the learning outcomes and process components of the Turkish Language Course Curriculum, updated within the framework of the Turkey Century Education Model in 2024.

Results: In this study, which focuses on the 2024 Turkish Language Course Curriculum, a total of 206 learning outcomes and 618 process components across all skill areas for 7th and 8th grades were classified according to the Revised Bloom's Taxonomy. The study classified the learning outcomes and process components of each grade level by their respective skill areas, and these were supported by tables and graphs to ensure the continuity and depth of the data. The findings of the study revealed that the majority of learning outcomes for the 7th and 8th grade levels fell under the analyzing category, while no learning outcomes at the remembering level were identified. It was found that the process components for the 7th and 8th grade levels were mostly located in the evaluating category, with no process components at the remembering level

Discussion and Conclusion: The studies based on the Revised Bloom's Taxonomy will contribute significantly to the development of the 2024 Turkish Language Curriculum, as well as to the development of future educational programs.

Key Words: Learning Outcomes, Process Components, 2024 Turkish Language Curriculum, Revised Bloom's Taxonomy

ANALYSIS OF SOME HEAVY METALS IN ARABICA AND ROBUSTA COFFEE BEANS SAMPLES CONSUMED IN TURKEY USING ICP-OES METHOD

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ABSTRACT

Introduction and Purpose: Coffee plants can absorb metals from the soil and the environment and store them in their leaves, roots and grains. Only two types of coffee, namely Arabica coffee (*Coffea arabica* L.) and Robusta coffee (*Coffea canephora*), have significant commercial value and are traded worldwide. In this study, the concentration levels of heavy metals such as Cd, Cr, Cu, Fe, Ni, Pb and Zn were determined in two types of coffee beans commonly consumed in Turkey. The non-carcinogenic health risk was estimated by calculating the hazard quotient (HQ) and the hazard index (HI) values for the metals examined in this study.

Materials and Methods: A total of 26 roasted coffee samples from 19 different brands were collected from a numberof stores offering coffee products in different provinces of Turkey in November 2021. Heavy metal analysis in the coffee samples was carried out at Tekirdag Namık Kemal University Central Research Laboratory (NABILTEM). The concentrations of the heavy metals were identified using Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES, Spectro, SpectroBlue). The solutions for analysis were prepared by wet digestion method. The quality control of the measurement system was carried out using the reference material IAEA-336 (Lichen).

Results: Among the studied elements, two elements (Cd and Pb) were not detected in coffee samples. The mean concentrations of Cr, Cu, Fe, Ni and Zn in the coffee samples were determined as 0.16, 12.54, 13.94, 0.35 and 8.01 mg/kg, respectively. The HQ and HI values calculated for the coffee samples were determined to be less than 1.

Discussion and Conclusion: The heavy metal concentration values obtained in coffee samples were compared with international limits and concentration values found in the literature. It was estimated that the coffee samples consumed in Turkey do not pose a non-carcinogenic health risk in terms of contamination of the heavy metals examined in this study.

Key Words: Coffee; Heavy Metals; ICP-OES; Non-carcinogenic Health Risk

ABSTRACT

Introduction and Purpose: Organic black tea may be exposed to heavy metal pollution in processes such as collection, transport, storage, production and processing of tea plants as well as the environmental conditions and geographical structure of the region where organic agriculture is applied. In this study, the concentrations of heavy metals such as Cd, Cr, Cu, Fe, Ni, Pb and Zn were determined in the organic black tea samples. In addition, the non-carcinogenic health risk was estimated by calculating the hazard quotient (HQ) and the hazard index (HI) values for the metals examined in this study.

Materials and Methods: A total of 15 organic black tea samples from different brands were collected from a number of stores offering tea products in different provinces of Turkey in February 2023. Heavy metal analysis in the organic black tea samples was carried out at Tekirdag Namık Kemal University Central Research Laboratory (NABILTEM). The concentrations of the heavy metals were identified using Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES, Spectro, SpectroBlue). The solutions for analysis were prepared by wet digestion method. The quality control of the measurement system was carried out using the reference material IAEA-336 (Lichen).

Results: Among the studied elements, two elements (Cd and Pb) were not detected in the organic black tea samples. The mean concentrations of Cr, Cu, Fe, Ni and Zn in the organic black tea samples were determined as 1.33, 9.24, 131.6, 5.53 and 52.87 mg/kg, respectively. The HQ and HI values calculated for the organic black tea samples were found to be less than 1.

Discussion and Conclusion: The heavy metal concentration values obtained in the organic black tea samples were compared with international limits and concentration values found in the literature. It was estimated that organic black tea samples consumed in Turkey do not pose a non-carcinogenic health risk in terms of contamination of the heavy metals examined in this study.

Key Words: Organic Black Tea; Heavy Metals; ICP-OES; Non-carcinogenic Health Risk

ETHOS IN MOROCCAN POLITICAL DISCOURSE: BETWEEN MANIPULATION AND ARGUMENTATION

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Abstract:
Ethos is a very interesting element in the construction of self-image. Indeed, all definitions, from Aristotle to contemporary studies, reflect how a speaker represents and positions themselves in a particular context. Based on these insights, it can be argued that the political actor, in all their speeches, tries to present a positive image of themselves in order to convince voters and citizens of their credibility.
The aim of this paper is to study how Moroccan political leaders manifest their ethos during their statements and interviews. In other words, it will examine the different discursive strategies employed by various political actors to enhance their image. We will also emphasize that we will base our analysis on the works of D. Maingueneau and Ducrot, who studied ethos from a discursive perspective, referring to the self-image that the speaker seeks to convey through their speeches. In this sense, Ducrot states: "It is not about the flattering statements that the speaker might make about themselves in the content of their speech, statements which could, on the contrary, offend the listener, but about the appearance conveyed by the flow, intonation, whether warm or harsh, the choice of words, arguments..." (Ducrot, 1984, P121).

WASTEWATER TREATMENT IN POWER PLANTS AND ITS RELATIONSHIP TO THE ENVIRONMENT: A CASE STUDY OF KENITRA IN MOROCCO

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In power generation facilities such as nuclear, hydro or thermal power plants and wind turbines, the production of electrical energy is based on the transformation of kinetic energy into the energy of movement, into a flow of electrons called "electricity" and this process has an impact on the environment.

We have conducted an in-depth study on the quality of the effluents discharged by the Kenitra gas turbine power plant. The results of the physico-chemical analyses were compared with the Moroccan standards in force governing industrial discharges. According to the characterisation results, the treatment of liquid discharges from the gas turbine is considered to be effective, the settling stage captured 85.66% of the suspended solids with a concentration at the end of the treatment of 43 ppm which does not exceed the discharge limit value (100 ppm). De-oiling also made it possible to effectively reduce the concentration of organic matter, expressed in COD, BOD5 and hydrocarbons, with yields remaining below the discharge limit values. The waste water from the gas turbine has a COD/BOD ratio of about 2.62 below 3, the value of urban wastewater to the domestic domain. It can be concluded that these discharges are readily biodegradable, and do not represent any risk of pollution for the natural environment to which they are discharged. This comparison showed that all the parameters analysed complied with the authorised limit values.However, the substances accumulated in the water that are poured into the waterways continue to have a significant impact on the environment and are manifested in the impact on the food chain, the destruction of ecosystems, the pollution of soil and groundwater, the impact on human health.

Keywords: wastewater treatment, environment, ecosystems**,** COD, BOD 5

EVALUATION OF APPLICATIONS AND APPOINTMENTS IN A STATE HOSPITAL PSYCHIATRY OUTPATIENT CLINIC

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ABSTRACT

Introduction

Health institutions consider unattended appointments in outpatient clinics a waste of time and resources. Although studies have been conducted on this subject in the literature, studies in Turkiye are limited. Unattended appointments have negative consequences on issues such as daily patient examination plans, use of health service resources, and service efficiency.

This study aims to determine the characteristics of non-attendance to the appointments made in a state hospital's psychiatric outpatient clinic. We believe our findings may be helpful to develop solutions regarding this problem.

Methods

Appointments made in a State Hospital Psychiatry Outpatient Clinic in Izmir province during one year (between January 1 and December 31) were examined. A comparison was made between, those who made an appointment through the Ministry of Health appointment system and attended, versus those who made an appointment and did not attend.

Results

A total of 4004 psychiatry outpatient clinic appointments were given during the calendar year and the attendance rate for these appointments was 2763 (69%).

There were no significant differences regarding gender (p=0,397), total hospital applications (p=0,129) and psychiatry clinic applications (p=0,302) between the groups. Unattended applications were significantly younger compared to attended applications *(mean age: 44,14 ±14,678 vs 51,44 ± 17,588, p<0.001).*

Discussion

Healthcare managers use three interrelated factors to evaluate the efficiency of health services. These are cost control, quality of patient care, and accessibility of patient care (Niles, 2015). Patients who do not attend their appointments not only create an inefficient and incompatible environment in hospitals but also deprive other patients of seeing a healthcare provider when necessary (Hwang et al., 2015). Moreover, missed appointments cause congestion in hospitals (Zacharias & Pinedo, 2014).

Conclusion

Unattended appointments by patients can reduce the efficiency of the service provided and negatively affect health institutions both financially and operatively.

Key Words: Appointment; Outpatient Clinic; Psychiatry

EVALUATION OF THE EFFECTIVENESS OF REHABILITATION TREATMENT OF SERVICEMEN WITH CONSEQUENCES OF MINE-BLAST TRAUMATIC BRAIN INJURY

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ABSTRACT

Introduction and Purpose: In the context of modern warfare, mine-blast trauma (MBT) of varying intensity is a major factor in the casualties of military personnel. During the impact of IEDs, victims are exposed to a variety of damaging factors, most often a blast wave, which leads to concussion and damage to the hearing and vestibular systems. Subsequently, victims develop post-combat syndrome, which is characterised by headaches, dizziness, fatigue, insomnia, and a subjective feeling of decreased intelligence.

Materials and Methods: An analysis of medical records of rehabilitation of 32 injured servicemen who were undergoing long-term rehabilitation in a sanatorium with the consequences of combined mine-blast trauma in the form of closed head injury and limb injuries was conducted. We studied the history of treatment at the previous stages, clinical examination data upon admission to the rehabilitation facility, laboratory (general blood and urine tests, blood biochemistry) and instrumental (electrocardiography, electroencephalography, audiometry) examination data, rehabilitation measures applied and results obtained.

Results: The victims were diagnosed with cephalgic 92%, asthenoneurotic 78%, anxiety-depressive 45%, dyssomnia 73%, and emotional lability 48%. Chronic sensorineural hearing loss was observed in 85% of cases, in 28% - in combination with tinnitus. In all cases, the individual rehabilitation programme was completed in full. On average, 89 per cent of the rehabilitation goals were achieved.

Discussion and Conclusion: In general, the analysis of medical records indicates satisfactory results of rehabilitation treatment, but at the same time suggests some ways to improve rehabilitation care for victims of this category. The introduction of more sensitive functional assessment instruments - the HDRS depression scale, the HAM-A/HARS anxiety scale, the Montreal Cognitive Assessment Scale (MoCA) - seems to be promising in this direction.

Key Words: Mine - blast trauma, closed head injury, rehabilitation

EXAMINATION OF REFLECTION COEFFICIENT BASED RADIATION PATTERN OF BREAST CANCER

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ABSTRACT

Breast cancer is one of the leading causes of fatal diseases commonly observed in women. Traditional imaging methods, although effective, often face challenges such as high cost, limited accessibility, and insufficient resolution for detecting small or early-stage tumors. This study examines the effect of tissue type, size, and location on S11 parameters through extensive simulations at the frequency of 33.29 GHz. Piecewise cubic interpolation was used to refine the simulation results. The results revealed that besides tissue type, size, and location, the S11 values experienced interference depending on the tissue-antenna distance. Strong divergence in S11 was observed close to the antenna, attributed to wave interference, while fluctuations decreased with increased distance from the antenna, correlating with reduced power density. The S11 response was also sensitive to the type and size, highlighting their importance in tissue characterization and localization. Therefore, the radiation pattern, power density, and interference can be obtained from a single S11 surface of a homogeneous spherical tissue model.

Keywords: Tomographic millimetre wave imaging, Reflection coefficient, Breast cancer detection, Image construction algorithm

EXPLORING COMMUNITY CLOUD COMPUTING ADOPTION: QUANTITATIVE STUDY IN SAUDI HEIS

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ABSTRACT

Introduction and Purpose: Cloud computing is one of the most significant trends and the novel sector in the world of information technology where customers can rent and release resources on demand using the Internet. In Saudi Arabia, Higher Educational Institutions (HEIs) are not yet prioritizing research on the factors that may influence local universities' decisions to adopt the community cloud system. The aim of the study is to examine the relationship between the variables (technological, organizational, environmental, human, advantages, and security) and community clouds adoption.

Materials and Methods: A survey was conducted with 106 replies to create a community cloud adoption framework for Saudi Arabia's higher education institutions (HEIs). The survey was designed after consultation with academics and review of relevant literature. The study conducted a regression analysis to investigate the relationships between the dependent variable (community cloud computing) and the independent variables (technological, organizational, environmental, human, advantages, and security). The study uses SPSS, one of the most sophisticated statistical analysis programs available.

Results: According to Pearson correlation analysis, the dependent and independent variables showed statistically significant positive connections. The 25 elements were identified in the study that can help IT managers better understand how decisions are made and draw their attention to some of the unseen factors that must be considered when adopting community cloud computing.

Discussion and Conclusion: The quantitative correlational study aimed to examine the relationship between technological, organizational, and environmental advantages, human, security factors, and adopting community cloud computing. It is possible to conclude that the aim of the study was accomplished in a satisfactory manner. The main objective was fulfilled by examining the relationship between these factors and adopting cloud computing. To satisfy this objective, correlation and regression analyses were performed utilizing the SPSS software, six research questions arose. According to the study's findings, the most important variables relate to one another and may impact IT managers' motivation to embrace community cloud computing in terms of compatibility, top management support, relative advantage, and mimetic pressure. In conclusion, the study contributed to the limited literature on the adoption of community cloud computing in the context of Saudi Arabia.

Key Words: Cloud computing; Community cloud; Adoption; Descriptive Analysis; Factors

LOW CURRENT AND HIGH CURRENT ELECTRICAL PROJECT DESIGN

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ABSTRACT

Introduction and Purpose: This study explains the design process of weak and strong current electrical project plans for a floor plan of Gelişim University. The project's aim is to design a secure and organized electrical infrastructure that meets the required needs. Within the scope of the weak current project, fire detection and alarm systems are included, while the strong current project covers socket and lighting installations.

Materials and Methods: The design was created using the AutoCAD drafting program. A distance of 12 cm was maintained between cables on a 1/100 scale plan to ensure the project's organization. Attention was paid to columns and walls during the drafting process. For lighting, luminaires were selected based on the intended use of the area, ceiling structure, and brightness level. For the fire detection and alarm system, appropriate detectors were chosen according to the specific region of use.

Results: The designed weak and strong current projects provide an orderly infrastructure that enhances building safety and functionality. Cable routing was optimized through shorter paths to achieve material savings.

Discussion and Conclusion: The designed electrical infrastructure offers a secure, organized, and sustainable solution that meets user needs. Moreover, theoretical knowledge was effectively translated into practical applications during the project's execution.

Key Words: : AutoCAD, weak current, strong current, power calculations, cable sections, to line

NUMERICAL COMPUTATION FOR REACTIVE MAGNETIZED EYRING-POWELL NANOFLUIDIC FLOW OVER A THIN STRETCHY DEVICE WITH GENERALIZED ARRHENIUS KINETICS

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Abstract
This research presents the computational analysis for the flow of a reactive Eyring-Powell nanofluid over a thin stretchy material in the presence of thermal radiation, thermal migration of tiny particles, chaotic motion of the particles generalized Arrhenius kinetics, The research is focuses on electrically conductive particles moving through a thin and flexible device with slips condition, This study finds relevant applications in various engineering fields like space exploration, energy conversion, mechanical engineering, and storage systems. The model partial derivatives model suitable for the description of the current problem is developed and converted to coupled nonlinear ordinary derivative and then solved using the Chebyshev Collocation technique. The results are depicted graphically to reveal the impact of the embedded parameters on the flow fields. The impact of thermophoresis and Brownian diffusion on the thermal field reveal an increment in the thermal energy. The concentration gradients improve significantly with rising magnitudes of the activation energy

Keywords: Generalized Arrhenius Kinetics; Eyring-Powell nanofluid**;** Thermal radiation, Thermo-migration of particles; Chaotic motion of particles.

FIBER TYPE EFFECT ON OPTIMAL WATER CONTENT OF ROLLER-COMPACTED CONCRETE MIXTURES PRODUCED BY MAXIMUM DENSITY METHOD

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ABSTRACT

Introduction and Purpose: As in traditional concrete, various fibers are used in roller-compacted concrete (RCC) mixtures to improve their low tensile and flexural strength and to enhance crack resistance. Preparing RCC mixtures at their optimum water content is crucial for improving their mechanical and durability performance. The optimum water content of RCC mixtures varies depending on several parameters, such as the type and fineness of cement, the presence and type of mineral additives, aggregate gradation, type of aggregate, and the use of fibers. It is known that there are several methods for determining the optimum mix ratios of RCC mixtures, with the most common approach being the maximum density method. In this study, the effect of fiber type on the optimum water content of RCC mixtures designed using the maximum density method was investigated.

Materials and Methods: Two-hooked steel fibers and polypropylene fibers, each 30 mm in length, were added to a control mixture containing no fibers at a total volume fraction of 0.75%, resulting in a total of three series of RCC mixtures. To determine the optimum water content of the mixtures, four different water-cement (w/c) ratios were tested for each series. All mixtures utilized CEM I 42.5 R type cement at a binder content of 300 kg/m³ and crushed limestone aggregate with a maximum particle size of 22 mm. The aggregate gradation was achieved by using 60% of the total aggregate volume in the 0-5 mm range, 20% in the 5-12 mm range, and the remaining 20% in the 12-22 mm range. For each mixture, dry unit weight points corresponding to different water contents were determined according to ACI 207 guidelines, and water content-dry unit weight curves were plotted.

Results: Examining the obtained curves, it was observed that the density of the RCC mixtures increased as the w/c ratio increased, but after a certain point, it began to decrease. The water content and dry unit weight values at this point represent, respectively, the optimum water content and the maximum dry unit weight.

Discussion and Conclusion: With the use of fibers, a slight increase in the optimum water content of RCC mixtures was observed. This increase was found to be more pronounced in steel fiber-reinforced mixtures, and it was determined that steel fiber-reinforced mixtures exhibited a higher maximum dry unit weight compared to the control and polypropylene fiber-reinforced mixtures.

Key Words: Roller-Compacted Concrete; Polypropylene and Steel Fibers; Optimum Water Content; Maximum Dry Unit Weight

"DERDİMİ ALAN" FROM ISPARTA GASTRONOMY CULTURAL HERİTAGE

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Abstract

Introduction

All civilizations and the societies formed by these civilizations have produced unique dishes according to their geography and climate conditions from past to present. The natural resources, agriculture and livestock products of each region have been among the most important factors shaping the culinary culture in that region. Wars, migrations and the opening of trade routes have enabled different cultures to influence each other. This interaction has led to a great cultural richness not only between people but also between cuisines. Proper transmission of cultural values, traditions and recipes is possible through gastronomy tourism. Gastronomy tourism is of great importance for the protection and dissemination of this cultural interaction and culinary diversity. Isparta cuisine is influenced by animal husbandry and nomadic culture as well as having an economy based on agriculture. In the nomadic lifestyle food culture, it is preferred to consume foods that can last for a long time, can be easily transported and cooked quickly. Yufka bread, which is preferred as bread in nomadic culture, is produced with the traditional bread making technique that can be cooked in a natural environment on a wood fire on a hair stove and stored in dry form. Agricultural production in the region is one of the important income sources of the society. Since grape cultivation is high in Isparta province and districts, molasses production is high. Molasses is used as a sweetener in regional delicacies.

Method

A semi-structured interview form was used as a data collection tool in the study. 20 people with knowledge and experience of the regional food culture were preferred for the study sample.

Discussion and Conclusion

One of the cultural heritages of Isparta gastronomy is the "derdimi alan" dessert made with yufka and molasses. In particular, the use of butter in this dessert increases the nutritional value and flavor of the dessert. In this study, it is aimed to research, prescribe, ensure recognition and contribute to the literature on Derdimi alan dessert, which is a product of cultural heritage products of Isparta gastronomy culinary culture.

Keywords: Derdimi alan, molasses, yufka, Isparta cultural heritage

ISPARTA LOCAL FLAVOR "CIFNE"

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Abstract

Introduction

Isparta cuisine has a rich historical background and a culinary culture bearing the traces of different cultures. Isparta, which is an important part of the Lakes Region, has an economy based on agriculture as well as being influenced by animal husbandry and nomadic culture. These factors play a major role in shaping Isparta cuisine. Local products have an important place in Isparta cuisine. Especially delicious meals are prepared using traditional foodstuffs, fresh and dried vegetables, meat varieties, dairy products and spices that are unique to Isparta. In Isparta cuisine, various vegetables and fruits with the effect of agriculture, meat and vegetable meals with the use of animal husbandry products due to nomadic culture, and the consumption of dairy products have increased the variety of meals. Dried vegetables and fruits are preferred in the meals cooked in the winter months in the region. Dried eggplant, dried green beans and dried okra have an important place in the variety of meals. The poppy plant, which is grown due to the geography and climatic conditions of Isparta, is one of the important agricultural products in the region, and poppy oil or poppy paste is widely used as a unique flavor element in meals and pastries.

Method

The 20 people included in the sample of the study were selected from the individuals who were born and/or lived in Isparta province and its districts for a long time. These people have knowledge and experience about the food culture of the region. The research utilized qualitative research and data collection technique. A semi-structured interview form was used as a data collection tool.

Discussion and Conclusion

The delicious meal made with dried green beans in the region is called cifne or zıplak. While Cifne was variable, poppy seed oil was preferred as liquid oil, but today, poppy seed oil or olive oil is used in addition to poppy seed oil. In addition, dried minced meat or pastrami (dried meat) is added to flavor the cifne meal. In this research, it is aimed to investigate, prescribe, recognize and bring the cifne meal, which is one of the local meals of Isparta province, to the literature.

Keywords: Cifne, zıplak, poppy oil, Isparta culinary culture

RELATIONSHIP BETWEEN YIELD AND SOME YIELD COMPONENTS OF SAFFLOWER (*Carthamus tinctorus* L.)

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ABSTRACT

Introduction and Purpose: Safflower (Carthamus tinctorius L.) plant, from the Compositae (Asteraceae) family, is an annual plant mostly grown in arid regions. Its flowers are used in the dye and pharmaceutical industries, while its seeds are evaluated as oilseeds. Due to its advantages such as being resistant to drought, not requiring any mechanization problems and having high oil quality, safflower is a plant that is a candidate to meet our country's oil deficit.

Materials and Methods: With this study, which was carried out to determine the relationships between seed yield and same yield components of safflower cultivars in Kırşehir ecological conditions in 2024. The experiment was established in the Randomized Complete Blocks Design with three replications and the five cultivars (Remzibey, Linas, Dinçer, Zirkon ve Safir) were used. In the study, the plant height, number of lateral branches, number of tables, table diameter, number of seed in the table, thousand-seed weight and plant flower and seed yield were analysed.

Results: According to the two-way Pearson correlation analysis results, it was determined that the grain yield was significantly ($P<0.01$) positively correlated with flower yield and significantly positive corelation ($P<0.05$) with number of lateral branches and thousand-seed weight. Plant flower yield showed a significant positive relationship ($P<0.1$) with side branch number, head number and plant seed yield. The effect of plant height on side branch number and table number was found to be positive and significant. The highest positive relationship among the examined traits was found to be between number of lateral branches and number of tables with 0.957**.

Discussion and Conclusion: This study is important in terms of revealing the relationships between flower yield and some morphological characteristics in safflower both through correlation analysis. As a result of the research, a significant and positive relationship was found between flower yield and the number of heads and side branches according to both analyses. These relationships will lead to significant progress in safflower breeding.

Key Words: Safflower; Seed yield; Flower yield; Correlation

DETERMINATION OF FLOWER YIELD AND YIELD COMPONENTS OF SOME SAFFLOWER (*Carthamus tinctorus* L.) CULTIVARS IN KIRŞEHİR ECOLOGICAL CONDITIONS

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ABSTRACT

Introduction and Purpose: Safflower has been used by humans for centuries for various purposes. Safflower flowers have traditionally been used to color food and textiles. However, this traditional use was relegated to the background when cheaper, synthetic dyes were invented in 1856. Currently, the largest use of safflower is as a cooking oil due to its oil composition and its acceptance as a healthy alternative to sunflower oil. In addition to its oil, it has many uses such as vegetables, animal feed, tea, cut flowers or medicinal plants. Safflower is an important dye plant thanks to the color pigments Carthamin (yellow color) and Carthamin (red color) found in its flowers. The pigments found in safflower flowers have some advantages over other colorants, especially in terms of light, temperature and pH value, and are cheaper than saffron. According to 2024 statistics in Turkey, safflower was planted in 321,300 da areas and only the seeds of safflower were used.

Materials and Methods: The research was conducted at experimental field of Kırşehir Ahi Evran University Faculty of Agriculture field in 2024. Field experiment was designed based on randomized complete block design with three replications and 5 safflower cultivars (Remzibey, Linas, Dinçer, Zirkon and Safir) were used. Plant height, number of side branches, number of head, head diameter, number of grains in head, thousand grain weight, plant flower and seed yield were used in the research.

Results: As a result of the variance analysis performed according to the randomized complete block design, it was determined that the change in plant flower and seed yield according to the cultivars was statistically significant ($P < 0.01$) and the highest plant flower and seed yield was obtained from Linas variety with 0.303 g and 6.65 g, respectively. Significant differences were detected among the varieties in terms of plant height and number of side branches and Remzibey, Linas and Dinçer varieties were in the highest group. Remzibey and Safir varieties were in the lowest group in terms of head diameter, plant seed and flower yield.

Discussion and Conclusion: The lack of mechanization studies on harvesting aspirin seeds with their flowers and then threshing and evaluating the flowers in Turkey is an important deficiency. Studies should be conducted on the use of the flowers of the safflower plant, which has significant planting potential in Turkey, both as a dye and for medical purposes.

Key Words: Safflower; Seed yield; Flower yield; Number of tables

Q-LEARNING ALGORITHM APPLIED TO THE MINING PROCESS IN THE DOCE RIVER BASIN, BRAZIL

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ABSTRACT

Introduction and Purpose: On November 5, 2015, the Fundão mining dam in Mariana (MG) burst and released approximately 50 million m3 of mining waste. The waste affected the entire Doce River basin, reaching the mouth of the Doce River in the Atlantic Ocean. The presence of mining dams, especially those built using the upstream method, poses a risk to the basin region since they can burst. The current study aims to develop a methodology based on a reinforcement learning algorithm (Q-Learning) applied to the Doce River basin, aiming to formulate public policies for environmental recovery, remediation, and monitoring; the goal is to minimize the contamination problems in the river basin and seek to recover the area after the disaster.

Materials and Methods: The policy adopted in the construction of the Q-learning algorithm was deterministic, seeking to maximize the accumulated reward (long term). The proposed Q-Learning rewards have been determined asymmetrically for each action. The state-action diagrams for the mining parameter were established in 6×6 Q tables, totaling 36 states for the identified learning problem. The algorithm established the best path after 1000 learning full realizations to achieve recovery that leads the agent to receive the highest accumulated reward in the long term, starting from the state of most significant degradation (S1,1) to the equilibrium state (S6,6), based on the highest percentual recovery for the two parameters analyzed.

Results and Discussion: In practice, we have observed that from 150 trials, the cumulative return plateau is reached, indicating a safe minimum number of trials for the algorithm to work with. However, the variability of the sampled path is more stable from 850 trials onwards. The variability of the Q value indicates that from 800 trials onwards, the ideal path will not vary. At 1000 attempts - the value set by the algorithm - the variability of the Q values is minimal, making the model reliable for establishing the best path in de-characterizing mining dams.

Conclusion: The Q-Learning algorithm has been pivotal in determining the best actions for recharacterizing upstream mining dams. This innovative approach has paved the way for the development of a public policy in Brazil that can efficiently and feasibly restore the basin. By focusing on the recovery of the Doce River watershed, this policy aims to create better long-term environmental conditions for the impacted region.

Key Words: Reinforcement Learning; Environmental Recovery; Public Policy; Fundao Dam; Q-learning

DYNAMIC NITROGEN BALANCE IN THE EARTH'S PEDOSPHERE AND ATMOSPHERE

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ABSTRACT

This review paper looks at the dynamic balance between the pedosphere and the Earth's atmosphere regarding the intensity of the emission of nitrogen oxides and molecular nitrogen and their uptake by the biosphere. Maintaining this balance is important for minimizing the consequences of excessive N_2O emission (desertification, greenhouse effect), on the one hand, and encouraging nitrogen fixation processes, on the other hand, which protects the soil from degradation.

Keywords: nitrogen, nitrogen fixation, balance, balance, cycle.

EFFECTS OF INCREASES IN NIGHT TEMPERATURES ON PLANTS

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ABSTRACT

Heat waves, an increase in the number of hot days and nights are more frequent in important agricultural regions of the world. Night temperatures are increasing faster than day temperatures and this situation is expected to continue in the coming years. High night temperatures in summer are becoming more harmful especially for hot climate plants. High night temperatures negatively affect various physiological and metabolic processes including carbohydrate, amino acid and hormone metabolism. It has been associated with inhibition of photosynthesis, acceleration of leaf senescence, disruption of cell membranes and photochemical reactions and restriction of carboxylation process due to high night temperatures. Respiration in plants accelerates with high night temperatures, which leads to carbon loss in plant tissues. Amino acids that play a role in stress protection increase under stress conditions and ensure plant adaptation to these conditions. While growth-promoting hormones such as cytokinin, auxin and gibberellic acid increase with high night temperatures, stress-related hormones such as abscisic acid and salicylic acid decrease.

Keywords: Abscisic acid, photosynthesis, carbohydrate, respiration, high temperature

ANALYSING THE RELATIONSHIP BETWEEN HEALTH EXPENDITURES AND MACROECONOMIC INDICATORS WITH PANEL DATA

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ABSTRACT

Despite the fact that health expenditure has, in general, increased at a greater rate than GDP over the course of the last decade, its proportion of the overall economy has declined in the majority of countries since the peak of the pandemic. Consequently, health systems are experiencing financial constraints. This phenomenon is indicative of a challenging economic environment. In the pursuit of enhancing the efficiency and accessibility of health services, while concomitantly ensuring the stabilisation of health expenditure, countries have been observed to make concerted efforts to fortify their health systems. The present study employs a panel data method to analyse the relationship between total health expenditures and GDP, per capita income, inflation, and income inequality for 32 selected countries over the period 2003-2022. The findings indicate a negative correlation between GDP and total public health expenditures, suggesting that as GDP increases, total public health expenditures decrease. Furthermore, a positive correlation is observed between income inequality and total public health expenditures, indicating that as income inequality deteriorates, total public health expenditures increase.

Keywords: GDP, Income distribution, Panel data analysis

WOUND ANALYSIS USING IMAGE PROCESSING TECHNIQUES

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ABSTRACT

Advancements in technology and engineering have enabled the integration of new technologies into the healthcare sector, including the increasing use of image processing techniques. This study aims to monitor wound healing and make predictions regarding the healing process using these techniques. Monitoring the status of wounds and their healing progress after treatments is crucial for evaluating the treatment's effectiveness and the patient's response. When there are indications of healing, the treatment plan can be maintained; otherwise, alternative approaches or further investigations may be needed to ensure effective recovery. Traditional methods rely on visual observations by healthcare professionals and feedback from patients, which can be subjective. In contrast, computer-aided image analysis offers a more efficient and faster approach, especially for detecting subtle changes over short time intervals. This method reduces human error, ensures objective and precise monitoring, and supports healthcare professionals by reducing their workload. In this study, open-source mouse wound images were used to apply image processing techniques and regression models, allowing the prediction of wound healing outcomes through computational analysis.

Keywords: Wound analysis, Image processing, Healing prediction, Computer-aided medicine, Wound therapy analysis.

IOT SYSTEM FOR AIR QUALITY AND GAS MONITORING IN GEOTHERMAL REGIONS

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ABSTRACT

Geothermal energy has positive environmental effects compared to fossil fuels however some negative environmental effects are observed during the installation and energy production processes. Gases such as Hydrogen sulphide (H_2S), Carbon dioxide (CO_2), Ammonia, Argon (Ar) and Radon (Rn) released into the atmosphere from geothermal sources are among the important parameters affecting air quality. This study which was conducted in Aydın' s Efeler district involved the measurement of climate variables like temperature, humidity, pressure, rainfall, and carbon monoxide by using sensors and the design of an air quality measurement system facilitated daily data collection generating forty-eight data sets per day. The measurements performed are uploaded to Google tables in the cloud environment by using ESP32. The measurements were averaged daily for the analyses. The effects of these variables on hydrogen sulfide were analyzed by Pearson correlation measures and multiple linear regression methods. As a result of the analysis, there was a negative correlation between H2S and temperature and a significant relationship, while the humidity variable has a positive correlation and a significant relationship is detected. But there was not a significant relationship between H2S data with pressure and carbon monoxide with rainfall data.

Keywords: Air quality, Geothermal Energy, Hydrogen Sulfide (H_2S), ESP32, Toxic Gases.

HIGH GAIN ANTENNA DESIGN FOR 6G WIRELESS APPLICATIONS

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Abstract:
Last few years, mobile communications have been undergoing a drastic evaluation/change for every ten years or so. The technique difference between the communication processes named as “G’s”. The fifth-generation (5G) systems is becoming a commercial & there is significant interest for future in systems beyond 5G & known as the sixth generation (6G) of wireless systems. This paper describes the design of a novel tooth-shaped patch antennadevelopment for communication in radar system with better performance. The antenna designed in Tera Hz at 300GHz frequency. To achieve higher gain, the designed patch antenna exhibits lower mutual coupling effect. Current distribution & gain of designed novel tooth shaped patch antenna having

1.32*102A/m & 9.45db. The proposed antenna simulated to test the power transferred at the antenna port from the transmission line means impedance bandwidth (S11<-10dB) at frequencies of 326.67GHz that is, -50.524dB, allocated to the 6G applications by the Federal Communications Commission. By simulation of proposed patch antenna, visualize the intended output or result, the design of antennas is crucial to achieving the required results for future work. The simulation provides us effects to evaluate various parameters, like as bandwidth, and antenna isolation, for the manufactured device's superior performance standards. . RT/ Duroid 5880 is a low-loss / cost substrate and we used in designs. For 6G frequencies, the required band-width should be more than 20GHz, which is desirable for future reference/work.

Keywords: Wireless communication; Antenna Gain; 6G; radiation pattern; Bandwidth; impedance matching; mutual coupling effect

SUSTAINABLE TOURISM AND ENVIRONMENTALLY FRIENDLY PRACTICES

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ABSTRACT

Sustainable tourism represents an approach that prioritizes the preservation of natural and cultural resources while simultaneously promoting economic growth and social well-being. Within this framework, eco-tourism practices, the integration of environmentally sustainable technologies, and the active involvement of local communities stand as core pillars of sustainable tourism. Eco-tourism seeks to minimize environmental impacts while serving as a model that supports local economies. Sustainable technologies contribute significantly to the tourism sector, encompassing innovations from energy-efficient systems to transportation methods aimed at reducing carbon emissions. The involvement of local communities in tourism decision-making processes is vital, both for ensuring economic benefits and fostering social acceptance. Integrating local populations into tourism activities not only safeguards the authentic identity of destinations but also drives sustainable development. Effective implementation of management plans is essential to conduct tourism activities without compromising the integrity of the natural environment. In recent years, innovative approaches such as eco-friendly accommodations, practices aimed at reducing plastic usage, and businesses that prioritize organic products have gained traction. These initiatives not only raise environmental awareness among tourists but also enhance the long-term competitiveness of destinations. The future of sustainable tourism will be shaped by the collaborative efforts of all stakeholders, who must take shared responsibility for preserving natural and cultural heritage. In summary, sustainable tourism is an approach that harmonizes environmental stewardship with economic and social advantages. For this approach to be effectively implemented, all stakeholders must act with sensitivity and awareness. Achieving sustainability in tourism involves not only protecting natural and cultural resources but also enhancing the quality of life for local communities. This study aims to promote the adoption of innovative and environmentally sustainable practices in the tourism sector by analyzing the environmental, economic, and social impacts of sustainable tourism initiatives. As technologies and the products offered increase, it is becoming more and more difficult

Keywords: Sustainable Tourism, Eco-tourism, Environmental Awareness.

DIGITALIZATION AND TECHNOLOGICAL INNOVATIONS IN TOURISM

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ABSTRACT

Digital transformation has radically reshaped the tourism sector, revolutionizing both tourist experiences and business operations. Advanced technologies such as artificial intelligence, virtual reality, and blockchain are widely utilized to enhance service quality and ensure operational efficiency, replacing traditional practices with innovative solutions. Artificial intelligence supports tourists' travel planning through personalized recommendations, while chatbots and smart assistants deliver seamless customer service experiences. Virtual reality enables potential visitors to virtually explore destinations, positively influencing decision-making processes and facilitating the broader dissemination of cultural heritage. Blockchain technology enhances transparency and reliability in reservation systems and payment processes, simultaneously reducing costs and eliminating intermediaries. Beyond improving customer experiences, digitalization actively transforms operational processes such as supply chain management, inventory tracking, and performance analytics. These technologies empower businesses to optimize resources and quickly adapt to dynamic market conditions, fostering resilience and competitiveness. However, the digital transformation journey is not without challenges. Issues such as data privacy concerns, unequal access to technology, and the ongoing need for workforce training pose significant obstacles. Addressing these issues requires robust collaboration among industry stakeholders, governments, and technology providers to ensure sustainable and equitable adoption. In conclusion, this study aims to provide an in-depth analysis of how digital technologies impact the tourism sector. By highlighting the opportunities and addressing the challenges posed by digitalization, the research seeks to demonstrate how these innovations contribute to sustainability, operational efficiency, and adaptability. Ultimately, the goal is to support the tourism industry in building a more resilient and innovative framework for the future.

Keywords: Digital transformation, Artificial intelligence, Blockchain, Virtual reality

MICROBIOTA MODULATION AS THERAPEUTIC APPROACH IN THE NEUROPATHIC PAIN IN DOG WITH SPINAL CORD INJURY: IMPACT OF POLENOPLASMIN

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Background Studies have demonstrated the presence of gut dysbiosis (alterations in gut bacterial homeostasis) secondary to spinal cord injury in dogs. The dysbiosis is thought to impair recovery by decreasing the production of short-chain fatty acids which play a role in suppressing inflammation within the central nervous system.

Objective Therefore, targeting gut dysbiosis could have significant therapeutic value in the management of spinal cord injury. The purpose of this study is to determine if gut dysbiosis occurs in dogs with spinal cord injury. Another area of potential intervention interest is in situations of spinal injury where there is an urgent need to generate new neurons. To arrive at these observations, the authors examined how Polenoplasmin and diet solve paralysis in dogs.

Materials and methods The most common cause of spinal problems in dogs is trauma. We are currently assessing whether indoles can also stimulate formation of neurons in dogs with paralysis.

Results We found that gut microbes that metabolize tryptophan-an essential amino acid-secrete small molecules called indoles, which stimulate the development of new brain cells in dogs, also demonstrated that the indole-mediated signals elicit key regulatory factors known to be important for the formation of new neurons.

Conclusion This study is another intriguing piece of the puzzle highlighting the importance of lifestyle factors and diet. The link between the health of the microbiome and the health of the brain shows how microorganisms in the gut solve paralysis, gut microbe secreted molecule linked to formation of new nerve cells in paralyzed dogs.

Keywords: gut dysbiosis, indole, paralyzed dog, Polenoplasmin.

COMPARISON OF LARGE LANGUAGE MODELS IN TEXT NORMALIZATION: T5 AND GPT-2

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ABSTRACT

Large language models (LLMs) have transformed natural language processing (NLP), excelling in tasks like text generation, machine translation, and text classification. Among these, T5 and GPT-2 have emerged as high-performing models capable of handling complex linguistic challenges.

This study evaluates the performance of T5 and GPT-2 in predicting full product names from abbreviated forms, using a dataset containing paired abbreviations and their corresponding full names. The task was framed as a sequence-to-sequence problem, where the models learned to translate abbreviated inputs into accurate, expanded outputs. Performance was assessed using metrics such as BLEU and ROUGE scores, which measure the alignment between predicted and actual outputs.

The results indicate that both models performed well, effectively reconstructing full product names. However, T5 consistently outperformed GPT-2, achieving higher BLEU and ROUGE scores. This superiority can be attributed to T5's architecture, which is specifically designed for sequence-to-sequence tasks like translation and text reconstruction. While GPT-2 also demonstrated robust capabilities, its slightly lower performance highlights its general-purpose design compared to T5's task-specific optimization.

In conclusion, this study confirms the effectiveness of both models for reconstructing full product names from abbreviations. T5's advantage suggests it is better suited for sequence-to-sequence tasks, though GPT-2 remains a strong alternative for similar applications.

Keywords: Large Language Models (LLM), T5, GPT-2

DESIGN AND ANALYSIS OF DUAL-BAND HIGH-GAIN THZ ANTENNA ARRAY FOR THZ SPACE APPLICATIONS

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Abstract:
In this paper, a high-gain THz antenna array is presented. The array uses a polyimide substrate with a thickness of 10 µm, a relative permittivity of 3.5, and an overall volume of 2920 µm × 1055 µm × 10 µm, which can be employed for THz band space communication and other interesting applications. The dual-band single-element antenna is designed in four steps, while operating at 0.714 and 0.7412 THz with −10 dB bandwidths of 4.71 and 3.13 GHz, providing gain of 5.14 and 5 dB, respectively. In order to achieve a high gain, multiple order antenna arrays are designed such as the 2 × 1 antenna array and the 4 × 1 antenna array, named type B and C, respectively. The gain and directivity of the proposed type C THz antenna array are 12.5 and 11.23 dB, and 12.532 and 11.625 dBi at 0.714 and 0.7412 THz, with 99.76 and 96.6% radiation efficiency, respectively . For justification purposes, the simulations of the type B antenna are carried out in two simulators such as the CST microwave studio (CSTMWS) and the advance design system (ADS), and the performance of the type B antenna is compared with an equivalent circuit model on the bases of return loss, resulting in strong agreement. Furthermore, the parametric analysis for the type C antenna is done on the basis of separation among the radiating elements in the range 513 to 553 µm. A 64 × 1 antenna array is used to achieve possible gains of 23.8 and 24.1 dB, and directivity of 24.2 and 24.5 dBi with good efficiencies of about 91.66 and 90.35% at 0.7085 and 0.75225 THz, respectively, while the 128 × 1 antenna array provides a gain of 26.8 and 27.2 dB, and directivity of 27.2 and 27.7 dBi with good efficiency of 91.66 and 90.35% at 0.7085 and 0.75225 THz, respectively. All the results achieved in this manuscript ensure the proposed design is a feasible candidate for high-speed and free space wireless communication systems.
Keywords: THz antenna; planar antenna; antenna array; ITU; dual band; radio astronomy; satellite communication; space research services

TECHNOLOGY AND HUMAN RELATIONSHIPS IN THE CONTEXT OF *HER*: THE IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN PSYCHOLOGY AND SOCIAL BONDS

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Technology has become one of the most fundamental dynamics of modern society, reshaping individuals' lifestyles, modes of communication, and social interactions. Today, advanced digital technologies play a decisive role in areas ranging from access to information to daily habits, while also leading the transformation of social structures. This rapid change brings new forms of attachment in interpersonal relationships, an increase in social issues like loneliness and isolation, and a redefinition of identity perception; it also raises ethical and philosophical questions about the future of society. In this study, Spike Jonze's 2013 film Her is used to explore the role of artificial intelligence in human life, inviting viewers to reflect on the nature of technology and human existence. The film discusses the role of artificial intelligence in human relationships, centering on the interaction between technology and human emotions through the primary character Theodore's relationship with Samantha, an advanced artificial intelligence. This study examines psychological, sociological, and ethical perspectives on AI-human relationships and analyzes the social insights the film presents. In particular, the cinematographic elements such as color palette, sound design, setting, and close-up shots are evaluated for how they guide viewers toward empathizing with AI. Through the film, questions of loneliness, isolation, and the possibility of a future where the boundaries between human and nature blur are addressed within a philosophical and ethical context. Ultimately, the film *Her*, analyzed through thematic analysis, offers a striking perspective on the impact of artificial intelligence on human psychology and relationships, prompting thoughts on the potential consequences of emotional satisfaction through technology in the future.

Keywords: Artificial Intelligence, Cinema, Thematic Analysis.

MIGRATION AND CRIME: CRIME DYNAMICS OF SYRIAN REFUGEES IN TURKEY AND COMPARISON WITH EUROPE

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ABSTRACT

İntroduction and Purpose: The relationship between migration and crime emerges as a complex social phenomenon resulting from the challenges faced by migrants in adapting to new living environments and the perceptions of host societies. Particularly in the context of Syrian refugees in Turkey, the relationship between migration and crime has become a widely debated issue on both local and international levels. The aim of this study is to examine the discrepancies between the actual crime rates and societal perceptions, as well as to understand how media and political discourses shape these perceptions. Additionally, the study evaluates the impact of social integration and security policies on migrants.

Materials and Methods: This research employs a literature review method. Statistical data, academic studies, and official reports related to Syrian refugees in Turkey have been analyzed to explore the dynamics of the migration-crime relationship. Comparative analyses of crime rates involving migrants in Turkey and Europe were conducted, along with discussions on the influence of media and political narratives on these relationships. The study specifically focuses on findings from field studies conducted in cities with high refugee populations, such as Şanlıurfa, as well as insights drawn from prior academic investigations.

Results: The study reveals that the impact of migrants on crime rates is generally exaggerated and that media plays a significant role in reinforcing these perceptions. While perceptions of increasing crime rates are common in refugee-dense regions like Şanlıurfa, official statistics do not support these claims. Among Syrian refugees, crime rates have been found to be generally low. However, economic concerns and cultural differences have contributed to the development of prejudices against refugees among the local population. Perceptual differences between Turkey and Europe were observed; refugees in Turkey are perceived more positively, whereas in Europe, they are more often associated with crime due to the influence of xenophobia and far-right political rhetoric.

Conclusion: The relationship between migration and crime is primarily shaped by societal perceptions and political narratives. Although the contribution of Syrian refugees to crime rates in Turkey is limited, this relationship is often exaggerated due to economic and cultural concerns. In Europe, migrants are more systematically associated with crime due to the influence of media and the political climate. This situation hinders the social integration of migrants and exacerbates social polarization. The study emphasizes the importance of accurate information policies and social integration programs to address misconceptions and strengthen societal harmony. In this regard, it is crucial for the media to act responsibly and for policymakers to actively support this process.

Keywords: Migration and Crime Relationship, Syrian Refugees and Crime, Migration Policies

THE MEDIATING ROLE OF RUMINATION IN THE RELATIONSHIP BETWEEN DEPRESSION, ANXIETY, STRESS, AND LIFE SATISFACTION

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Introduction and Purpose: Life satisfaction is directly related to people's judgments about their lives and their psychological well-being. Various studies have shown that depression, anxiety and stress negatively affect life satisfaction. Rumination, on the other hand, is defined as people constantly thinking about negative events and emotions and evaluating these experiences repeatedly in the mind. While depressive individuals constantly thinking about their negative experiences leads to the deepening of depression, those with anxiety thinking again by focusing on future threats can reduce life satisfaction by increasing the effect of anxiety. The fact that people who have experienced a stressful event rethink the negative aspects of this event negatively affects the psychological well-being of the individual by increasing the effect of stress. It is supported by various studies in the literature that ruminative thinking is an intermediary variable that reinforces the negative effects of depression, anxiety and stress on life satisfaction.For this reason, in this study, the hypothesis that ruminative thinking will mediate the relationship of depression, anxiety and stress with life satisfaction has been created.

Materials and Methods: To test the hypothesis, the Depression Anxiety Stress Scale, Ruminative Way of Thinking Scale, and Life Satisfaction Scale were administered to a total of 402 participants, comprising 275 women and 127 men.

Results: The structural model derived from the research indicated that the effects of depression, anxiety, and stress on life satisfaction were statistically significant. Additionally, ruminative thinking style was found to significantly impact depression, anxiety, stress, and life satisfaction, with ruminative thinking serving as a mediating factor in this relationship.

Discussion and Conclusion: The results of the current study highlight that strategies for dealing with ruminative thoughts may play a role in reducing the negative effects of depression, anxiety and stress on life satisfaction.

Keywords: Anxiety, Depression, Stress, Ruminative Thinking, Life Satisfaction

GREEN ECONOMY DIMENSION OF URBAN OPEN GREEN AREAS

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ABSTRACT

Urban open green areas, in the modern world where urbanization is rapidly increasing, are of great importance not only in terms of aesthetic and social benefits but also in terms of environment and economy. The concept of economy in urban open areas is the most important of sustainable development goals. These areas play an essential role within the framework of the green economy. The environmental impact of urban open areas aims to provide economic and social benefits. This concept makes urban life more livable. It also protects natural resources. It is an economy that aims to reduce environmental risks and ecological scarcities and aims for sustainable development without damaging the environment. Sectors operating within the green economy should not be perceived only as energy and agricultural activities produced without harming nature. It includes an environmentalist approach by preventing environmental damage, protecting and repairing the ecosystem, and conducting industrial production by nature. With this understanding, studies focusing on renewable energy systems and energy-saving applications should be implemented in cities. Renewable energy, green buildings, sustainable transportation, water, and waste management are sub-applications of the green economy. In this context, urban open green areas are among the most critical targets of the green economy concept. When the idea of the green economy is applied in urban open green areas, it improves the economic value of green areas. It increases the economic value of cities by providing ecosystem services. It includes resource efficiency by encouraging the use of renewable energy sources. It increases the resilience risk of cities by providing climate adaptation. When evaluated in this context, urban open green areas have critical importance both environmentally and economically. The protection and increase of these areas contribute significantly to the development of the green economy. This process not only protects nature but also improves economic growth, social welfare, and health quality. This study examined and evaluated examples of urban open green areas in the context of the green economy.

Key Words: Urban Open Green Spaces, Green Economy, Sustainability

AN EXAMINATION OF THE MEASUREMENT INVARIANCE OF THE MATHEMATICS ANXIETY SCALE IN TERMS OF GENDER VARIABLE

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ABSTRACT

Introduction and Purpose: This study investigated the measurement invariance of the Mathematics Anxiety Scale (MAS) developed by Bindak (2005) and consisting of 10 items collected under a single factor in terms of gender varible. Although there are many studies in the literature using MAS, no study has been found that tested the measurement invariance of the scale in terms of gender. This makes the current paper an original research that can contribute to the literature.

Materials and Methods: The study was conducted with a total of 526 secondary school students, 277 (52.70%) female and 249 (47.30%) male. Before the data collection process, approval was obtained from the Dicle University Social and Human Sciences Ethics Committee regarding the compliance of the study with ethical principles. Then, MAS was administered to the students in the Spring Semester of the 2023-2024 Academic Year in their class and on the voluntary basis. Within the scope of measurement invariance of MAS, four measurement invariance models, namely configural, metric, scalar and strict, showing a hierarchical structure, were tested through multi-group confirmatory factor analysis.

Results: When the differences between the RMSEA, SRMR and CFI indices reported for the sequential models and the significance of the difference between the chi-square statistics calculated for two consecutive models were inspected, it was determined that all four levels of measurement invariance were provided. In other words, the results of the multi-group confirmatory factor analysis revealed that the MAS measure mathematics anxiety in the same way in male and female students.

Discussion and Conclusion: The results of the study suggest that there will be no bias due to the differences of the scale parameters in the difference based anaylsis such as *t*-test and variance anaylsis to be conducted for the gender variable in MAS.

Key Words: Mathematics Anxiety Scale, Gender, Measurement Invariance

GREEN TECHNOLOGY ADOPTION: STRATEGIC FRAMEWORKS FOR SUSTAINABLE URBAN DEVELOPMENT

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Abstract:
The adoption of sustainable materials, such as iLow's biodegradable conductive polymer, presents transformative opportunities for advancing urban sustainability and addressing global environmental challenges. This study highlights the potential of iLow's technology to contribute to **CO_2 emissions reduction,** align with **sustainability goals,** and support the transition to a **circular economy** by replacing non-renewable materials with eco-friendly alternatives. Leveraging bibliometric analysis from 91 open-access articles retrieved via ScienceDirect, this research identifies key opportunities for integrating iLow's technology into **smart cities**, particularly in infrastructure projects focused on **energy systems, transportation networks**, and **urban agriculture**. The findings underscore the role of iLow's innovation in fostering **green innovation**, supporting the shift towards **Industry 4.0** and **Industry 5.0**, and enhancing **digitalization** efforts. Additionally, the study explores applications in **renewable energy systems** and **climate adaptation strategies**, highlighting the polymer's potential in sustainable energy storage and transmission. iLow is positioned to benefit from strategic partnerships with governments and private sectors, leveraging **public-private collaborations** to implement scalable, sustainable solutions. This research offers actionable strategies for decision-makers and urban planners to integrate iLow's technology into future-focused, environmentally sustainable urban systems.

Keywords: Green technology, smart cities, sustainability, circular economy, renewable energy, Industry 4.0, public-private partnerships.

THE IMPORTANCE OF ETHNIC AND CULTURAL ASSESSMENT IN EVALUATING HEALTH

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ABSTRACT:
The evaluation of health is the process of collecting information and analyzing the collected data to determine an individual's healthcare needs or to make a decision regarding their health status. The importance of cultural and ethnic assessment in health evaluation is increasing, and it is considered critical for healthcare professionals, especially nurses, to develop their cultural competence in order to provide inclusive and respectful care that meets individuals' health needs. In nursing care, it is important to consider the cultural values of patients and their relatives. Having cultural competence among nurses is effective in improving the quality of care, enhancing the knowledge and skills of caregivers, accelerating the recovery from illness, and increasing trust in healthcare providers and institutions.

Providing culturally appropriate care to patients has been noted to positively impact health outcomes, nurse-patient communication effectiveness, patient and caregiver satisfaction, caregiver knowledge and skills, the disproportionate burden of death and disease, and system costs. Cultural competence involves adapting healthcare services while considering individuals' ethnic, religious, and social differences. Therefore, global migrations and the increasingly multicultural structure of societies necessitate that nurses receive training in these areas and enhance their cultural awareness.

In conclusion, nurses should develop a perspective that understands the differences between individuals, families, and communities from various cultures.

Keywords: Culture, cultural health assessment, health assessment, nurse, transcultural nursing.

METHAMPHETAMINE USE DISORDER AND SUBSTANCE INDIVIDUALS WHO DO NOT USE COMPLEX ATTENTION AND FOCUSED ATTENTION SKILLS COMPARISON

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ABSTRACT

Introduction and Purpose: Methamphetamine is a powerful supporter of your brain and central nervous system. It is an amphetamine derivative. When literature studies are examined, psychoactive substances (marijuana, cocaine, alcohol, etc.) Test performances (cognitive flexibility, verbal rationality, reasoning, etc.) from the research results compared to healthy individuals. According to the findings, different substance types have effects on different cognitive skills. It has been stated that**.** In this study, patients with methamphetamine use disorder and those without substance use Comparison of complex attention and focused attention skills in individuals is intended.

Materials and Methods: The population of this research is addicted and non-addicted adults living in Turkey. It consists of individuals. The sample of the research; 50 methamphetamines between the ages of 18-45 It was conducted with individuals with substance use disorders and 50 individuals without substance use. With methamphetamine use disorder Snowball sampling method was used to select participants. In the research, Socio-Demographic Information Form, Trail Making Test and Stroop Test has been used. Trail Making Test and Stroop Test of participants who use and do not use substances Mann-Whitney U test was applied to compare the scores. Within the scope of the study Trail Making Test and Stroop Test of participants who use and do not use selected substances The relationships between the scores were examined with the Pearson test.

Results: The Stroop Test and Trail Making Test (B) times of individuals who do not use substances are It was determined that no statistically significant correlations were observed ($p>0.05$). Stroop Test-IV (total time) and Stroop Test-V (total time) of individuals using substances There is a statistically significant correlation between the duration of the Trail Making Test (B) and the Trail Making Test (B) duration. It was concluded that the levels were found ($p>0.05$).

Discussion and Conclusion: Trail Making Test (A) times in individuals who use substances are lower than in individuals who do not use substances. Was found to be higher. However, between substance use and Trail Making Test (B) periods no significant differences were observed.

Values taken from the Stroop Test-IV overall are was found to be higher than in non-users. In Stroop Test-V, substance use People's test times are higher compared to people who do not use substances.

In the study, Stroop Test-IV (number of corrections) and There was a significant and positive difference between Stroop Test-V (durations) and Trail Making Test (A) durations. correlation was found. Again, in individuals who do not use substances, Stroop Test and Trail Making Test (B) No significant and positive correlation was found between the durations.

Key Words: Methamphetamine, focused attention, complex attention, cognitive functions

INVESTIGATION OF THE ROLE OF NLRP3 INFLAMOSOME IN AUTOIMMUNE DISEASES THROUGH BIOINFORMATICS ANALYSIS

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ABSTRACT

Introduction and Purpose: Autoimmune diseases are a wide spectrum of human diseases characterized by impaired immune tolerance and autoantibody production. Recently, dysfunction of innate and adaptive immunity has been thought to be an important step in the initiation and maintenance of autoimmune diseases. NOD-like receptor family pyrin domain-containing 3 (NLRP3) is an intracellular receptor that senses foreign pathogens and endogenous danger signals. The main function of the NLRP3 inflammasome is to promote the secretion of interleukin (IL)-1β and IL-18 and pyroptosis via caspase-1. Abnormal activation and regulation of the NLRP3 inflammasome, which acts as a checkpoint in innate and adaptive immunity, plays an important role in the pathogenesis of autoimmune diseases. In this article, the roles of the NLRP3 inflammasome in autoimmune diseases are examined and it is emphasized that the NLRP3 inflammasome may be a therapeutic target for autoimmune diseases.

Materials and Methods: In the study, bioinformatics databases were used for differential expression analysis, gene enrichment analysis and gene expression data analysis. NLRP3-related diseases were detected in the MalaCards database. Genes obtained from this database were used for gene ontology analysis via the STRING database. Accordingly, possible interactions between these genes were determined via STRING and network enrichment was performed.

Results: Using the String database, it was found that it was co-expressed with PYCARD, NEK7, AIM7, NLRC4, MAVS, CASP, TXNP, DHX33, NLRP6, NLRP1 (Score: 0.999) genes. In addition, the NLRP3 gene was found to be associated with NLRP1, NLRC4, PYCARD, AIM2, CASP1 and NEK7 genes. Gene ontology enrichment analysis revealed significant enrichment in biological processes including pyropitosis (GO:0070269), Inflammasome complex assembly (GO:0140632), Positive regulation of inflammatory response (GO:0050729). In our study, it was found to be associated with NOD-like receptor signaling pathway (Score:1.17e-20), Cytosolic DNA-sensing pathway (Score:6.24e-06) via KEGG database. It was found to be overexpressed in mononuclear cells, B lymphocytes and monocytes (FDR:0.0398). It has been found to be associated with diseases such as Muckle-Wells syndrome (MWS), chronic infantile neurological cutaneous and articular (CINCA) syndrome, neonatal onset multisystem inflammatory disease (NOMID), hereditary keratoendotheliitis fugax and inflammatory or non-inflammatory deafness.

Discussion and Conclusion: The NLRP3 inflammasome complex functions as an upstream activator of NF-kappaB signaling and plays a role in the regulation of inflammation, immune response and apoptosis. The sensor component of NLRP3 inflammasomes; as supramolecular complexes that assemble in the cytosol in response to pathogens and other damage-related signals and play critical roles in innate immunity and inflammation, can shed light on experimental studies to be conducted to elucidate their roles in the pathogenesis of autoimmune diseases.

Key Words: Bioinformatic analysis; NLRP3; Inflammation; Autoimmune disease

HEALTHY DIET ENHANCES IMMUNITY AND REDUCES VIRAL INFECTIONS, WITH A SPECIAL EMPHASIS ON COVID-19

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Abstract

Background of the study: A balanced nutritional diet is essential for maintaining immunity and preventing and mitigating viral infections. However, there is currently limited online information regarding nutritional consumption during the COVID-19 pandemic. In our systematic review article, we aimed to evaluate evidence from various previous clinical trials focused on dietary interventions for viral diseases and provided a concise overview of the findings.

Methods: A systematic search was conducted using three key medical databases: PubMed®, Web of Science®, and SciVerse Scopus®. Studies were deemed suitable if they involved clinical trials in humans and assessed appropriate immunological parameters for viral and respiratory infections. Basic clinical trials on nutritional vitamins, minerals, nutraceuticals, and probiotics were included.

Results: We explored 10 review articles and extracted data for our study. A total of over 2000 participants were included. Several trace elements and various vitamins were excluded, but our inclusion criteria primarily focused on those that demonstrated beneficial immune-modulatory effects against viral respiratory infections.

Conclusions: We have encapsulated the potential health benefits of certain minerals, vitamins, designer foods, nutraceuticals, and probiotics in combating viral infections. Based on the nutritional intervention strategies derived from our current data, these interventions show promise in reducing COVID-19 replication and enhancing our immunity to fight the virus.

Keywords: COVID-19, Neutraceuticals, Clinical trials, Immunity, Vitamins, Nutritional Intervention Strategy.

HERITAGE AND SUSTAINABILITY: ENERGY-EFFICIENT SOLUTIONS FOR HISTORICAL STRUCTURES

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Abstract:
An opportunity for fusion between historical structure preservation and sustainability requires the integration of energy efficient solutions into historical structures. This study explores innovative approaches employed in the retrofitting of historically significant buildings, focusing on three exemplary case studies: Berlin , La Scala Opera House in Milan and Edinburgh Castle, Scotland. Examples of these sites are of cutting-edge technologies that can tremendously reduce energy consumption and still retain the architectural integrity. The research points to the difficulties of reconciling the demands of contemporary energy usage with the preservation of cultural heritage, arguing that these methods should be reversible, non-invasive, and the work of interdisciplinary groups involving architects, engineers, and conservationists. This study, through the analysis of the sustainability impacts of these interventions reductions in carbon emissions and operational costs calls for global policy frameworks to encourage the energy efficiency in heritage contexts. The findings emphasize the role that historical sites can play as examples for ecologically responsible action and guide stakeholders who seek to reconcile conservation and sustainability. This research advances the evolving discourse on sustainable heritage management offering a roadmap to the twin objectives of cultural preservation and environmental stewardship.

Keywords: Heritage Preservation; Sustainability; Energy-Efficient Renovations; Historical Structures; Cultural Conservation.

STUDY OF THE BIOLOGICAL ACTIVITIES OF NATURAL EXTRACTS FROM SOME EXOTIC PLANTS

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Abstract

The present work is part of the evaluation of the protective effect of *lycium barbarum* and *psidium guajava* plant extracts against NaCl-induced stress in *Tetrahymena pyriformis*, chosen as the cellular model. Their antibacterial activity was also studied on a number of multi-resistant bacterial strains. Our results show the cytotoxicity of NaCl through growth inhibition and its effect on protozoan shape. However, monitoring of in-vivo antioxidant activity confirms that both plants are endowed with good anti-stress activity, which can attenuate the intensity of NaCl-induced stress, improving cell growth and restoring *Tetrahymena pyriformis* cell numbers. On the other hand, the study of antibacterial activity suggests that *psidium guajava* extract is characterized by inhibitory activity against *Escherichia coli*, *Staphylococcus aureus* and *Listeria monocytogenes*. *Lycium barbarum* extract, on the other hand, showed no activity against these bacteria. We have therefore demonstrated that both extracts have a protective effect against stress. Only *psidium guajava* showed antibacterial activity.

Keywords: *Lycium barbarum*, *Psidium guajava*, *Stress, NaCl*, *Tetrahymena Pyriformis*, Antibacterial Activity

HYBRID BLOCKCHAIN SOLUTIONS FOR SUPPLY CHAIN MANAGEMENT: ENHANCING SECURE AND TRANSPARENT TRACEABILITY WITH ADVANCED PRIVACY MEASURES

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Abstract:
Supply chain management is increasingly reliant on blockchain technology to address challenges related to transparency, security, and traceability. However, conventional public blockchains encounter limitations in privacy and scalability, impeding their widespread adoption. This paper proposes a novel approach: hybrid blockchain solutions tailored for supply chain management. Leveraging a combination of public and private blockchains, this hybrid model aims to maintain the integrity and transparency of transactions while integrating advanced privacy measures. Through a thorough review of existing blockchain-based supply chain solutions, this research identifies limitations and explores opportunities for improvement. The theoretical framework presented emphasizes the importance of data partitioning, permissioned access, and consensus mechanisms customized for supply chain environments. This study contributes to the ongoing discourse on blockchain technology's application in supply chain management, providing insights into the potential benefits of hybrid blockchain solutions in achieving secure and transparent traceability. In conclusion, this research underscores the growing significance of blockchain technology in revolutionizing supply chain management by addressing challenges related to transparency, security, and traceability. Recognizing the limitations of conventional public blockchains, this study advocates for the adoption of hybrid blockchain solutions tailored specifically for supply chain applications. By combining the strengths of public and private blockchains, such hybrid models offer a promising avenue for maintaining transaction integrity and transparency while overcoming privacy and scalability concerns. Through a comprehensive review and theoretical framework, this paper contributes valuable insights into the design and implementation of hybrid blockchain solutions, emphasizing the importance of data partitioning, permissioned access, and customized consensus mechanisms. Moving forward, the exploration of hybrid blockchain approaches holds immense potential in enhancing the security and transparency of supply chain operations, thereby advancing the broader discourse on blockchain technology's role in modernizing global supply chains.

Keywords: Hybrid BlockChain, Supply chain management, Traceability, Privacy measures, Transparency.

UTILIZATION OF ICT IN EDUCATION

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The integration of ICT (Information and Communication Technologies) in education has revolutionized teaching and learning processes. ICT provides innovative tools and methods to enhance interactivity, accessibility, and individualization in education. By leveraging digital platforms, multimedia content, and collaborative tools, ICT supports learners in developing essential skills while facilitating personalized learning paths.ICT offers numerous benefits, including increased student engagement, broadened access to education through hybrid and distance learning models, and streamlined assessment processes. However, its implementation poses challenges such as infrastructure limitations, teacher training needs, and addressing digital inequalities.Applications of ICT span diverse disciplines, from virtual simulations in science to interactive language learning platforms and performance analysis tools in physical education. Emerging technologies, including artificial intelligence and virtual reality, promise to further personalize and enrich learning experiences.While ICT transforms education by promoting inclusivity, collaboration, and innovation, its effective integration requires robust planning, investment in teacher capacity building, and efforts to minimize digital divides

Keywords : ICT, EDUCATION, TEACHING,

STUDY ON COMPRESSIVE STRENGTH OF QUARRY DUST AS FINE AGGREGATE IN CONCRETE

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Abstract
According to the research, one way to boost the amount of quarry dust produced by quarries is to employ it in place of fine aggregate. Quarry dust substitute can lessen the need for landfill and address the issue of a shortage of natural sand. Affordable sand is not a good choice for fine aggregate in concrete, so other sources of material must be investigated. Quarry dust not only serves as a cost-effective substitute for sand, but it also serves as an alternative material. Even the weight of dumping crusher dust in one location pollutes the ecosystem. The conclusion drawn from the practical investigations findings is that quarry dust can be employed as a fine aggregate substitute. It has been discovered that substituting 40% of the fine aggregate with quarry dust results in stronger concrete than regular concrete, with the strength decreasing after 50%.

Keywords: Dust, Landfill, Investigation, Strength, Regular concrete.

THE PROBLEMATIC OF CHILDREN RIGHTS AND DUTIES IN CHARLES DICKENS *OLIVIER TWIST*

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ABSTRACT

One of the impacts of the Industrial Revolution experienced by the United Kingdom in the nineteenth century was the exploitation of children as labourers in mines and industries. In the novel *Oliver Twist*, Charles Dickens depicts these problems in advocating for children's rights and duties. This research work comes to give an explanation on how the author depicts the exploitation, neglects, and abuses of children in the novel. Historical and Biographical criticism are the literary theories used because the writer based on his childhood experiences to write his fiction. The expected results at the end of this research work are to find out new perspectives aiming to strengthen and contribute to the protection of Human Rights as well as children's rights and duties.

Key words: Industrial Revolution, United Kingdom, problems of children's rights and duties

THE PROBLEMATIC OF BRITISH MONARCHY IN THE CONTEXT OF A DEMOCRATIC RULE

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Abstract

This study aims at scrutinizing, focusing on the histories or origins and the current realities of the British Monarchy, the constitutional, institutional, social, economic and more specifically, the political organizations and reforms of British Monarchy and Democracy. It is also to revisit challenges, perspectives and difficulties of the British Democracy for the sustainable growth of the country. It is, likewise to find out strategies that were used by the Monarch to overcome difficulties and how they ruled the country. This study is useful since it reveals the secrets of the coexistence of two apparently contradicting political systems. Other nations of the world will learn from the British experience, given that this study has shown the achievements and the challenges of such a political system. It will also be useful for the on-going debate on governance because there is no political system in the world without flaws incongruities.

Keywords: British Monarchy, democracy, community

BIOCHEMICAL PROFOLING AND ETHNOMEDICINAL POTENTIAL OF AVOCADO PEEL EXTRACT (CALIFORNIA LONG)

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Abstract

Recently scientist is taking keen interest in identifying the bioactive compounds from natural sources. Many plant species and fruits are potent source of bioactive compounds that are used as herbal medicines for ailment of different diseases. The purpose of this research was to extract bioactive components from avocado (California long) peel extract and evaluated their nutritional and medicinal value. Ultrasonic assisted extraction was done with help of polar solvent methanol and nonpolar solvent n-hexane. HPLC analysis was performed for evaluation of bioactive components in avocado peel extract. Proximate analysis i.e. ash contents, crude fiber, protein, and moisture contents determine that avocado peel extract has great nutritional value. Antioxidant properties of peel extract was evaluated by determining total phenolic contents (TPC), Total flavonoid contents (TFC), Diphenyl Picryl Hydrazyle free radical scavenging activity (DPPH) and reducing power. The results showed that n-hexane extracts has significant antioxidant potential and values of TPC, TFC, DPPH and reducing power are significantly higher than methanol extract that can be used in the treatment of various diseases and is beneficial for the human health. Medicinal potential of avocado peel extracts was checked against different bacterial and fungal strains by using disc diffusion method. Disc diffusion method measured and inhibition zone indicated that the n-hexane extract of avocado peel showed maximum antibacterial and antifungal activity. Hemolytic activity of bioactive compounds was checked using 0.1% triton X-100 as a positive control and phosphate buffer saline (PBS) as negative control and absorbance was observed at 576nm. The results of cytotoxic effects of bioactive compounds show that no toxicity was observed and has ability to protect the cell from oxidative damage and is safe in range. Therefore, the avocado peels are promoted to be utilized in the food products to meet the nutritional requirements as well as in the cosmetics and pharmaceutical industry.

Keywords: Avocado peel extract, bio actives, ultrasonic waves, proximate composition, antioxidants, medicinal potential

EFFECTS OF GRAPHIC ORGANISER ON ATTITUDE AND ACHIEVEMENT OF JUNIOR SECONDARY SCHOOL TWO STUDENTS IN BASIC SCIENCE AND TECHNOLOGY IN JEMA'A LOCAL GOVERNMENT AREA, KADUNA

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Abstract

This study investigated the effects of effects of graphic organizer on attitude and achievement of junior secondary school two students in Basic Science and Technology in Jema'a Local Government Area, Kaduna State. Six research questions were answered and six hypotheses were tested at 0.05 level of significant in the study. The study adopted a quasi-experimental research design. The population for the study consisted of one thousand nine hundred and sixty- four (1,964) Junior Secondary II Basic Science and Technology students in Public Secondary Schools in Jema'a Local Government Area of Kaduna State. The sample for the study consisted of one hundred and eight (108) students found in two intact classes. The instruments for data collection are the Basic Science and Technology Achievement Test (BSTAT) and Basic Science and Technology Attitude Scale (BSTAS). The instruments were validated by two experts and a reliability index of 0.81 and 0.88 were obtained for BSTAT and BSTAS respectively. This was done through the use of K-R21. The data analyzed using Analysis of Covariance (ANCOVA) at alpha level of 0.05. The result of the study showed that; There is a significant difference between the post-test attitude mean scores of the control and experimental group in favour of the experimental group, there is a significant difference between the post-test achievement mean scores of the control and experimental group in favour of the experimental group. However, there is no significant difference in the attitude mean scores of male and female students taught Basic Science and Technology using graphic organizer and there is no significant difference in the achievement mean scores of male and female students taught Basic Science and Technology using graphic organizer. Likewise, there is no significant interaction effect of treatment and gender on students' attitude mean scores and also there is no significant interaction effect of treatment and gender on students' achievement mean scores. Following the findings of the study, the following recommendations were made; Basic Science and Technology teachers should be encouraged to use graphic organizer to improve students' attitude in the learning of Basic Science and Technology at the junior secondary school level. Basic Science and Technology teachers should be encouraged to use graphic organizer as an alternative strategy to improve the achievement of students in Basic Science and Technology at the junior secondary school level. Graphic organizer should be used to maximize learning among students irrespective of their gender. Government should equip secondary schools with basic school facilities that facilitate learning of Basic Science and Technology to enable the students to benefit from the use of graphic organizer at that level.

KEYWORDS: Graphic Organizer, Achievement, Attitude, and Basic Science and Technology.

THE IMPACT OF AI ON MODERN SOCIETY AND IDENTITY FORMATION

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Abstract

This research delves into the transformative role of emerging technologies, including artificial intelligence (AI), biotechnology, and digital communication, in reshaping individual and collective identities. These advancements offer unprecedented opportunities for self-expression, innovation, and global connectivity while presenting critical challenges, such as ethical dilemmas, societal fragmentation, and questions of equity. The study highlights the dual-edged nature of these technologies, emphasizing the urgent need for inclusive frameworks to guide their integration into modern society and ensure they serve as tools for positive transformation.

Keywords: artificial intelligence, digital communication, identity, innovation, challenges.

THE MONEY SUPPLY GROWTH AND INFLATION DYNAMICS IN NIGERIA

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ABSTRACT

This study investigated the dynamics of money supply growth and inflation in Nigeria from 2000 to 2022, In Africa, the relationship between the growth of the money supply and inflation is especially crucial, given the continent's wide range of economic structures and varying policy environments. Each country has its unique set of challenges, influenced by factors such as resources, governance, and external conditions. For instance, Nigeria, one of Africa's largest economies, has faced significant hurdles in maintaining price stability while striving for robust economic growth. This delicate balance is complicated by currency fluctuations, fiscal policies, and external debts, which impact inflation rates and overall performance. Consequently, many African nations are continually working to develop strategies that promote sustainable growth while keeping inflation in check. The study employed VAR and OLS methodologies. Coefficient Variance Decomposition reveals the dominant role of the constant term in influencing variance, suggesting the significant impact of non-monetary factors on inflation. Heteroskedasticity and Ramsey RESET tests indicate potential nonlinearity in the relationship between monetary variables and inflation. These findings align with the literature highlighting the influence of external and structural factors on inflation dynamics. Policy recommendations underscore the importance of incorporating fiscal policies and external shocks in monetary strategies. Future research could explore specific drivers of non-constant variance and nonlinearity, contributing to a more comprehensive understanding of inflation dynamics in Nigeria.

Keywords: Money Supply Growth, Inflation Dynamics, Nigeria, VAR, OLS, Heteroskedasticity, Nonlinearity, Fiscal Policy, Structural Factors.

ILERA L'ORO (HEALTH IS WEALTH): APPRAISAL OF THE ROLE OF MUSIC IN ENHANCING GOOD HEALTH AND HUMAN WELLBEING AMONG THE YORUBA OF SOUTH WEST NIGERIA

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Abstract

Music as an integral part of human culture plays significant role in enhancing human wellbeing and positively impacting on the physical, emotional, and mental health of individuals. Over the years, research has consistently shown the potency of music in enhancing good health and human wellbeing. Therefore, this paper examines the content of selected songs on good health and human well-being among the Yoruba of South West Nigeria. This research is relevant to Sustainable Development Goals number 3 (Good Health and Well-being by ensuring healthy lives and promoting well-being) and number 6 (Clean Water and Sanitation by ensuring the availability and sustainability management of water). Primary data was collected through selected songs on good health and human well-being. The secondary data includes library, internet and oral interviews. The findings of the study revealed that adherence to the content of the songs on good health and human wellbeing has appreciably enhanced their health and wellness overtime. Therefore, it is recommended that the lessons inherent in the songs should be adhered to always in order to remain healthy and productive.

Keywords: Good Health, Human Wellbeing, Songs, Sustainable Development Goals.

LEGAL NATURE OF THE INFLUENCER CONTRACT

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ABSTRACT

The advancement of technology and the gradual increase in digitalization have affected social life as well as many other areas in the world. The fact that people use social media to socialize and that it has become widespread among large masses leads to the marketing of goods or services on these platforms. The impact of digitalization and the fact that social media has become a part of our lives changes the marketing model needed for a product, service or brand. Instead of traditional marketing, the tendency in society is now to be interested in the products used and praised by influencers who are perceived as idols. For this reason, it is becoming widespread to promote products through “influencers” who have many followers and have the power to influence them. For this purpose, a contractual relationship is established between the customer who owns the brand, goods or services and the influencer who will perform the promotion. These contracts are referred to as influencer contracts in doctrine and practice. In these contracts, the influencer's obligation is to promote the brand, good or service and market it to a large audience by using his/her influence. In return for the influencer's performance, the customer is obliged to pay a fee or other benefit.

Influencer agreements are not regulated under the Turkish Code of Obligations. The need to determine the legal nature of the influencer contract is important for determining which provisions should be applied in case of a dispute. The purpose of this study is to determine the legal nature of this contract, which is called influencer contract, and to determine the provisions to be applied. The influencer contract is a broad subject that concerns different branches of law. However, in this study, only the legal nature of the contract will be discussed in the context of the Turkish Code of Obligations.

Key words: Influencer Contract, Freedom of Contract, Anonymous Contracts, Social Media

1990S RIGHT-WING POLITICAL PARTY FRAGMENTATIONS

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ABSTRACT

Introduction and Purpose: By the 1990s, with the end of global stabilization, both democracies and societies began to undergo changes. As a result of these changes, the structures of fragmentation diversified, and disintegrations increased. The primary factor behind this transformation was the simultaneous revival of movements such as Turanism, Political Islam, and Kurdish Independence, which had been frozen during the Cold War, coinciding with the collapse of the Soviet Bloc. This simultaneous revival led to a fragmentation of votes among right-wing political parties in Turkey during the 1990s, such as the Anavatan Party (ANAP), Doğru Yol Party (DYP), Refah Party (RP), and Milliyetçi Hareket Party (MHP), which were unable to unite voters under a single center. This study provides a comprehensive framework for understanding the fault lines along which right-wing political party fragmentations occurred in Turkey during the 1990s. By evaluating the foreign policy stance of Turkey during this period alongside the political maneuvers of party leaders and the political ideologies of their parties, this study aims to fill a gap in the related literature.

Materials and Methods: During the research, content analysis and qualitative data analysis methods were employed by examining previous studies on the era and leaders, political discourses, newspaper articles, and evaluating the vote shares received by political parties.

Results: The research concluded that the primary factor behind the fragmentation of right-wing political parties in Turkey was external influences. These external influences impacted the political discourses of political parties and their leaders, and these discourses, along with internal factors affected by external dynamics, led to changes in the voting preferences of the public.

Discussion and Conclusion: The factors that increase or decrease the effectiveness of these elements are economic and social class issues. To better understand the reasons behind the fragmentation of political party structures in Turkey, it is essential to examine the economic and social class problems in Turkey during the 1990s.

Key Words: USSR, Turanism, Political Islam, ANAP (Anavatan Party), DYP (Doğru Yol Party), RP (Refah Party), MHP (Milliyetçi Hareket Party), Political Party, Party Fragmentation

INTELLECTUAL BRAIN DRAIN IN PAKISTAN: A CRISIS ESCALATES AS THOUSANDS PROFESSIONALS LEAVES

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Abstract:
The total number of highly qualified and skilled professionals who migrated from Pakistan. Many of our skilled and professionals are growing increasingly frustrated and experiencing various social and psychological conditions which leading to anxiety, feelings of depression and stress within our society. Pakistan is losing a significant number of highly qualified and skilled individuals, making brain drain the talk of the town. This essay's goal is to address the causes of and remedies for intellectual brain drain inside Pakistan. 49 immigrants from 17 immigration consulting organizations and the head of higher education institutions at the University of Agriculture, Faisalabad, provided primary data for the study. A pair of questionnaires were created specifically for emigrants and faculty members. The majority of respondents (79%), when asked what factors pushed them to make the change, cited general job discontent, professional isolation, low economic returns, and inadequate personnel planning. 48% of emigrants accepted inferior opportunities for higher education; for them, relocation was driven by progress and research. And 33% said that the primary causes of their emigration were ongoing political unrest in Pakistan, danger to their lives, and financial hardships. There were 23% regarding family suggestions and for good living standards for living, they decide to leave the country of origin. The solutions put forward are 35% of the emigrants with the suggestion employments 10% basic facilities, 15% considered educational reforms in our country can lead towards stopping brain drain, and 38% understand secure and good working environment as well as research facilities to be provided. There were 23% propose fair recruitment for jobs, respect for merit, equally chances of promotions, keep justice system and ensure the law and order suitations and economic issues and greater financial returns, according to 30% of emigrants; encouragement, respect, equal opportunities, and social behavior toward qualified individuals, according to 29% of respondents; and awareness programs, according to 5% of emigrants, should be started to address the issue. There were 8% respondents suggest to stop political corruption. Over the past three to four years, Pakistan has seen an extraordinary surge in the brain drain trend. For example, in 2022, about 765,000 people departed the nation. Ninety-two thousand of the migrants were highly skilled professionals (Moti, 2023). The term "brain drain" describes the phenomenon of human capital

being lost from one industry or region to another. It typically occurs when professionals and highly qualified individuals leave their native countries—which are frequently poor nations—in search of better prospects elsewhere. Therefore, in order to prevent brain drain from leaving developing nations like Pakistan, governments should prioritize policies that guarantee job opportunities, appropriate research facilities, safe working conditions, and merit-based systems.

Keywords: Brain Drain, Intellectual Brain Drain, Pakistan.

INTELLIGENT SURVEILLANCE SYSTEM FOR WEAPON AND FIRE DETECTION IN ANY ENVIRONMENTS

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In today's commercial world, corporate security and safety are essential elements. Ensuring the safety of personnel, property, and infrastructure becomes critical as businesses expand and function in more complicated and frequently dangerous contexts. Conventional security solutions, such having employees on the scene and manually monitoring video systems, have limits in terms of their scope and efficacy, particularly when it comes to spotting dangers that change quickly, like fire or firearms. Intelligent surveillance systems that make use of cutting-edge technology like computer vision and machine learning are becoming more and more necessary to overcome these constraints. Significant gains in object detection and real-time monitoring capabilities have been made possible by the latest developments in deep learning. One such innovation is the YOLO (You Only Look Once) algorithm, which is renowned for its high accuracy real-time object detection capabilities. Because of its single-shot detection technique, YOLO can quickly and effectively identify objects in photos or video streams, which makes it a great option for applications that demand quick decision-making and high processing efficiency. The creation of an automated corporate safety system that uses the YOLO algorithm to detect fire and weapons is the idea put forth in this paper. Organizations can enhance security and fire safety measures by automating the identification of weapons, knives, and fire related threats in corporate environments by incorporating YOLO into a real-time video surveillance system.

INTRANASAL DRUG DELIVERY AND PHARMACEUTICAL APPLICATIONS

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ABSTRACT

Introduction and Purpose: Intranasal drug delivery (INDD) is a rapidly advancing field in pharmacology, offering innovative solutions for the delivery of both systemic and central nervous system (CNS)-targeted therapies. By utilizing the unique anatomical and physiological properties of the nasal cavity, INDD allows for non-invasive, rapid, and efficient delivery of a wide range of therapeutic agents, including small molecules, peptides, proteins, vaccines, and even biotechnology-based drugs. The aim of this study is to prepare a general evaluation of INDD systems from past to present.

Materials and Methods: Intranasal drug administration has many advantages. One of them is that it is easy for the drug to participate in the systemic circulation due to its mucosal structure with a dense vascular network, and the other is that the drug can easily pass to the central nervous system thanks to its olfactory region. For this reason, the review was made under the headings of Mechanisms of Intranasal Drug Delivery and CNS Targeting, Advances in Biotechnology-Based Intranasal Therapeutics, Nanotechnology in Intranasal Drug Delivery, Intranasal Drug Delivery in Emergency Medicine, Challenges and Regulatory Considerations in Intranasal Drug Delivery.

Discussion and Conclusion: In summary, INDD represents a transformative approach in pharmacology, particularly for CNS and emergency treatments. The advancement of nanotechnology and biotechnology within INDD addresses many limitations, opening doors to a wide range of applications that improve patient outcomes and compliance. With ongoing research and regulatory support, INDD is poised to become a critical modality in modern therapeutic strategies.

Key Words: Instranasal Drug Delivery, Central Nervous System, Systemic Circulation

INVESTIGATION OF DIAPHRAGM-BASED FIBER OPTIC SENSOR

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ABSTRACT

Diaphragm-based fiber optic sensors provide high-precision solutions for detecting acoustic signals, vibrations, pressure, and micron-level distance changes. With their resistance to electromagnetic interference and long-distance sensing capabilities, these sensors are rapidly gaining traction in various industrial and scientific applications. They are particularly effective in areas such as monitoring oil and gas reservoirs in the energy sector, measuring stress in buildings and bridges for structural health monitoring, lidar-based sensing systems in autonomous vehicles, vibration analysis in the space industry, and pressure change measurements in microfluidic systems in the biotechnology field. The sensors operate based on the Fabry-Perot cavity created between a cut fiber tip and a thin diaphragm. This cavity functions on the optical interferometric principle between two reflective surfaces. External factors cause deformations in the diaphragm, altering the optical path length of the Fabry-Perot cavity. These changes are precisely detected through the intensity and phase properties of the reflected light, enabling accurate measurement of the external effect. In this study, new-generation material options available in the literature for sensor diaphragms were evaluated, and the mechanical and optical performances of these materials were analyzed. The results provided critical data for designing high-precision sensing systems and contributed to the development of innovative fiber optic sensors applicable in sectors such as energy, automotive, space, and biotechnology. Additionally, the sensor's static time and frequency response were measured. The results showed that the sensor yielded values comparable to those of a commercial sound level meter (SLM) in the audible range.

Keywords: Fiber optic, sensor, diaphragm, acoustic sensing, new material.

INVESTIGATION OF PHENOLIC COMPONENTS AND ANTIOXIDANT ACTIVITIES of HALHALI, OLIVE LEAF EXTRACT FOR 12 MONTHS

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ABSTRACT

Introduction and Purpose: The olive tree is one of the oldest agricultural plants (Özcan and Matthäus, 2017). In this study, the determination and antioxidant activities of phenolic compounds in the extracts of olive leaves, which are generally considered as agricultural waste produced in the olive tree cultivation and processing industry, were investigated.

Materials and Methods: Samples were collected from the leaves of the Halhalı olive variety, which is approximately 100 years old and grown on the same land in Altınözü district of Hatay, for 12 months and dried in an oven at 55 °C. The antioxidant properties of the extracts obtained as a result of the dried leaves being pulverized and extracted with the help of an ultrasonic bath using 80% methanol-water solution were determined using the TPC, FRAP, ABTS, ELLMAN and DPPH methods. In the determination of phenolic compounds, 14 phenolic compounds including were determined quantitatively with the help of HPLC. has been detected.

Results: The highest levels of 3-Hydroxytyrosol were found in May, Tyrosol in July, and Oleuropein and other phenolic compounds were highest in January.

Assay	Per g Leaf	Per g Extract	Month
TPC (mg GAE)	12,143	50,862	January-June
TFC (mg QE)	523,72	1653,14	September-December
FRAP (mg TE)	627,78	2494,03	January-June
ABTS (mg Trolox)	79,87	307,17	February-February
ELLMAN (mg Cys)	14,76	72,58	October-November
DPPH (IC_{50} mg/ml)	3,21	0,29	July-December

Discussion and Conclusion: As a result of the study, olive leaf extract can be obtained and used as a food supplement, and olive leaves, which are considered as agricultural waste, can be brought into production and not only increase employment, but also bring national wealth to the country. The extracts obtained can be used in clinical studies to investigate their usability in the treatment of cancer diseases that are difficult to treat today.

Key Words: Halhalı, Anklet, Phenolic Compound, Antioxidant Activity, Hatay

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IOT DRIVEN HYBRID ALGORI-ITHM FOR REAL TIME AIR QUALITY PREDICTION

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Abstract

The effect of air pollution on the environment has a drastic impact on the economic and health conditions of the people in various countries which needs to be emphasized. Currently, removal of the pollutants to eliminate them is already in existence at India. Environmental Drones (E-drones) are for autonomous monitoring of air quality at any specific point. The height of flight is predetermined and measurements of height with respect to E-altitude is done at regular intervals of time. The comparison is done based on the threshold value for the pollutants. The advantages of this system is the ability to measure air pollution concentration of CO_2, CO, NH_3, SO_2, PM, O_3 and NO_2 gases. The novelty of this system lies on the fact that the detection takes place whenever it detects an excessive pollution. When multiple E-drones are used in different locations, custom software generates an Air Quality Health Index (AQHI) map of the region that can be used for present and long-term environmental analysis. Monitoring the quality of air is very important because of elevated pollution levels causing health hazards. Many research related studies are carried out to estimate the pollutants in the air quality in metropolitan cities and areas near thermal power stations are inconsistent because the measured data for the multiple pollutants are not accurate. Though some mathematical models are available there exists a research gap because of the lag existing in their capability to deal with multiple pollutant concentrations. Hence, a smart drone can be designed to monitor 7 different poisonous gases which are responsible for air pollution in various metropolitan cities and areas near thermal power plants. The quality of air can be monitored using drones in surrounding areas, near thermal power plants like Neyveli Lignite Corporation (NLC), Neyveli, Tamil Nadu, to estimate the solid waste in the dump yards and also emission of various flue gases like Carbon Monoxide (CO), Carbon dioxide (CO_2), Nitrogen Oxides (NO_x) and Sulphur Dioxide (SO_2). Currently, simulation studies reveal that four gas emissions related to air pollution are forecasted and estimated on using real time data from the sensors on a small scale. This data was used for analysing the training curve of the Hybrid algorithm for Real time Air quality Prediction.

Keywords — Air quality, Industrial Air pollution, Intelligent Controller, Artificial Neural networks

THE EFFECT OF SERVICE QUALITY DIMENSIONS ON PATIENTS' DECISION TO PREFER THE HOSPITAL AGAIN

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ABSTRACT

Introduction and Purpose: Due to the unique characteristics of health care, the elasticity of demand for health care is much more rigid than the elasticity of demand curves for other goods and services. However, this situation may not be related to patients' hospital choice. Patients and their relatives may tend to prefer hospitals that they can access more easily, have better physicians in terms of specialization, have more friendly health professionals, and have easy parking. The aim of the study is to evaluate the service quality within the framework of the functional quality dimension that patients can easily evaluate and to determine the service quality dimensions that are effective on patients' decisions to choose the hospital again.

Materials and Methods: Field research was conducted with patients who applied to a private branch hospital. A total of 375 questionnaires were collected using the survey technique. As a result of the preliminary evaluation, it was decided that 368 questionnaires could be used and analyzes were made on these questionnaires. The research variables are intention to choose the hospital again, physical characteristics, empathy, enthusiasm, reliability and trust. The variables of physical characteristics, empathy, enthusiasm, reliability, trust and trust are independent variables.

Results: In the study, firstly, descriptive statistics were applied to the independent variables since they were continuous data and frequency analysis was performed since the dependent variable was categorical data. The relationship between the research variables was determined by correlation analysis. The effect of the independent variables, which are continuous data, on the independent variable, which is categorical data with two options, was analyzed by logistic regression analysis. According to the findings obtained from this analysis, it was determined that empathy, reliability and enthusiasm dimensions had an effect on patients' preference for the hospital. The effect of physical features and trust variables is not statistically significant. According to the ORs obtained in logistic regression, the effect of reliability, empathy and enthusiasm dimensions were revealed in descending order.

Conclusion: Hospital managers focusing on the decision to choose a hospital again can focus on empathy, reliability and enthusiasm dimensions of service quality. Improvements in these key dimensions may lead patients to return to the same hospital.

Keywords: Patient, Hospital, Service Quality, Prefer

THE RELATIONSHIP BETWEEN PERCEPTION OF RECREATION BENEFIT AND PERCEIVED HEALTH

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Introduction and Purpose: It is known that recreation not only provides physical and mental benefits to people, but also increases social interactions, stimulates the senses, and enables the wise and effective use of time. In this context, the aim of this study is to reveal the relationship between the benefits individuals derive from recreation and the health they feel.

Materials and Methods: This study is a field research and survey technique was used as a data collection method. The questionnaire used in the study consists of three parts. The first part of the questionnaire includes the recreation benefit scale, the second part includes questions about the physical, mental and social health status of individuals and the last part includes questions about demographic characteristics. In the study where individuals living in Seferihisar district of Izmir province were determined as the population, 452 questionnaires were collected. As a result of the preliminary evaluation, it was decided that 415 questionnaires could be used and analyzes were made on these questionnaires. In the study, frequency analysis and descriptive statistics were performed on the data related to demographic characteristics. The differences between the responses of individuals to the research variables according to their demographic characteristics were analyzed by independent sample t-test and one-way ANOVA test. The relationship between the research variables was determined by correlation analysis.

Results: When the research findings were examined, a difference was found between the participants' responses to the individual development variable from the recreation benefit dimensions according to their gender. According to the participants' education levels, a difference was found between their responses to the variable of recreation benefit dimensions. There was no difference between the participants' responses to the research variables according to their marital status. In the correlation analysis for the relationship between recreation benefit perception and perceived health status, the relationship between relaxation and perceived health status was found to be positive with low strength. The relationship between individual development and perceived health status was also found to be positive with low strength.

Conclusion: It has been revealed that the perception of benefit from recreation and perceived health are related. However, when the effects of recreation on human health are evaluated, it can be said that this relationship is at a low level. It can be said that the reason for this is the low level of knowledge of individuals about recreation and the fact that individuals do not have a cognitive level that can evaluate their leisure time.

Keywords: Recreation, Recreation Benefit, Health

THE ANTIOXIDANT PROPERTIES OF C-PHYCOCYANIN IN INHIBITING MIGRATION AND METASTASIS OF A549 LUNG CANCER CELLS: INSIGHTS INTO THE NOTCH PATHWAY

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ABSTRACT

Lung cancer remains a major cause of cancer-related mortality worldwide. Among the cell lines utilized in lung cancer research, A549 is widely recognized as a prominent model for studying non-small cell lung cancer (NSCLC). Addressing key cancer hallmarks such as enhanced migration, metastasis, and resistance to apoptosis remains critical for developing effective treatments. C-Phycocyanin (C-PC), a natural antioxidant derived from blue-green algae, has shown significant potential as an anticancer agent. This review examines the role of C-PC in mitigating these hallmarks in A549 cells, with a focus on its modulation of the Notch signaling pathway and associated molecular mechanisms.

The Notch pathway, particularly through key genes like HES1 and JAGGED1, plays a pivotal role in cancer cell proliferation, migration, and invasion. By targeting this pathway, C-PC has demonstrated the ability to suppress tumor-promoting signals and disrupt critical regulatory mechanisms driving cancer progression. Furthermore, long non-coding RNAs (lncRNAs) such as TUG1, ANRIL, and MALAT1, known to regulate the Notch pathway, are also implicated in the aggressive behavior of A549 cells. C-PC's ability to modulate these lncRNAs adds another layer of its therapeutic potential.

Beyond its regulatory impact on signaling pathways, C-PC exhibits strong antioxidant properties, effectively reducing oxidative stress—a major contributor to cancer metastasis and progression. By neutralizing reactive oxygen species (ROS), C-PC creates an environment less conducive to cancer cell migration and invasion, while also sensitizing cells to apoptosis.

Future studies should delve deeper into the molecular mechanisms underlying C-PC's effects on the Notch pathway and its associated lncRNAs. Integrating C-PC into existing NSCLC treatment strategies may enhance therapeutic efficacy, reduce metastatic spread, and offer a novel approach to tackling lung cancer progression with high precision.

Key Words: C-Phycocyanin; A549 cells; lung cancer; Notch pathway

THE IMPACT OF C-PHYCOCYANIN ON IPSC DIFFERENTIATION INTO NEURONS: A FOCUS ON THE NOTCH PATHWAY

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ABSTRACT

Induced pluripotent stem cells (iPSCs) are a powerful tool for neural regeneration and the treatment of neurodegenerative diseases. A major challenge in this field is optimizing the differentiation of iPSCs into functional neurons. C-Phycocyanin (C-PC), a protein derived from blue-green algae, has garnered attention for its antioxidant properties and regulatory effects on cellular signaling pathways, including the Notch pathway. This review explores the impact of C-PC on key molecules in the Notch pathway, such as NOTCH1, HES1, and JAGGED1, which play critical roles in regulating neural differentiation.

The Notch pathway contributes to maintaining the pluripotency of stem cells by modulating the expression of genes like HES1, and C-PC may facilitate neuronal differentiation through its effects on this pathway. Furthermore, recent evidence suggests that specific long non-coding RNAs (lncRNAs), including MALAT1, and TUG1, interact with the Notch pathway and influence iPSC differentiation into neurons. This review highlights the potential role of C-PC in regulating these lncRNAs and their interplay with Notch pathway components.

Understanding the mechanisms through which C-PC influences neuronal differentiation offers significant potential for advancing regenerative medicine. By targeting the Notch pathway and associated molecular networks, C-PC could serve as a novel therapeutic agent to enhance the efficiency and precision of iPSC-based neuronal differentiation. This opens exciting possibilities for treating neurodegenerative disorders such as Parkinson's and Alzheimer's disease, where neuronal loss is a hallmark. Future research should investigate how C-PC can be applied in stem cell research and its potential to revolutionize personalized therapies by influencing the Notch pathway and lncRNAs.

Key Words: C-Phycocyanin; iPSC Differentiation; Notch Pathway; Neural Regeneration; Neurodegenerative Diseases

ANALYST COMPETENCY SCALE: VALIDITY AND RELIABILITY STUDY WITH RASCH MODEL

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ABSTRACT

Introduction and Purpose: Chemistry laboratory analyst is the person who has the knowledge and skills to take samples for analysis in laboratories, to make physical checks of the sample, to make pre-analysis preparations and qualitative, quantitative and instrumental analyses, to calculate, interpret and report the analysis results. In this regard, determining the knowledge and skills of chemist candidates preparing to become analysts will help analysts to get to know themselves. Thus, it is important for chemist candidates preparing to become analysts to know themselves as analysts in determining their knowledge and skills. This research aimed to develop a reliable and valid Likert-type measurement tool to determine the laboratory competencies of chemist candidates. For this reason, statistical analyzes of the Analyst Competency Scale (ACS) developed in the study are reported.

Materials and Methods: This is a study in scanning model. A total of 40 participants, 21 males (52.5%) and 19 females (47.5%), who completed the ACS survey were included in the study. Data were analyzed using the Rasch model to obtain significant scores for the ACS.

Results: In the study, classical test theory (CTT) and item response theories were used together in statistical analysis. The content validity of ACS was ensured by expert opinion and the construct validity was ensured by using the Rasch model. Evaluations of content validity were carried out according to content validity ratio, content validity index and kappa values. The construct validity of the draft ACS, whose content validity was achieved, was verified using the Rasch model. EFA and CFA were tested within the scope of CTT, and some Rasch assumptions such as dimensionlessness, local independence and monotonicity were tested within the scope of item response theory.

Discussion and Conclusion: Analysis results showed that ACS met the minimum statistical values required for a good measurement tool. Thus, 20 valid and reliable compatible items were produced that can be used to determine the laboratory competencies of chemist candidates. The data obtained from the application of valid and reliable ACS to chemist candidates will guide curriculum and policy makers. Additionally, self-knowledge of chemist candidates can also be determined.

Key Words: Analyst Competence, Chemist Candidates, Item Response Theory

APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN THE 21ST CENTURY MANUFACTURING INDUSTRY IN NIGERIA: INSIGHT FROM SELECTED MANUFACTURING COMPANIES IN ABIA STATE, NIGERIA

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Abstract

Artificial intelligence (AI) is the ability of a digital computer, computer-controlled machine or robot to perform tasks commonly associated with intelligent beings like humans. The study was to investigate the relationship between artificial intelligence application and organizational efficiency in manufacturing sector in Abia State. A descriptive research survey design was used for the study. The sample of the study is six (6) operational managers from each of the twenty six (26) registered manufacturing companies in Abia State by the manufacturing association of Nigeria (MAN) Abia State chapter. The population of the study is twenty six (26) registered manufacturing companies in Abia State. The researcher distributed 156 questionnaires to the respondents. The method of data collection was through questionnaires. Data from the distributed questionnaires was further analysed, using the Pearson Product Moment Correlation Coefficient. The hypotheses of the study were tested using Pearson's product moment Correlation with aid of the statistical package for social science (SPSS). Findings revealed that, the predator variable artificial intelligence and its dimensions robotics, and electronic fund transfer have significant relationship with the measures of the criterion variable as innovation cost reduction. Therefore, it was recommended among others that manufacturing sector should adopt the use of robot in their production process to bring about safety of their staff that might be working with hazardous substances and in the high risk sections of an organization.

Key Words: Artificial intelligence, Organization efficiency, scientific Robotics, Electronic fund transfer, Innovation, Cost reduction.

CLIMATE CHANGE AND ITS EFFECTS ON THE SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA

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Abstract

Climate change has become a great challenge to our generation and its impact is felt in almost every society in the world. Nigeria is likely to be the one of the most negatively impacted countries in the world as a result of climate change. Nigeria is plagued with many ecological problems of various dimensions. Whilst the people living in the southern part of the country are being ravaged by flood and gully erosion, their counterparts in the north are contending with the menace of desertification, deforestation and drought, among others. These environmental challenges have direct and indirect effects on the social and economic activities of the societies. The paper reviews the potential impact of climate change on Nigeria's economic and socio-cultural developments. Secondary data were used and descriptive research design was adopted. The findings indicates that many sectors of the Nigerian economy appears to be directly vulnerable to the impacts of climate change such as manufacturing, insurance, transportation, offshore oil and gas exploration and thermal and hydro-power generation and transmission. Other vulnerable sectors are those dependent on climate-sensitive resources like agriculture, fishing, forestry, renewable energy and eco-tourism. These cumulative effects will impact the GDP negatively. On the basis of the findings, the following were recommended; there should be policies toward mitigation and toward developing technology that can improve productivity and are environmentally friendly, irrigation should be encouraged, NIMET should be well equip to enable it function effectively, government agencies and NGOs should sensitize the people about the dangers of Climate Change in the drive towards a sustainable environment.

Key Words: Climate change, Global warming, Economic development, Sustainable development, Nigeria

FACTORS INFLUENCING RURAL-URBAN MIGRATION OF YOUTHS IN ABIA STATE, NIGERIA

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ABSTRACT

This study examined the factors influencing rural-urban migration of youths in Abia State of Nigeria. A multi-staged sampling technique was employed in the selection of 240 of the respondents (youths) from three local government areas of the state. Data for this study were sourced primarily through the use of well-structured questionnaire. Both descriptive and inferential analyses were employed in the analyses of the data. The result of this study showed that mean age of the respondents was 22.60 years. The study further revealed that majority (68.8%) of the respondents were male, single and family size of between 5 – 8 and had secondary education. The results revealed that the poor electricity supply in the rural areas, bad condition of roads, absence of pipe-borne water were push factors driving the youths away from their communities into urban areas. Results further revealed that better employment opportunities, superior wages in the urban areas, improved living condition are pull factors that attract rural youths to the urban centers. Majority (68.8%) of the respondents were not willing to stay in the rural areas with or without improvement in the condition of living in their communities. The results of this study revealed that age ($r - 0.50$; $p < 0.00$), sex (X-squared – 34.57; $p < 0.05$) and educational level (X-squared – 45.57; $p < 0.01$) of the respondents were significantly related to their decision to migrate from rural to urban areas. The study recommends that government should provide basic social amenities in the rural areas as they are found in the urban areas so as to encourage the youths to stay.

Key words: Rural-Urban Migration, Youths, Bende L. G. A., Abia State

TEXT ADAPTATION STUDIES IN TEACHING TURKISH TO FOREIGNERS – THE EXAMPLE OF İRAN TALES

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Studies in the field of text adaptation studies in teaching Turkish to foreigners have been increasing in recent years. Although the use of original texts in language teaching is always recommended, authentic texts used at the basic and intermediate levels are not fully understood by students. For this reason, authentic texts are adapted and changed with methods called simplification, expansion, summarization and facilitation. These adaptation methods are sometimes intuitive, sometimes structural and sometimes prepared with textlinguistic criteria. Along with this increase, in addition to the ongoing discussions on the use of original and authentic texts in teaching Turkish to foreigners, criticisms of text adaptation studies, descriptive analyses of the studies conducted and the methods used are also questioned a lot. All these criticisms and studies on text adaptations are undoubtedly contributions to the field. Text adaptation studies are carried out with structural, intuitive and textlinguistic methods. Text adaptations made with these methods are aimed at both content in textbooks and meeting the need for reading outside of class. Tales, which are products of folk literature, are frequently used in language teaching due to their value in terms of cultural transfer. In this study, the İran tales of the Three Advices and the Man Who Seeked His Fortune studied. These tales were adapted to the A2 level by adhering to the structural criteria of the simplification method. While making the adaptation, these adapted texts, which were obtained based on the criteria in the Common European Framework of Reference for Languages and the A2 level grammar structures and achievements in the Turkish Language Teaching Curriculum prepared by the Turkish Language Association, were presented to the use of individuals learning Turkish. The words in the fairy tales were examined according to word usage frequency lists in Turkish.In addition, the adapted texts were tried to be made more qualified by obtaining expert opinions.

Keywords: Turkish as a foreign language, Text adaptations, İran tales

ROW CONFIGURATION OF FORAGE PEA-SORGHUM X SUDANGRASS HYBRID INTERCROPPING FOR YIELD AND RELATIVE FEED VALUE

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ABSTRACT

Today, it is crucial to apply systems other than the known production strategies for cultivating forage crops in areas with semi-arid climates for water efficiency and land use. In this respect, plants with high water use efficiency such as the Sorghum x Sudangrass hybrid are preferable. However, although this species has high yields, it may lag behind other grass species in terms of nutrition. Forage pea, which has gained importance as an annual among forage legumes, can close this gap. With this information, the experiment was carried out with 3 different row configurations (same, alternate, cross seed) and 3 different intercropping mixture designs with 3 replications for two years in 2019-2020 in a continental semi-arid climate ecology. The results showed that Sorghum x Sudangrass hybrid intercropping designs had high values in terms of dry matter yield but decreased in relative feed value (RFV). The alternate row configuration stood out with 4.3 t ha^{-1} in yield and 171.0 RFV among the different row configurations. Due to the high importance of the benefit to be obtained from the unit area nowadays, the forage pea - 50% Sorghum x Sudangrass hybrid mixture, which showed more than two times more yield increase compared to sole-sown forage pea plots in terms of yield, was the prominent application.

Key Words: Forage pea, intercropping, mixture, row configuration, sorghum

INNOVATIONS IN MONTE CARLO-BASED MARKOV SWITCHING TEST: AN APPLICATION TO TURKEY'S GDP DATA

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ABSTRACT

Introduction and Purpose: This study investigates the application of Monte Carlo-based tests, specifically LMC-LRT and MMC-LRT, for analyzing Turkey's quarterly GDP data from 1998Q1 to 2024Q2. The aim is to address challenges in non-standard asymptotic distributions and nuisance parameters and identify structural breaks in economic dynamics.

Materials and Methods: The study employs Monte Carlo-based methodologies within the Markov Switching Autoregressive (MSAR) framework and compares it to a baseline Autoregressive (AR) model. Statistical tests like LMC-LRT and MMC-LRT, as proposed by Rodriguez-Rondon and Dufour (2024), are utilized to validate regime-switching.

Results: The MSAR model significantly outperforms the AR model by capturing two distinct economic regimes with varying means and variances. Monte Carlo-based tests strongly reject the null hypothesis of no regime-switching ($p < 0.05$), highlighting the presence of structural breaks in Turkey's GDP.

Discussion and Conclusion: The findings emphasize the relevance of Monte Carlo-based approaches for robust economic analysis, contributing to both theoretical advancements and practical applications. Policymakers can benefit from these insights to address structural changes in economic dynamics.

Key Words: Markov Switching Models; Monte Carlo Tests; Regime Switching; Turkey; GDP Analysis

REVIEW OF GRADUATE THESES IN TURKEY

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ABSTRACT

Purpose: This study aims to examine the place and development processes of graduate theses on green concepts such as green entrepreneurship, green management, green organizational behavior, green innovation and green human resource management in the field of management and organization in Turkey. In this context, analyses were conducted on the years, types, methods, languages, departments, institutes, supervisor titles, universities, and keywords of the related concepts.

Method: The research is based on the document analysis method, which systematically examines the postgraduate theses in Turkey. The data were obtained from the National Thesis Center of the Council of Higher Education. In the study, a total of 85 postgraduate theses were identified using the identified keywords ("green entrepreneurship", "green management", "green organizational behavior", "green innovation" and "green human resources management"). However, after excluding 3 repeated theses, the analysis was conducted on 82 theses. Content analysis method was applied to answer the research questions.

Findings: It was determined that the majority of the theses were written in 2022 and after and that the interest in green concepts increased in this process. 87.8% of the studies were conducted with quantitative methods and 85.4% of the theses were written in Turkish. It was seen that the most studied concepts were "green human resources management" and "green organizational behavior". In addition, the majority of the theses were prepared in the department of business administration and conducted in social sciences institutes.

Results: The results of the research show that green concepts are gaining importance in the academic field and that studies in this field contribute to the development of sustainability strategies. However, the scarcity of qualitative methods and the understudied nature of some concepts (e.g. green entrepreneurship) offer opportunities for future research. It is suggested that green concepts should be addressed by different disciplines and international comparisons should be made.

Key Words: Green Entrepreneurship; Green Management; Green Organizational Behavior; Green Innovation; Green Human Resource Management; Systematic Analysis

TRUSTEE APPOINTMENTS AND LOCAL DEMOCRACY: LEGAL AND PRACTICAL EFFECTS OF CENTRAL GOVERNMENT TUTELAGE

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ABSTRACT

İntroduction and Purpose: The aim of this study is to analyze the legal and practical effects of trustee appointments on local democracy in Turkey. The compatibility of the trustee practice with the constitutional principles of democracy is evaluated in the context of central government tutelage and the effects of these processes on the autonomy of local governments are discussed. Furthermore, the effects of the practice on the participation and trust of local people in governance and the functioning of public services are discussed.

Materials and Methods: In this study, the Decree Law No. 674, which initiated the post-2016 trustee practices, is taken as the basic legal framework. A literature review was conducted on the constitutional arrangements addressing the democratic functioning of local governments and trustee practices in Turkey. Academic articles, official reports and analyses on the subject have been evaluated and the legal and practical dimensions have been examined in detail.

Results: Trustee appointments contradict the principle of autonomy of local governments by replacing elected local administrators with central government representatives. This prevents direct participation of the people in governance and undermines trust in local democracy. Moreover, trustee appointments have been observed to lead to disruptions in services and social unrest. Legally, trustee practices are incompatible with the constitutional framework of local democracy.

Conclusion: The trustee practices have increased the central government's tutelage over local governments and damaged the principle of decentralization. It is necessary to strengthen local democracy, to establish a participatory model of governance within the framework of the rule of law and to protect the people's right to democratic elections. In this respect, limiting central tutelage and increasing local government autonomy stand out as an important need.

Keywords: Trustee Appointments, Local Democracy, Guardianship

DISEASE DISCOURSE IN DEATH NEWS AND PROBLEMS ARISING

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ABSTRACT

Journalists, who have the potential to influence society, should act responsibly in ensuring that the content they publish does not cause "psychological damage" to people. Therefore, in accordance with the understanding of “free but responsible press”, the words to be chosen when writing news are important. Recently, it has been observed that especially in news texts covering the death of ordinary people, the names of the diseases that cause death are openly given even though there is no public benefit to them, and negative details about the disease are mentioned. This discourse is dangerous because it can create pessimism in individuals who have the same disease. In this study, various news published in different press organizations were examined using the qualitative content analysis method and the problem in question was identified. On the other hand, when looking at international ethical codes, it is seen that there is no significant regulation on this issue. Only the press councils of Germany, Croatia and Slovenia dealt with the issue in a limited manner, in the context of "violation of privacy". In Turkey, the Turkish Journalists Declaration of Rights and Responsibilities, published by the Turkish Journalists Association, states under the heading "health" that news about health should not create pessimism in people. However, what is emphasized here is not health news but death news. Therefore, in order to solve the problem, it is necessary to increase academic studies on this subject and to create awareness, especially among those who practice journalism, with the support of press professional organizations. In addition, the principle of "in cases where there is no public interest, the name of the disease should not be included in death news" should be added to the applied ethical codes.

Key Words: Disease news, Disease discourse, Press ethics, Media ethics.

STUDY OF THE INHIBITORY EFFECT OF SOIL BACTERIA ON SOME PLANT PESTS

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Abstract

This work is part of a biological control trial studying the ability of soil microorganisms (Actinomycetes) to inhibit the activity of a number of crop insect pests.

We tried to test the effect of soil actinomycetes extract on:

- White grubs, which live in the soil and attack the roots of all plants,
- Insect pests belonging to the locust family (e.g. grasshoppers, locusts, etc.),
- Hemipteran insects (e.g. aphids) that feed on plant sap, which can cause serious damage to leaves, stems and flowers.

The results show that actinomycete-based pesticides have an effective inhibitory effect on grubs. Actinomycetes, which are beneficial soil bacteria, produce antimicrobial and insecticidal substances that disrupt the metabolism and survival of grubs.

These bio-pesticides are particularly advantageous because they specifically target pests, while being more environmentally friendly than traditional chemical pesticides. Thus, the use of actinomycete-based pesticides offers a promising method for managing grub populations in an environmentally friendly and sustainable way.

Key words: Soil, Biotechnology, Biological agriculture, Actinomycetes, Bio-pesticide.

THE EFFECT OF QIRAAT MISTAKES ON PRAYER

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ABSTRACT

In order for the prayer, which is one of the most important acts of worship that Muslims are obliged to perform, to be fulfilled in accordance with the will of the Shari'ah, it must be performed in accordance with some principles that scholars have determined as conditions or rukun. One of these principles is the rukun, which is called qiraat and consists of reading some Qur'an during the qiyam. Scholars have expressed the conditions that the ritual of qiraat, the obligation of which is fixed by the Qur'an and the Sunnah, must have in order to be performed correctly. Qiraat, which is one of the rukuns that the authenticity of the prayer depends on its authenticity, has been an issue that has been emphasised since the early periods. It is seen that a rich literature has been formed on this subject, which is especially emphasised by the scholars of qiraat and fiqh.

The issue of which of the reading errors, which the Hanafis conceptualise as zellat al-kārī and the other sects conceptualise as lahn, invalidate the prayer and which do not, is one of the issues on which the scholars disagree. This situation, which refers to slips of the tongue and reading mistakes during qiraat, which is the rukus of prayer, is dealt with in a wide range such as 'error in i'rab', 'error in waqf and ibtidā', 'change of letters', 'change of words' and 'error in the pronunciation of letters' in the Hanafi fiqh doctrine, while other sects have dealt with it in a relatively narrower framework such as 'reading, grammar and i'rab error'.

In this study, the ritual of qiraat in the prayer will be discussed, and then the concept of dhellat al-kāri and lahn will be discussed. Subsequently, the effects of reading errors on the issue of cancelling the prayer will be discussed. In this regard, it is aimed to reach some conclusions on a principled basis by analysing the evidence of the relevant opinion holders.

Key Words: Islamic Law, Tajweed, Prayer, Rukun, Qiraat, Zellat al-Kāri

ACETYLCHOLINESTERASE ACTIVITY CHANGES INDUCED BY XONE PESTICIDE IN *Dreissena polymorpha*

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ABSTRACT

It is known that pesticide residues used in agricultural areas to protect against pests in domestic environments mix into the aquatic environment in various ways. In this study, which aims to investigate the effects of Klaxone (KLX), a widely used pesticide, on aquatic organisms, *Dreissena polymorpha* was selected as a model organism. Samples were taken from D. polymorpha individuals exposed to 0.01; 0.15 and 0.3 mg/L KLX concentrations at 24 and 96 hours, all soft tissues were homogenized and changes in Acetylcholinesterase enzyme activities were observed using CAYMAN brand ELISA kits. SPSS 24.0 package program one-way ANOVA (Duncan 0.05) was used to evaluate biochemical analyzes.

Study data show that statistically significant decreases in acetylcholinesterase activity occurred at 24 and 96 hours following Klaxone exposure.

Keywords: Klaxone, *Dreissena polymorpha,* Acetylcholinesterase

INVESTIGATION OF THE EFFECTS OF HESPERIDIN ON CHLORPYRIFOS-INDUCED GASTRIC DAMAGE IN RATS

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ABSTRACT

Aim: Chlorpyrifos (Cpf), an organophosphate insecticide, is frequently used against insects and pests in agriculture. In addition to its beneficial effects, it causes toxic effects in organs and tissues such as the liver, kidney, reproductive organs, and nervous system. Exposure is frequently seen especially in humans who apply the drug or in animals that come into contact with the drug. Hesperidin (Hes) is a herbal antioxidant, a flavonoid derivative, and has antioxidant, anti-inflammatory, and antiautophagic effects. Therefore, the aim of the presented study was to investigate the effects of hesperidin (Hes) on gastric damage caused by chlorpyrifos (Cpf) exposure in rats via oxidant/antioxidant status, inflammation, apoptotic, and autophagic activity pathways.

Materials and Methods: In the study, 35 Spraque Dawley rats were divided into 5 groups, each containing 7 rats. The groups; control, Hes, Cpf, Cpf + Hes50 and Cpf + Hes100.

Results: It was determined that Cpf application increased MDA levels, caused a decrease in GSH, GPx, SOD and CAT activities, and Hes application together with Cpf reversely regulated these parameters and strengthened the antioxidant system. In addition, it was determined that inflammation markers such as NF-κB and p38MAPK and apoptotic marker Bax increased and antiapoptotic marker Bcl-2 decreased with Cpf application, and Hes application was sufficient to suppress both inflammation and apoptosis by reversely regulating the levels of these parameters.

Conclusion: As a result, it was determined that the use of Hes supportive treatment on Cpf-induced gastric damage in rats would be beneficial.

Keywords: Chlorpyrifos, Gastric damage, Hesperidin, Rat

EVALUATING THE TOXIC EFFECTS OF PESTICIDES ON NON-TARGET ORGANISMS: A CURRENT REVIEW

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ABSTRACT

Recent studies have highlighted the harmful effects of pesticides on a wide range of organisms, including predatory insects, bees, fish, and humans, underscoring both ecological and health-related concerns. Predatory insects experience reduced hunting efficiency and reproductive success due to pesticide exposure, disrupting food chains and compromising ecosystem stability. Bees, essential pollinators in agriculture, suffer from impaired navigation and decreased reproduction, contributing to population declines and lower crop yields. In aquatic environments, pesticide exposure disrupts reproductive cycles and alters fish behavior, particularly affecting juvenile survival. The potential health risks for humans are also alarming, with long-term exposure linked to cancer, neurological disorders, and reproductive issues. The growing body of evidence highlights the urgent need for sustainable agricultural practices and a reduction in pesticide use. Advancing alternative pest management strategies and protecting biodiversity are essential to mitigate these harmful effects and maintain ecological balance. This review aims to consolidate recent research on the diverse impacts of pesticides across multiple species and explore their broader implications for ecosystem health and human well-being.

Keywords: Ecotoxicology, Non-Target Organisms, Pesticide Toxicity.

EXAMINING FEMVERTISING LITERATURE THROUGH BIBLIOMETRIC ANALYSIS

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ABSTRACT

Femvertising is a type of advertising that seeks to challenge traditional gender stereotypes and promote gender equality by using empowering messages, images, and stories about women and girls. In recent years, this advertising approach has become a popular strategy, not only to support social transformation but also to contribute to the commercial goals of brands. However, questions have been raised about whether femvertising truly contributes to authenticity, ethics, and gender equality. This study combines bibliometric and content analysis to provide a comprehensive map of academic research on femvertising, focusing on publications in the Web of Science (WOS) database. The aim is to uncover key trends, identify gaps, and address criticisms in this field.

The bibliometric analysis investigates the dissemination patterns, core themes, and academic collaboration networks within femvertising literature. Meanwhile, the content analysis examines how femvertising is applied across various sectors and media types and evaluates its effects on consumer behavior. The findings indicate that femvertising is particularly prevalent in social media campaigns for brands in the luxury, cosmetics, and sports industries. Research on consumer behavior shows that advertisements with authentic and value-oriented messages tend to receive more positive reactions. However, femvertising practices are sometimes criticized for "femwashing" when commercial motives are perceived to undermine their credibility.

This study offers valuable contributions to the academic understanding and practical application of femvertising. One major conclusion is the need for more inclusive and effective advertising strategies that genuinely promote gender equality. Another critical finding highlights the importance of implementing femvertising in an ethical, impactful, and authentic way to support social change and build consumer trust.

Keywords: Femvertising, Gender equality, Bibliometric analysis, Content analysis, Femwashing

THE INFLUENCE OF INSTRUCTIONAL CONTENT ON YOUTUBE: INSIGHTS FROM METRICS AND VIEWER FEEDBACK

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ABSTRACT

The study investigates the impact of instructional content on YouTube, a platform that has evolved into a significant educational resource. The aim is to understand what makes educational content effective by examining both quantitative metrics and qualitative feedback from viewers.

To achieve this, the study focuses on a well-known educational YouTube channel. Data was collected over a year, including metrics such as views, likes, dislikes, comments, and subscriber changes. Additionally, advanced textual analysis tools were used to analyze viewer comments, categorizing them into positive, neutral, and negative sentiments.

The study employs sentiment analysis, a branch of natural language processing (NLP), to extract and analyze opinions from text. This approach helps in understanding public opinion and trends by examining large volumes of text data from social media platforms like YouTube. Previous research indicates a positive correlation between video likes and positive comment sentiment.

The research begins with selecting an educational YouTube channel based on criteria like content diversity, subscriber count, and upload frequency. Data collection involves gathering metrics and extracting comments for sentiment analysis. After preprocessing the data to remove anomalies, descriptive statistics such as average views and likes are computed. Sentiment analysis tools categorize comments, and correlations between metrics and sentiment scores are explored to identify patterns.

The results indicate that content with real-world examples, engaging segments, and clear explanations tends to receive higher viewer interaction. However, a high thumbs-up to thumbs-down ratio does not necessarily correlate with high viewership, suggesting other factors influence viewer retention. Comments reveal that viewers value clarity, relatability, and delivery style, while criticisms often focus on content depth, pacing, and technical issues.

Based on these findings, the study offers several recommendations for content creators. Enhancing interactivity through quizzes, polls, or other elements can improve viewer retention. Using relatable real-world examples makes abstract topics easier to grasp. Regularly reviewing and acting on audience comments can lead to continuous content improvement. Diversifying content delivery methods can cater to different learner preferences.

Keywords: YouTube Education, Sentiment Analysis, Content Effectiveness

CO_2 ADSORPTION IN CU_2BASNS_4/POLYANILINE COMPOSITES: A SYNERGISTIC APPROACH

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Abstract

The integration of conductive polymers with chalcogenide-based materials has shown significant potential in enhancing CO_2 adsorption performance. In this study, a novel Polyaniline/Cu_2BaSnS_4 (PANI/CBTS) composite was synthesized by polymerizing aniline within the pores of CBTS to investigate the synergistic effects of CBTS incorporation on the CO_2 uptake behavior of PANI. The composite materials were prepared with varied CBTS content, with the 5% CBTS addition exhibiting the most promising results. The surface area and porosity of the materials were studied by BET analysis. The PANI demonstrated a surface area of 35.3 m^2/g, aligning with its porous characteristics, and the pore size distribution was mostly mesoporous. For CBTS, the surface area was measured as 2.2 m^2/g, showing its thick crystalline structure and restricted porosity. The PANI/CBTS10 composite revealed a surface area of 24.35 m^2/g, somewhat lower than that of pure PANI. The introduction of CBTS into PANI resulted in a composite with optimized porosity and surface properties, enhancing its CO_2 adsorption capacity compared to pristine PANI. SEM and XRD analyses confirmed the homogeneous distribution of CBTS particles within the composite and the preservation of the crystalline structure of CBTS. This study highlights the potential of PANI/CBTS composites for CO_2 capture applications, offering a new pathway for developing efficient and sustainable adsorbent materials.

Keywords: Cu_2BaSnS_4, CO_2 adsorption, Polyaniline, composite.

(FACTORS CAUSING POLYCYSTIC LIVER DISEASE IN CATS)

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ABSTRACT

Objective: To investigate the prevalence of polycystic liver disease (PKD) in animals such as dogs, cats, mice, goats, and pigs, with a particular focus on the role of ductal plate malformation and *Platynosomum fastosum* infection in feline PKD.

Materials and Methods: A comprehensive review of studies related to the diagnosis of polycystic liver disease and imaging techniques used in these cases.

Results: Advanced cases of polycystic liver disease are often associated with progressive jaundice, weight loss, abdominal distension, elevated liver enzymes, cyst formation in the liver, hemoabdomen due to cyst rupture, liver damage, and impaired hepatobiliary function. Abdominal ultrasound typically reveals multiple large hepatic masses with irregular, hyperechoic walls. Histological examination confirms the biliary origin of these cysts, leading to a diagnosis of PKD. While infections often cause mild clinical signs, the severity of symptoms can vary depending on the intensity of the infestation, the number of adult parasites, the duration of infection, and individual host response.

Conclusion: Given the findings in human studies, new treatment options can be developed and evaluated for veterinary patients. Clinical, ultrasonographic, and biochemical findings are valuable tools in diagnosing PKD, and further research is needed to improve the diagnosis, treatment, and quality of life for affected animals.

Keywords: Cat, Polycystic Liver, Ductal Plate Malformation, Platynosomum Fastosum

THE MEDIATING ROLE OF PERFECTIONISM IN THE RELATIONSHIP BETWEEN OBSESSIVE-COMPULSIVE SYMPTOMS IN PARENTS OF INDIVIDUALS WITH AUTISM DIAGNOSIS AND PARENTING ATTITUDES

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ABSTRACT

Objective: The main aim of this study was to examine the mediating role of perfectionism in the relationship between obsessive-compulsive disorder levels and parental attitudes in parents of individuals diagnosed with autism spectrum disorder (ASD).

Material and Method: The sample of the study consisted of parents of individuals diagnosed with autism. A total of 198 people (148 women, 50 men) participated in the study and purposive sampling method was used. Sociodemographic Information Form, Multidimensional Perfectionism Scale (MPS), Vancouver Obsessive Compulsive Inventory (VOCI), Family Life and Child Raising Attitude Scale (PARI) were used to collect the data. The data were evaluated by Pearson Correlation analysis with IBM SPSS 27 software.

Findings: The results of the study revealed the following findings: Perfectionism mediated the symptoms of obsessive-compulsive disorder and the overcontrol sub-dimension of parental attitudes; There was a significant positive correlation between symptoms of obsessive-compulsive disorder and perfectionism; Obsessive-compulsive symptoms had a significant positive correlation with the overcontrol sub-dimension of the parental attitudes scale; The data were normally distributed and met the normality assumption.

Conclusion: The study examined the relationship between obsessive-compulsive symptoms, parental attitudes and perfectionism in parents of individuals diagnosed with autism. There are limited number of studies on this subject in the literature. The limitations of the study include the small sample size and the fact that the participants' education levels were mainly at the primary and high school levels.

Limitations: The limitations of the study include the fact that the educational levels of the parents were predominantly at the primary and high school levels, the length of the scale items, and the lack of information on the level of autism spectrum disorder. It was also assumed that the participants filled out the forms in a way that reflected the truth.

Keywords: Autism Spectrum Disorder, Obsessive-Compulsive Disorder, Pareting Attitudes, Perfectionism.

THE RELATIONSHIP BETWEEN COGNITIVE FLEXIBILITY AND SOCIAL ANXIETY IN ROMANTIC RELATIONSHIP VIOLENCE

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ABSTRACT

Objective: The aim of this study is to examine the relationship between the levels of violence in romantic relationships, cognitive flexibility levels and social anxiety of young adults. The period of young adulthood is considered important both because it includes university life where social ties are important and because it covers the periods when the first steps are taken into adulthood life and more and more new situations have to be adapted to. Adults encounter various people in both university and professional life. They try to get to know them and coexist with them, and sometimes have romantic relationships with them.

Material and Method: A total of 72 people aged 18-42 years participated in the study. Of the participants, 40 (56.3%) were female and 31 (43.7%) were male. The following scales were used as data collection tools: Demographic Information Form; Cognitive Flexibility Inventory (CRI); Romantic Relationship Rating Scale (RRRS); Liebowitz Symptoms of Social Phobia Scale (LSFPS)

Spearman Correlation Analysis; Kruskal Wallis U Test; Independent Groups t-Test; Mann Whitney-U Test were used to analyze the data.

Findings: The important findings of the study are as follows: There was a significant negative correlation between participants' cognitive flexibility and social anxiety; women's romantic relationship evaluation scores were significantly lower than men's.

Conclusion: The findings were discussed within the framework of the literature and suggestions for future research were presented. In order to obtain more comprehensive results, studies with larger sample groups are recommended.

Limitations: The limitation of the study is the low number of participants.

Keywords: Romantic Relationship, Violence, Cognitive Flexibility, Social Anxiety, Abuse

DEVELOPMENT OF A MODEL FOR DETERMINING APPROPRIATE HARDWARE REQUIREMENTS FOR MICROCONTROLLERS IN ELECTRONIC CONTROL UNITS

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ABSTRACT

Introduction and Purpose: The number and type of Electronic Control Units (ECU) in vehicles today are constantly increasing. The hardware features of each ECU are different. The same type of ECUs can be designed in different configurations. This situation causes microcontrollers with different hardware features to be used for each ECU. The use of microcontrollers with different hardware features can also complicate the software developed for ECUs.

Materials and Methods: The use of AUTOSAR software architecture largely avoids software complexity. However, different AUTOSAR software components must be used for different types of ECUs. By taking all these parameters into account in this study, the most appropriate hardware requirements for the microcontroller to be used in the ECU were determined. ECM, BCM, ADAS and BMS are taken as ECU types. When it is desired to design an AUTOSAR-based ECU, the necessary hardware requirements can be determined realistically by using this designed model.

Results: Since the model is designed as a generic, it enables different types of ECUs that may be added in the future to be easily added to the system and ECU-specific configuration can be made.

Discussion and Conclusion: In this way, when other ECU types and modules are added, hardware requirements for all electronic systems used in a vehicle can be determined and the electronic design of the vehicle can be made. In addition, project cost calculations can be made indirectly by determining the required microcontroller features and the modules to be used before the project begins.

Key Words: Electronic Control Units; AUTOSAR; Microcontrollers' requirements.

INVESTIGATION OF MECHANICAL AND THERMAL PROPERTIES OF ±45° ORIENTED CARBON AND GLASS FIBER REINFORCED POLYMER COMPOSITES

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ABSTRACT

Introduction and Purpose: This study evaluates the mechanical and thermal behaviors of ±45° oriented carbon fiber reinforced polymer (CFRP) and glass fiber reinforced polymer (GFRP) composites through flexural, ILSS, and DSC tests. The aim is to investigate the impact of fiber type on the composites' structural performance and thermal stability.

Materials and Methods: Composites were fabricated using vacuum infusion techniques with ±45° fiber orientation for both CFRP and GFRP. Flexural strength and interlaminar shear strength (ILSS) were tested according to ASTM standards. Differential scanning calorimetry (DSC) analysis was performed to determine the glass transition temperature (Tg), focusing on onset values.

Results: Flexural tests indicated a higher strength for CFRP (330 MPa) compared to GFRP (206 MPa). ILSS values for both composites were close, with CFRP at 14.5 MPa and GFRP slightly higher at 14.7 MPa. DSC analysis revealed onset Tg values of 80.7°C for CFRP and 82.7°C for GFRP, showing a comparable thermal performance with a marginal advantage for CETP.

Discussion and Conclusion: The results suggest that while CFRP exhibits superior flexural strength, GFRP provides slightly better ILSS and Tg performance. These findings underline the importance of selecting fiber types based on the specific mechanical and thermal requirements of applications. Both composite types demonstrate suitability for structural applications, with fiber orientation playing a critical role in their overall performance.

Key Words: Fiber-reinforced composites, Carbon fiber, Glass fiber, Flexural strength, ILSS, DSC analysis.

THE CONCEPT OF THE «PROMISED LAND» IN THE CONTEXT OF THE JEWISH HOLY BOOK COLLECTION

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Abstract

When we look at the Jewish holy book collection, we see that there are many places considered sacred. One of the holy places mentioned in the Torah (Torah) is the Promised Land, which was promised to the Prophet Abraham and his descendants. The Promised Land has great religious importance for the Jewish nation and has played a very important role in shaping the Jewish identity. This holy place, expressed with the concept of the Promised Land (promised land), has been addressed within the framework of the "covenant" made with the God Yahweh at different times in Judaism. The Promised Land is expressed in the Jewish holy book Torah as "the land of Canaan, the land of foreign lands, the good and spacious land, the land flowing with milk and honey, the land that is the adornment of all countries." The Promised Land was first promised to the Prophet Abraham and his descendants, and later the same covenant was made with his son Isaac. When we look at the Torah narratives, we see that a similar covenant was made with the prophets Jacob, Joseph, Moses and Joshua in later periods. On the other hand, possessing the Promised Land (the promised land) in return for this covenant, which has been repeated throughout history, was tied to certain conditions. Because the Children of Israel would earn the promise on condition that they fulfill the conditions of the covenant, otherwise they would be deprived of it. Therefore, in return for the promise, the descendants of Hz. Ibrahim would accept only Yahweh as God and every Jewish male would be circumcised. Again, different expressions stand out in the Torah regarding the boundaries of the Promised Land. While the boundaries were meant as "the land from the Nile River to the Euphrates River" in the covenant made with Hz. Ibrahim, in Hz. In the covenant made with Moses and Joshua, it was stated that "every place your feet will go will be yours." The purpose of this report, in which the descriptive method of the history of religions is used, is to explain the concept of the Promised Land in the context of the Jewish holy book collection and to try to present the concepts related to the subject.

Key Words: History of Religions, Holy Place, Arz-ı Mevud, Land of Canaan.

THE HIDDEN ACTOR OF GLOBAL WARMING: WATER VAPOR POLLUTION

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ABSTRACT

Introduction and Purpose: Studies on global warming generally focus on greenhouse gases such as carbon dioxide (CO2) and methane (CH4), but water vapor pollution is an important component of this process but has not been sufficiently investigated. This article aims to examine the effects of water vapor on global warming and the role of anthropogenic water vapor pollution on climate. How water vapor triggers feedback mechanisms in the atmosphere and the contribution of human activities to this process are analyzed.

Material and Methods: The article uses existing scientific data in the literature and climate modeling studies to evaluate the effects of water vapor on the atmosphere. Water vapor originating from natural processes is compared with human impacts originating from power plants, irrigation projects and industrial emissions. In addition, regional water vapor concentrations and their effects on climate are analyzed. In this process, data examining the effect of the amount of water vapor in the atmosphere on feedback mechanisms are used.

Results: The study reveals that water vapor is one of the most potent greenhouse gases in the atmosphere and creates a feedback loop that exacerbates temperature increases. Water vapor released into the atmosphere as a result of human activities causes imbalances in the climate system by changing the natural water cycle. Activities such as fossil fuel use, energy production and irrigation are the main human-induced factors that increase the water vapor density in the atmosphere. As a result, it has been observed that water vapor accelerates global warming by interacting with other greenhouse gases in the atmosphere.

Discussion and Conclusion: Water vapor should be considered as a hidden actor of global warming. Human-induced water vapor pollution accelerates global warming by triggering feedback mechanisms in the atmosphere. Therefore, controlling water vapor emissions can provide a new perspective in the fight against climate change. Policy makers need to take this element into account and develop measures to limit feedback mechanisms caused by water vapor. This study aims to make water vapor pollution more visible in climate change studies.

Keywords: Water Vapor Pollution, Global Warming, Greenhouse Gases, Climate Change

LANGUAGE TRAUMA AND THERAPEUTIC DISCOURSE: EXPLORING LINGUISTIC MICRO-AGGRESSIONS IN COUNSELING INTERACTIONS

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Abstract

The intricate landscape of counseling interactions reveals a profound yet often overlooked dimension of psychological intervention: the potent role of linguistic micro-aggressions. This research delves into the nuanced intersections of language, trauma, and therapeutic discourse, illuminating how subtle communicative patterns can significantly impact client psychological experiences. The importance of this research emerges from the critical need to comprehend language as more than a communicative tool, but as a dynamic mechanism of psychological experience. By exploring linguistic micro-aggressions, the study aims to unravel the complex communicative strategies that potentially reproduce psychological harm, focusing on subtle linguistic mechanisms that can either support or undermine therapeutic healing. The research confronts significant challenges within the framework of trauma and language, addressing critical gaps in understanding the manifestation of linguistic micro-aggressions in counseling interactions, the psychological impact of linguistic choices on client experiences, and the potential for linguistic patterns to reinforce existing traumatic narratives. Utilizing a robust mixed-methods approach in therapeutic discourse analysis, the study integrates qualitative discourse analysis of counseling interactions, narrative interviews exploring linguistic experiences, critical sociolinguistic theoretical frameworks, and psychological trauma interpretation models. Preliminary findings reveal multifaceted manifestations of linguistic micro-aggressions, including subtle power dynamics embedded in therapeutic communication, unintentional cultural disconnections, linguistic strategies that inadvertently marginalize client experiences, and communicative patterns that compromise therapeutic alliance and healing potential. The research substantially contributes to expanding theoretical understanding of language's psychological dimensions, developing innovative linguistic competence training, creating more inclusive and trauma-informed communication strategies, and providing practical interventions for mitigating linguistic re-traumatization. By critically examining the intricate relationship between language and psychological experience, this study offers transformative insights into counseling practices, emphasizing the profound importance of linguistic sensitivity in therapeutic interactions.

Keywords: Counseling, Language, Micro-aggressions, Psychological trauma, Therapeutic discourse

LEGAL PROFESSIONS AFFECTED BY INSECURE IT SYSTEMS

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Cybercrime has a negative impact on society in general and on the legal professions in particular.

The security of information provided by the client in electronic form depends on the concrete possibilities of the notary and lawyer's offices to store and manage it. Both the lawyer and the notary are bound to observe professional secrecy regarding any aspect of the case entrusted to them, except in cases expressly provided for by law, regardless of the manner in which the information is communicated.

A solution in this direction, to prevent and deter cyber attacks, would be the implementation of Regulation (EU) 2023/1543 of the European Parliament and of the Council, adopted on July 12, 2023, which will come into effect on August 18, 2026. This regulation addresses European orders for the disclosure and preservation of electronic evidence in criminal proceedings, as well as the execution of custodial sentences following criminal proceedings.

This paper aims to analyze how the professions of notary public and lawyer are affected by the insecurity of information systems, specifically in the context of the need to ensure the confidentiality of client data and the impact of the European rules adopted in this area.

LI-FI (LIGHT FIDELITY)

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ABSTRACT:

Li-Fi (Light Fidelity) is an emerging wireless communication technology that utilizes visible light for high-speed data transmission, presenting a revolutionary alternative to traditional Wi-Fi. Unlike Wi-Fi, which relies on radio waves, Li-Fi employs light emitted from light-emitting diodes (LEDs) to send and receive information, offering advantages such as enhanced bandwidth, improved security, and reduced electromagnetic interference. This paper explores the fundamental principles of Li-Fi technology, its operational mechanisms, and potential applications across various sectors.The core functionality of Li-Fi hinges on modulating light intensity at rapid speeds, imperceptible to the human eye, to encode data. This technology can deliver data rates significantly higher than current Wi-Fi standards, reaching speeds in excess of 10 Gbps in laboratory conditions. Moreover, Li-Fi is particularly advantageous in environments where radio frequency communication poses challenges, such as hospitals, aircraft, and underwater applications.The discussion includes the practical implications of Li-Fi in enhancing internet connectivity in densely populated urban areas and developing regions with limited access to traditional broadband services. Furthermore, the paper addresses the challenges associated with Li-Fi implementation, such as the need for direct line-of-sight and its performance limitations in varying lighting conditions.Through an analysis of current research and development trends, this paper highlights the future prospects of Li-Fi, suggesting that its integration with existing technologies could pave the way for a new era of high-speed, secure, and energy-efficient communication. As cities increasingly embrace smart technologies, Li-Fi stands out as a promising solution to meet the growing demand for fast and reliable internet connectivity in an increasingly digital world

Keywords: Li-Fi,led,wifi,electromagnetic

EXAMINATION OF POSTGRADUATE EDUCATION INTENTION LEVELS OF FACULTY OF EDUCATION STUDENTS

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ABSTRACT

Introduction and Purpose: The interest in postgraduate study, which is the next stage of undergraduate education, and the programs accepting students are on the rise. Thanks to the variety and prevalence of postgraduate programs that can be applied for, students of the Faculty of Education are also interested in postgraduate programs. Students who want to reach higher levels in their fields of expertise with postgraduate study have the intention to start postgraduate education while their undergraduate education continues. This study aimed to examine whether there is a difference according to variables that are thought to be effective in the level of postgraduate study intention.

Materail and Method: The data consists of the responses of 224 students studying at the Faculty of Education of a state university in the fall semester of 2024-25 to the Postgraduate Study Intention Scale developed by İlter (2020). In the study, the variables of gender, age, marital status, class level and general grade point average of the individuals were used as a factor each, and whether there was a difference in the level of Postgraduate study intention between the subgroups was examined with independent samples t-test, Mann Whitney U, ANOVA and Kruskal Wallis.

Results: It was observed that the level of postgraduate study intention did not differ significantly according to gender and marital status variables ($p>.05$). It was found that the level of postgraduate study intention differed generally according to age group ($p<.05$), but it was not significantly differentiated in the pairwise examination of the groups. It was found that the level of postgraduate study intention differed significantly according to the class level variable, the difference was in favor of the 1st class compared to the 2nd and 3rd classes and in favor of the 4th class compared to the 2nd class. It was observed that the level of postgraduate study intention differed significantly according to the grade point average variable, the difference was in favor of the 3.5-4 range compared to the 2.5-3 range in the pairwise examination.

Discussion and Conclusion: In this study, where the variables thought to affect the postgraduate study intention were taken as independent variables, it was concluded that the variables of age, class level and grade point average could be effective in this process. It can be thought that students start their postgraduate study intentions with high intentions and tend to decrease due to the difficulties they encounter in their undergraduate lives, and they tend to re-intend in the final year as their specialization becomes more apparent. The higher intentions of successful students are expected results in light of the literature.

Key Words: Postgraduate Study Intention; Faculty of Education; Pre-service Teacher

DESIGN OF EFFICIENT 37 GHZ MILLIMETER WAVE MICROSTRIP PATCH ANTENNA FOR 5G MOBILE APPLICATION

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Abstract:-
Millimeter wave (mmWave) wireless technology has become a part of human life for high-speed and secure data transmission. This paper presents a square-slotted microstrip patch antenna at 37 GHz resonant frequency for mmWave wireless communication. The antenna consists of one H-slot and one inverted T-slot loaded over the radiating patch. The proposed antenna has been designed and investigated on Rogers RT5880 substrate with relative permittivity 2.2 and loss tangent 0.0009 using Electromagnetic Simulation Software CST Microwave Studio. The result of this paper shows minimal return loss −43.05 dB, gain 8.18 dB, and impedance bandwidth 16.22% at 37 GHz resonant frequency. The voltage standing wave ratio (VSWR), E-plane, and H-plane radiation pattern has also presented for the proposed antenna which can be strong candidate for 5G mmWave cellular communication.

Keywords Fifth generation (5G) · Millimeter wave (mmWave) · Microstrip patch antenna · Wireless communication

MALE ENGAGEMENT IN FAMILY PLANNING PROGRAMS IN PAKISTAN: A STRATEIC PLANNING GUIDE

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Abstract:
Family planning is a major issue which has long been seen as a women's issue in Pakistan. It has led to the barring of men from relevent activities. Cultural and societal reduction that save the males from acquire family planning services further exaseorate this difficult situation. This study was examine the extent to which family planning services are available to men in Faisalabad metropolitan neighborhoods. It explores men's involvement in family planning service delivery, finds gaps in services currently available to men and men's views of these services' acceptability and accessibility. Finally, makes some suggestion to improve men's involvement and 49 service delivery to better meet men's needs. This study was conducted 50 respondents which consisting 17 key informant respondents of main state powered, 17 which are services respondents, and 16 respondents are married men conducted in-depth interviews. This study recommend the very limited bounding of men in family planning programs, primarily due to ingrained. Male healthcare professionals are discouraged from working with female colleagues at the community level due to behavioral and information-sharing hurdles. With the exception of NGO-led vasectomy projects, family planning programs fall short of meeting men's requirements. The policy is acknowledged, but it is not being implemented well enough. More male healthcare practitioners and more training to overcome stigma around contraception are needed to close the men's involvement gap. To effectively involve males in community and service delivery related to family planning, further study is needed. Since that very few males in Faisalabad participate in family planning, the idea that contraception is only the duty of women needs to be changed. Men can be participating in activities that are both beneficial to their health and not. Equitable family planning requires couple-centered, culturally aware services that are created with community engagement. Men's inclusion initiatives in service supply and utilization require further investigation. It is commonly acknowledged that men and women should participate in family planning decision-making as equal partners. Over the past 30 years, there have been more initiatives involving men, but the majority are still minor in scope. We must first comprehend how these programs were effective in enhancing outcomes linked to gender dynamics, family planning, and reproductive health in order to support the scaling up of these activities.

Key Words: Family Planning, Reproductive Healthcare, Gender Dynamics, Cultural and Societal Reduction.

ARRANGEMENT OF STUDENTS' INDEPENDENT WORK DURING THE STUDY OF PROFESSIONAL DISCIPLINES

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ABSTRACT

The ability of students to learn is important, which indicates that they have educational opportunities in order to successfully overcome difficulties in the process of independent assimilation of scientific knowledge. Considering this, it is necessary to solve the problem of organizing independent work in the process of professional training.

Independent work of students in the conditions of professional training traditionally includes the following types of educational activities: studying mandatory educational literature of a professional discipline, searching for additional literary sources in the library and the Internet; analysis of new information and its coding (compilation of schemes, tables, graphs); compilation of reviews, reports, theses; formation of information in an abstract form; preparation of messages and reports for seminars and practical classes; performing exercises and solving problems; performance of written control, laboratory works; performing tasks using interactive learning methods and information and communication technologies, etc.

Independent work is the main way for a student to master the material in his free time from mandatory classes, but its content is determined by the curriculum of the professional training discipline, methodical materials, tasks and instructions of the teacher.

Students should be ready to perceive an ever-increasing and updated flow of information. Instead of passive learning, it is recommended to independently search for it, the ability to analyze and apply it for self-improvement. Young people must master the techniques of independent collection, analysis, processing and synthesis of information.

The level of organization of independent work significantly affects the formation of students' persistent interest in educational professional disciplines, the degree of their cognitive activity and the process of mastering professional competences.

As a result of the study, it was concluded that for the successful professional training of students, it is necessary to ensure: positive motivation for independent educational activities of future specialists; clearly establish the tasks of independent work and the phased implementation of them; specify the deadlines and reporting forms; to provide systematic consultations and control over the performance of assigned tasks; to develop methodological support for independent work.

Keywords: independent work, students, professional training.

“HARNESSING NATURAL COMPOUNDS TO TACKLE ANTIBIOTIC RESISTANCE

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Abstract

The alarming rise in antibiotic-resistant bacteria has resulted in a big challenge to global public health. In response, the search for alternatives has increased interest in natural compounds from plants as a sustainable and effective alternative of bacterial. Plant-derived compounds represent an enormous source of bioactive molecules with antimicrobial properties, and most of them have shown great potential in trying to outsmart the bacteria in their resistance. The following review will discuss various plant-based compounds that have been used against multi-resistant bacterial strains, their mechanisms of action, their impact on bacterial viability, and their possible application as adjunctive or alternative agents to conventional antibiotics. Plant compounds such as alkaloids, flavonoids, terpenoids, and phenolic acids exhibit a wide range of antibacterial activities, targeting bacterial cell walls, disrupting membrane integrity, inhibiting protein synthesis, or interfering with essential enzymatic pathways. Many of these molecules also have the ability to modulate bacterial resistance mechanisms, thereby restoring the efficacy of existing antibiotics. Additionally, their natural origin makes them more environmentally friendly and biodegradable compared to synthetic antimicrobials. This review illustrates that what is needed, if the plant products are to be established as a realistic alternative in the fight against resistant

bacteria, is more research and development of the technology, especially on the clinical use of plant products as antimicrobials.

In conclusion, the exploration of plant-derived compounds holds immense potential for the development of novel therapeutic agents, offering sustainable and natural solutions to modern medical challenges.

Keywords: natural compounds, resistant bacteria, infections, public health

ASSESSMENT OF MINERAL COMPOSITION OF MANGO FRUITS (*MANGIFERA INDICA L.*)

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Abstract

Mango is found in *Anacardiaceae* family, genus *Mangifera* and Species *Mangifera indica,* which is an important fruit for human nutrition in many parts of the world. It is a tropical fruit widely accepted by consumers throughout the world for its succulence, sweet taste, and exotic flavor, being called the "king of fruits." The present study was carried out with the aim to determine mineral composition of mango (*Mangifera indica L.*) The fresh fruits were collected from "Aliero" Kebbi State, Nigeria. The standard method of Association of Analytical Chemists (AOAC) were used to assessed the mineral contents of *Mangifera indica L.* fruit. The result of mineral composition showed the content of calcium (8.6 mg/100g), iron (0.2 mg/100g), magnesium 10.4 mg/100g), phosphorus 11.2 mg/100g), potassium (185 mg/100g), sodium (0.2 mg/100g), zinc (0.7 mg/100g), copper (0.09 mg/100g), manganese (0.08 mg/100g), and selenium (0.3 mg/100g). The result of this study showed that the fruit is a good source some minerals, which are chemical elements that are essential for the body to function and develop normally. They perform many important functions, including: Building bones and teeth: Calcium and phosphorus are essential for healthy bones and teeth. Regulating body fluids: Sodium, potassium, and chloride help maintain water balance and the correct pressure between cells and their surrounding fluids. Turning food into energy: Minerals help release energy from food.

Keywords: Mango, Mineral, Calcium, Potassium, Fruit.

MARINE DERIVED PRODUCT FOR COSMECEUTICALS

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ABSTRACT

Marine-derived products have garnered significant attention in the cosmeceutical industry due to their unique bioactive compounds, which offer a range of benefits for skin care and anti-aging formulations. These marine ingredients, sourced from marine organisms such as algae, seaweed, sponges, and fish, are rich in essential nutrients like antioxidants, vitamins, minerals, fatty acids, and peptides that promote skin health. The bioactive molecules found in these marine products exhibit anti-inflammatory, moisturizing, and anti-aging properties, making them valuable in combating skin aging, wrinkles, pigmentation, and other dermatological conditions. Marine polysaccharides, such as alginates and carrageenans, have been shown to enhance skin hydration and protect the skin barrier. Additionally, marine peptides, including those derived from fish collagen, stimulate collagen production and improve skin elasticity. Marine oils, such as those from algae and sea buckthorn, are rich in essential fatty acids that help nourish and repair the skin. The use of marine-derived products in cosmeceuticals represents an exciting trend, offering novel, sustainable, and eco-friendly alternatives to traditional ingredients. As research continues to explore the full potential of marine bioactives, these ingredients are poised to play an increasingly important role in the development of advanced skin care solutions.

Keywords: Marine-derived products, cosmeceuticals, bioactive compounds, anti-aging, skin hydration.

THE ROLE OF FAIRY TALES IN RAISING CHILDREN IN LINE WITH NATIONAL-SPIRITUAL VALUES IN THE CONTEMPORARY EDUCATION SYSTEM

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Abstract

Fairy tales have an incredible effect on the upbringing and education of the young generation. Unfortunately, this effective tool that brings together all the values is not sufficiently utilized in the education system. In general, homework is given for children to read with their parents in addition to the lesson. This usually causes us to not get enough results. When we look at the world experience, we can see what Anderson's Fairy Tales are capable of in Germany's current development and unity. At the same time, it should not be ignored that the family values, honesty and truthfulness, and human values that still live in Azerbaijan continue thanks to the children of yesterday who grew up with fairy tales. The same applies to Turkish literature. Indeed, Turkish literature, which has a rich folklore, continues to maintain its attachment to fairy tales today. The activities and influence of the Turkish immigrant writer Yücel Feyzioğlu, who lives in Germany, once again reveal how important fairy tales are. The functionality of fairy tales in child education has been determined by many pedagogues and children's literature writers in the world. These determinations are based on the fact that every nation had fairy tales about every subject and these fairy tales entertained and educated people and told them about life and themselves. In this sense, psychologists also have important determinations about fairy tales. According to psychologists, there are two characters and personalities inside a person that struggle with each other. One of these is the person himself, and the other is the secret self that he hides inside, even makes live imaginary, and wants to be. These two selves appear in almost all fairy tales. They struggle and everything ends happily. This is a magical world that is in line with human nature and reflects their inner world. Apparently, storytellers saw how powerful a fairy tale is in the formation of human character long before psychologists and pedagogues. Fairy tales with such a rich effect and structure should be placed in classrooms and in the formation of children's characters. Fairy tales have important functions in helping children recognize cultural values and balance their behaviors in society as social beings.

In our research, the ideas of German, Azerbaijani and Turkish pedagogues and psychologists about fairy tales and their views on the functionality of fairy tales are compared and analyzed.

Keywords: Fairy tale, pedagogy, psychology, German, Azerbaijani, Turkish

SAFEGUARDING OF FINANCIAL FREEDOM THROUGH INVESTMENT STRATEGIES: A CONCEPTUAL FRAMEWORK FOR NAVIGATING ECONOMIC UNCERTAINTIES

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Abstract

In today's unpredictable economy, achieving and maintaining financial freedom is a top priority for many individuals and organizations. This research paper provides a comprehensive framework for understanding how to reach financial freedom and how to protect it through wise investment decisions. The paper is divided into three main sections: the first section discusses the basics of financial freedom and financial literacy, the second section outlines the steps to achieve financial freedom, and the third section focuses on safeguarding strategies for maintaining financial freedom in various economic conditions. The article emphasizes the importance of personal financial planning, including setting clear financial goals, creating a budget, saving money, and investing wisely. The paper also stresses the need for diversification and staying informed about market changes to ensure the best chances of success. In conclusion, the paper offers a practical approach to securing financial freedom by combining strategic investments, a solid contingency plan, and a commitment to financial literacy. It suggests that by investing in a mix of real estate, peer-to-peer lending, and dividend stocks, individuals can build a resilient financial foundation that can withstand economic fluctuations and secure their financial independence for the future.

Keywords: Financial Literacy, Financial Freedom, Personal Budgeting, Real Estate, Safeguarding Strategies.

MEDICAL EDUCATION IN MARDIN BIMARISTAN

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Abstract

Aim: Bimaristan, built in the Artuklu district of Mardin during the Artuklu period, which served as a hospital and medical school for many years and some of which still stand today, has a critical importance for medical history. This study aims to investigate the place of Mardin Bimaristan in medical history and its current status.

Method: The place of Mardin Bimaristan in medical history and its current status were determined through literature review and field studies.

Results: During the reign of Artuklu Meliki Necmeddin İlgazi (1108-1122), a social complex was built in the Maristan Neighborhood of Mardin in the name of Emineddin and his brother İlgazi. This social complex also included a hospital and became a famous health center of the period. These developments are an indication that Mardin was a center of science and culture at that time. Fahrü'l-Mardinî, one of the physicians trained during the time of Necmeddin İlgazi, learned Ibn Sina's work "Kanun fi't-Tıb" and worked in Mardin for a long time. There was a rich medical library. Other important physicians known in Mardin include İbnü's-Salâh and Necmeddin İbnü'l Minfahı. In addition, in 1164, Dioskorid of Anazavar's work "Materia Medica" was translated from Syriac to Arabic by the Artuqids and kept in a library. The Emineddin Complex is a complex consisting of a hospital, madrasah, mosque and bathhouse. However, over time, the hospital was ruined or destroyed. Today, the mosque, madrasah and bathhouse sections of the complex are still standing. It is thought that the hospital was in the area where the complex is located or nearby.

Conclusion: Mesopotamia, one of the regions where the oldest civilizations were established in history, has an important place in medical history and medical education. It should be known that medical education was given and patients were treated successfully in Mardin Bimaristan, which was established in the 12th century.

Keywords: Bimaristan, medical history, medical education, Mardin.

NOSTALGIA IN THE ARTHURIAN LEGEND: BRIDGING PAST IDEALS AND PRESENT REALITIES

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Abstract

Nostalgia plays a significant role in the tales of King Arthur and Camelot, creating a connection between the past and the present. It evokes a longing for an idealized time characterized by chivalry, heroism, and noble ideals, inviting us to envision a brighter future rooted in these cherished values. The Arthurian legend is often reinterpreted in literature and media to align with contemporary concerns. For instance, the musical "Camelot" portrays this kingdom as a moment of splendour, highlighting the clash between cultural fantasy and historical reality. In a poignant conclusion, King Arthur urges a young boy to remember the story of Camelot, underscoring the importance of preserving these ideals for future generations. The ongoing fascination with King Arthur in popular culture reflects how these narratives resonate deeply with audiences, offering a romanticized view of the past that contrasts with the complexities of modern life, providing both comfort and inspiration.

Keywords: Medieval Nostalgia, Medieval Culture, Medieval England, Camelot.

SYNTHESIS OF NEW DERIVATIVES OF ASADINES CONTAINING 4-OXOTHIAZOLIDINE RING

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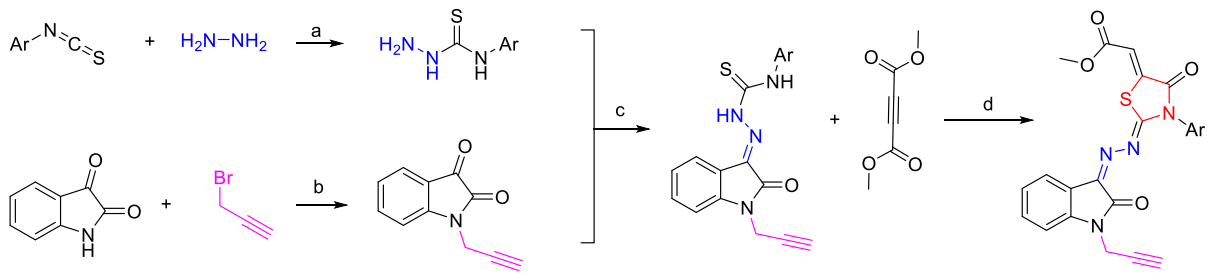
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ABSTRACT

Isatin has been widely used in drug discovery. Many natural organic compounds contain this ring and are used by researchers to design new medicinal compounds with diverse biological activities. The isatin ring has multiple biological activities such as anticancer, anti-inflammatory, antiviral, anticonvulsant, antituberculosis, antidiabetic, antimicrobial and many more. Thiazolidine is one of the privileged structures in medicinal chemistry considering its wide range of pharmaceutical spectrum and affinity for various bio targets. Thiazolidines derivatives especially 4-oxothiazolidine, numerous compounds carrying this template have been reported to have a broad spectrum of bioactivity. 1 which include anticancer, anti-HIV, antihypertensive agents, antitumor, antiproliferative agents, antibacterial, and etc.



Scheme 1. Genel synthesis method. a) EtOH, rt, 3h. b) DMF, K_2CO_3. c) EtOH, CH_3COOH, rt 5h. d) MeOH, reflux 8h

In this study, with the aim of synthesizing new drug-like compounds, isadiene derivatives containing a novel oxathiazolidine ring were synthesized through a multi-step reaction process. Initially, Isatin was reacted with Propargyl Bromide, then, Isothiocyanate was reacted with Hydrazine to produce Hydrazine derivatives. Azomethine intermediates were then formed by reacting Acetyl isatin with the Isothiocyanate derivatives, In the final step, the oxathiazolidine ring was synthesized by reacting azomethine derivatives with Dimethylacetylenedicarboxylate (DMAD). The structural characteristics of the synthesized compounds were proven by ^{1}H-NMR, ^{13}C-NMR, FT-IR and HR-MS analysis.

Keywords: Isatin, Thiazolidine, Synthesis

CHROMATOGRAFIC PARAMETERS IN EVALUATION OF THIOCARBOHYDRAZONES' LIPOPHILICITY AND PHARMACOKINETICS

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ABSTRACT

Introduction and Purpose: Thiocarbohydrazones are azomethine compounds formed by the condensation of thiocarbohydrazides with aldehydes or ketones. Thanks to the presence of nitrogen and sulfur in their structure, thiocarbohydrazones exhibit specific chemical reactivity, making them a subject of research in various scientific fields due to their potential applications. They are particularly significant for use in medical research, especially because of their antimicrobial, anticancer, and antioxidant properties. Modern research is focused on studying and establishing the relationship between a molecule's structure and its physicochemical properties, as well as biological activity. The parameters used to describe these relationships are called molecular descriptors. Among the numerous molecular descriptors, one of the most commonly applied to assess the potential biological activity of a compound is lipophilicity. Lipophilicity of a substance affects the ADME processes (absorption, distribution, metabolism, and elimination), which are fundamental to its pharmacokinetics. Understanding the relationship between lipophilicity and pharmacokinetics is essential for optimizing drug design and improving therapeutic efficacy.

Materials and Methods: Using reversed phases thin-layer chromatography (RPTLC), the chromatographic parameters of synthesized tiocarbohydrazone derivatives were determined. Ethanol solutions of the tested compounds at a concentration of 2 mg/cm³ were applied to commercial chromatographic plates RPTLC C18/UV254s (Macherey–Nagel, Germany). The chromatograms were developed in mixtures of water – 1-propanol and water –acetone. The chromatograms were developed using a one-dimensional ascending technique, without prior saturation of the chromatographic chamber's atmosphere with organic modifier vapors, varying the volume fraction in the range of φ = 0.36–0.52. After development, the chromatographic plates were dried at room temperature, and the studied compounds were identified under UV light at a wavelength of λ = 254 nm, where dark spots appeared on a fluorescent background.

Results: The study investigated the correlation between the chromatographic parameters R_M^0 and m (alternative measure of lipophilicity) and the partition coefficient log$P$ (standard measure of lipophilicity), along with selected pharmacokinetic predictors, by using linear regression analysis. Satisfactory values of the regression coefficient have been obtained.

Discussion and Conclusion: Retention behavior is to a small extent conditioned by the applied organic modifier, while to a greater extent it depends on the type of substituent. Linear dependencies were obtained between R_M^0-log$P$ and log$P$-m, as well as between log$P$ and pharmacokinetic predictrors. All the obtained results indicate that TLC can be successfully and reliably used for evaluation of the lipophilicity and pharmacokinetics of thiocarbohydrazone derivatives.

Key Words: Thiocarbohydrazones; reversed phase thin-layer chromatography; lipophilicity; ADME

MENTAL HEALTH AND PHYSICAL HEALTH

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ABSTRACT:

There is a strong link between mental health and physical health, but little is known about the pathways from one to the other. We analyse the direct and indirect effects of past mental health on present physical health and past physical health on present mental health using lifestyle choices and social capital in a mediation framework. We use data on 10,693 individuals aged 50 years and over from six waves (2002–2012) of the English longitudinal study of Ageing. Mental health is measured by the Centre for Epidemiological Studies Depression Scale (CES) and physical health by the Activities of Daily Living (ADL). We find significant direct and indirect effects for both forms of health, with indirect effects explaining 10% of the effect of past mental health on physical health and 8% of the effect of past physical health on mental health. Physical activities is the largest contributor to the indirect effects. There are stronger indirect effects for males in mental health (9.9%) and for older age groups in mental health (13.6%) and in physical health (12.6%). Health policies aiming at changing physical and mental health need to consider not only the direct cross-effects but also the indirect cross-effects between mental health and physical health.

Keywords: Mental health , Physical health , Mediation analysis , Older population

PRE-SERVICE CAREGIVERS CONCEPTION OF MENTAL HEALTH IN EARLY CHILDHOOD EDUCATION: A PARTICIPATORY DEVELOPMENT APPROACH

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Abstract
The full potentialities of individuals for purposeful life and economic development are developed at the early childhood years. Thus, early childhood years of life is considered to be the most crucial stage of a person's developmental journey (World Health Organization [WHO], 2015). The WHO further states that the language, cognitive, socioemotional, and physical domains of development are all included in healthy early childhood development. Since Early Childhood Development (ECD) has a substantial impact on a child's mental health and overall wellbeing throughout their life, these factors are equally important and have a big impact on a nation's economic burden (United Nations [UN], 2015). Additionally, since it was incorporated into the Sustainable Development Goals (SDGs) of the UN, ECD has drawn a lot of attention. However, it is projected that 10.5 million children in economic hardship die before the age of five from preventable causes, and 43% of children living in low- and middle-income nations are at danger of not attaining their developmental potential (Black et al., 2017; WHO, 2015). As a result, supporting children's socioemotional growth in ECD along with other developmental domains helps to maintain their mental health and general well-being, enabling them to realize their full potential throughout their lives. The article therefore, will use the Participatory Development Approach (PDA) to examine the research on early years mental health. Additionally, the study findings validate pre-service caregivers' conception about mental health and perceive children's conduct during emotions.

Keywords: Pre-Service Caregiver, Mental Health, Early Childhood Education.

AN ALLEGORICAL EXAMPLE FROM THE CONSTITUTIONAL PERIOD TURKISH THEATRE: *HAK VE KUVVET*

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ABSTRACT

Turkish theatre, which gave its first examples with the Reform Era and followed a socio-political line from the beginning, entered a period of stagnation after the Gedikpaşa Theatre was demolished by the order of Abdulhamid II in 1884. Following the declaration of the Second Constitutional Monarchy in 1908, the art of theatre was revived. Works discussing social change, fundamental freedoms and administrative reforms became more frequent on the stage, and plays became an important form of political expression. This understanding was carried even further in the process leading to the declaration of the Republic: Individual freedoms and freedom of thought came to the fore, and theatre was used as a way of expressing these freedoms. Criticism against the Ottoman period, especially the period of Abdulhamid II, and negative political messages about the old regime found their place in theatre works. During this period, theatre became not only a stage art, but also an important propaganda tool defending social, political and cultural changes.

Born in 1898 in the Reyhaniye district of the Harim district of the Aleppo province, the Circassian poet and writer Ömer Hilmi Tsey's first book, *Hak ve Kuvvet-Mudhikeli Fecia* (*The Truth and The Force-A Tragic Play*), is a play that is in line with the political-artistic atmosphere outlined above. The play, which was first published in January 1923, brings to the stage with an allegorical narrative the unjust practices during the reign of Abdulhamid II, the oppressive administration that restricted fundamental rights and freedoms, and the declaration of the Constitutional Monarchy. In the play, in which "Disgrace" is clearly shown to represent Abdulhamid II, the other allegorical concepts and emotions that make up the main cast are "Virtue", who first became an exile and then the president of the republic; "Truth", the father of Freedom; "Freedom", who was first a captive in the hands of Disgrace and then free; "Strength", who first became a tool for Disgrace and then for Virtue and finally committed suicide; "Ignorance", the father of Strength and the guardian of the Abode of Darkness; "Nationality" and "Humanity", the two lovers of Freedom, who were saved by Virtue while under the domination of Disgrace and in the clutches of Disgrace; "Truth", who is imprisoned in the mind; "Ambition", the head of the Court of Despotism and the members of the court of despotism; "Hatred", "Benefit", "Treason", "Malice", "Bribery", "Hypocrisy", "Sedition", "Evil", "Insult", "Scorn" and "Enmity", and all the characters in the cast are represented in accordance with the spirit of an allegorical tragedy, without going beyond the framework of the concepts and emotions they bear.

Key Words: The Constitutional Period Turkish Theater, Ömer Hilmi Tsey, *Hak ve Kuvvet*, allegory, tragedy.

"ICTAL-INDUCED CARDIOVASCULAR DISEASE AND ASSOCIATED NEUROLOGICAL COMORBIDITIES: A META-ANALYTICAL APPROACH"

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Abstract

Epilepsy, impacting over 50 million individuals globally, poses a substantial risk of sudden unexpected death, with SUDEP. Notably, a history of epilepsy is associated with a 21% incidence of heart disease, significantly higher than the 12% observed in those without epilepsy. Heart disease is 2.4 times more prevalent among epilepsy patients aged 18-44 years, reaching 25.6% compared to 11.5% in those without epilepsy. Research into the "Epileptic Heart" syndrome reveals structural and autonomic changes in the heart linked to chronic epilepsy, leading to increased susceptibility to fatal arrhythmias. Studies using electrocardiography (ECG) and heart rate variability (HRV) assessments have identified significant abnormalities, including elevated QTc and QTd values, particularly among refractory epilepsy patients, suggesting heightened SUDEP risk in this subgroup. Autonomic dysfunction, characterized by sympathetic overactivity, has been implicated in cardiac fibrosis and arrhythmogenesis, contributing to cardiovascular complications in epilepsy.

The concept of an "ictal-Heart Syndrome" is supported by data showing that nearly 9% of epilepsy patients experience cardiovascular events (CVEs) within 30 days following ictal episodes, with rates varying across age groups. Those who suffer early CVEs face elevated long-term risks of hospitalization and mortality compared to individuals without epilepsy-related CVEs. Moreover, individuals with epilepsy have a 2–3 times higher risk of premature death, with SUDEP accounting for 2–18% of epilepsy-related deaths.The integration of routine cardiac evaluations, including resting 12-lead EKG and ambulatory EKG patch recording, into epilepsy management is crucial for detecting and managing cardiac issues associated with seizures. This multidisciplinary approach aims to optimize outcomes and reduce premature mortality by addressing cardiac comorbidities in epilepsy patients. These findings underscore the urgent need for comprehensive care strategies tailored to mitigate cardiovascular risks and improve long-term prognosis in this vulnerable population.

Keywords: Epilepsy, SUDEP, Cardiovascular disease, Ictal-Heart Syndrome, Autonomic dysfunction, Sudden cardiac death, Electrocardiography (ECG), Heart rate variability (HRV), Cardiac evaluation, Multidisciplinary care.

APPLICATIONS OF MOLECULAR GASTRONOMY: THE CASE OF OLIVE OIL

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ABSTRACT:
Olive oil, which has a very ancient history in gastronomy and human history, holds significant value as a crucial component in global and regional cuisines due to its taste, aroma, fragrance, and health benefits. The use of olive oil in molecular gastronomy aims to process this essential ingredient through various techniques to create new presentations and flavors. Molecular gastronomy, which has long been a prominent field in gastronomy, is an area where scientific principles are applied in the preparation and cooking of food. By altering the physical structures of ingredients, it enables the presentation of unique tastes, textures, and visuals. It offers creative and scientific solutions, allowing chefs to analyze cooking processes from a scientific perspective and develop new techniques that foster creativity and innovation. In doing so, it elevates guest experiences to a higher level and introduces a new dimension to dining. The use of olive oil in molecular gastronomy includes methods that aim to create new presentations and flavors by applying different techniques to this vital ingredient. Through the scientific methods and techniques offered by molecular gastronomy, changes in the physicochemical and biochemical properties of olive oil lead to the development of visually and flavorfully innovative presentations. This study explores how olive oil, which has a wide significance and range of uses in gastronomy, can be utilized within the framework of molecular gastronomy's creative and scientific solutions. It examines exemplary applications, recipes, and experiments conducted globally in this field.

Keywords: Molecular Gastronomy, Olive Oil, New Trends in Gastronomy.

AZERBAIJAN'S ALPHABET CHANGE AND ITS EFFECTS ON TURKEY

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ABSTRACT

Alphabet discussions in Azerbaijan and Turkey began at approximately the same time. The discussions that began in the Ottoman Empire in recent years continued during the years when the Republic of Turkey was founded. However, the alphabet issue did not remain only within the borders of the Republic of Turkey; it also came to the agenda in the Turkish States living in the Union of Soviet Socialist Republics after the Bolshevik Revolution in World War I and the collapse of the Tsarist regime. The alphabet discussions among Turkish communities were similar to the ideas and criticisms expressed in the Ottoman Empire. After a few attempts at the alphabet in Azerbaijan, the First Baku Turkology Congress was held in 1926, at a time when efforts to adopt an alphabet based on the Latin alphabet increased. The decision taken at the congress that the Turkish communities living in the USSR should switch to the Latin alphabet contributed to the process of switching to the Latin alphabet in Turkey and was also effective in the acceptance of the Latin alphabet. One of the results of the Baku Congress that affected Turkey was that some Turkist intellectuals changed their ideas about the alphabet. Those who did not support the adoption of the Latin alphabet in Turkey, claiming that the Turks in Russia also used Arabic letters and that there would be a gap if Turkey adopted the Latin alphabet, changed their views after the Turkology Congress. Azerbaijan, which adopted the Latin alphabet before Turkey, It has also set an example for Turkey in this regard. However, although Azerbaijan adopted the Latin alphabet before Turkey, the process did not progress as it did in Turkey and it was forced to switch to the Cyrillic alphabet again. The USSR government, which changed its attitude on this issue after the Republic of Turkey adopted the Latin alphabet, acted in accordance with its main purpose in the following period. As a result, during the Stalin Era, it was claimed that the Latin alphabet was not sufficient to bring other nations closer to the culture of the great Russian people, and the new alphabet was abandoned in 1939. In the following process, in accordance with the policies of the USSR, all Turks were forced to switch to the Cyrillic alphabet, and it was announced that Azerbaijan would switch to the Cyrillic alphabet as of January 1, 1940. This study examines how the alphabet change in Azerbaijan affected Turkey and the changing policies of the USSR after the alphabet change in Turkey.

Keywords: Azerbaijan, Turkey, Arabic Alphabet, Latin Alphabet, USSR, Turkology Congress

AWARENESS OF THE PRINCIPLES OF BODY MECHANICS IN NURSING STUDENTS: EXAMINATION OF MUSCULOSKELETAL PROBLEMS, PAIN AND FATIGUE

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ABSTRACT

Introduction and Purpose: Body mechanics is about the efficient use of muscles, joints and bones during actions such as lifting, bending or standing. Improper use can lead to musculoskeletal problems, pain and fatigue, especially in physically demanding occupations such as nursing. The aim of this study is to investigate nursing students' understanding of body mechanics concepts and their relationship to musculoskeletal problems, pain and fatigue.

Materials and Methods: This descriptive study was conducted with 327 nursing students studying at a public institution between January and November 2024. Data were collected via an online survey using the Chalder Fatigue Scale (CFS), the Cornell Musculoskeletal Discomfort Questionnaire (CMDQ), the Short-Form McGill Pain Questionnaire (SF-MPQ), and the Body Mechanics Awareness Form. The survey assessed physical fatigue, pain and state of consciousness.

Results: The study included a total of 327 nursing students, the majority of whom were female (72.8%), with a mean age of 21.5 ± 2.1 years. Of the participants, 43.4% reported having received no training in basic body mechanics, and 31.9% reported not knowing the principles of body mechanics. However, 98.8% considered the principles of body mechanics to be important. When asked about their level of knowledge, only 39.1% reported that they had sufficient knowledge of body mechanics. During clinical procedures, 73.4% of participants reported pain, mainly in the neck (44%) and lower back (64.2%), and 57.4% stated that this pain affected their work performance. In addition, 32.7% stated that they felt constantly exhausted due to the high workload and long work routines. Although 98.8% recognized the importance of body mechanics, only 21.1% consistently applied the correct principles when lifting objects. In addition, 67.9% of participants reported pain according to the Short-Form McGill Pain Questionnaire, while 31.8% reported problems related to fatigue on the Chalder Fatigue Scale.

Conclusion: In this study, although a large majority of nursing students recognized the importance of the principles of body mechanics, only a small proportion consistently applied these principles correctly and regularly. Pain, particularly in the neck and lower back, and problems

related to pain and fatigue were commonly reported during clinical procedures. These findings highlight the need to raise awareness of body mechanics principles among nursing students to protect their physical health and improve the sustainability of their careers and emphasize the importance of strengthening such educational programs.
Keywords: Body mechanics, nursing students, pain, fatigue

PROMOTER ACTIVITY OF NLP1 AND NLP7 GENES IN PHASEOLUS VULGARIS DURING SYMBIOSIS WITH RHIZOBIUM TROPICI

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ABSTRACT

NIN-like proteins (NLPs), are a family of transcription factors composed by the presence of the RWP-RK domain, PB1 domain, and GAF-like domain. NLPs play different roles in plant responses to abiotic, drought, and cold stresses; nitrate sensors, rhizobial symbiosis processes, and nitrogen sensing and signaling mechanisms, plant development, among others. NLPs are present in legumes and non-legumes. Likewise, they play different roles and govern diverse physiological responses in plants. The objective of this work is to locate the expression site of the NLP1 and NLP7 genes in the symbiosis with *Rhizobium tropici* CIAT 899. To localize the expression of the *Phaseolus vulgaris* NLP1 and NLP7 genes we took the promoter region of each gene and cloning into the expression vector pBGWSF7.0. The empty pBGWSF7.0 vector was used as a control. Then, we generate transgenic aerial hairy roots on the plants through infection with *Agrobacterium rhizogenes* K599 following an established protocol. After that, each construction plant was transplanted into sterile vermiculite and inoculated with the *R. tropici* CIAT 899 wt strain. The phenotype was observed twenty-eight days post-inoculation under GUS-stained treatment. Our preliminary results showed that the NLP7 promoter is active in the nodule formation, in contrast with the NLP1 gene promoter, where the expression signal was absent during all the nodule formation steps. Interestingly, we observed a high and uniform expression signal of NLP7 in all the nodule structures, suggesting an important structural role. Furthermore, research is necessary to establish the complete participation of the NLP7 gene in *P. vulgaris* in symbiosis with R. tropici. We thank to the DGAPA scholarship to M.L.S; PAPIIT-UNAM for partially funding this research through grant no. IN217724 to K.N and IN208424 to M.K.A.

Keywords: *Phaseolus vulgaris*, Nodule development, NIN-like proteins, plant development.

DOUBLE ETL HETEROSTRUCTURE WITH SPIKE-CLIFF CONFIGURATION TO BOOST THE EFFICIENCY OF DOUBLE PEROVSKITE SOLAR CELL

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Abstract

In this study, diverse structures for electron and hole transport were engineered within perovskite solar cells to address the challenge of balancing carrier mobility. Achieving a balance in electron and hole mobility's could effectively avoid carrier recombination within the cells, thereby enhancing their overall performance. A simulation comparison of the perovskite devices that employed a single ETL and a single HTL with that employed dual ETLs has been carried out using 1D-SCAPS numerical simulator which solves the 1D semiconductor equations under steady state conditions. In this context, new structures of perovskite solar cells with dual ETLs are proposed to investigate the influence of the ETL on balanced carrier mobility as well as the current density and power-conversion efficiency.

This study reveals that perovskite solar cells with dual ETLs and experienced a significant increase in both current density and power-conversion efficiency. The results of this study demonstrate the achievement of a highly efficient perovskite solar cell (PSC) with notable performance metrics. The PSC achieved a power conversion efficiency (PCE) of 25.49%, a Voc (open-circuit voltage) of 1.23 V, and a fill factor (FF) of 80.15%. These impressive results were obtained through a numerical optimization process that focused on various materials design, including $PC_{60}BM$, SW_2, as ETLs materials.

These findings are extremely promising and highlight the potential of Cs_2TiBr_6 for use in efficient and environmentally friendly solar applications. The outcomes of this study not only contribute to our understanding but are also likely to inspire further research into lead-free perovskite solar cells.

Keywords:SCAPS1D, Spike-Cliff configuration, Perovskite solar cells,performance.

CAUSES OF BUILDING COLLAPSE IN NIGERIA: THE ESTATE SURVEYOR AND VALUER'S PERSPECTIVES

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Abstract

Cases of building collapses in Nigeria have become a rampant and devastating phenomenon, causing the disheartening loss of lives, property, and investments. This ugly trend has generated diverse expert opinions and comments on how the situation could be reversed. This paper interrogates the underlying causes of building collapses in Nigeria, highlighting the contributory roles of poor construction practices, substandard materials, weak regulatory frameworks, and disregard for professional advice. It highlights the crucial and important role of estate surveyors and valuers in toward addressing these challenges through their expertise in property valuation, risk analysis, and project feasibility studies. The study engages in the discourse of ways through which estate surveyors and valuers can mitigate the risks of building collapse by ensuring proper site selection, material evaluation, and strict adherence to building codes. It further emphasises the importance of collaboration between estate surveyors, regulatory authorities, and construction professionals in enforcing standards. The findings underscore the urgent need for training and retraining, and awareness campaigns to empower professionals and stakeholders in tackling this persistent problem. It submits that efforts to address the incessant building collapse in Nigeria cannot bring forth any fruitful result unless all hands are on deck. Among the recommendations are: adopting stringent compliance mechanisms, leveraging technology for monitoring, and ensuring ethical practices within the built environment sector.

Keywords: Building collapse, Estate surveyor, Valuation, Risk analysis, Compliance.

EFFECT OF DIFFERENT SOWING RATES AND NITROGEN DOSES APPLICATIONS ON GRAIN YIELD IN EINKORN WHEAT (Triticum monococcum L.)

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ABSTRACT

Aim: In recent years, due to the increasing impact of global climate change and changing demands among consumers, the demand for local wheat has increased. However, there are very few studies on the sowing rate and nitrogen dose of local wheat such as einkorn wheats. The aim of the study was to determine the most appropriate sowing rate and nitrogen dose by comparing the yield and quality of einkorn wheats and the most commonly cultivated bread wheat at different sowing rate and nitrogen doses.

Meterial and Method: The study was carried out using einkorn wheat obtained from the Field Crops Central Research Institute in 2023 and 2024. It was carried out in Tekirdağ ecological conditions with 4 different sowing rates (400, 450, 500 and 550 seed m^2) and 10, 15 and 20 kg/da pure nitrogen application according to the split plot experimental design with 3 replications. 25 kg/da 20.20.0 fertilizer was applied to all plots together with sowing.

Results: When different sowing rates were examined, the highest grain yield was 187.16 kg/da with 450 seeds/m². The lowest grain yield was obtained with 166.11 kg/da in the highest seed amount of 550 seeds/m² per square meter. When the effect of different nitrogen doses on grain yield was examined, the highest grain yield was obtained with 193.66 and 192.70 kg/da in nitrogen doses of 15 and 10 kg/da. Since the obtained values are in the same statistical significance group, it is understood that the lowest nitrogen dose of 10 kg/da pure nitrogen application is sufficient in einkorn wheat production. The lowest grain yield was obtained with 146.33 kg/da in the highest nitrogen application of 20 kg/da pure nitrogen.

Conclusion: The obtained data show that the use of 400 seeds/m² is sufficient for einkorn wheat with a long plant height, and that when the amount of seeds increases, the yield decreases, especially when 550 seeds/m² is used, there is a yield loss of more than 25 kg per decare. In other words, the grain yield decreases by 8%. It was also determined that 10 kg/da nitrogen application is the most economical and advantageous nitrogen dose.

Keywords: Grain yield, sowing rate , nitrogen dose, einkorn wheat

DEVELOPMENT AND VALIDATION OF AN HPLC METHOD FOR MOXIFLOXACIN HCl ACTIVE SUBSTANCE IN BULK AND PHARMACEUTICAL FORMULATION

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ABSTRACT

Introduction and Purpose: The active ingredient moxifloxacin is a broad-spectrum antibiotic with an effect on DNA gyrase and topoisomerase IV enzymes. The aim of the present study was to develop and validate a High-Performance Liquid Chromatography (HPLC) method for the determination of moxifloxacin in drug substances and *in situ* gel.

Materials and Methods: A mixture of 10 mM KH_2PO_4 and acetonitrile (70:30) (v/v) was used as mobile phase. The column was GL-Sciences İnter sustain C18 column (250x4.6mm with 5µm particles). The eluent was monitored with UV detection at 295 nm, flow rate was set to 1 mL/ min and the column temperature was kept constant at 25 °C. The method was validated partially with respect to system suitability, linearity, limits of detection (LOD) and quantitation (LOQ), precision, accuracy, specificity, selectivity and stability.

Results: Obtained results showed that the analytical method had good linearity, accuracy, precision, selectivity and stability. Analytical method development results indicated that the LOD was 0.005 µg/mL; LOQ was 0.014 µg/mL and assay exhibited a linear range of 5- 200 µg/mL.

Discussion and Conclusion: According to the results obtained, the calibration curve of the active ingredient of moxifloxacin was drawn. At the same time, validation procedures were successfully performed and selectivity was ensured in in situ gel systems. For this reason, moxifloxacin can be analyzed qualitatively and quantitatively both in bulk and in formulation.

Key Words: Moxifloxacin, HPLC, PDA detector, In situ Gel

THE IMPACT OF ENERGY AND WATER USE EFFICIENCY ON SUSTAINABLE AGRICULTURE IN SOUTH ASIA; 2000 TO 2023

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Abstract

This study examines the impact of energy and water use efficiency on sustainable agriculture in South Asia from 2000 to 2023, a region grappling with the dual challenges of resource constraints and increasing food demand. For this study a Panel Autoregressive Distributed Lag (ARDL) model and a double log model has been used, the research investigates the effects of energy efficiency (EE) and water use efficiency (WE) on sustainable agriculture (SA), while control variables such as agricultural capital (AC), agricultural labor (AL), research and development expenditure (RD), capital use in agriculture (K), and pesticides in agriculture (AP). For this study, a comprehensive sustainable agriculture index was constructed, incorporating social, economic, and environmental dimensions.

The findings reveal that energy efficiency has a significant positive impact on sustainable agriculture. Similarly, water use efficiency also positively influences sustainable agriculture. By analyzing data across selected countries within South Asia, this study seeks to answer two pivotal questions: 1) what is the effect of energy efficiency on sustainable agriculture in south Asia? and 2) How does water use efficiency influence sustainable agriculture? The findings aim to provide actionable insights for policymakers and stakeholders to enhance sustainable agricultural practices, ensuring food security and environmental sustainability in South Asia.

Key words: Sustainable agriculture (SA) , Energy efficiency (EE), Water use efficiency (WUE), South Asia, Panel ARDL (PARDL)

EXTRACTION AND CHARACTERIZATION OF ORANGE PEEL ESSENTIAL OIL FOR FLAVOUR AND FRAGRANCE APPLICATION

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ABSTRACT

This study conducts a thorough examination of orange peel essential oil through Soxhlet extraction and Fourier Transform Infrared (FTIR) analysis, revealing a nuanced chemical composition. The FTIR spectrum identifies key peaks indicative of various functional groups, including aromatic and aliphatic compounds, with notable peaks at 1640.02865 cm^{-1} (aromatic C=C stretching) and 2974.41559 cm^{-1} (aliphatic C-H stretching). Comparative analysis with other essential oils elucidates the unique qualities of orange peel oil, emphasizing its balanced aromatic profile. The correlation between its chemical composition and aroma underscores its suitability for flavor and fragrance applications. The absence of menthol-related notes differentiates it from peppermint oil, offering a warmer alternative. The study's implications for industry applications are evident in the oil's potential use in creating complex blends and diverse formulations. Recommendations for future research encompass isolating key aromatic compounds, conducting sensory evaluations, exploring synergistic blending, and optimizing extraction methods. The identified chemical composition and aroma correlation position orange peel essential oil as a versatile and valuable ingredient with implications for diverse applications, prompting further exploration in the realms of sustainability and innovative product development.

Keyword: FTIR, Soxhlet extraction, orange peel essential oil, exploration.

EFFECT OF DIFFERENT DRYING CONDITIONS ON ERITADENINE CONTENT AND BIOACTIVE PROPERTIES IN SHIITAKE MUSHROOM

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ABSTRACT

Introduce and Purpose: Cardiovascular diseases are one of the main health problems that cause the most deaths. Eritadenine (EA) is an adenosine-derived chemical compound that has a cholesterol-lowering effect. The highest concentration is in shiitake mushrooms (Lentinula edodes L. Berg.). The aim of this study was to investigate the effect of different drying conditions on the EA concentration and bioactivity (Total phenolic content (TPC), antioxidant capacity by DPPH (AOC-DPPH) and ABTS (AOC-ABTS) radicals) in shiitake mushroom.

Materials and Methods: The sliced mushroom samples were dried in freeze dryer (Model TRS2, TEKNOSEM, İstanbul, Turkey), an oven (Model EN 400, Nuve Co., Ankara, Turkey) at 30, 40 and 50 ◦C for 6-12 h, sun drying for 2 days, shade drying for 4 days. The dried mushrooms were ground into 500 μm of particle sizes using a solid blender (Waring, Staufen, Germany). For solid liquid extraction, 60% ethanol was used as solvent and samples were homogenized at 7000 rpm for 5 minutes. HPLC method modified by us was used for EA analysis and spectrophotometric methods were used for bioactivity.

Results: EA amount for different drying conditions was determined between 661.64±0.32-452.96±0.18 mg/100 g Dry Matter (DM). TPC, AOC-DPPH and AOC-ABTS amount for different drying conditions were determined 0,66±0,003-0,36±0,001 mg Gallic acid equivalents (GAE)/g DM, 1,09±0,04-0,61±0,032 mg Trolox eqivalents (TEAC)/g DM, 4,34±0,46-3,08±0,28 mg TEAC/g DM, respectively. The maximum EA content (661,64 mg $100g^{-1}$), TPC (0,66 mg $GAEg^{-1}$) and antioxidant activities by DPPH (1,09 mg TEg-1) and by ABTS (4,03 mg TE g-1) were obtained under lyophilized drying method.

Discussion and Conclusion: These results suggest that the EA compound is a stable compound that shows high bioactivity. This high stability of EA demonstrates its capacity to be used in different food processes such as functional foods.

Key Words: Eritadenine, Bioactive compounds, Shiitake Mushroom

GLOBAL PLAYERS IN MEDICAL TOURISM: SWOT REVIEW OF INDIA AND SINGAPORE

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ABSTRACT

The aim of this study is deal with medical tourism in India, a South Asian country, and Singapore which is located in South East Asia which have a great share in health tourism. These two countries, which have many cultures, have a great wealth due to this. For tourists who come to their countries of this wealth, sometimes the ease of communicationsometimes emerges as a diversity of healthy services. India and Singapore, which have understood the value of the health tourism sector long ago, continue to grow with their studies on both health policies and alternative medicine. In this study, first of all, general information about countries, health systems and medical tourism activities were included, and then SWOT analysis was made. Short waiting times of Indian medical tourism, its strengths such as doctors who speak a foreign language and its weaknesses such as pollution, security problems, etc., opportunities such as providing services at cheaper prices in India despite the expensive health services in developed countries, and threats such as the fact that their neighbors take an active part in health tourism are discussed. With its strengths such as providing high-quality service in Singapore medical tourism and its weaknesses such as being expensive in neighboring personal countries, opportunities such as increasing the workforce more with globalization and threats such as increasing competition with neighbors were discussed.

Keywords: India, Singapore, Medical Tourism, SWOT analyze

USE OF NANOTECHNOLOGIES IN CLIMATIC CHANGES

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Abstract:
Climate change presents critical challenges to both ecosystems and human societies, necessitating forward-thinking and innovative solutions. This project investigates the potential of nanosponges—engineered nanostructures—to absorb and neutralize greenhouse gases and environmental pollutants. The primary objective is to develop nanosponges with high efficiency in capturing carbon dioxide (CO_2) and other harmful gases, helping mitigate climate change effects. Secondary objectives include assessing the environmental impact of these nanostructures and examining their potential applications across diverse ecosystems.

Synthesizing nanosponges using materials like silica, polymer composites, and bio-inspired designs to achieve high surface area and porosity; characterizing these nanosponges through techniques such as scanning electron microscopy (SEM) and Brunauer-Emmett-Teller (BET) analysis to understand structural and adsorption properties; and conducting experiments to determine absorption rates of CO_2 and other pollutants under various environmental conditions are key challenges. The project envisions producing a scalable and effective solution for carbon capture and pollution reduction. Nanosponges that achieve the intended goals could significantly lower greenhouse gas levels in the atmosphere, improve soil and water quality, and advance sustainable environmental management. Integrating advanced materials science with environmental engineering, this initiative represents a proactive strategy in addressing climate change and environmental degradation.

Keywords: Climate change, Nanosponges, Carbon capture, Environmental pollutants, Sustainable management

NANOTECHNOLOGY IN PHOTONIC AND OPTOELCTRONICS

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ABSTRACT:
Nanotechnology, the science of manipulating materials at the atomic or molecular scale, has a vast range of applications across multiple fields. Nanotechnology in photonics and optoelectronics represents a transformative approach to precise manipulation and control of light and enabling high-performance optical devices at the nanoscale, paving the way for groundbreaking advancements in communications, imaging, and sensing technologies. Nano lasers—lasers constructed with nanoscale materials like quantum dots, nanowires, and plasmonic structures—are capable of emitting coherent light in ultra-compact sizes, supporting the miniaturization and integration of photonic circuits. This enables faster data processing, high-density optical data storage, and efficient optical communication with lower power consumption. In optoelectronics, nano lasers enhance the performance of devices like displays, sensors, and energy systems, allowing for more sensitive, energy-efficient and versatile applications in areas from medical diagnostics to environmental monitoring. As nano laser technology advances, it holds potential for integration in quantum computing, high-resolution biomedical imaging, and next-generation photonic devices, though challenges remain in achieving cost-effective production, thermal stability, and scalability for widespread deployment. a 'new synthetic frontier' for quantum dots - The type of semiconductive nanocrystals known as quantum dots are both expanding the forefront of pure science and also hard at work in practical applications including lasers, quantum QLED televisions and displays, solar cells, medical devices, and other electronics.

Keywords: Nanotechnology; Nano Laser; Photonics; Optoelectronics.

NARRATIVE IDENTITY CONSTRUCTION AND LINGUISTIC RESILIENCE: CODE-SWITCHING AS A HEALING MECHANISM IN MULTICULTURAL COUNSELING

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Abstract

The intricate landscape of multilingual communication reveals profound psychological mechanisms of healing and identity reconstruction through the nuanced practice of code-switching. This research explores the transformative potential of linguistic practices in multicultural counseling, examining how individuals navigate complex psychological landscapes through sophisticated linguistic strategies. The critical importance of this research emerges from the growing recognition of language as a dynamic psychological resource. By investigating code-switching as a healing mechanism, the study illuminates the sophisticated ways multilingual individuals utilize linguistic practices to negotiate identity, process emotional experiences, and construct meaningful personal narratives in therapeutic contexts. The research confronts significant gaps in understanding multilingual psychological experiences, addressing critical challenges in theoretical frameworks for comprehending code-switching, exploring linguistic practices in multicultural counseling, and understanding the complex interplay between language, identity, and psychological healing. Employing a rigorous mixed-methods design, the study integrates narrative interviews, discourse analysis, and phenomenological exploration. Researchers systematically examine multilingual participants' experiences, focusing on the intricate ways code-switching functions as a psychological and communicative strategy in therapeutic interactions. Preliminary findings reveal code-switching as a multifaceted psychological mechanism, demonstrating its profound role in emotional regulation, narrative identity construction, cultural navigation, and therapeutic communication. The research uncovers how multilingual individuals strategically employ linguistic alternation as a sophisticated healing tool, enabling complex emotional expression and psychological resilience. The study substantially contributes to expanding theoretical understanding of linguistic diversity, developing innovative counseling methodologies, and recognizing language as a powerful psychological resource. By critically examining the relationship between language, identity, and psychological healing, the research offers transformative insights into the potential of linguistic practices in multicultural counseling contexts. Through comprehensive exploration of code-switching, narrative identity, and linguistic resilience, the study provides a nuanced understanding of how language serves as a dynamic mechanism of psychological adaptation and healing, challenging traditional conceptualizations of communication and therapeutic intervention.

Keywords: Code-switching, Counseling, Identity, Linguistic resilience, Multicultural psychology

NATURAL ANTIMICROBIAL PRESERVATIVE ADDITIVES USED IN THE FOOD INDUSTRY

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ABSTRACT

Traditional methods such as heat treatment, cooling and freezing have been used to preserve and store foods since ancient times. However, increasing population, changing living conditions and advancement of technology caused new production techniques to meet the demand for long-term storage of food products without spoiling, standardization and minimizing food losses. In terms of food safety and quality, usage of natural antimicrobials is one of the methods. There has been a tendency towards the use of natural antimicrobial products in the food industry.

Organic acids known to have natural antimicrobial effects include lactic acid in pickle, brine, and olive production; citric acid in canned vegetables, sauce, ketchup, mayonnaise, jam, and mostly in soft drinks; various spices in meat, frozen food, bakery products, confectionery, and soft drinks has become popular recently. The properties of antimicrobial food additives used as preservatives depend on factors such as the concentration of the food substance, processing steps, physical and chemical composition, antimicrobial spectrum, food composition, and pH. The main purpose of using food additives is to provide the consumer with access to high-quality, healthy, and economical products and to apply the changes in the sensory quality of the product in a way that will appeal to the consumer and positively affect product sales. It is observed that consumers are becoming more and more conscious about food additives and are more selective in the products they consume. In this study, novel and the most popular natural preservatives were listed to the food industry and academy.

Key Words: food preservation, food safety, plants, spices

SPECTROPHOTOMETRIC QUANTIFICATION OF CEPHALEXIN AND ITS APPLICATION IN DOSAGE FORMS

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Abstract:
A new method for the determination of Cephalexin is established which is simple and cost-effective. The drug is heated in in the presence of benzidine producing a colored complexwith absorbance at 480nm. The Beer's law ranges were determined to be 0.05-2.5 mg/10ml. The proposed method has been statistically validated. The low standard deviation and RSD values revealed that the proposed approach was highly precise. Hence, the proposed approach is appropriate for routine determination of cephalexin. This procedure applies to cephalexin in both pure and dose form.

TEACHING THE AMMONIA TOPIC WITH MIND MAPPING AND ITS IMPORTANCE

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Object: The purpose of this subject is to learn the effect of using mind maps during chemistry lessons on the mastery of the topic being covered and the productivity of the lesson.

Material and method: During the research, 9th grade chemistry textbook, teaching aids, information booklets, Mindmap program, colored pencils and specially constructed mind maps, visual observation and comparison methods, pedagogical experiment were used.

It has been shown that during the teaching of the topic, the written text in which the content of the lesson is explained should be consistent with the sequence in the relevant mind map specially constructed by each student, and the branching starting from the main idea (topic name) should be carried out clockwise, covering the details and subtleties of the topic. The main forms of thinking that form logical and critical thinking in students are inductive thinking (induction) and deductive thinking (deduction). Induction is to unite examples under one principle, that is, to move from examples to a general principle (from the specific to the general); the other form of thinking is deductive thinking (deduction).

Result: During the experiment, it was determined that in the result of extensive use of terms, keywords, concepts, and colored pencils during a lesson conducted using the mind mapping method increases the productivity of subject learning, facilitates the correct spelling and pronunciation of keywords and expressions used and creates conditions for the enrichment of students' chemistry knowledge and skills.

Discussion: Research shows that material learned through mind mapping by students

is more memorable than material learned through other methods, because the learning process with mind map is suitable for all student learning styles (visual, auditory, kinesthetic, digital).

Keywords: Mind map, completion, ammonia, thinking, experiment

NEPHROPROTECTIVE ACTIVITY OF KUDZU ROOT EXTRACT IN STREPTOZOTOCIN INDUCED DIABETIC NEPHROPATHY IN RATS

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Abstract:
Diabetic nephropathy (DN) remains a prevalent complication of diabetes mellitus, necessitating novel therapeutic interventions. Present study investigates the nephroprotective effects of Kudzu root extract (KRE) in streptozotocin-induced diabetic nephropathy, with a focus on attenuating oxidative stress and ameliorating diabetic parameters. Diabetes was induced in male rats with a single injection of streptozotocin (55mg/kg/i.p). After 72 hours the rats were tested for diabetes, those rats showing blood glucose level above 250mg/dl were considered as diabetes and further tested for the development of nephropathy. Rats with diabetic nephropathy were treated with KRE (50 and 100mg/kg/p.o) for 2 week. At the end of treatment period various biochemical parameters and markers of oxidative stress were studied. Rats treated with KRE shows significant alteration in blood glucose levels, kidney function markers, markers of oxidative stress, membrane bound ATPases and Histopathological changes. In conclusion KRE showed significant nephroprotective effects which might be due to its strong antioxidant property

Keywords: Diabetes nephropathy, oxidative stress, streptozotocin, Kudzu root extract, membrane bound phosphatases

NEUROMORPHIC COMPUING IN VLSI

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ABSTRACT

Neuromorphic computing represents a paradigm shift in the design of computing systems, inspired by the structure and function of the human brain. This approach utilizes specialized hardware, often developed through Very Large Scale Integration (VLSI) technology, to create energy-efficient, high-performance computational architectures capable of processing information in a manner similar to biological neural networks. Neuromorphic systems leverage asynchronous event-driven processing, parallelism, and adaptive learning, enabling them to excel in tasks such as pattern recognition, sensory processing, and decision-making. Recent advancements in VLSI technology have facilitated the development of neuromorphic chips that integrate millions of artificial neurons and synapses, optimizing computational efficiency and reducing power consumption. These innovations open new avenues for applications in robotics, autonomous systems, and artificial intelligence, where traditional von Neumann architectures may struggle to meet performance demands. This abstract outlines the fundamental principles of neuromorphic computing, highlights recent VLSI developments, and discusses potential future applications and challenges in the field.

Keywords: Neuromorphic computing, vlsi technology, Asynchronous, Pattern recognition, Energy Efficiency.

TEMPERATURE EFFECTS IN POLYMER ELECTROLYTE FUEL CELLS MODELING

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Abstract

Hydrogen fuel cells are considered a promising alternative to meet the needs of the future. This lies in its high efficiency in converting chemical energy into electrical energy It does not produce any environmental pollution. What increases its importance is that it does not need to be recharged periodically like batteries. This work deals with the presented Mathematical model simulation of PEM fuel cells Study the effect of temperature on activation, ohmic and mass transfer voltage drop Also discuss the results using polarization and power curves.

Temperature significantly influences the electrochemical reactions in hydrogen fuel cells. As temperature increases, the overall chemical reaction rate increases, leading to an acceleration of oxidation and reduction reactions within the cell. Consequently, this can enhance the efficiency of converting hydrogen into electricity and heat in the cell. However, there must be a balance between temperature and cell efficiency. Excessive temperature increase may lead to the deterioration of internal cell components.

Keywords: *Hydrogen fuel cells, voltage drop, Modeling, Temperature Effect, power*

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APPLICATION OF REMOTE SENSING METHODS IN AGRICULTURE

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ABSTRACT

Reflectance data is being used in agriculture more and more as satellite, aerial, and ground-based remote sensing technologies progress. This study examines several remote sensing techniques intended to preserve the environment and maximize the profitability of agricultural crop production. The study provides examples of how remote sensing data can be used to anticipate crop yields, evaluate plant nutritional needs and soil nutrient content, calculate plant water [20] demand, and control weeds.

Key words: crop irrigation, plant protection, agronomy, vegetation indices, and remote sensing.

NOVEL TECHNOLOGIES in SUSTAINABILITY LIVESTOCK

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ABSTRACT
The livestock sector is the foundation of the global food system. Livestock farming contributes to poverty reduction, to progress food security, and agricultural development. It is estimated that the world population will reach 9.6 billion by 2050. On one hand, population growth and on the other hand, increasing income levels are linearly increasing the demand for animal-based foods (milk, meat, and eggs). To meet this demand, producers are intensively using both animals and resources (land, water, energy). However, while the livestock sector strives to increase food production, it also aims to reduce environmental impacts and protect animal health and welfare. In this context, sustainable livestock farming is a multidimensional structure that successfully encompasses health, welfare, and environmental aspects. If this structure is not managed properly, it can lead to significant consequences that pose a risk to human health. In this study, technological applications that are accepted in controlling, monitoring, and managing the activities of farm animals, which enable the improvement of animal welfare and health and have positive outcomes for the sustainability of animal production, are discussed.

Keywords: Ruminant, poultry, technolog, nutrition, welfare, health

NUTRITIONAL KNOWLEDGE AND PRACTICES IN DIABETIC PATIENTS

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Introduction

Nutrition plays a crucial therapeutic role in the management of diabetes. It has a direct impact on glycemic control and contributes to metabolic balance and the prevention of associated complications. Good knowledge of nutrition and appropriate dietary practices are essential for the effective management of diabetes. In this context, we aimed to determine the level of knowledge of diabetic patients, followed up in a university hospital (UH) and in primary healthcare centers (PHC), about their disease and their nutritional practices.

Methods

This was a cross-sectional study of diabetic patients followed at UH and PHC during the period November 2023 to January 2024. Data was collected using a questionnaire administered to all patients. A score out of 100 was calculated to assess patients' knowledge about their disease and the appropriate nutritional measures.

Results

A total of 227 patients were included. The mean age was 62.69 ± 9.8 years. The sex ratio was 0.49. In 45.8% of cases (n=104), patients had a primary level of education. A nutritional education was received by 67.1% of patients (n=149). In 71.9% of cases (n=159), patients were followed up at PHC.

The median overall knowledge score was 50/100 (interquartile range (IQR) = [21.1 – 65.4 /100]). A good level of knowledge was found in 47.6% of patients (n=108). Depending on the institution of care, a good level of knowledge was noted among patients followed up at the UH (64.5% (n=40) vs 39% (n=62); p<0.001).

Consumption of 3 meals per day (74.2% (n=46) vs. 35.4% (n=51); p<0.001) and regularity of meals (67.2% (n=41) vs. 42.7% (n=61); p=0.001) were significantly higher in patients followed up at the UH. Patients followed up at the UH had at least one snack per day (75.8% (n=47) vs. 28.5% (n=41); p<0.001) and used a sweetener (27.4% (n=17) vs. 12.9% (n=9); p=0.036) more significantly than those followed up at the PHC. When comparing practices regarding the use of olive oil (p=0.97), the reading of labels on products purchased (p=0.71), and the consumption of fruit (p=0.57) and vegetables (p=0.8), no significant difference was found according to the institution of care**.**

Conclusion

Our study has shown that the nutritional knowledge and practices of diabetic patients are relatively satisfying. However, there are some deficiencies, especially in patients followed up at PHC. Improving nutrition education in line with the new dietary recommendations, combined with more rigorous surveillance, could significantly improve the management of diabetic patients.

TİTLE: SYNTHESIS AND CHARACTERIZATION OF SILICA-CHITOSAN DECORATED MAGNETIC NANOSTRUCTURE FOR WASTEWATER TREATMENT

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Abstract

Magnetic nanoparticles (MNPs) possess extraordinary magnetic properties and serve as effective absorbents for heavy metals in wastewater treatment. Coating the surface of magnetic nanoparticles improves their adsorption efficiency, recyclability, and hydrophilicity. The proposed study will be focused different ferrite magnetic nanoparticles efficiently coated with silica chitosan for the elimination of heavy metals in the treatment of wastewater. Superparamagnetic cobalt ferrite, nickel ferrite, and cupper ferrite nanoparticles will be synthesized using a simple co-precipitation technique. The magnetic cores of $CoFe_2O_4$, $NiFe_2O_4$, and $CuFe_2O_4$ magnetic nanoparticles will be decorated with a silica shell through tetraethyl orthosilicate (TEOS) hydrolysis. Subsequently, the silica-coated ferrite magnetic nanoparticles will be further coated with chitosan. Atomic adsorption spectroscopy employed to determine the extent of metals removal from the water. The magnetic properties, structure analysis, identification of functional groups, and morphology of the prepared adsorbents analyzed before performing adsorption experiments.The kinetics and adsorption isotherms of the adsorbents examined using different chemical models.

ENHANCEMENT OF ATHLETİC PERFORMANCE

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Abstract:

The enhancement and refinement of athletic performance is fundamentally rooted in a comprehensive and multifaceted paradigm that intricately weaves together various dimensions, including but not limited to the physical, technical, tactical, psychological, and nutritional elements that contribute to an athlete's overall capabilities. This holistic approach is strategically designed to harness and maximize the inherent potential of athletes by meticulously considering the unique characteristics inherent to their specific sports disciplines, as well as the individual attributes and competitive demands that each athlete faces in their pursuit of excellence.

The advent of cutting-edge technological innovations, which encompass sophisticated video analysis tools, advanced biomechanical sensors, and sophisticated data tracking platforms, facilitates a highly accurate and nuanced evaluation of athletic performance, thereby enabling the personalized fine-tuning of training regimens tailored to the specific needs of each athlete. Furthermore, it is imperative to acknowledge that mental preparation strategies and effective recovery protocols hold a pivotal position in not only preventing injuries but also ensuring sustained and consistent performance levels throughout the competitive season.

In summation, the pursuit of optimizing sports performance necessitates a thoroughly integrated and collaborative approach that engages a diverse array of multidisciplinary experts, alongside the implementation of innovative and state-of-the-art tools and techniques. This multifaceted strategy is not merely an enhancement of performance metrics; rather, it serves as a crucial lever for achieving the pinnacle of excellence while simultaneously safeguarding the health and well-being of athletes throughout their athletic careers.

Keywords: performance, strategies, sport, optimization

STRUCTURAL AND VIBRATIONAL ANALYSIS OF LA2-XBIXNIMNO6 DOUBLE PEROVSKITES WITH SUBSTITUTIONS AT X = 0.25, 1

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Abstract

This study investigates the structural and vibrational characteristics of La2-xBixNiMnO6 (LBNMO) double perovskites, focusing on bismuth substitution levels at x = 0.25 and x = 1. Recognized for their relevance in energy technologies, double perovskites exhibit diverse physical properties, including electronic and magnetic behaviors. We examine the influence of increasing bismuth content on the crystal structure and vibrational spectra of these materials. X-ray diffraction (XRD) confirmed that all samples retain a monoclinic configuration within the P21/n space group. Fourier Transform Infrared (FTIR) spectroscopy revealed significant shifts in vibrational frequencies, correlating with lattice alterations caused by bismuth substitution. These findings highlight the profound impact of bismuth doping on both structural and electronic properties, enhancing the potential utility of LBNMO materials in energy-related applications.

Keywords: Double Perovskites, Bismuth Substitution, Structural Analysis, Vibrational Spectroscopy.

CONTRIBUTIONS OF ORGANIC FERTILIZERS TO PLANT GROWTH

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ABSTRACT

Introduction and Purpose: Organic fertilizers are one of the cornerstone elements of sustainable agricultural practices, enhancing soil fertility and naturally supporting plant growth as an eco-friendly solution. Derived from animal waste, compost, green manures, and other organic materials, these fertilizers improve soil structure, reduce erosion, and increase water retention capacity. They provide essential nutrients like nitrogen, phosphorus, and potassium, which are critical for plant growth, and integrate naturally into the soil cycle without harmful accumulation.

One of the key advantages of organic fertilizers is their ability to boost microbial activity in the soil, encouraging the proliferation of beneficial microorganisms. These microorganisms break down organic matter into more accessible nutrients for plants. As a result, the humus content in the soil increases, making it looser and more aerated. Additionally, unlike chemical fertilizers, organic fertilizers protect the long-term health of the soil and minimize the risk of toxic buildup. By helping to regulate the soil's pH balance, organic fertilizers ensure the health of both the soil and the crops grown in it.

Organic fertilizers also enhance plant resilience by increasing their resistance to diseases and improving product quality. They contribute to the production of sturdier and more nutritious crops. Furthermore, by reducing dependency on chemical fertilizers, they mitigate environmental harm, prevent groundwater contamination, and lower greenhouse gas emissions. These attributes position organic fertilizers as a vital component of sustainable agriculture.

Conclusion: In conclusion, organic fertilizers support soil health, environmental sustainability, and product quality simultaneously, providing a natural and effective agricultural solution. Their widespread adoption can reduce reliance on chemical fertilizers and contribute to the development of a more sustainable agricultural system in the future. This review aims to explore the contributions of organic fertilizers to plant growth and soil health, emphasizing their significance in the context of sustainable agriculture.

Key Words: Nutrient, Soil Health, Sustainable Agriculture

ORIENTATION-DRIVEN DESIGN: A PATHWAY TO SUSTAINABLE ENERGY USE IN ARCHITECTURE

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Abstract:
Orientation driven design has become an important design strategy in sustainable architecture, which makes use of alignments as configurations for buildings to interact better with environmental factors such as sun and wind and thermal dynamics. This paper investigates the principles, applications, and potential of orientation driven design to improve energy performance, minimize ecological footprints and provide occupant comfort. The research, drawing on key case studies including Solar Decathlon Houses, Bosco Verticale, Milan and the Indian Institute of Management Ahmedabad, shows how strategic design elements—cross ventilation, façade orientation and integration of renewable energy technology—can greatly reduce dependence on mechanical systems. The study illustrates that orientation driven strategies are adaptable and scalable to varying climatic conditions and urban conditions using advanced computational tools and energy performance metrics. Cost constraints, regulatory barriers and the site-specific limitations are discussed as challenges along with further recommendations for integrating interdisciplinary approaches and advanced technologies. Through this investigation, we identify the transformative capacity of orientation driven design as an ecological design strategy for reducing energy consumption and fostering ecological resilience in contemporary architectural practice and future practice.

Keywords: Orientation-driven design; Sustainable architecture; Energy efficiency; Climate-responsive design; Renewable energy integration.

IS OTSU'S THRESHOLD ENOUGH FOR SEGMENTATION QUALITY CHECK?

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ABSTRACT

Introduction and Purpose: The quality of segmentation masks obtained from medical images is important to accurately extract diagnostic information. There are few studies on segmentation quality check, usually requiring training of large models. Here, we explore the potential link between threshold levels of segmentation probability maps and the qualities of segmentation obtained deep models.

Materials and Methods: We used Uslu and Varela's segmentation model, which is an implicit ensemble model and can generate well calibrated outputs, for image segmentation. Otsu's threshold is used to binarize the mean outputs to generate segmentation masks, whose quality was evaluated against reference segmentation masks provided by medical experts regarding Dice score. We train a linear regression model to approximate quality scores from Otsu's thresholds calculated for each segmentation mask. We validate our method on two cardiac MRI image datasets, STACOM 2013 and a private dataset, for left atrium segmentation and a fundus image dataset, DRIVE, for retinal vessel segmentation. We also explore the generalisation ability of our method by predicting quality scores of out of distribution (OOD) datasets, which are STACOM 2018, IOSTAR ve STARE datasets.

Results: We found predicted and real quality scores over the datasets are well correlated, with a Pearson correlation coefficients of 0.88, 0.93 and 0.99 for models trained with Stacom 2013, CINE MRI and DRIVE datasets respectively, calculated over corresponding test sets, including OOD datasets. The classification accuracies of good and bad quality segmentation were 0.94, 0.95 and 0.96 for the aforementioned datasets respectively.

Discussion and Conclusion: Otsu's threshold can be used for segmentation quality estimation for well calibrated models with the minimum cost, without requiring complicated models. Future work will investigate the validity of our method on other medical image datasets.

Key Words: Segmentation Quality Check, Model Calibration, Ensemble Models

BIOLOGICAL ACTIVITY OF CLOVE ESSENTIAL OIL ON ORAL BACTERIAL STRAINS

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Abstract

Plants are excellent sources of bioactive compounds, including essential oils, which play a crucial role as therapeutic agents in the treatment of various diseases. This study explored the chemical composition and biological activities of *Syzygium aromaticum* essential oil and its effects on common oral bacterial strains. The essential oil was extracted with hydrodistillation and was analyzed by gas chromatography-mass spectrometry (GC-MS) and gas chromatography with flame ionization detection (GC-FID). The antioxidant activity was assessed using 2, 2-diphenyl-1-picrylhydrazyl (DPPH) radical scavenging assay and ferric reducing power (FRAP) assays. Antibacterial efficacy was tested against oral pathogens, including *Streptococcus epidermidis*, *Streptococcus xylosus* and *Streptococcus aureus* ATCC 6538 using disc diffusion method.

Results revelated that Eugenol (80.91%) was the major compound of the studied essential oil. DPPH radical scavenging assay showed the median inhibitory concentration (IC50) value of 16.92µg/ml, while the ferric reducing power assay recorded the median effective concentration (EC50) value of 5.52µg/ml. Otherwise results demonstrated significant antibacterial activity against all bacterial strains, with inhibition zones of 15-18.5 mm. These findings indicate that possesses both antioxidant and antibacterial properties, suggesting its potential use as a natural therapeutic agent in oral health care.

Key words: *Syzygium aromaticum.,* Essential oil, chromatography, Antioxidant activity, Antibacterial activity.

ENTREPRENEURIAL PUBLIC MANAGEMENT APPROACH AND TELEMEDICINE APPLICATION AS AN EXAMPLE OF ENTREPRENEURSHIP IN HEALTH SERVICES

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ABSTRACT

Due to the rapid changes in recent times, public administration has been transitioning from a traditional bureaucratic structure to a more innovative and entrepreneurial framework. This new perspective represents an approach aimed at delivering public services more effectively, efficiently, and with a citizen-focused orientation. The primary objective of this approach is to address societal needs by integrating technological innovations and modern management techniques into public services.One of the areas where entrepreneurial public administration is most needed is healthcare services. Rapid changes in the healthcare sector and increasing demand for services necessitate more accessible and effective solutions. In this context, telemedicine applications emerge as an innovative example of entrepreneurship in healthcare services. Telemedicine, a system enabling the remote provision of healthcare services, offers significant conveniences for both patients and healthcare professionals. It particularly facilitates overcoming geographical barriers, time constraints, and inequalities in access to healthcare services. Additionally, telemedicine applications reflect the entrepreneurial understanding in public administration by reducing costs, personalizing healthcare services, and enabling prompt interventions.

This study examines the fundamental principles of entrepreneurial public administration and its impact on healthcare services, focusing on the role of telemedicine applications in the healthcare sector. Furthermore, it explores the infrastructure, legal regulations, and organizational processes required for the successful implementation of telemedicine systems. Ultimately, the study evaluates the contributions of telemedicine applications to the transformation of public services as an example of entrepreneurial public administration. The study employs text/document analysis, one of the qualitative research methods, and serves as a guide to understanding the impact of entrepreneurial public administration on the healthcare sector and emphasizing the significance of innovative approaches in this field.

Keywords: Entrepreneurship, Entrepreneurial Public Administration, Healthcare, Telemedicine Entrepreneurship

AUTO-ENROLLMENT, STATE-SUPPORTED INDIVIDUAL RETIREMENT SYSTEM AND USA-TÜRKİYE COMPARISON

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ABSRACT

The purpose of this research is to comprehensively compare the structural and operational features of individual retirement systems in Türkiye and the USA and to present recommendations for enhancing the sustainability of the system in Türkiye. Spesifically, the advantages and disadvantages of the Individual Retirement System (BES) in Turkey and the 401(k) and IRA (Individual Retirement Account) plans in the USA are analysed in detail.

The study begins by examining the historical development of individual retirement systems and emphasizes their economic, demographic and social contexts. Following a literature review, the similarities and differences between the individual retirement systems in Turkey and the USA are evaluated through the comparative analysis method.

The findings reveal that, although Türkiye's BES has become widespread due to state contributions and automatic enrollment practices, it faces several challenges concerning sustainability. High early withdrawal rates, low fund returns, limited financial literacy among participants, and the overall cost structure of the system undermine individuals' willingness to commit to long-term savings. In contrast, 401(k) and IRA plans in the USA demostrate greater resilience, offering tax advantages, diverse investment options, and employer contributions, which collectively encourage long term saving and yeald more stable outcames.

In conclusion, individual retirement systems play a vital rol as a social security mechanism, supporting economic stability and fostering a culture of savings among participants would yield long term benefits for both individuals and national economy. This study provides a comprehensive assessment of Türkiye's current system and proposes actionable strategies for creating a more effective retirement system.

Key words: Individual retirement system, automatic participation, state support, individual retirement system in Türkiye and the US

HUMAN TEACHINGS IN THE WRITINGS OF FAZLUR RAHMAN

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Abstract

Fazlur Rahman is one of the founding figures of the Islamic thought tradition. It is possible to follow this from his works. In this report, we aimed to reveal his teachings on humanity and the place of this teaching in the general thought system. The elements of his general thought system are not separate and disconnected elements. Namely, in his system, belief in God and the conception of man are not independent of each other. Therefore, while dealing with the teachings on humanity, we will also see what the thinker's teachings on God and theology correspond to. Another important reason for us to take him as our subject is that he takes the Quran as his basic starting point in his works. Because, according to him, a method that does not take the Quran as its starting point and aims to develop a thought or theory from there cannot be Islamic. On the other hand, in his view, man and society are elements that complement each other. In this respect, an individual without a society cannot be considered for him. Indeed, we see that there is always an understanding of society in the commands of the Quran regarding human behavior. A society that is in a process of change also keeps the individuals that form it in the same process. However, man is not a passive being who acts randomly and irresponsibly in this process. Therefore, man can keep change under his own control and direct it in the direction he wants. This is possible only if man knows his own nature/limitations and abilities very well. For this reason, the Quran has given great importance to the analysis of human nature/essence and has encouraged man to take stock of his own self. The Quran also gives great importance to human responsibility. Man's abandonment of his own responsibility is described as creating chaos and corruption on earth. Responsibilities and freedoms are the front and back sides of the same coin.

Keywords: Fazlur Rahman, Human, Theology, Will, Responsibility, Competence.

THE VALUE AND POSITION OF THE SCIENCE OF KALÂM IN GHAZALI

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Abstract

One of the important scholars of the Islamic thought tradition is Ghazali. In our paper, we aimed to discuss the importance he gave to the science of kalam and his thoughts that the science of kalam is a special field of specialization that does not appeal to everyone. He finds everyone's occupation with words unnecessary and dangerous. According to him, people who are newly indoctrinated with such religious principles should be kept away from the assemblies of theology and struggle. Because the struggle corrupts more than it corrects. Trying to strengthen this belief by force is like beating a tree with an iron mallet to strengthen it. Anyone who tries to squeeze the tree with an iron mallet risks breaking it. Experience and observations on this issue are sufficient and there is no need to look for other evidence. When the belief of the righteous and pious people in the category of the common people, who are not experts in the science of theology, are compared with the belief of theologians and strugglers; He expresses that the belief of the common people is like a high mountain that no force can shake it, while the belief of the theologians is like a rope suspended in the air that is swayed by the wind and swaying left and right. However, those who have a strong faith are actually the common class who accept their evidence by imitating, as well as believing through imitation. Because there is no difference between imitation in learning evidence and imitation in learning the implied faith. The author evaluates the positive and negative aspects of the science of kalam. The paper will focus on the meaning and value of the analyzes expressed by the author. Finally, the issue of interpretation in theological matters and the legitimacy of interpretation will be discussed and Ghazali's comments will be examined.

Keywords: Kalâm, Ghazali, Comment, Ordinary People, Elite, Religious Sciences.

THE EFFECT OF SUNK COST BIAS ON RATIONAL DECISION-MAKING STYLE: A STUDY ON R&D FIRMS IN TECHNOLOGY DEVELOPMENT ZONES

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Abstract

In today's world where technology is highly developed, our country gives special importance to and supports companies operating in Technology Development Zones. These companies produce new ideas, develop projects and market them, and the added value they create for our country is increasing day by day. While R&D companies have become widespread in our country in recent years, due to the nature of the process, it is an important problem that if the decisions taken are unsuccessful, the subsequent decisions are affected by past failures. However, there is no study on decision-making styles in these companies. Especially the sunk cost fallacy, known as the sunk cost fallacy, which occurs when past failures affect current choices and the biases that arise when the past cannot be corrected are distancing themselves from the fact that the past can cause great losses to companies.

Based on this point, the designed study aims to measure the level of awareness in this area by investigating whether the sunk cost prejudices that R&D companies operating in Technology Development Zones have in their product creation processes affect their rational decision-making style. In this context, the sunk cost perceptions of companies operating in Technology Development Zones arising from the mistakes they make during the R&D studies and the possible effects of these perceptions on their decision-making styles are examined. For this purpose, companies operating in Technology Development Zones were sampled and data were collected using the survey method. The obtained data were analyzed using the least square structural equation.

Keywords: Sunk Cost, Rational Decision-Making, Technology Development Zones, R&D

INNOVATION ACCOUNTING

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Abstract

This study reveals the need to reconsider various types of innovation, which are key to the performance effectiveness and efficiency of any business and are implemented with possible innovation strategies such as product, process, management and market, from a new and broad perspective in the accounting perspective beyond traditional research and development activities. Today, R&D is carried out by one-third of companies, while design is carried out by approximately half and process improvements are carried out by more than half. However, in terms of these activities, the accounting perspective only partially addresses and measures R&D activities on the axis of innovation cost.

In this context, innovation accounting is addressed from a management and accounting perspective by taking into account the need for managerial information in the study, and criticisms regarding the concept of innovation and its accounting and its importance in terms of measuring and managing innovation performance are mentioned. The subject is also examined in terms of accounting within the framework of the regulations in the TMS - 38 Intangible Assets standard.

Keywords: Innovation Accounting, Management Accounting, Business Management, Intangible Fixed Assets Standard

THE VOCABULARY OF PROPER NOUNS IN THE "DIWAN LUGHĀT AL-TURK"

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ABSTRACT

Introduction and Purpose: "Diwān Lughāt al-Turk" that has been written by Mahmud Kashgari is a significant dictionary for the linguistics and literary activity of the Turkic people from the 11th century. The work is one of the most famous research works in the history of the world literature, specially, in the history of the Turkic world.

Materials and Methods: This work has written for the aim of learning Turkic language. This diwān was written in 1072-1074 with the aim of attracting the attention of Arabs and teaching Turkish, a language as powerful as Arabic and not inferior to it in social importance. Its vocabulary, glossary, and grammatical information were prepared in accordance with the principles of classical Arabic lexicography and divided into sections according to the characteristics of this language [1, p.15]. The samples of poems from both the written literature and folklore of the Turkic people have shown in this work. This work deals with the culture, politics, dialectology and geography of the Turkic nations before and after Islam.

Discussion and Conclusion: Mahmud Kashgari has started to write this work in 1072 and he has completed it in 1074. During two years, he has collected large information about Turkic tribes, mountains, rivers, lakes, countries and states. Thus, we will examine the proper nouns in "Diwān Lughāt al-Turk".

Key Words: Diwan Lughat al-Turk, Mahmud Kasghari, proper nouns, Turk

NATURE AS A WHOLE OF CODED VERBAL MESSAGES IN GOD-SERVANT COMMUNICATION

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One of the most important topics of the Quran is God, nature, humans and their relationships with each other. Nature is not just a place where people spend their lives. Nature is the set of messages in which God encodes information about himself in his communication with his servants. God's power and strength, the balance and order He has placed in the universe, and the aesthetic and artistic stamp He has placed on His creations are hidden in the products exhibited in nature. Therefore, it is possible to evaluate nature as a set of non-verbal messages coming from God. The Holy Quran, which is the last verbal communication with people, also mentions such non-verbal communication elements. In many verses, the Holy Quran mentions signs pointing to the existence of Allah on earth and in the sky. Almighty Allah says, "Will you not look?" With its question pattern, it turns man's gaze to the earth, the sky, and his own creation. Again in the Qur'an, "Will you not understand?" Don't you think? When we evaluate all the questions together, it is possible to say that there are many coded messages in nature that point to the existence and unity of Allah.

Key Words: God, Nature, Human, Communication

CODES OF THE MESSAGES THAT CAME WITH THE FIRST REVELATION

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Summary
At the beginning of the 7th century AD, in the Hejaz region of the Arabian peninsula, the belief in paganism became an important paradigm guiding life. The belief in idolatry, which emerged with the beginning of deviations from the Hanif religion, became incapable of producing goodness other than a few virtuous behaviors inherited from the past. Sharing the idea of Hanifism in this environment, which the Quran calls the period of ignorance. The revelation began when Muhammad (pbuh) went to the Hira cave with a feeling of loneliness and towards the morning, Gabriel appeared to him and read the first five verses of the Surah Alak. The first five verses both stated on which level the communication between Allah and His servant would continue and clearly rejected the belief in ignorance and laid the foundations of the belief in monotheism instead. In the first seconds, he was giving an idea about the science and wisdom codes of Islamic civilization by emphasizing reading and writing.

Key Words: Quran, Revelation, Message

CHANGE AND DEVELOPMENT OF ARCHITECTURE IN CENTRAL ASIA FROM THE SCYTHIANS TO THE GREAT SELJUK STATE

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ABSTRACT

The aim of this study titled 'The Change and Development of Architecture in Central Asia from the Scythians to the Great Seljuk Empire' is to base the architectural structures seen in the Central Asian steppes, the elements that are the source of the formation of the structures and their unique features on the Islamic period starting from the Pre-Islamic period, to compare the architectural structures and to reveal the similarities and differences in the light of scientific data.

The emergence of urbanism in Central Asia coincides with a very early period. This situation has naturally led to the emergence of architectural structures in a period that can be considered quite early. The first examples of architecture in this geography are encountered in the Scythian period. Contrary to popular belief, Turks tried to maintain their lives between nomadism and sedentarism rather than nomadism, and they were engaged in agricultural activities to the extent that conditions permitted. Therefore, even though they did not settle down in a real sense, this did not prevent them from building material cultural assets. Thus, for the Turks, who created many architectural structures, the Pre-Islamic Period was a period in which tents, which constitute the basis of today's houses, and simple structures such as kurgan, the first example of funerary architecture, came to the fore. With the Islamic period, an important development was made and works that are the continuation of the Pre-Islamic Period were put forward. Thus, while the kurgans were replaced by tombs with more advanced forms, the temples were replaced by madrasahs and the decorated tents called Orduğ, representing the tent of the ruler, were replaced by palaces.

Keywords: Central Asia, Architecture, Tent, Tomb, Kurgan

EFFECT OF NANO SILICON APPLICATIONS ON BIOCHEMICAL CHANGES IN PEPPER UNDER DROUGHT STRESS CONDITIONS

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ABSTRACT

Introduction and Purpose: Nano-silicon applications are evaluated as a new approach to reduce the negative effects of stress against increasing drought stress due to climate change. The effects of nano-silicon (NS) applications on biochemical properties (superoxide dismutase-SOD, catalase-CAT, glutathione reductase-GR, ascorbate peroxidase-APX, chlorophyll-a, chlorophyll-b, total chlorophyll, total carotenoid, malondialdehyde content-MDA, total flavonoid, and phenolic compound content) in pepper grown at different irrigation levels were investigated.

Materials and Methods: Seedlings were transplanted into compressed cocopeat slabs, and drought stress was started 45 days after transplantation. For this purpose, stress was induced in control plants with two different levels of water restriction: full irrigation (S100) and irrigation reduced by 30% compared to full irrigation for drought stress (S70) and irrigation reduced by 50% compared to full irrigation (S50). In the study, a 0.5 mM dose of nano-silicon was used. 95 days after planting, plant growth and yield parameters were evaluated.

Results: Under drought stress conditions, an antioxidant enzyme activity increased by 52-368%, and this increase was 133-709% in NS applications. The highest MDA content was determined in the S50 application (199% increase). With NS applications, MDA content decreased by 23-34% on average. Photosynthetic pigment contents decreased by 8-32%, and this change was 1-9% in NS application, and 12-36% improvement was provided. Total phenolic and flavonoid content decreased by 5-29%, and NS application increased by 6-51% compared to control plants.

Discussion and Conclusion: NS applications allowed an increase in antioxidative enzyme activities in pepper and were effective in preserving photosynthetic pigment content. Nano silicon has been found to be important in ensuring the effectiveness of the defense mechanism under stress conditions.

Key Words: *Capsicum annuum*, Nano-silicon, MDA, SOD, CAT

CASE REPORT: HEART FAILURE, HYPONATREMIA AND SGLT-2 INHIBITION

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ABSTRACT

Introducion

Hyponatraemia is common in congestive heart failure (CHF). This condition develops due to both heart failure and diuretics. Hence, there are repeated hospitalisations with symptomatic hyponatremia. In this case report, we present a patient who had recurrent admissions with hypervolemic hyponatremia and have not been developed hyponatremia for two years after SGLT-2 (Sodium-glucose cotransporter 2) inhibitor was administered.

Case

A 54-year-old woman with type 2 diabetes mellitus and atrial fibrillation underwent mitral valve replacement one month ago. The patient was admitted to the nephrology clinic with dyspnea, leg swelling and nausea. Blood pressure was 100/60 mmHg, pulse 110 beats/min and arrhythmic. There were bilateral rales in the basal lungs, metallic valve sound in the cardiovascular system and bilateral pretibial edema 3+. Fasting blood glucose was 125 mg/dL, serum creatinine 1,3 mg/dL (basal creatinine 1,2 mg/dL), Na:125 mmol/L. Ejection fraction (EF) 40%, severe tricuspid regurgitation, pulmonary hypertension and left atrial dilatation were present on echocardiography. Her medicane is furosemide, hydrocortiazide + spironolactone, escitalopram and basal-bolus insulin. Thiazide and escitalopram which may contribute to hyponatremia were discontinued and intravenous (i.v.) furosemide infusion was started. Dyspnea and edema relieved. Sodium increased to 133 mmol/L. Furosemide 2x40 mg, spiranolactone 1x25 mg and water restriction were recommended and the patient was discharged. She admitted two more times with similar clinical picture and treated with loop diüretic again. In the last admission, SGLT-2 inhibitor was added to treatment. Hyponatremia have not been developed since two years.

Discussion

Osmotic diuresis and sodium loss from other nephron segments occur with administration of SGLT-2 inhibition. In osmotic diuresis, through free water excretion is higher than sodium. SGLT-2 inhibitor was given. In heart failure with hyponatremia adminastiration of SGLT-2 inhbitor is promosing for advanced clinical trials.

Key Words: Congestive heart failure, Hyponatremi, Osmotic diuresis

THE USE OF ARTIFICIAL INTELLIGENCE FOR ADVANCED CLIMATE CHANGE ACCOUNTING: SUSTAINABLE DECISION-MAKING

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Climate change accounting has become a cornerstone of corporate sustainability and policymaking. With the prominence of frameworks such as the Paris Agreement, the Task Force on Climate-Related Financial Disclosures (TCFD), and the Sustainability Accounting Standards Board (SASB), organizations are increasingly required to report on carbon emissions, climate-related risks, and mitigation efforts. Climate change accounting is a critical component of global efforts to mitigate the impacts of climate change, track progress toward sustainability goals, and ensure transparency in environmental impact reporting. However, traditional accounting systems often fall short in managing the complexity, scale, and granularity of climate data. Moreover, traditional methods struggle to meet growing demands for accuracy and timeliness in data collection, processing, and reporting.

Artificial Intelligence (AI) offers promising solutions to overcome these challenges through machine learning, big data analytics, and automation. AI can process large and diverse datasets, predict emissions, assess risks, and support decision-making processes. These technologies have the potential to transform climate change accounting by providing more accurate models, automating data processing, and enabling more dynamic decision-making in climate-related policies and investments.

This article theoretically explores the transformative role of AI in advancing climate change accounting and aligning organizations with global sustainability goals within the framework of existing literature. Specifically, it examines AI-driven solutions such as Machine Learning (ML), Natural Language Processing (NLP), AI-Based Predictive Modeling, IoT and Sensor Networks, and Deep Learning.

Keywords: Climate Change Accounting, Artificial Intelligence, Sustainable Decision-Making

POPCORN *(Zea mays everta)*

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ABSTRACT

The corn plant is a member of the Gramineae family and is a summer annual. It ranks first in the world in terms of production volume. In terms of its photosynthetic properties, corn is classified as a C4 plant. Consequently, it is highly effective at utilizing solar energy, resulting in a high dry matter yield. Furthermore, the rate of dry matter production is faster than that observed in C3 plants. As a consequence of the aforementioned factors, the production of this crop is also increasing in our country. In addition to grain and silage production, alternative popcorn production is also undertaken. No statistics are available regarding the planting area, production, or consumption of popcorn in Turkey. It has been documented that the crop is cultivated in the provinces of Adana, Çanakkale, Adapazarı, Antalya, Isparta and Burdur, as well as in the Aegean and Mediterranean regions. Popcorn is used directly as human food. Popcorn is widely consumed during cinema and football matches and other cultural events. Although its production varies from year to year, popcorn is known to have a higher income than regular corn. In particular, it is noteworthy that its seed price is more affordable than that of grain corn and that it requires less water and fertilizer.

Keywords: popcorn, alternative production, increasing income

A LOOK AT CENGİZ DAĞCI'S NOVEL "LETTERS TO MY MOTHER" WITH THE HERMENEUTIC METHOD

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ABSTRACT

Introduction and Purpose: Hermeneutics emerged in the 19th century as a method of understanding and interpreting the meaning of human actions, words, products and institutions. Hermeneutics is also discussed in terms of literary science, whose basic tool is language. Here, the necessity of approaching literary texts arises based on the statement that the same words or sentences have different meanings in different contexts, and therefore cannot be known without grasping the whole in which they are located, and therefore the whole and the parts are in mutual dependence. The aim of this study is to review Cengiz Dağcı's novel "Letters to My Mother", which was published in 1988 and deals with the 1920s and World War II years with flashbacks in the current time period of 1980s, from today's perspective and to try to determine new meanings and interpretations about the work with hermeneutic method.

Materials and Methods: It has been determined that the novel Letters to My Mother, which we analyzed with the hermeneutic method, is based on five basic motifs. These five basic themes direct the inner world and character of the narrator/hero. In addition, it is seen that these five elements shape the events of the 1930s and 1940s, which are discussed throughout the fifteen letters in the novel, and the current situation in the 1980s, when the work was written.

Results: Letters to My Mother is based on five basic motifs. These are, in order of importance; longing for the homeland/Gurzuf, love/Safiye Akimova, war and the wounds it inflicted, loneliness and old age. Among these, the theme of war in particular determines the entire life of both the narrator/hero and the author of the novel. Although war is a universal subject that is always on the agenda and is shown as a background in the novel, it has an importance that is the focal point of the novel.

Discussion and Conclusion: The current study examines a novel written in the 1980s, with flashbacks extending back to the 1920s and set in Crimea, in the light of the hermeneutic method in 2024. With the obtained basic motifs, Letters to My Mother has been reinterpreted and reinterpreted. As a result, the five basic motifs determined have determined and shaped the entire lives of both the novel's protagonist Topkayacı and the novel's author Cengiz Dağcı. In addition, the fact that these themes have a universal structure and maintain their validity is also noteworthy in terms of the work's appeal to today's reader.

Key Words: Cengiz Dağcı; Letters to My Mother; Novel; Hermeneutic Method.

THE ROLE OF BIOSTIMULANTS IN SOILLESS AGRICULTURE: UNLOCKING NEW OPPORTUNITIES FOR VEGETABLE PRODUCTION

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ABSTRACT

Biostimulants have emerged as a promising solution for enhancing plant growth, yield, and quality in soilless agriculture systems. These systems, including nutrient film technique (NFT), deep flow technique (DFT), and aeroponics, offer a sustainable alternative to conventional soil-based farming by optimizing water and nutrient use. Biostimulants, including organic acids, microbial agents, and seaweed extracts, improve nutrient uptake, promote stress tolerance, and stimulate plant growth, making them particularly suitable for soilless cultivation. In vegetable production, biostimulants have shown significant potential to improve yield and quality parameters, such as antioxidant activity and phenolic content, while also supporting plant performance under stress conditions, including salinity and temperature fluctuations. Despite these benefits, challenges such as high costs, optimal dosing, and integration into existing systems remain. This review highlights the advantages of using biostimulants in soilless vegetable production systems, explores their mechanisms of action, and discusses the limitations and future research directions for their broader application. Biostimulants represent a key innovation in advancing sustainable agriculture and maximizing the potential of soilless farming systems.

Keywords: Biostimulants, soilless agriculture, hydroponics, vegetable production, sustainable farming.

INNOVATIVE SOLUTIONS FOR SUSTAINABLE WATER MANAGEMENT AND PRODUCTIVITY: THE USE OF SUPERABSORBENT HYDROGELS IN AGRICULTURE

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ABSTRACT

Superabsorbent hydrogels (SAHs) offer an innovative solution for optimizing water management, promoting plant growth, and enhancing environmental sustainability in agriculture. This review examines the potential, benefits, and limitations of SAHs in agricultural applications. SAHs, capable of absorbing hundreds of times their weight in water, enhance plant access to moisture under stress conditions, such as drought, thereby increasing productivity. In addition, they improve soil structure, enhance fertilizer efficiency, and support the transport of nutrients within the soil. In agricultural practices, SAHs reduce irrigation frequency, enabling significant water savings and making production viable in arid regions. These materials, when used in seed coating and seedling planting, improve germination rates and provide the necessary moisture during early plant development. However, their high cost and sensitivity to certain soil conditions (e.g., pH and salinity) limit their widespread adoption. Furthermore, the slow biodegradability of synthetic SAHs poses environmental risks. Future advancements in developing biodegradable and cost-effective SAHs could further enhance their effectiveness in agriculture. Additionally, the combined use of SAHs with fertilizers presents promising opportunities for plant nutrition and environmental sustainability. This review highlights the potential of SAHs and provides a roadmap for their broader adoption in modern agricultural practices.

Keywords: Superabsorbent hydrogel, sustainable agriculture, water management, drought, biodegradable polymer.

ETHNOCENTRISM, CULTURAL SENSITIVITY, AND MULTICULTURAL PERSONALITY: OUTCOMES OF A CULTURALLY SENSITIVE COUNSELING COURSE

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ABSTRACT

The need for a multicultural/social justice approach in educational studies, including counselor education, has grown, but counseling practices and research have made it abundantly evident that cultural factors pertaining to clients, counselors, and supervisors have not been sufficiently addressed and examined. Three main arguments can be raised for previous research regarding multicultural counseling competencies in counselor education: previous research in Turkey was based on a single course within only one counseling program; has been limited to perceptions of professionals, teachers, and candidates, scale developments and adaptations, and theoretical work; the investigation of counselors' cultural competencies regarding demographic variables and other related variables generated inconsistent findings. This study aimed to investigate three concepts (ethnocentrism, cultural sensitivity, and multicultural personality) related to the multicultural counseling competencies of counselor candidates. The research participants consisted of 50 guidance and psychological counseling second-grade students from Usak University (M_{age} = 20.1, 77% women). Descriptive statistics and paired samples t-tests were applied for the data analysis The results of the current study showed that while students' ethnocentrism level decreased, cultural sensitivity mean scores increased at the end of the course. However, no significant change was observed in the mean scores of the multicultural personality. This study indicated that while personality features were stable over time, particular features of counselor candidates, ethnocentrism and cultural sensitivity, can be developed with particular courses. Thus, educational programs and courses can be designed for specific skills and competencies to increase the cultural competencies of counselor candidates.

Keywords: ethnocentrism, cultural sensitivity, multicultural personality, counseling

A BRIEF REVIEW OF INSENSITIVE MUNITIONS AND NATO TEST PROTOCOLS

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ABSTRACT

Insensitive Munitions (IM) are designed to enhance military safety by reducing the risk of detonation caused by external factors such as heat, impact, and mechanical shock. These munitions reduce potential damage to personnel, infrastructure, and equipment during storage, transport, and operations by ensuring less destruction after adverse events. Moreover, they maintain operational effectiveness under challenging conditions. Additionally, Insensitive Munitions provide logistical advantages due to their enhanced level of protection. These advantages include safer transportation, improved storage flexibility, and reduced risk of sympathetic detonation in confined environments.

NATO has established a framework for the evaluation and certification of IM through agreements and technical standards such as STANAG 4439, AOP-39, and AOP-39.1. This framework defines reaction classifications and test protocols. IM testing involves six core tests: Fast Heating, Slow Heating, Bullet Impact, Fragment Impact, Shaped Charge Jet Impact, and Sympathetic Reaction. These tests are designed to evaluate munition performance under real-world scenarios. The reactions of munitions to destructive effects are classified into six types, ranging from catastrophic detonation (Type I) to no reaction (Type VI). The development of IM continues in response to evolving combat environments and more demanding operational conditions. Examples include the development of safer explosive formulations like IMX-101 and IMX-104, which reduce sensitivity without compromising performance. Furthermore, sustainable practices, such as using propane burners for thermal testing, and advanced devices like high-speed cameras, cutting-edge sensor sensors, have increased testing precision while minimizing environmental impact. Computational modeling has also facilitated the IM development process by predicting munitions' responses to external factors, reducing reliance on physical testing.

This study examines NATO’s framework for IM, including key standards such as STANAG 4439, AOP-39, and AOP-39.1, while highlighting advancements in testing protocols, IM technologies, and modeling tools.

Keywords: Insensitive, Munition, Explosive, NATO, STANAG 4439, Test Protocols

CULTIVATION AND IMPORTANCE OF CONFECTIONARY SUNFLOWER IN TURKEY

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ABSTRACT

This study examined the changes in the cultivation area, yield, production and market values of confectionery sunflower in order to determine the agricultural and economic importance of confectionery sunflower production in Turkey. Sunflower has an important place in meeting the demand for vegetable oil, and its consumption for snacks is also increasing significantly. It is an important agricultural product due to its high nutritional value and resistance to drought conditions. The cultivation area of confectionery sunflower increased by 25% in the 2004-2023 period, reaching 88 thousand hectares, and the production amount increased by 138%, reaching 238 thousand tons in Turkey. However, price fluctuations and imported product competition stand out as the main factors limiting the development of the sector. While the price of confectionery sunflower was 18.44 TL/kg in 2022, it increased by 63% to 30.18 TL/kg in 2023. Despite this, the profitability of producers has been negatively affected due to increasing costs and low market. For the sustainability of confectionery sunflower production, the use of hybrid seeds should be expanded, state support should be increased and financial incentives should be provided to producers.

Key Words: confectionary sunflower, production, yield, price

NURSING CARE OF AN INDIVIDUAL WITH GUILLAIN BARRE SYNDROME: CASE REPORT

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ABSTRACT

Guillain-Bar Syndrome is a demyelinating autoimmune disease affecting the myelin and axons of peripheral nerves with acute onset, rapid progression and usually severe course. The most common complaints of patients diagnosed with Guillain-Bar Syndrome are pain, weakness in the legs, involvement of facial nerves and dysphagia. The disease picture, which gradually worsens with developing dysotonomy and loss of muscle strength, makes the individual dependent in daily life activities and requires nursing care in many areas of life. A well-planned and holistic care process, especially in chronic and progressive diseases, increases the quality of life of the patient. The best way to provide well-planned care is to base care on a model. The "Human Care Model", one of the care-oriented theories, provides a comprehensive nursing service in the management of chronic diseases. This model developed by Jean Watson includes compassion, healing, interpersonal relationships and human experiences. Watson emphasizes the importance of evaluating the individual holistically, not separately, both physically and mentally. This model takes into account the roles of nursing as health promoter, healer in case of illness, disease preventer and caregiver, and defines the caregiver role as making eye contact, active listening, being patient-centered, addressing the patient by name, protecting the patient's dignity, being emotionally open and accessible. In the Human Care Model, nurses have a major role in providing professional and quality care. This review presents a case study detailing the application and outcome of Watson's Human Care Theory to a patient diagnosed with Guillain-Barr . The concepts that make up the basic structure of the Human Care Model describe the practices for providing nursing care. In the case, nurse-patient communication and the patient's achievement of the goal of "healthy recovery-healthy life" and goals were explained in detail and it was determined that Watson's Human Care Model was appropriate for planning nursing care in the management of Guillain-Bar Syndrome.

Keywords: Guillain-Bar , Watson Human Care Model, Nursing

THE EFFECTS OF DIFFERENT SALT CONCENTRATIONS ON GERMINATION AND SEEDLING GROWTH OF CONFECTIONARY SUNFLOWER (*Helianthus annuus* L.) VARIETIES

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ABSTRACT

This study was carried out to determinate the responses of different salt concentrations on germination of confectionery sunflower (*Helianthus annuus* L.) varieties (TG-400 and Palancı-1) in the laboratory of the Department of Field Crops, Faculty of Agriculture, Kırşehir Ahi Evran University in 2023. In order to determine the effect of salt stress on germination time, germination rate, root and shoot development, 5 salt concentrations (0 (control), 50 mMol, 100 mMol, 150 mMol and 200 mMol NaCl) were applied. The experiments were carried out in an incubator at 22 °C temperature according to the factorial experimental design with 4 replications in a randomized plot. As a result of the study, no significant differences were observed between the germination rates of the varieties under control conditions, while significant differences were observed between the varieties under increasing salt concentrations. It was determined that the decrease in germination rate, root length, stem length, seedling fresh and dry weights and increase in mean germination time and dry matter ratio increasing salt concentrations. Palancı-1 variety generally showed better performance than TG-400 variety under increased salt concentrations.

Key words: sunflower, salt stress, germination, dry matter

NURSING CARE OF AN INDIVIDUAL WITH MYASTHENIA GRAVIS: CASE REPORT

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ABSTRACT

Myasthenia Gravis is an autoimmune disease of the neuromuscular junction characterized by weakness and loss of tone in voluntary muscles innervated by brainstem motor nuclei due to slowing or stopping of neuromuscular transmission. The disease is characterized by the development of antibodies against postsynaptic acetylcholine receptors. Patients with Myasthenia Gravis often experience painless, specific muscle weakness and fatigue. However, patients also experience symptoms such as drooping eyelids (ptosis), double vision (diplopia), chewing and swallowing difficulties. Controlling these symptoms is only possible with good care and successful disease management. It is very important to adapt to the disease in the management of chronic diseases that affect lifestyle. The most important responsibility for the patient to achieve and maintain this adaptation falls to the nurse who provides care. The fact that nurses are based on nursing models and theories in the provision of health care services increases the quality of care provided. One of these models is the Roy Adaptation Model. The nurse who provides care with the Roy Adaptation Model focuses on the individual's adaptation to the disease and treats the individual as a whole with its physiological, psychological and social aspects. According to this theory, the nurse contributes to the individual's adaptation to the disease and the development of coping mechanisms, contributes to the establishment of internal and external balance and aims to increase the independence of individuals. In addition to this, the individual is concerned with the situations he/she experiences.

Key Words: Myasthenia Gravis, Roy Adaptation Model, Nursing

LOCAL OPEN GOVERNMENT ISSUES IN AUSTIN, UNITED STATES

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Abstract

This study aims to analyze key issues of open government in Austin. Austin plays a major role in the United States as the only local government pilot program established by the Open Government Partnership. Qualitative approaches and bibliometric analysis methods are used in this study. The research data were obtained from the official website of the Austin Government and sourced from the Google Scholar database. The findings of this study indicate that the study of Austin's open government is not popular. The topics that dominate the study of Austin's open government are information, collaboration, transparency, communication, development, community, access, framework, service, and communication model. Meanwhile, the latest and potential topics in the study of Austin's open government include network, media, online information, consultative process, implementation, data sovereignty, governance, monitoring, assessment, deployment, infrastructure, data sharing, digital intervention, and innovation strategy. Austin is currently focusing on four main commitments, namely the community climate resilience pilot, inclusion in court contracting, public participation in city anti-displacement efforts, and public safety data analysis. These commitments have the potential to create a more open Austin government.

Keywords: Austin; Key Issues; Local Open Government

ROLE OF PEROVSKITES IN RENEWABLE SOLAR PHOTOVOLTAICS ENERGY

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Abstract:

Perovskite materials have rapidly transformed the renewable energy landscape, emerging as a vital component in the development of next-generation solar photovoltaics. Their exceptional optoelectronic properties, including high absorption coefficients, tunable bandgaps, and superior charge transport, have enabled unprecedented power conversion efficiencies exceeding 25%, rivaling conventional silicon-based technologies. However, critical challenges related to device stability, lead toxicity, and scalability hinder their widespread adoption.

As a researcher contributing to this transformative field, I have focused on developing innovative approaches to address these limitations. My work includes the design of stable perovskite formulations through doping strategies and interface engineering, aimed at enhancing both efficiency and operational durability. Additionally, I have explored AI-driven optimization frameworks to identify new perovskite compositions with reduced environmental impact. These efforts also extend to the fabrication of lightweight, flexible perovskite solar cells for emerging applications, including wearable devices and integrated energy systems.

This study presents a comprehensive analysis of the advancements in perovskite photovoltaics while highlighting my contributions toward overcoming material and fabrication challenges. By addressing these barriers, my research aims to facilitate the large-scale deployment of perovskite-based technologies, driving sustainable energy solutions to meet global demands.

Results

This section delves into the experimental and computational findings of the study. It showcases the impact of doping strategies and interface engineering on perovskite solar cell performance, emphasizing significant improvements in stability and efficiency. AI-driven frameworks demonstrated potential in predicting environmentally friendly compositions, yielding promising candidates for lead-free perovskites. Furthermore, the fabrication of flexible, lightweight cells achieved power conversion efficiencies exceeding 20% under standard test conditions, confirming their viability for wearable and integrated applications.

Discussion and Conclusion

The study underscores the transformative potential of perovskite photovoltaics in revolutionizing renewable energy solutions. Despite remarkable advancements, persistent challenges, such as environmental and scalability concerns, necessitate continued research. The integration of AI as a tool for material discovery proved instrumental in addressing these issues, opening pathways for sustainable, high-performance perovskite-based technologies. Conclusively, the presented innovations not only enhance the practical applicability of perovskite solar cells but also provide a blueprint for addressing critical barriers, paving the way for their commercialization and integration into the global energy infrastructure.

Keywords

Perovskite Solar Cells, Renewable Energy, AI Optimization, Lead-Free Perovskites, Device Stability, Flexible Photovoltaics, Sustainable Energy Solutions.

EVALUATING THE INFLUENCE OF PCM IN VARIOUS PARTS OF THE BUILDING ENVELOPE FOR PASSIVE THERMAL COMFORT IN THE TEMPERATE DRY CLIMATE OF NIGERIA

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Abstract

According to the International Energy Agency, buildings account for approximately 30% of global final energy consumption and 26% of global energy-related emissions. However, residential sector in Nigeria alone uses roughly 65% of the country's total yearly energy consumption. It is noted that, the shell of the building accounts for 50–60% of heat exchange and can result in 26% of the total building load due to heat gain and 36% of the peak cooling loads in tropical climates. This shows that building envelope is critical in determining energy efficiency and thermal comfort in buildings. Thermal energy storage systems, particularly those utilizing phase change materials (PCMs), have gained substantial attention in the past decade. The aim of the research is to investigate the impact of phase change materials (PCMs) on indoor thermal comfort and potential energy savings in cooling loads. A qualitative research design using experimental research strategy was employed on the prototype student hostels in Maiduguri. Simulations were conducted using the Design-Builder software with the EnergyPlusv8 plugin. Findings revealed incorporating PCMs on walls and roofs results in a significant indoor temperature reduction of 9.68°C. When PCM is placed in Windows and internal walls the energy consumption reduces by 20.6%.

Keywords: Building Envelope, Energy, PCM, Student hostel, Thermal Comfort

INTERSECTIONALITY IN FEMINISM: UNDERSTANDING THE MULTIPLE IDENTITIES OF WOMEN

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Abstract:
Intersectionality in feminism is a critical framework that examines how overlapping social identities, including race, class, sexuality, and ability, impact women's experiences of discrimination and privilege. Originating from Kimber Crenshaw's work, intersectionality emphasizes that women do not experience sexism in a vacuum, but rather through the intersections of multiple social categories. Traditional feminist approaches often focused on gender alone, overlooking the compounded effects of additional identities. By embracing an intersectional perspective, feminist scholarship seeks to highlight the unique challenges faced by marginalized women, such as Black women, LGBTQ+ individuals, and those in lower socio-economic classes, who encounter complex forms of oppression not adequately addressed by single-axis analyses. This approach has transformed feminist activism and policy, urging a more inclusive movement that recognizes and addresses the diverse needs and lived realities of all women. Intersectionality thus provides a richer, more nuanced understanding of gender inequality, advocating for structural changes that can benefit women across all identities and backgrounds.

Keywords: Intersectionality, Feminism, Gender inequality, Social identities, Kimber Crenshaw, Discrimination

PHARMACEUTICAL DATA LOGGING WITH SCADA ANALYTICS

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ABSTRACT
The pharmaceutical industry faces stringent regulatory requirements and operational challenges in maintaining optimal storage conditions for raw materials and finished products. Temperature fluctuations during storage can compromise the efficacy, safety, and shelf-life of pharmaceuticals, leading to significant financial losses and compliance risks. This paper presents an innovative approach utilizing data loggers integrated with Programmable Logic Controllers (PLCs) and Supervisory Control and Data Acquisition (SCADA) systems to ensure precise temperature monitoring and control in pharmaceutical storage environments. The proposed system is to design a data logger to offer real-time temperature monitoring, data logging, alarm notifications, and reporting functionalities tailored to the unique needs of the pharmaceutical industry. Data logger using PLC and SCADA systems, coupled with real-time storage in SQL databases, plays a pivotal role in ensuring stringent environmental monitoring in pharmaceutical industries particularly for temperature and humidity control. These industries demand precise monitoring and recording to maintain regulatory compliance and product integrity. The developed solution emphasizes scalability, modularity, and ease of integration with existing pharmaceutical infrastructure. The system supports advanced features such as customizable alerts, automated reporting, and predictive analytics, trend analysis. The implementation of this integrated system demonstrates significant improvements in operational efficiency, risk mitigation, and regulatory compliance, positioning it as a transformative tool for pharmaceutical storage management. This paper outlines the technical architecture, key components, and potential applications of the proposed system, providing a roadmap for future enhancements and industry-wide adoption.
Keywords: Data loggers, Programmable Logic Controllers, Supervisory Control and Data Acquisition

RESPONSIBILITIES OF NURSES IN HEALTH CARE ASSOCIATED INFECTIONS IN INTENSIVE CARE UNITS

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ABSTRACT

Healthcare Associated Infections (HAI) are extremely important for healthcare institutions due to the economic burden they create by increasing patient morbidity and mortality and lengthening hospital stay. They are infections that can be prevented by taking appropriate control measures. HAI's are defined as infections that do not have an infection or are not in the incubation period at the time of applying to the health institution, but occur on the 3rd day or later of hospital admission. HAI is an extremely important medical condition because it prolongs the duration of hospitalization, causes multiple organ disfunction, has limited treatment options and leads to an increase in mortality. According to studies, the rate of HAI in our country varies between 1% and 16.5%. This number increases even more in some intensive care units. In hospitals in the United States that implement effective infection control programs, it has been determined that there is a 35% decrease in circulatory system and surgical site infections, a 31% decrease in urinary system infections, a 27% decrease in lower respiratory tract infections, and a 32% decrease in total.

While many international studies have been found in the literature to determine the role and knowledge level of nurses in preventing HAI, it has been observed that various studies have been conducted on the subject in our country. Since nurses are a group that is constantly together with patients in the provision of health services, they are key health personel in the process of taking and implementing measures regarding HAI. Creating and disseminating good practice examples regarding infection control measures, and increasing the awareness and qualifications of health workers through in-service training help prevent HAI.

Keywords: Healthcare Associated Infections, Nursing, Intensive Care Unit

UNITING EFFORTS FOR HUMAN, ANIMAL, AND WILDLIFE PROTECTION UNDER THE ONE HEALTH CONCEPT

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The connection between mistreatment of animals and interpersonal violence is undeniable. To combat this cycle of violence, the authors present the preliminary results of a scientific/educational project." This project embodies the aspiration for early educational intervention during a phase when children possess an unparalleled capacity to develop awareness and empathy. By instilling values of compassion and respect in childhood, we lay the foundation for a future built on kindness.

Respecting animal life in its various forms inherently translates into respecting human life. Reducing cruelty toward animals correlates with a significant decrease in interpersonal violence and fosters respect for all human and non-human living beings. The project is grounded in the concept of shared well-being, emphasizing the deep interconnection between human and animal welfare. Once initiated, the cycle of violence is challenging to disrupt, underscoring the importance of prevention before it begins.

This project aims to nurture values of friendship, respect for wildlife, care, and happiness. It teaches that every living being—whether a loyal companion or a creature in the wild—deserves fundamental care: water, food, affection, attention, healthcare, shelter, and some simple rules. Isn’t this, after all, the essence of what every child needs as well?

Through engaging activities and educational outreach, this project seeks to inspire children to become guardians of animal welfare. By fostering an early appreciation for coexistence and shared responsibility, this project contributes to a more compassionate society where respect for life is the norm, and the cycle of violence can be stopped before it begins.

POLITICAL PARTICIPATION OF WOMEN IN AFGHANISTAN

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Abstract

The abstract summarizes the main aspects of the research, briefly highlighting the issue, importance, research method, and results.Political participation of women in Afghanistan, as a key element of democratic development and social justice, faces structural and cultural challenges. This research aims to examine the factors affecting women's participation in politics, analyze relevant national and international laws, and propose practical solutions to enhance their involvement. Through qualitative methods and the analysis of field and documentary data, it was found that patriarchal traditions, lack of education, and unequal opportunities are the primary obstacles. The results suggest that increasing public awareness, reforming legal structures, and capacity-building can contribute to boosting women's participation and achieving gender equality in Afghanistan.

Introduction

The introduction provides the scientific background for the research topic and highlights its importance.Political participation of women in Afghanistan is a crucial indicator of achieving social justice and strengthening democracy in a country with a long history of gender inequality and patriarchy. This participation is important not only in formal decision-making arenas but also in civil and social activities. However, Afghan women's political involvement is limited due to factors such as insecurity, ineffective laws, and discriminatory attitudes. The aim of this research is to comprehensively explore the barriers to women's political participation in Afghanistan and identify strategies to increase their presence and influence in politics. The significance of this issue lies in the fact that women's participation in politics can lead to more equitable decision-making that reflects the demands of all segments of society.

Research Methodology

This section explains how the research was conducted and what tools were used for data analysis.Type of Research: This study is qualitative and analytical, focusing on an in-depth examination of social and legal factors related to the issue.Data Collection Method: Data was collected through the analysis of national and international documents (such as the Afghan Constitution and the Convention on the Elimination of All Forms of Discrimination Against Women), semi-structured interviews with women's rights activists, and reports from international organizations.Target Population: The study includes women's rights activists, Afghan female politicians, and human rights experts.Analysis Tools: A qualitative content analysis method was used to examine the data and identify key patterns.

Conclusion

The conclusion summarizes the findings and offers practical solutions.The research findings indicate that the main barriers to women's political participation in Afghanistan include gender discrimination, weak legal enforcement, lack of public awareness of women's rights, and insecurity.Women, when provided with education, legal support, and equal opportunities, can play

an effective role in political decision-making.Reforming national laws to support women's participation, creating a safe space for their political activities, and strengthening the role of civil society organizations are some of the solutions that can help increase women's political participation

Key Points

The key points of the research are briefly summarized to convey the main scientific messages of the topic.Political participation of women in Afghanistan is a measure of social development and gender justice.Cultural and social factors, such as patriarchal traditions, act as barriers to women's participation in politics.Women's education, reforming supportive laws, and strengthening the role of civil society organizations are key solutions to increase women's political participation.Women's participation in politics can strengthen democracy and improve the social and economic conditions of Afghan society.

POSSIBILITIES OF URBAN OPEN SPACE INNER COURTYARDS IN PUBLIC HOUSING

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ABSTRACT

With urbanization's effect, the housing systems have increased due to population growth. The need for people to live in more crowded mass housing has increased. The need for shelter has changed with people's socialization and use of open green spaces. This situation has restricted people's collective use of open green spaces. For this reason, open green space systems surrounded by structures have come to the fore. These spaces, surrounded by structures called inner courtyards, provide all the features of open green spaces by hosting more physical activities. It is one of the building-scale work areas within the scope of the urban landscape. They can be designed as interior and exterior spaces with multiple functions. They allow them to move freely without being directed to a mandatory activity or action and to choose their activities. Inner courtyards, which also have an identity value in terms of history and culture, structurally affect the spatial structure of the houses. Landscape designs are carried out by the function of the building to which they are connected, providing functional benefits to the users. The arrangement of landscape elements with appropriate design principles creates a visual effect of the courtyards. In this study, information is given about using inner courtyards in mass housing as urban open spaces. The opportunities offered to people by inner courtyards as urban open spaces and the functional aesthetic values of these opportunities were evaluated.

Key Words: Urban Open Space, Public Housing, Inner Courtyards

IMMUNICATION IN THE PRECONCEPTIONAL PERIOD

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ABSTRACT

Preconceptional immunization is vital in protecting maternal and infant health. Vaccines administered during this period not only strengthen the immune system of the expectant mother, but also protect the fetus from congenital malformations, growth retardation, premature birth and serious diseases during pregnancy. In addition, maternal antibodies transmitted through the placenta provide additional protection against infections during the first period of the baby's life. Accordingly, screening women of reproductive age for infections and administering the necessary vaccines to those with immune deficiencies before pregnancy are essential elements of comprehensive preconceptional care. In particular, assessment of immunization status for tetanus, diphtheria, pertussis (Tdap), varicella, measles, mumps, rubella (MMR) and hepatitis B is recommended for all women of reproductive age. Women at risk of hepatitis B infection who have not been vaccinated before are recommended to receive hepatitis B vaccination before pregnancy. If women of childbearing age do not have a history of chickenpox, a two-dose varicella vaccine is recommended. The US Centers for Disease Control and Prevention (CDC) recommends that women who are not immune to measles should receive measles, mumps and rubella (MMR) vaccine before pregnancy. Because chickenpox and MMR are live vaccines, pregnancy should be avoided for at least one month after each dose. Influenza in pregnancy is associated with increased morbidity and risk of hospitalization. Although influenza vaccination is recommended for women planning to become pregnant between October and May, those with a history of anaphylaxis to eggs should not be vaccinated. Diphtheria, tetanus and pertussis (Tdap) vaccine administered before pregnancy provides protection by providing passive immunity in the newborn. The CDC recommends one dose of Tdap vaccine for all women planning to become pregnant. Human papillomavirus (HPV) vaccination is recommended for all women of reproductive age 9-26 years. If the HPV vaccination series has been started and the woman subsequently becomes pregnant, completion of the vaccination series should be delayed until after the completion of that pregnancy. It is important for nurses to assess the immune history and risk factors of expectant mothers and provide individual counseling before pregnancy. In this report, we aimed to present the importance and effectiveness of preconceptional immunization and current recommendations

Key Words: Preconception Health; Immunization Schedule; Vaccines.

EFFECTS OF PROBIOTICS ON ORAL MICROBIOLOGICAL ENVIRONMENT, GINGIVAL HEALTH AND DENTAL PLAQUE; A META-ANALYSIS

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ABSTRACT

Background:
The oral microbiome, comprising over 700 bacterial species, plays a crucial role in oral health. Key microorganisms like Streptococcus mutans and Porphyromonas gingivalis contribute to biofilm formation, leading to conditions such as gingivitis, periodontitis, and dental caries. Conventional treatments, including fluoride and professional cleaning, focus on plaque control, but probiotics are gaining attention as potential adjunct therapies for their ability to modulate the oral microbiome, reduce inflammation, and limit harmful bacteria.

Objective:
To evaluate the effects of probiotics on gingival health, plaque accumulation, and the oral microbiological environment.

Materials and Methods:

A meta-analysis was conducted according to PRISMA guidelines. After thorough web search, thirteen studies from 2009 to 2024 were included, comprising of 321 participants. Random effects models were used for statistical analysis, and the Cochrane Risk Assessment tool was applied to assess bias.

Results:
Probiotics significantly improved the Gingival Index (WMD=0.27, 95% CI=0.02–0.52, p=0.04). However, no significant changes were found in Plaque Index (p=0.64), Bleeding on Probing (p=0.92), or Gingival crevicular Fluid volume (p=0.94). While IL-1β concentration in GCF increased (p=0.02), bacterial counts, including Aggregatibacter actinomycetemcomitans and Porphyromonas gingivalis, showed no significant reduction.

Conclusion:
Probiotics may offer benefits by improving gingival health, though their effects on plaque and bacterial counts remain limited. Strain-specific effects, dosage, and individual variability could explain the inconsistent findings. Further research is needed to optimize probiotic interventions for oral health.

Keywords: dental plaque, gingiva, oral microbiota, probiotics

ANALYZING THE IMPACT OF TEMPERATURE FLUCTUATIONS ON THE PROPERTIES OF SLAG CEMENT CONCRETE

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Abstract

This study explores the effects of temperature variations on the physical and mechanical properties of slag cement concrete. Ground-granulated blast-furnace slag (GGBFS), a by-product of iron and steel production, is used as a key component in the concrete mix. Concrete samples, cured for 28 days, were subjected to heating at varying temperatures of 100°C, 150°C, 200°C, 250°C, and 300°C. Post-heating, the samples were weighed and tested using a rebound hammer to evaluate changes in mass, density, hardness, and compressive strength. The findings indicate that increasing temperatures lead to a reduction in the weight, density, and compressive strength of slag cement concrete. However, its thermal performance shows slight superiority over conventional concrete in tensile properties. These insights contribute to understanding the behavior of slag cement concrete under thermal stress, highlighting its potential for applications in thermally challenging environments.

Keywords: Slag Cement Concrete, Ground-Granulated Blast-Furnace Slag (GGBFS)
Temperature Variation, Compressive Strength, Thermal Performance, Mechanical Properties, Density Reduction

USE OF INTELLIGENT TRANSPORTATION SYSTEMS IN LOCAL GOVERNMENTS

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ABSTRACT

Intelligent transportation systems were developed to establish a sustainable transportation system. The definition of Intelligent Transportation Systems (ITS) dates back to the mid-20th century and includes the use of information and communication technology in this field of transportation science. The first IIT application in the field of transportation was to reduce traffic congestion by using signaling methods. In the United States, studies were carried out as "Intelligent Vehicle-Highway Systems" in the 1990s and the integration of transportation systems with advanced technology systems was planned (Ministry of Transportation and Infrastructure, 2020). IIT applications, which started with signaling systems in these periods, have developed up to autonomous vehicles today.

Intelligent Transportation Systems (ITS) are systems that provide a more controllable, integrated, smarter service for the use of the types developed in the transportation system (land, air, rail, sea), and make transportation more comfortable, faster, and more reliable (Usta, 2023). In our country, studies have been initiated on a local scale in line with the IIT plans determined at a higher scale. It was aimed to produce solutions to the transportation problems experienced with the concentration of the population, especially in big cities. For this reason, applications have been started in other big cities, especially in Istanbul. However, the status of this application at the local municipality level is not clear, and no study has been conducted on the stage it is at. In this context, in the first part of my study, I conducted a literature review on ITS applications in local governments. In the second part, I examined the results of the survey I conducted with personnel working in connection with smart transportation systems in local governments, and in the conclusion part, I commented on the status of smart transportation system usage in local governments based on this survey.

Keywords: Intelligent Transportation Systems, Local Government Policies, Intelligent Transportation Systems Applications

SUSTAINABLE INTELLIGENT TRANSPORTATION POLICIES IN ISTANBUL

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ABSTRACT

Intelligent transportation systems, which were initiated by the United States in 1939, are not as popular as the concept of sustainable transportation mentioned in 1992. Today, concepts such as rapid development of technology, increased communication between objects, and mobility resulting from an increasing population are increasing the popularity of intelligent transportation system-based applications. In the Istanbul metropolis, which hosts approximately 18.35% of Turkey's population , transportation is among the main problems. The main factors causing transportation problems are; the number of vehicles, the number of trips, intersection arrangements, insufficient parking, inadequate road routes and signaling systems controlling these roads. These problems brought Istanbul to the 4th place in the world with the most traffic congestion in 2019. It is predicted that the number of registered vehicles, which was 4.3 million in 2020, will increase by 39% in 2040. In addition, it has been determined that the number of daily trips, which reached 30.3 million in 2020, will increase by approximately 25% . Considering all these developments and predictions, in order to prevent the current situation in Istanbul from becoming more serious, it should be integrated with smart transportation systems urgently, and sustainable systems should be established while this integration is being provided. In this study, I first conducted a detailed literature review on the applications developed for smart transportation systems. In the second part, I examined the intersection points of sustainable transportation with smart transportation systems and the policies developed within this framework. In the last part, I included the transportation policies envisaged for the next 25 years for the Istanbul metropolitan area and examined these policies in the context of sustainability.

Keywords: Intelligent Transportation Systems, Sustainable Transportation, Traffic Congestion, Traffic Problem in Istanbul

WORKING CONDITIONS AND SALARY IN ALBANIA

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Abstract

After the pandemic, the Albanian labor market has faced difficulties, particularly due to a shortage of workers. This problem has been mainly influenced by the low level of the minimum and average wage, which does not provide sufficient incentives for individuals to enter or remain in the labor force.

Most Albanians, even though they are employed, face financial insecurity and limited opportunities to save due to the high cost of living in Albania. Income directly affects personal finances by creating favorable conditions for well-being.

Wages are a key factor in the decision-making process when seeking a job, as fair and satisfactory compensation motivates employees and fosters job satisfaction.

Albania has experienced economic growth in recent years, supported by the development of important sectors such as tourism and construction, which have increased the demand for labor.

Employment in public administration in Albania has become increasingly attractive in recent years, mainly due to high salaries that are more competitive compared to the private sector.

Working conditions, wage levels, lack of material and non-material incentives are some of the causes that have influenced the increase in emigration and the desire to work in European markets.

Through this study, we will try to identify how wages and working conditions affect the labor market and what challenges Albanian employees face.

The lack of labor force in Albania as a result of emigration and the problems that exist in the labor market require the creation of appropriate strategies and policies to address these challenges.

Keywords: labor market, employees, income, wage, work conditions.

JEL Classification: J21, J31, J61

RECENT ADVANCES IN RECTAL CANCER MANAGEMENT: PAVING THE WAY FOR ORGAN PRESERVATION

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ABSTRACT

Introduction and Purpose: Rectal cancer constitutes a significant subset of colorectal malignancies and remains one of the leading causes of cancer-related deaths globally. Recent advancements in treatment strategies, such as total neoadjuvant therapy (TNT) and the “watch-and-wait” approach, have shown promise in enhancing organ preservation and reducing the need for surgery. However, the long-term outcomes and optimal criteria for implementing these strategies remain areas of active investigation in the literature. This study aims to evaluate the impact of “watch-and-wait” strategy on organ preservation, local recurrence rates, and quality of life in rectal cancer treatment. By reviewing findings from key clinical trials, the effectiveness and applicability of these approaches will be critically assessed.

Materials and Methods: Key findings from pivotal studies are reviewed. The efficacy of the "watch-and-wait" approach were analyzed.

Results: In patients with complete clinical response, non-surgical monitoring enhances quality of life without compromising overall survival. Approaches such as delaying surgery following short-course radiotherapy offer more flexible treatment strategies. However, successful implementation of organ preservation protocols requires careful patient selection and rigorous follow-up.

Discussion and Conclusion: Personalized approaches in rectal cancer treatment offer promising prospects for organ preservation and avoidance of surgery. Future research should explore the broader applicability of these protocols and the role of biomarkers in optimizing treatment outcomes.

Keywords: Rectal cancer, watch and wait, neoadjuvant therapy, organ preservation

REDUCING ENERGY LOSS IN BUILDINGS: THE ROLE OF NEXT-GENERATION INSULATION SYSTEMS

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Abstract:
A large proportion of global energy consumption is accounted for in buildings, making for an imperative need for new solutions to reduce energy loss and facilitate sustainability. This study examines the transformative potential of next generation insulation systems, specifically aerogel-based insulation, phase change materials (PCMs) and vacuum insulation panels (VIP), to enhance energy efficient building practices. The Edge Building in Amsterdam, The Bullitt Center in Seattle, and the Reichstag Building in Berlin illustrate how these technologies substantially enhance thermal performance without addressing the design, functional and considerations that are environmentally. PCMs control indoor temperatures, to reduce needs for HVAC systems, while aerogels enable innovative architectural designs with superb thermal insulation for very thin layers. With unprecedented thermal resistance, VIPS enable the retrofits of historic structures without compromising their appearance. Cost and scalability, along with economic and environmental benefits of these advanced materials, are the focus of the study. The options for material affordability enhancement and scaling production processes as well as the policies integration for widespread adoption are highlighted. The building industry can make substantial energy reductions, align with global sustainability goals, and help combat the effects of climate change by building with next generation insulation systems.

Keywords: Energy Efficiency; Thermal Performance; Energy Loss Reduction; Sustainable Building Design; Retrofitting Technologies.

REINFORCED NEURAL NETWORKS FOR LUNG CANCER DETECTION

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Abstract. Lung cancer is one of the deadliest diseases which cause high death rates throughout the world. Lung cancer is an irregular growth of cells that can be characteristically derived from a single irregular cell which may spread to whole part of the lung. CT scan is one of the sensitive methods used in the medical field for treating the patients as compared to MRI and X-rays. Diagnosis of cancer from the computed tomography (CT) images of lung is very challenging for doctors. Computer aided diagnosis (CAD) is another tool for detection that uses computer-generated output as an assisting tool for a clinician to form a diagnosis. The biomedical image processing has better ability to detect lung diseases as it helps in analyzing each image and monitoring the data. MATLAB has been used through every procedure made in this study. In image processing procedures, pre-processing of an image is a necessary process as there is difficulty in detecting cancer cells in an image due to the presence of noise and low-quality of images. Steps like image enhancement, image segmentation and feature extraction methods can be used to reduce the degree of those problems. Reinforcement machine learning algorithm is introduced to increase the accuracy rate of detecting tumor growth in lungs. In future, the CT images are collected from health-care centers and remote places through Internet of Things (IoT)-enabled platform and the image is stored in the cloud servers and obtained for processing at any time. The main purpose of this paper is to assist the doctors to detect and classify lung cancer by using CT images based on reinforcement learning algorithm through IoT platform.

Keywords: Computed Tomography (CT), Internet of Things (IoT), Computer aided diagnosis (CAD), Pre-processing, Image Segmentation, Reinforcement Learning Neural Networks

RELATIONSHIP BETWEEN FOOD ADDITIVES AND CANCER: SCIENTIFIC EVALUATION

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Abstract

Aim: Food additives are widely used to extend the shelf life of foods and improve their properties such as taste, color or texture. However, some additives need to be carefully examined due to their potential health risks. This study aimed to examine the possible relationship between food additives and cancer.

Method: As a result of literature review and examination of existing studies, the possible relationship between food additives and cancer was examined.

Results: In the literature, there are additives that were approved for use in the past but were later banned due to their carcinogenic effects. Additives called dulcin, safrole and butter yellow are among those banned because they cause cancer. In addition, food additives with suspected cancer are also known. This situation emphasizes the need for continuous monitoring and evaluation in the field of food safety. For example, a preservative known as sodium benzoate (E211) can lead to the formation of a chemical compound called benzene, which can cause cancer, when combined with vitamin C (ascorbic acid) and exposed to sunlight. This situation shows that formulations where these two ingredients are used together, especially in beverages, should be carefully evaluated.

Conclusion: It is important for individuals to turn to natural and unprocessed foods in order to protect their health. Natural nutrition not only provides protection from potentially harmful chemicals, but also provides a balanced intake of the nutrients the body needs. However, raising consumers' awareness about food additives and increasing regulatory authorities' inspections of food safety are of critical importance for public health. As a result, the potential for food additives to be associated with cancer reveals that these substances should be continuously evaluated in light of scientific data. In order to minimize health risks, individuals are advised to prefer natural products as much as possible and to exhibit a conscious consumer approach in this regard.

Keywords: Food additives, cancer, nutrition, disease.

RENEWABLE ENERGY CRISIS ANALYSIS: STRUCTURAL ECONOMIC CHALLENGES IN THE 2020-2024 ENERGY TRANSITION

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Abstract

This research analyses the complexity of the renewable energy crisis in the context of global economic dynamics and the challenges of the international energy transition for the 2020-2024 period. Through a quantitative and qualitative approach using data from the International Energy Agency (IEA) and the World Bank, the study reveals that the imbalance between demand and availability of renewable energy technologies, supply chain limitations of critical materials such as lithium and cobalt, and price volatility of solar panel and wind turbine components have created significant pressure on global clean energy implementation. The research findings show that developing countries face serious financial barriers in adopting renewable technologies, with an average capital cost increase of 45% for renewable energy projects, while reliance on technology imports from developed countries creates a widening adoption gap. The analysis also identifies that policy uncertainty, inadequate grid infrastructure, and underinvestment in energy storage systems are key constraining factors in achieving global energy transition targets. This study makes an important contribution to a comprehensive understanding of the dynamics of the contemporary renewable energy crisis and suggests an integrated policy framework to address the structural challenges in the global energy transition.

Keywords: Renewable energy crisis, global energy transition, critical materials, technology affordability.

ROLE OF SELF-CONTROL IN THE RELATIONSHIP BETWEEN ONLINE SHOPPING ADDICTION AND COMPULSIVE BUYING BEHAVIOR AMONG YOUNG ADULTS

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Abstract
Online shopping addiction can lead to compulsive buying behavior and self-control plays a crucial role in managing and mitigating these behaviors. The study aimed to explore the relationship between online shopping addiction and compulsive buying behavior among young adults, with self-control acting as a mediator. Online Shopping Addiction Scale was used to measure the online shopping addiction (Zhao et al., 2017). Compulsive Buying Behavior Scale was used to measure the severity of compulsive buying tendencies in participants (Valence et al., 1988). The Brief Self-Control Scale (BSCS) was utilized to assess self-control (Tangney et al., 2004). The cross-sectional correlational research design was used in this study. The sample consisted of (*N=300*) young adults. An equal number of boys and girls participated in the current study. The age range of the participants was 18-39 years old. The findings of the study revealed a significant relationship between online shopping addiction, compulsive buying behavior, and self-control. In correlation analysis, significant positive relationship was found between online shopping addiction and compulsive buying behavior; findings also revealed that both online shopping addiction and compulsive buying behavior were negatively correlated with self-control. Significant mean differences in online shopping addiction, compulsive buying behavior, and self-control were found across gender including gender in relation to the study variable. The mediation analysis showed that self-control had a significant mediating effect on the relationship between online shopping addiction and compulsive buying behavior. This study can provide insights into the development of effective interventions and strategies to promote healthy online shopping behaviors among university students.
Keywords. online shopping addiction, compulsive buying behavior, self-control, young adults.

ASSESSMENT OF RESOURCES FOR QUALITY BLOCK / BRICKLAYING AND CONCRETING TRADE IN TECHNICAL COLLEGES IN OGUN STATE

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Abstract

This study was carried out to assess the material resources for quality brick/block laying, and concreting trade in technical colleges in Ogun State. A survey research design was adopted for the study. A checklist and structured questionnaire were used for data collection. Three experts from Tai Solarin University of Education in the industrial and technical education department validated the instruments. The reliability was determined using Cronbach Alpha method of estimating reliability. The coefficient of reliability obtained was 0.71. Population for the study comprised all teachers, technicians, and students in all eight (8) technical colleges in Ogun State offering brick/block laying, and concreting trade. The sample comprised 102 respondents which include 7 teachers, 2 technicians, and 93 students. A structured questionnaire and checklist were used to obtain information on availability, adequacy, and utilization of material resources for quality Brick/Block-laying and concreting in Ogun State. Percentage and mean were used to analyze data obtained on the availability, adequacy, and utilization respectively. The study found out that all the material resources required are available, however, 70-100% are highly available, 50-69% are moderately available while items below 50% of the required resources are low in availability quality brick/block-laying, and concreting (BB&C) trade in Technical Colleges in Ogun State. Furthermore, the study also found out that there are inadequacies in the material resources needed for quality brick/block-laying, and concreting (BB&C) trade in Technical Colleges in Ogun State, items below 50% are inadequate and items above 50% are adequate. Finally, the study found out that only 2 out of the 14 equipment are always utilized while 12 are sometimes utilized, and also 22 out of the 34 tools are always utilized while the remaining 12 are sometimes utilized. It was therefore recommended that government should inject more funds into technical colleges to enable them to provide adequate tools and equipment for the implementation of technical education programmes, more also personnel should be sensitized on the relevance of utilization of available tools and equipment for quality brick/block-laying, and concreting (BB&C) trade in Technical Colleges in Ogun State.

Keywords: Resources, block laying, brick laying and concreting, Technical College.

REVOLUTIONIZING CANCER DIAGNOSIS: THE POTENTIAL OF 3D PRINTED NANOSENSORS

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Abstract: Cancer is a complicated illness with a worldwide impact, requiring ongoing breakthroughs in diagnosis and treatment. The application of 3D printing technology is increasingly recognized as an innovative tool in cancer diagnosis, offering enormous possibilities in detection and surveillance. The study aims to improve early diagnosis and prognosis for patients. 3D printing has become more popular for producing precise, customizable nanosensors with high sensitivity and specificity. The study covers the latest advances in 3D-printed cancer nanosensors. It discusses how inkjet printing, stereolithography, and fused deposition modeling can create intricate nanostructures with increased performance. Design and functionalization strategies for targeting nucleic acids, proteins, and circulating tumor cells are also covered. Nanomaterial-based sensors can detect tumor biomarkers, circulating cells, and extracellular vesicles, improving cancer diagnosis and survival. Integrating 3D-printed nanosensors with fluorescence, electrochemical, and surface-enhanced Raman spectroscopy allows rapid and accurate cancer diagnosis in clinical settings. The publication critically reviews and synthesizes previous research to show how 3D-printed nanosensors could improve cancer diagnosis as well as personalized therapy. The study explores the capacity of 3D-printed nanosensors to bring about significant changes in the field of cancer diagnostics. Using 3D-printed technology and additive manufacturing, these sensors provide exceptional sensitivity and specificity for the early identification of cancer biomarkers. Their ability to be customized allows for specific therapies for various types of cancer, offering substantial progress in precision medicine. The paper analyzes the most recent advancements, obstacles, and potential future opportunities of 3D-printed nanosensors, with a specific focus on their significant impact on transforming cancer diagnosis.

Keywords: 3D printing, Nanosensor, Stereolithography, Cancer diagnosis, personalized therapy,

ROB OTICS

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Robots are increasingly deployed to perform tasks traditionally done by humans, enhanced with artificial intelligence (AI) to enable autonomy and decision-making capabilities. Robotics, as a field, integrates diverse engineering disciplines, making it an interdisciplinary domain with applications in industries, services, medicine, and exploration. At its core, robotics encompasses mechatronics—a synergy of mechanical and electronic engineering—alongside computer engineering, manufacturing, and materials science. This broad foundation allows for the creation of robots equipped with advanced computational intelligence, incorporating AI technologies such as artificial neural networks and genetic algorithms.

This paper provides an introduction to the fundamental concepts and applications of robotics, examining the various types and functions of modern robots. Key areas of focus include mobile robots for autonomous navigation, industrial robots for manufacturing, service robots designed for customer interactions, and specialized robots such as military robots, telerobots for remote operation, medical robots for surgical precision, space robots for exploration, and humanoid robots for human-like interaction. Additionally, BEAM robots (biological, electronic, aesthetic, and mechanical robots) and microrobots represent emerging fields within robotics. The primary contribution of this work lies in conceptualizing these diverse robot types, illustrating the expanding role of robots across multiple sectors and their reliance on integrated artificial intelligence for effective functionality.

Keywords: Robotics, Artificial Intelligence, Mechatronics, Modern Robots

ROBOTICS AND AUTOMATION IN AGRICULTURE

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ABSTRACT:
Robotics and automation are transforming agriculture, enhancing efficiency and sustainability in food production. As the global demand for food rises due to population growth, the integration of advanced technologies in farming practices has become essential. This abstract reviews the current state and future prospects of robotics and automation in agriculture, emphasizing their role in precision farming.**Precision Agriculture** is a key area where robotics and automation are applied, aiming to optimize inputs and outputs while minimizing environmental impact. Technologies such as drones, autonomous tractors, and robotic harvesters are increasingly utilized for tasks like planting, monitoring crop health, and harvesting. These innovations enable farmers to implement precise management strategies that improve yield and reduce waste.Recent advancements include the development of mobile robots capable of performing various agricultural operations autonomously. For instance, systems equipped with sensors and artificial intelligence can analyze soil conditions, monitor crop growth, and apply fertilizers or pesticides with high accuracy. This not only enhances productivity but also addresses labor shortages in the agricultural sector.However, the adoption of these technologies presents challenges. High initial costs, the need for technical expertise, and varying economic factors across different regions can hinder widespread implementation. Furthermore, small-scale farmers often find it difficult to access these innovations due to financial constraints.The future of robotics and automation in agriculture looks promising. Ongoing research aims to develop cost-effective solutions tailored for diverse agricultural settings. By addressing the specific challenges faced by different types of farming operations, the agricultural sector can benefit from increased efficiency and sustainability. Ultimately, embracing these technologies will be crucial for meeting global food demands while ensuring environmental stewardship.
Keywords: Robotics, Automation, Agriculture, Drones, Robotic Harvesters, Food Security

THE IMPORTANCE OF THE DEVELOPMENT AND TEACHING OF GREEN CHEMISTRY FOR SOLVING ECOLOGICAL PROBLEMS

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Abstract

The urgent issue of achieving solutions to global environmental problems for sustainable development determines the urgent goals of both science and education. For the realization of these goals, Green education, as well as teaching Green chemistry to the younger generation, can lead to environmental awareness and the importance of environmental protection in people's thinking and their behavior in accordance with the challenges and trends of the modern world. In this regard, taking into account relevant issues in undergraduate preparation can contribute to a purposeful assessment of existing opportunities. Thus, it can be considered appropriate to study the essence of Green Chemistry, training results, and existing innovative approaches.

It is known that environmental chemistry studies the sources of chemical waste, distribution environments and indicators of sustainability in the relevant environment, as well as their harmful effects. Green chemistry aims to prevent the formation of harmful chemical waste and improve and renew existing methods based on innovative approaches. Studies show that research work in accordance with the goals of Green chemistry is being carried out among the research conducted in various fields of chemistry. For example, the process of cross-linking a matrix with a modifier during the production of polymer compositions can also be considered as a subject of study of Green chemistry. Thus, cross-linking reactions prevent the extraction of the modifying compound into the exploitation environment. For this reason, the renewal of the existing process and innovative solutions to the problem are provided. The existence of opportunities for evaluating multidisciplinary research work conducted in various fields of chemistry as “green solutions” paves the way for the enrichment of the subject of Green chemistry.

Three main directions in the development of green chemistry were proposed by R. Noyori in 2005. I believe that enriching the subject of Green Chemistry based on the results of scientific development and teaching it to the younger generation can contribute to solving environmental problems.

Keywords: Green Chemistry, ecologıcal problems, Green education

INVESTIGATION OF THE ANTIOXIDANT EFFECTS OF COENZYME Q10 AND VITAMIN C ON BREAST CANCER STEM CELLS

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Introduction and Purpose: Breast cancer is the most common cancer among women and one of the leading causes of cancer-related deaths. In the treatment of this disease, targeting breast cancer stem cells (BCSCs) is a critical approach to reduce the risk of recurrence and metastasis. Investigating the metabolic pathways of cancer stem cells (CSCs) helps in better understanding their growth and survival mechanisms and enables the development of targeted therapeutic strategies. This study aims to investigate the effects of vitamin C and coenzyme Q10 on breast cancer cell line MCF-7, focusing on cell survival and apoptosis.

Materials and Methods: In this study, the luminal type breast cancer cell line MCF-7 was used. The cells were divided into two experimental groups: a control group and a vitamin C-treated group. The experiments were repeated three times to ensure accuracy. Cell survival, apoptosis rates, and cell proliferation were analyzed using flow cytometry. The effects of vitamin C on cell proliferation and apoptosis were evaluated, particularly focusing on its ability to suppress proliferation and increase apoptosis.

Results: The results showed that the application of vitamin C significantly increased apoptosis in the MCF-7 cell line. Flow cytometry data indicated that vitamin C treatment enhanced apoptosis by approximately 30% and suppressed cell proliferation. These findings demonstrate that vitamin C has synergistic effects in breast cancer cells, potentially offering therapeutic benefits.

Discussion and Conclusion: These results suggest that vitamin C could be considered a complementary treatment option in breast cancer therapy. The effects of vitamin C on aggressive breast cancer subtypes highlight its potential role in enhancing treatment outcomes. The study emphasizes the importance of understanding the role of antioxidants in cancer therapy and their potential in supporting conventional treatments.

Key Words: Breast Cancer, Cancer Stem Cells, Vitamin C, Antioxidant, Apoptosis

STUDY OF THE EFFECTS OF Ni DOPING ON THE STRUCTURAL, MICROSTRUCTURAL, AND OPTICAL PROPERTIES OF TIN OXIDE FILMS USING PSP METHOD

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Abstract – In this study, we used a pneumatic spray pyrolysis technique at 450°C to deposit Sn1–xNixO2 thin films ($0.0 \leq x \leq 0.10$) on glass substrates. The influence of doping content on the films structural and optical was investigated. Structural characterization by X-ray diffraction indicated that the rutile phase of SnO2 is present in all thin films, and crystallite sizes are estimated to be in the range of 27–47 nm. The optical bandgap energy increases from 3.83 to 4.01 eV as the dopant content increases according to the Burstein-Moss effect. Resistivity is affected by doping and the thickness of thin films.

Keywords – Thin films, X–ray diffraction, Optical properties.

THE EFFECT OF ZnO NANOPARTICLES ON THE CHLOROPHYLL PIGMENT DEGRADATION OF BEAN LEAVES

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ABSTRACT

Introduction and Purpose: Chlorophyll degradation is a natural process, it can be altered by several environmental factors. This process occurs as a result of the degradation of chlorophyll pigment. Regulation of chlorophyll degradation is an important issue in agricultural practice. Therefore, in our experiments, we examined the effect of ZnO nanoparticles on chlorophyll degradation in bean leaves grown under normal irrigation conditions and subjected to drought stress.

Materials and Methods: We took 3rd trifoliate leaf samples from all variants of beans (I – normally irrigated; II – drought condition; III – ZnO + normal irrigation; IV – ZnO + drought variant.), that leaves are kept in complete darkness at normal temperature (30°C) for 10 days, chlorophyll degradation occurs quickly, within 3 days. Red or far-red light has little effect on chlorophyll degradation in the dark.

Results: It was found that leaves taken from all variants turned yellow, that is, chlorophyll degradation occurred, but ZnO nanoparticles were applied and chlorophyll degradation did not occur in the leaves of bean plants subjected to drought stress. Within 10 days, the leaf remained completely green.

Discussion and Conclusion: The results of our experiments have shown that ZnO nanoparticles can play a role in the drought resistance of bean plants. It is clear from the results that ZnO nanoparticles, when applied under normal irrigation conditions, have a positive effect on the height development of plants, reduce the vegetation period and keep the pigment content stable. The difference in the pigment content observed in our experiments during the growing season may be related to the formation of bean leaves in different layers at different times. In the plants subjected to drought stress (variant IV) where ZnO nanoparticles were applied, the pigment content remains stable, the growing season is shortened and pod formation occurs more quickly.

Key Words: ; Chlorophyll degradation; Nanoparticle; Bean leaves; Drought stress

ECONOMIC AND SOCIO-CULTURAL EVALUATION OF SPORTS TOURISM POTENTIAL OF SAMSUN PROVINCE

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ABSTRACT

This study evaluates the potential of sports tourism in Samsun province economically and socio-culturally. Sports have many effects, from public health to cultural interactions and economic to international relations. Tourism, which offers the opportunity to get to know different cultures and ways of life, enables individuals to look at the world from a broader perspective. At the same time, local culture, traditions, and customs are preserved and promoted through tourist activities. In this respect, sports tourism significantly contributes to host cities and countries. Samsun, one of the prominent cities of the Black Sea Region with its natural and cultural richness, is a developing center in sports tourism. Tourism investments in the city, the development of touristic facilities, and the increase in the number of tourists contribute to the economic structure of Samsun. In addition, cultural events and festivals also increase the attractiveness of the city's tourism and allow local people to be employed in the tourism sector. Student dormitories affiliated with the Ministry of Youth and Sports, guesthouses, training and camping centers of many official institutions, and the increasing number of enterprises with tourism business certificates contribute to the province's tourism. Samsun's geographical structure, climate characteristics, and developed sports facilities are among the factors that support the province's sports tourism potential. Samsun has the infrastructure to host national and international sports organizations. Samsun province has a wide range of sports tourism potentials, such as winter, nature, water, air, and traditional sports, with its rich natural beauties, geographical diversity, and infrastructure.

Key Words: Samsun; Sport; Tourism

THE IMPACT OF FEMALE GENITAL MUTILATION ON REPRODUCTIVE AND MENTAL HEALTH IN NIGERIA

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Female Genital Mutilation (FGM) has severe negative impacts on reproductive, and mental health. Reproductive health is compromised due to chronic pain, infections, menstrual problems, sexual dysfunction, and infertility. FGM can also lead to serious complications like fistulas and pelvic infections. During childbirth, women who have undergone FGM face higher risks of complications. These complications can increase maternal and infant mortality rates.
Mentally, FGM can cause long-term psychological trauma, leading to anxiety, depression, and post-traumatic stress disorder (PTSD). Women may also face social isolation and a loss of self-esteem due to the emotional and physical consequences of the practice.
Interventions such as community engagement through education and awareness campaigns, legislation and enforcement, training and retraining healthcare providers to manage and treat complications of FGM are ongoing to reduce the prevalence of FGM in Nigeria.
Key words: Female Genital Mutilation (FGM), Reproductive Health, Mental Health, Health Consequences, Psychological Impact, Sexual Health, Trauma and PTSD, Human Rights.

THE QIRAAT OF SAJDAH VERSES AND ITS FIQH RULINGS

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ABSTRACT
The verses in the Qur'an that require sajdah when they are read or listened to are called sajdah verses, and the verses performed for this reason are called tilawat sajdah. Many verses encourage sajdah to Allah, praising those who sajdah and condemning those who do not. There are verses of sajdah that include the words "sajdah to Allah", and "sajdah (to your Lord)", condemning those who do not sajdah by stating that the disbelievers and polytheists do not sajdah, or stating that all beings in heaven and earth, prophets, believers and angels sajdah to Allah. The number of sajdah verses, about which there are different opinions varies between eleven and fifteen. The number of sajdah verses is fourteen according to the Hanafis, Shafi'is, Hanbalis, Zaydis, and some scholars; eleven according to the preferred view of the Mālikīs; and fifteen according to the Ja'farīs and one of the Mālikīs. It is significant to discuss the "sajdah of tilawat" that occurs as a result of reading, listening, and hearing the sajdah verses in the Holy Qur'an, mentioned in the Qur'an, the Prophet's recitation, hadiths, and practices, and which are the source of jurisprudential rulings. In this study, the sajdah verses in the Holy Quran, as well as their content, features, ruling, conditions, rituals, and performance, will be discussed. By examining the issues that arise on the subject, the study aims to provide solutions to the problems that a person may encounter while reading or listening to the Holy Qur'an and while praying, in short, in the worship.

Key Words: Qiraah, Islamic Law, The Verse Sajdah, The Tilawat Sajdah, Fiqh Rulings.

SEED MORPHOLOGY AND ITS SYSTEMATIC IMPLICATION IN THLASPICERAS MEMBERS

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ABSTRACT

Introduction and Purpose: The current research work was aimed to determine the macro- and micromorphological properties of seeds in Thlaspiceras F.K.Mey members and evaluate their evolution in a phylogenetic framework. A total of 7 species of Thlaspicera from 20 different accessions were investigated using light microscopy (LM) and scanning electron microscopy.

Materials and Methods: In this study, the seed characteristics of 7 Thlaspiceras species from 20 accessions were investigated. Specimens were collected in Türkiye between 2015 and 2019 and Approximately 300 mature seeds were used for the size parameters (seed length and width). Digital images of seeds were taken with a ZEISS SteREO Discovery.V12 stereo microscope and morphometric measurements were performed using tpsDig ver. 2.31. Dried and mature seeds of each species were arranged on stubs for investigation. Seeds on the stubs were spatter-coated with gold using Leica EM ACE600 coater and examined using a Hitachi Regulus 8230 (FE-SEM) scanning electron microscope.

Results: Light and electron microscopy investigations revealed that there is a variation in the shape of seeds. But broadly ovate seeds are common in investigated species. Dark orange and brown are the main color of the investigated seeds. There are three different testa texture patterns were detected and species grouped according to their seed surface ornamentation. The anticlinal cell walls are concave and convex while periclinal cell walls are raised and sunken.

Discussion and Conclusion: Each species differs from each other as they have their own unique seed characteristics (i.e anticlinal and periclinal cell walls, color, size etc.). But, unique seed characteristics, visible only at higher magnification can distinguish the seeds from one another. It is noteworthy that different seed characters have evolved independently several times within Thlaspiceras members.

Key Words: Thlaspiceras, Brassicaceae, seed, micromorphology.

SCHOLARSHIP AND ENDOWMENT IMPACTS ON ACADEMIC INTEGRITY OF NIGERIAN STUDENTS AT AL-AZHAR UNIVERSITY, CAIRO-EGYPT

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Abstract

There is ongoing curiosity in issues related to students' academic integrity, higher institutions in particular. This can be virtually traced back to the numerous reports and cases about academic misconducts world-wide. Which is obviously attributed to the rapid growth of higher education cum serious massification of the universities systems. This curiosity in matters regarding students' integrity at higher institutions in particular can be virtually traced back to the numerous reports and cases about academic misconducts world-wide. Thus, academic integrity has been exhaustively dealt with by numerous scientists and researchers. The previous studies have explored different perspectives of the concept. The present study contributes to the literature as the first study to examine the impact of endowment and scholarship on academic integrity. Participants were 107 Nigerian students at Al-Azhar university in Egypt. They completed the academic integrity survey invented by Don McCabe who was the founder of the concept to measure their conducts towards research and examine their attitude towards exams.

Keywords: Academic integrity, endowment, roles, scholarship, Nigerian students, Al-Azhar University, education, Cairo, Egypt.

SEISMIC RESPONSE REDUCTION USING LEAD RUBBER BASE ISOLATORS: A MATHEMATICAL APPROACH

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Abstract

Seismic safety is a critical concern in structural engineering, necessitating advanced techniques to mitigate ground motion effects. Base isolation systems, particularly the Lead Rubber Bearing (LRB) isolators, provide an effective solution by decoupling the structure from ground motion and optimizing load distribution to reduce seismic forces transmitted to the superstructure. This study explores the implementation and analysis of LRB isolators in high-rise steel-concrete composite buildings.

LRBs, consisting of alternating layers of rubber and steel with a lead core, enhance seismic performance by allowing horizontal motion, dissipating energy, and improving load distribution. Numerical simulations conducted using ETABS evaluate the seismic response of 12-storey and 15-storey buildings in Zone V under medium soil conditions. Results show that base isolation significantly reduces bending moments, axial forces, and inter-storey drifts compared to fixed-base designs. For example, in 15-storey RCC buildings, base isolation reduces bending moments by 70%, axial forces by 52%, and limits inter-storey drift to 0.00837, compared to 0.0128 in fixed-base designs. Similarly, for composite buildings, base isolation reduces bending moments and axial forces by 60% while achieving drift values of 0.00837.

The findings underscore the advantages of base isolation systems in optimizing load distribution and seismic resilience. By integrating performance-based design metrics, the study highlights the potential for improved safety, reduced damage, and enhanced functionality during seismic events. Future advancements in materials, hybrid systems, and numerical simulations will further refine the effectiveness of these systems in taller and more complex structures.

Keywords: Load distribution, Performance- Based Design Matics, Numerical Simulations

ACCOUNTING OF SALAM CONTRACTS ACCORDING TO INTEREST-FREE FINANCE ACCOUNTING STANDARDS

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ABSTRACT

The term Salam, which literally means "to be delivered, to be submitted, or to purchase goods with advance payment for future delivery," has been used for centuries, particularly to finance agricultural activities. A salam contract is a type of agreement in which the buyer pays the price in advance for a product to be delivered at a future date. Framed within the principles of Islamic law, this contract aims to address the needs of both the buyer and the seller by mitigating risks and uncertainties between the parties. Sub-salam or parallel salam refers to an independent salam contract executed with a third party, typically implemented by Islamic financial institutions. In this arrangement, the participation banks, initially acting as buyers in the first salam contract, assume the role of sellers in the parallel salam agreement. While salam contracts bear similarities to conventional forward contracts used in contemporary finance, they are distinguished from such derivative instruments due to their adherence to Islamic legal principles. This study primarily aims to examine how salam and parallel salam contracts, which can be executed through participation banks in Türkiye, are accounted for from the perspectives of both buyers and sellers. To achieve this objective, the study utilizes the standards developed by AAOIFI, an organization established in Bahrain in 1991 that publishes various standards for Islamic financial institutions, which have been translated into Turkish by the Public Oversight, Accounting, and Auditing Standards Authority (KGK) as Participation Finance Accounting Standards. FFMS-7 Salam and Parallel Salam Standard, published by KGK, addresses the accounting principles related to salam financing and parallel salam transactions. Using this standard as a reference, this study provides a detailed analysis of the initial measurement of salam contracts, their measurement and accounting at the reporting date, accounting records related to the delivery of the underlying assets, and the accounting principles for the disposal of salam stocks through practical examples.

Keywords: Salam Contracts, Parallel Salam Contracts, Interest-Free Finance Accounting Standards

COLONIAL LEGACY AND POSTCOLONIAL IDENTITY IN DORIS LESSING'S *THE GRASS IS SINGING*

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ABSTRACT

The Age of Discovery marked the beginning of European exploitation and colonization of non-European territories, bringing profound social, economic, and cultural impact. Colonialism fueled conflicts, reshaped borders, and left an enduring legacy of displacement, identity crises, and cultural disintegration in formerly colonized nations. Postcolonial literature emerged as a response, offering a critical perspective of colonial experiences. Writers from colonized regions, educated in European traditions, used their platform to challenge the Eurocentric narratives that glorified colonial dominance. Doris Lessing, a Nobel laureate who spent her early years in colonial Rhodesia (now Zimbabwe), addresses these themes in her acclaimed novel, *The Grass is Singing* (1950), set in the same place during the years of apartheid. Lessing critiques the racial politics of the era, exposing the destructive effects of surveillance, cultural hybridity, and imposed identity. Building on her personal experiences, Lessing explores the tense relationships between colonizers and colonized, along with the societal and psychological consequences of colonialism. Through her vivid portrayal of colonial Rhodesia, Lessing underscores the fragility of societal structures built on racial segregation and inequality. Her nuanced characters reflect the internalized conflicts of a society governed by rigid hierarchies, illustrating how both the colonizers and the colonized are ensnared by the oppressive systems they inhabit. The protagonist's journey encapsulates the dissonance and alienation experienced by individuals who find themselves at the crossroads of cultural and ideological forces. In this context, the aim of the study is to discuss *The Grass is Singing* through a postcolonial lens, emphasizing its exploration of colonial oppression and its aftermath, and to contribute to understanding the enduring complexities of colonial and postcolonial identities.

Key Words: Doris Lessing, The Grass is Singing, postcolonial literature, colonization, racial politics

MONA HATOUM'S ART WORKS IN THE CONTEXT OF POSTMODERN ART APPROACH

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ABSTRACT

Introduction and Purpose; Postmodern art is an artistic movement that emerged in the 1960s and challenged the traditional values of its modernist predecessors. Representatives of this art, which preferred an eclectic approach and rejected universal truths, blurred the boundaries between high and low culture and used industrial materials and popular culture imagery.

Hatoum, originally from Palestine, was stranded in London during the Civil War in Lebanon. The artist, who turned this crisis into an opportunity, dealt with themes of conflict, displacement and identity in her works.

Materials and Methods; Initially known for her performance and video works, Hatoum later produced sculptures and installations that reflected her poetic and political style. Although the artist, who frequently used everyday objects, made them uncanny and hostile, she also balanced the serious themes she addressed by using humor and irony. In her works, she emphasizes historical and ongoing political conflicts, inviting viewers to consider the impact of such conflicts on contemporary society, while also managing to bring together a variety of media, including performance, video, photography, sculpture and installation.

The result is that Hatoum has skillfully used everyday objects to challenge and redefine the boundaries of the familiar and the unfamiliar. Her works are a unique blend of poetic sensitivity and political poignancy, inviting viewers to navigate the complex web of individual and collective narratives. This legacy of the artist stands out with its profound influence on contemporary artistic practices and the discourse surrounding art and socio-political issues.

Keywords: Art, Post-modernism, Performance, Mona HATOUM.

EVALUATION OF CONTRACTOR SELECTION CRITERIA FOR SUSTAINABLE SEA BED DRAWING OPERATIONS WITH FUZZY AHP

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ABSTRACT

Introduction and Purpose: Materials such as sand, mud and sediment that accumulate underwater over time in the seas destroy the sea bottom structure and reduce the water depth. This poses a significant threat, especially in areas such as ports, canals or marinas. Therefore, seabed dredging operations must be carried out at regular intervals in order to keep the depth of ports and marinas at a certain level, to maintain ship traffic safely and to protect the marine ecosystem. Seabed dredging operations are generally carried out by private dredging companies specialized in this field. Selecting the appropriate contractor for those who need dredging activities is the first and critical step of this process. In contractor selection, instead of only considering traditional criteria such as bid price, start time or completion time, addressing this process with a sustainable-based approach will contribute to protecting the environment, natural resources and society.

Materials and Methods: In this study, contractor selection criteria for sustainable seabed dredging operations were evaluated using the fuzzy AHP method under the main criteria of economic, social and community sustainability. Four sub-criteria were determined under each main criterion and their pairwise comparisons were made by experts in a fuzzy environment.

Results: As a result of the study, environmental criteria emerged as the most important element, followed by economic and social criteria. When all sub-criteria were evaluated together, environmental impact reduction was calculated as the most important criterion with an importance weight of 25.6%, followed by waste management with 15.2% and energy efficiency with 13.5% followed the criteria.

Discussion and Conclusion: This study revealed that environmental criteria are hugely important for decision makers in selecting contractors for sustainable seabed dredging operations. The study also demonstrated that the fuzzy AHP method has been successfully applied to evaluate contractor selection criteria for sustainable dredging operations. This study is intended to be a guide for sustainable dredging operations for public and private sector representatives involved in maritime affairs.

Keywords: Seabed Dredging, Sustainability, Contractor selection, Fuzzy AHP

TEACHER CANDIDATES' PERSPECTIVE ON THE CONCEPT OF CRIME: BROKEN WINDOWS THEORY

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ABSTRACT

Introduction and Purpose: Individuals encounter certain problems in every period of their lives. Depending on the content and scope of these problems, the individual gives reactions to his/her immediate environment. Reactions lead the individual to commit a crime. When an individual is not punished for every crime committed, it causes the emergence of bigger crimes as stated in the broken windows theory. In other words, if a seemingly insignificant crime is ignored by the individual's environment in the broken windows theory, it means that the crime will always be committed by the individual in a cycle. Because the individual will turn every reinforced behaviour into action regardless of the smallness or bigness of the crime. Socially, a crime will form the basis of another crime. Crimes will negatively affect the individual's life, as in a snowball. For this reason, the source of the crime should be determined by the family, teacher, and peer, regardless of age, gender, socio-economic status, etc. It is expected that the family at home and the teacher at school will closely observe the behaviours of the individual who is open to committing a crime. The source of crime and the reason for its occurrence should be analyzed with these observations.

Methods: The main purpose of the research is to examine the perspective of teacher candidates on the concept of crime within the framework of the broken windows theory. The case study design was used in the research. The study group of the research consists of teacher candidates studying at the Faculty of Education of Siirt University. A semi-structured interview form developed by the researcher was applied to the participants studying in different departments and classes. The results obtained from the interview form will be subjected to content analysis.

Conclusion: The data in the research will be discussed in the results section and various suggestions will be presented.

Keywords: Theory, Crime, Broken Windows Theory

A COMPARATIVE ANALYSIS OF THE EFFECTS OF TWO DISTINCT TAPING ON BALANCE, TIBIAL OSCILLATION AND PES PLANUS SEVERITY IN INDIVIDUALS WITH PES PLANUS

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ABSTRACT

Introduction and Purpose: The foot, which is the most distal segment in the lower extremity chain, maintains the balance, especially during one leg standing, and represents a relatively small support surface. It has been demonstrated that pes planus (PP) can have a detrimental impact on postural control strategies and balance. This study aims to compare the effects of two different taping on balance, tibial oscillation and the severity of pes planus.

Materials and Methods: The study included individuals between the ages of 18-35 years who exhibited bilateral PP. Kinesiotape (KT) and Dynamictape (DT) were applied to the tibialis posterior muscles (TPM) using the facilitation technique. Balance was assessed using the Y-balance test. The severity of PP was assessed using the navicular drop test (NDT), while tibial oscillations were evaluated using the ALDA Balance Gear sensor during one leg standing test. Evaluations were performed three times, as a no-taping, KT and finally DT.

Results: A total of 25 subjects (19 female, 6 male), with an average age of 21.88±3.09 years, participated. A decrease in right NDT scores was observed following KT and DT, while a decrease in left NDT scores was noted following DT ($p<0.001$). The mean NDT scores for the right and left sides were found to be lower following DT than following KT ($p<0.001$). No change was observed in the tibial oscillations following the tapings ($p>0.05$). The right lower extremity demonstrated an increase in Y-balance scores following KT and DT ($p=0.001$).

Discussion and Conclusion: In our study, it was determined that different TPM tapings with the same technique had positive effects on NDT and balance. In PP, which has many treatment methods. Taping methods are important because they are practical and can be easily adapted to daily life. However, we think that the effectiveness of taping methods should be demonstrated with studies comparing different taping and treatment methods.

Key Words: Pes planus; Postural balance; Taping

MIXED METHODS IN MARKETING RESEARCH: EVOLUTION, KEY TOPICS, AND METHODOLOGICAL PATTERNS

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ABSTRACT

Introduction and Purpose: Mixed methods, which combine qualitative and quantitative data collection and analysis within a single study, have been increasingly applied in recent years. This study aims to uncover insights, patterns, and trends related to mixed methods in marketing. It provides a general perspective of the evolving landscape of mixed methods research in marketing, highlighting its growth trajectory, key contributors, shifting thematic focus over time and general framework of the analysis methods related to the topic.

Materials and Methods: The study examines 680 articles published between 2005 and 2024 and indexed in the Web of Science database through bibliometric and text mining analysis. Bibliometric analysis conducted using Biblioshiny software package while text mining analysis conducted using Leximancer 5.0 software.

Results: Bibliometric analysis reveals that research on mixed methods in marketing has significantly accelerated since 2017, peaking in 2024. Key topics addressed in publications employing mixed methods include social media, consumer behavior, scale development, sustainability, and customer satisfaction. When examining emerging trends, earlier research predominantly focused on brand image, branding, and consumer behavior, whereas recent studies have increasingly emphasized consumer satisfaction, artificial intelligence, and the metaverse. Findings obtained from text mining analysis show that studies employing mixed methods predominantly use qualitative methods first, followed by quantitative methods. Among qualitative techniques content analysis, thematic analysis, social network analysis, and sentiment analysis are most frequently utilized while quantitative analyses are dominated by structural equation modeling, regression analysis, and clustering analysis.

Discussion and Conclusion: The findings indicate that mixed research methods have become widely utilized in recent years. In the context of this study, it can be stated that sequential designs, where qualitative analysis results are refined and expanded through quantitative methods, are particularly prominent.

Key Words: Mixed Methods; Bibliometric Analysis; Text Mining Analysis; Biblioshiny; Leximancer 5.0

SHUNT REACTOR TANK WALL ANALYSIS: 1 BAR PRESSURE AND STIFFENER OPTIMIZATION

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ABSTRACT

Shunt reactors, essential components of power systems, are subjected to various operational stresses, including internal pressure. The reactor tank, a critical component, is designed to withstand these pressures while maintaining its structural integrity. This study delves into the detailed analysis of shunt reactor tank walls, with a particular focus on the optimization of stiffeners under a 1 bar internal pressure scenario.

The primary objective in the design of tank walls is to ensure structural integrity under operational loads while resisting deformation. In this context, design parameters such as the placement, thickness, and profile of stiffeners have been optimized. Additionally, material properties, including Young's modulus, Poisson's ratio, and yield strength, were thoroughly analyzed to understand their impact on the tank's resistance to internal pressure.

An essential aspect of the study is the analysis of stress concentrations on the tank walls. Areas with high stress concentrations, such as openings, welds, and corner regions, were evaluated in detail, and appropriate safety factors were determined for potential failure modes, including yielding, buckling, and fatigue. The design was then optimized according to these criteria to ensure safe operational conditions.

Finite element analysis (FEA) was employed as an effective tool to simulate stress and deformation patterns in the tank walls. This study modeled the structural behavior of the tank under 1 bar internal pressure, identifying critical stress regions and evaluating the overall structural performance. The design parameters of stiffeners, including spacing, thickness, and profile, were optimized to achieve maximum strength and minimum material usage, supported by advanced optimization techniques.

Finally, the study assessed the sensitivity of the design to variations in material properties and loading conditions, enhancing the robustness of the design process. Particular attention was given to stress concentration zones to develop recommendations for reliable and long-lasting tank designs. This research provides an innovative approach to the design and optimization of reactor tanks, ensuring structural durability under internal pressure conditions. The findings contribute to the long-term reliability and stability of shunt reactors used in power systems.

Key Words: Shunt Reactor; Tank Wall Analysis; Pressure; Stiffener Optimization

FORMULATION AND EVALUATION OF HERBAL COUGH SYRUP BY BASE CONTAINING AQUEOUS EXTRACT OF MADHUCA INDICA

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Now a days, herbal remedies are commonly used for the treatment of coughs. The herbal drugs as well as herbal formulations are playing an important role in various types of coughs. In recent years, researchers have been focusing on herbal medicines that have fewer side effects. As per Ayurveda, Madhuca indica has Madhura-Kashaya Rasa, Madhura Vipaka, Guru-Snigdha Guna, and Sheeta Veerya. *Madhuca indica* flowers are largely used in India, in diarrhea and dysentery, and as food. They are used in coughs, colds, bronchitis, and wasting disorders. The main medicinal property of mahua flower is analgesic activity on both types of extracts, i.e., alcoholic and aqueous. So, the main aim of my work is to formulate and evaluate herbal cough syrup containing different phytochemical compounds beneficial for the treatment of cough. As a result, the formulation was observed as optimized in terms of their organoleptic features: yellowish brown color, pH in between 6.03-6.25, and aromatic odor with a slightly pungent taste. Appearances are turbid, and viscosity is 28.6-32.2 cp. The antimicrobial activity of the formulated syrup for the three prepared formulations tested by the cup plate method against Escherichia coli and compared with the standard drug. Further studies are being pursued to evaluate the safety and efficacy of the formulated herbal syrup.

Keywords: *madhuca indica,* extraction, evaluation, Antimicromial, herbal cough syrup

SMART CITY APPLICATIONS: LEVERAGING BIODEGRADABLE CONDUCTIVE POLYMERS FOR SUSTAINABLE URBAN FUTURES

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Abstract:
As cities strive to transition toward sustainable and intelligent infrastructures, biodegradable conductive polymers like iLow's patented material present transformative opportunities for reducing environmental impact and enhancing urban functionality. A bibliometric analysis was conducted using 13 open-source articles retrieved from ScienceDirect with the search formula: ("smart city" OR "urban infrastructure") AND ("biodegradable polymers" OR "conductive materials") AND ("telecommunications" OR "energy systems") AND ("market adoption" OR "innovation strategies"). The study identified key application areas, including energy-efficient systems, waste management optimization, and intelligent urban networks, where iLow's technology can contribute to a circular economy and align with sustainable development goals. Additionally, the research explores the potential of iLow's polymer in adaptive reuse strategies, membrane technologies, and carbon capture integration, highlighting its role in advancing smart cities' environmental and economic sustainability. By addressing market barriers, legal challenges, and adoption strategies, this study provides a roadmap for scaling biodegradable polymers in smart urban applications. These findings emphasize the need for collaboration between stakeholders to foster innovation and support sustainable development within urban landscapes.

Keywords: Smart cities, biodegradable polymers, sustainable innovation, circular economy, energy systems, adaptive reuse, market strategies.

INTERTEXTUALITY AND ALLUSION IN TWO OF OSUNDARE'S POLITICAL POEM

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Abstract

This paper explores the use of intertextuality and allusion in two political poems a prominent Nigerian poet, Niyi Osundare. Celebrated for his critical engagement with sociopolitical realities, Osundare deploys intertextual references and allusions to resonate his critique of systemic injustice and corruption. The study is anchored on the theoretical framework drawn from Julia Kristeva's and Mikhail Bakhtin's perspectives on intertextuality, and rard Genette's exploration of allusion as a literary device. By situating Osundare's poetry within these theoretical constructs, the paper expose how intertextual and allusive strategies promote the thematic richness and rhetorical power of his work. It takes an overview of Osundare's role as a politically engaged poet and an analysis of the broader significance of intertextuality and allusion in African political poetry. A review of existing scholarship on Osundare and related theoretical texts establishes a foundation for the study. The methodology employs qualitative, close-text analysis of two selected political poems, selected for their emblematic use of intertextual and allusive elements. The analysis reveals how Osundare recontextualises historical, biblical, and cultural references to critique sociopolitical injustices and inspire resistance among his readers. Findings reveal that intertextuality and allusion serve as potent tools in Osundare's poetic arsenal, enabling him to engage deeply with cultural memory while crafting a universal appeal. This study, hence, contributes to the broader discourse on African poetry by offering insights into how poets use intertextual and allusive techniques to navigate complex sociopolitical terrains.

Keywords: Intertextuality, Allusion, Perspectivism, Poetry, Close-text analysis.

SOCIO-ECONOMIC STATUS OF SMALL-SCALE GROUNDNUT OIL PROCESSING IN GOMBE LOCAL GOVERNMENT AREA, GOMBE STATE, NIGERIA

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ABSTRACT

The study assessed the Socio-Economic Status of small-scale groundnut oil processors in Gombe local government area, Gombe State. The objectives of the study were to describe the Socioeconomic characteristics of the respondents and to identify the Constraints faced by groundnut oil processors in the study area. A sample size of 220 groundnut oil processors were used as respondents for the study. The data collected was analyzed using descriptive statistics of means, frequencies and percentages The result revealed that majority (99.5%) of the respondents were males and (39.54%) of the respondents were between the aged of 31 – 40 years, (66.8%) of the respondents were married, while, (33.3%) of the respondents had between 4 – 6 family members, (33.2%) of the respondents had attended tertiary institution, (50%) of groundnut processors source capital from their personal savings, (34.1%) of groundnut processors had 11 – 15 years of experience in groundnut processing and (91.8%) of the respondents were members of cooperatives. The constraints facing groundnut oil processors in the study area includes, Erratic power supply (3.9), Inadequate capital (3.8), High cost of machines (3.8),high cost of fuel (3.1) and Inadequate storage facilities (2.9).The study therefore, recommended that groundnut oil processors should embark on groundnut production in order to maximize profits, government and non-government organization should provide financial support to groundnut oil processors ,government should provide adequate storage facilities at an affordable price in order to ensure the availability of groundnut oil throughout the year.

Keywords: Small scale, Groundnut, Groundnut oil processors

SOIL MOISTURE SENSOR USING EMBEDDED SYSTEM

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ABSTRACT:
Soil moisture sensors measure or estimate the amount of water in the soil. These sensors can be stationary or portables such as handheld probes. Stationary sensors are placed at the predetermined locations and depths in the field, whereas portable soil moisture probes can measure soil moisture at several locations. These sensor measurements permit farmers to take action when a field condition, such as low water levels, produces a stress reaction. Soil moisture sensors estimate the volume of water content based on the dielectric constant of the soil. The dielectric constant indicates the soil's capability to transmit electricity. How the Sensor Works. The Soil Moisture Sensor uses capacitance to measure dielectric permittivity of the surrounding medium. In soil, dielectric permittivity is a function of the water content. The sensor creates a voltage proportional to the dielectric permittivity, and therefore the water content of the soil. The measurement of soil moisture is basis for the refinement of agriculture to implement water-saving irrigation. A new soil moisture sensor was designed based on its theoretical basis and analysis of the dielectric constant characteristics of soil. It mainly consists of probes, electronic circuits and wiring cables. The calibration test of the sensor was conducted under the working voltage of 2.5 ~ 5.5V. Using the experimental data to analyse the regression function, it was found that the output voltage of the sensor should have a linear negative correlation with the volumetric moisture content of the soil, and the coefficient of determination R2 >0.986 .The accuracy of the sensor was verified by soil samples with different moisture content. The average absolute value of absolute errors is less than 2.5%. The results show that the sensor has stable and reliable working performance, high measurement accuracy and good linearity, and is suitable for moisture measurement in most types of soil.

KEYWORDS : Capacıtance , Dıelectrıc , Permıttıvıty , Probes , Accuracy , Lınearıty.

SOLAR AND WIND ENERGY

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Solar and wind energy are pivotal components of the transition to sustainable energy systems, leveraging abundant natural resources to reduce greenhouse gas emissions and dependence on fossil fuels. Solar and wind energy are two of the most promising forms of renewable energy. Both are abundant, sustainable, and significantly reduce carbon emissions compared to fossil fuels. Solar energy harnesses sunlight through photovoltaic cells and solar thermal Wind energy, generated by harnessing the kinetic energy of wind through turbines, has seen significant advancements in technology, improving efficiency and reducing costs. Both energy sources are characterized by their low environmental impact and potential for integration into existing grids systems, providing a versatile and scalable power source. Continued research, technological advancements, and policy support will drive growth, mitigate climate change, and ensure a cleaner, more resilient energy landscape. They complement each other well—solar panels work best in sunny conditions, while wind turbines can generate power day or night, in all seasons. As technological innovations continue to enhance energy storage and grid management, solar and wind energy are increasingly positioned as reliable, clean alternatives to traditional energy sources, contributing to energy security and climate change mitigation. Combining these sources can create a more reliable and resilient energy grid. Overall, they offer a cleaner, greener solution to meet the world's growing energy demands. This technology plays an important role in the future generation.

KEYWORDS : Sustainable energy, Carbon footprint, Smart grid, Energy independent

BIBLIOMETRIC ANALYSIS WITH VOSVIEWER ON PUBLIC RELATIONS REVIEW JOURNAL IN THE CONTEXT OF SOCIAL MEDIA AND PUBLIC RELATIONS

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ABSTRACT

This study examines public relations and social media interaction in the context of academic studies. Within the scope of the research, academic publications with the theme of social media in the Public Relations Review journal were analyzed. When the term Social Media was searched in Web of Science, a total of 142,530 publications were found, while in the Communication field, 18,077 publications were found. In the search made with the word social media in the Public Relations field, a total of 512 publications were accessed, including Public Relations Review (405), Journal of Public Relations Research (41), Public relations Inquiry (35), Romanian Journal of Communication and Public relations (31). In this study, the studies containing the term social media in the Public Relations Review journal, which is the most cited journal in the WOS database, has the oldest publication date (1975) in the field of public relations, and has the highest number of publications on social media (405), were analyzed with Vosviewer. Accordingly, it was observed that the first social media themed publication was made in 2008 and 2015 was the year with the highest volume with 42 publications, and the majority of the studies consisted of articles (391). In the analysis of the geographical distribution of the studies, the USA (257 publications) was the leader, followed by China (42), Australia (20) and Germany (20). It was concluded that the most frequently used keywords were “social media,” “public relations” and “crisis communication”, and that the number of publications in the academic literature in the category of public relations and related to social media showed an increasing trend over the years.

Keywords: Social Media, Public Relations, Bibliometric Analysis

PRIORITIZING SOCIAL MUNICIPAL PRACTICES USING WASPAS METHOD

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ABSTRACT

Introduction and Purpose: Social municipal practices play a crucial role in determining the quality and scope of services provided by local governments to various segments of society. These practices may include support for disadvantaged groups, cultural events, sports activities, as well as social programs targeting women, children, and the elderly. However, identifying which of these diverse initiatives hold greater importance poses a significant challenge for decision-makers. This study aims to determine the relative significance of different social municipal practices using the WASPAS method, one of the multi-criteria decision-making approaches. By doing so, it is intended to enhance the rationality and transparency in strategic planning and resource allocation within municipalities.

Materials and Methods: Initially, criteria for evaluating social municipal practices were identified through a comprehensive literature review and expert consultations. Based on the defined criteria, the alternative practices were compared. Following normalization and weighting of the data, the WASPAS (Weighted Aggregated Sum Product Assessment) method was employed to derive a performance score for each practice. The WASPAS method, combining both weighted sum (WSM) and product (WPM) models, provides a hybrid approach that strengthens the decision-making process.

Results: The application of the WASPAS method yielded a ranking of the selected social municipal practices according to their degrees of importance. The results indicate that certain practices, particularly those contributing to social cohesion, public health, the expansion of educational opportunities, or cultural interaction, assume a more critical role compared to others. Consequently, a clearer picture emerges regarding which practices should be prioritized in the allocation of municipal resources.

Discussion and Conclusion: The findings suggest that the WASPAS method can serve as an effective evaluation tool in the planning and implementation processes of social municipal practices. This study underscores the feasibility of comparing various initiatives from a holistic and objective perspective. Future research may consider integrating the WASPAS method with other multi-criteria decision-making approaches or incorporating different sets of criteria to further refine the decision-making process. Ultimately, this can enable social municipal practices to more effectively respond to genuine needs while optimizing resource utilization.

Key Words: Social Municipal Practices, Prioritization, WASPAS Method, Multi-Criteria Decision Making

THE EFFECT OF ALCOHOL AND CIGARETTE USE ON INTERNET ADDICTION IN ATHLETES

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ABSTRACT

Purpose: The purpose of this study is to investigate the effect of alcohol and cigarette use on internet addiction in university athletes.

Method: The universe of the study consists of students of the Faculty of Sports Sciences in the 2022-2023 Academic Year. The selected 1st, 2nd, 3rd and 4th grade students constitute the sample of this study. A total of 250 students participated in the study voluntarily. Internet addiction (20 items) developed by Özgen (2016) was used to measure internet addiction.

Findings: There are no significant differences in the total of alcohol use variables of athlete students ($p>0.05$). It was observed that there were significant differences in favor of non-smokers in the total of cigarette use variables of athlete students ($p<0.05$).

Conclusion: It was observed that cigarette use in athlete students was statistically significantly different from internet addiction levels ($p>0.05$).

As a result, it is understood that alcohol and cigarette use among athletes has a significant effect on internet addiction. Research shows that athletes who consume alcohol and cigarettes use the internet more excessively, which leads to the development of digital addiction. This addiction can negatively affect athletes' physical and psychological health, and can also cause a decrease in their sports performance. It is concluded that alcohol and cigarette use are factors that trigger internet addiction, and that athletes should adopt a healthy lifestyle. In this context, in order to prevent internet addiction, athletes should be encouraged to avoid harmful habits such as alcohol and cigarettes and develop healthy habits. As a result, it is important for athletes to receive both physical and psychological support in order to protect themselves from excessive addiction in the digital world.

Keywords: Alcohol, Cigarette, Internet addiction

STAKEHOLDER-CENTIC GOVERNANCE: ADAPTING TO TECHNOLOGICAL AND ENVIRONMENTAL CHALLENGES

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Abstract

In an era marked by rapid technological advancement and complex global challenges, the need for transformative corporate governance has never been more pressing. As organizations navigate a landscape characterized by evolving risks and stakeholder expectations, it is essential for corporate governance frameworks to adapt accordingly. This paper discusses the pressing need for companies to reassess and enhance their governance structures to effectively address contemporary issues such as cybersecurity threats, ethical technology use, sustainability, and the increasing demand for transparency from stakeholders.

The integration of robust cybersecurity policies into corporate governance is critical in today's digital economy. With the rise of cyber threats, organizations must not only protect their data but also ensure that their governance frameworks include comprehensive risk management strategies. This involves establishing clear protocols for incident response, regular security audits, and ongoing training for employees at all levels. By prioritizing cybersecurity within their governance structures, companies can mitigate risks and enhance stakeholder confidence. Moreover, ethical technology use is becoming a central concern for organizations as they adopt advanced technologies such as artificial intelligence and big data analytics. Companies must navigate the ethical implications of these technologies to avoid biases and ensure fairness in their operations. Governance frameworks should incorporate guidelines that promote responsible technology use, ensuring that decisions made by algorithms align with organizational values and societal norms. By fostering an ethical approach to technology deployment, organizations can build trust with their stakeholders and enhance their reputations. Sustainability is another critical component of modern corporate governance. As environmental concerns grow, stakeholders increasingly expect companies to take proactive measures in addressing climate change and promoting sustainable practices. This paper emphasizes the importance of integrating sustainability into corporate governance frameworks through initiatives such as sustainability reporting, stakeholder engagement on environmental issues, and the establishment of clear sustainability goals. By adopting a long-term perspective that prioritizes environmental stewardship, companies can not only fulfill their ethical obligations but also position themselves for future success in a market that increasingly values sustainability. In addition to these areas, the necessity of digital literacy among board members and executives cannot be overstated. As organizations grapple with the complexities of a digital economy, it is essential for leaders to possess the knowledge and skills required to make informed decisions regarding technology adoption and governance.

This paper discusses the importance of ongoing education and training for executives to ensure they are equipped to navigate the challenges posed by rapid technological change.

This paper synthesizes existing literature and best practices to outline a comprehensive framework for transformative corporate governance that aligns with the principles of sustainability and social responsibility. The discussion aims to provide valuable insights for organizations seeking to enhance their governance structures and foster resilience in an increasingly interconnected world.

Ultimately, this paper contributes to the academic discourse on corporate governance by identifying key considerations that organizations must address in order to thrive in a rapidly changing environment. It also proposes future avenues for research that support sustainable growth and effective governance practices in light of ongoing global challenges. By prioritizing these elements within their corporate governance frameworks, companies can better position themselves to meet the demands of stakeholders while ensuring long-term success.
KEYWORDS: corporate governance, technology, environment, stakeholder engagement, cybersecurity, sustainability

STRUCTURAL CHARACTERISATION OF ITS2 (INTERNAL TRANSCRIBED SPACER 2) REGIONS OF SOME CAMPANULA SPECIES WITH DIFFERENT ECOLOGICAL REQUIREMENTS

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ABSTRACT

Introduction and Purpose: The ITS (Internal Transcribed Spacer) region of the nuclear DNA (nrDNA) is used to understand species boundaries due to its conserved secondary structure and the properties of this structure. Different species require different ecological conditions as well as differences in their genetic structure. In this study, the ITS secondary structure of three species of Campanula genus growing under different ecological conditions were investigated and the differences in the ITS secondary structure of these species with different ecological requirements were determined and compared considering their ecological requirements.

Materials and Methods: In this study, ITS sequences of different species belonging to the genus Campanula were obtained from the NCBI Gene Bank (https://www.ncbi.nlm.nih.gov/). The ITS sequences of the studied species were firstly analysed using the Hidden Markov Model (HMM) based locus identification tool in the ITS2 Database V and the ITS2 sequence sequences of each species were determined.

After the localisation of the ITS2 sequences located between 5.8S and 28S of the ITS region, the ITS2 secondary structures of each species were determined using the 2.3 Energy Rule and 37 °C folding temperature options in Mfold, the RNA Folding Prediction Tool.

In addition to the Mfold programme, the ITS2 Data Bank was also used to detect secondary structures of ITS2 sequences. The obtained ITS2 secondary structures together with sequence information were aligned simultaneously with the 4SALE programme using a 12 × 12 scoring matrix. The ITS2 secondary structure of each taxon was visualised using VARNA 3.9 software.

Results: It was determined that the ITS2 secondary structure consists of four helices in all of the species examined. While the first helix of Campanula stevenii consists of three loops, Campanula erinus and Campanula alliariifolia have four loops. Similarly, the second helix of Campanula stevenii contained one terminal loop, while Campanula erinus and Campanula alliariifolia had two loops. In all species, the third helix consists of six loops, while Campanula alliariifolia differs from Campanula erinus and Campanula stevenii in having a fourth helix with four loops and a fourth helix with five loops.

Discussion and Conclusion: Campanula species analysed in this study were found to differ from each other in terms of both ITS2 secondary structure and Compensatory Base Changes. While Campanula erinus and Campanula alliariifolia species, which have similar ecological requirements, have similar ITS2 secondary structure, both ecological and ITS2 secondary structure of Campanula stevenii species were found to be different from other species.

Key Words: Campanula, Campanulaceae, ITS2, secondary structure.

WATER SCARCITY AND MANAGEMENT: STRATEGIC APPROACHES FOR TURKEY

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ABSTRACT

Introduction and Purpose: The purpose of this study is to evaluate the increasing water scarcity problem worldwide and Turkey's situation in the face of this problem. The study addresses the sustainable use of water resources, Turkey's current water management strategies and deficiencies in this area. In addition, the effects of climate change and increasing water demand are discussed and solution proposals for water scarcity are presented.

Material and Methods: This study was prepared using the literature review method. Relevant national and international reports, academic articles and official statistics on water management in Turkey were examined. Current practices in agricultural, industrial and domestic use to combat water scarcity were analyzed. In addition, solution proposals such as water recycling technologies, modern irrigation systems and integrated water management approaches were comparatively discussed.

Results: Turkey is among the countries experiencing "water stress" in terms of water resources. The agricultural sector is the largest consumer, accounting for 74% of total water consumption. Traditional irrigation methods are one of the main factors increasing water losses. Irregularities in precipitation regimes due to climate change negatively affect the seasonal and regional distribution of water. In industrial and domestic areas, the limited availability of recycling technologies poses an obstacle to the efficient use of resources. In this context, it has been seen that the expansion of wastewater treatment facilities and the increase of awareness campaigns are important.

Discussion and Conclusion: Turkey's fight against water scarcity can be strengthened with a holistic water management approach. The adoption of modern irrigation systems in agriculture, the expansion of water recycling technologies and the implementation of integrated water policies are of critical importance. Encouraging technological innovations and scientific research can provide a strong foundation for sustainable water management. This study emphasizes that Turkey needs to develop long-term strategies to solve the problem of water scarcity.

Keywords: Water Scarcity, Sustainable Water Management, Turkey's Water Resources, Climate Change, Water Saving Technologies

SYNTHESIS AND UTILIZATIONS OF SOLID WASTE BIOSORBENTS FOR ELIMINATIONS OF TOTAL HARDNESS FROM WATER

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Abstract

In village areas, hardness is a major groundwater problem. Hardness, those are alkaline in nature, can reason for the pain to the eyes, respiratory tract collapse, liver problems and skin problems created. The biological part of hardness in humans subsequent severe exposures are dosage-dependent and vary on the concentration, time of exposure, and volume absorbed by the human body. Biosorption is a physiochemical processes that happens mainly in certain biomass, allowing it to inertly added and bind Ca^{2+} and Mg^{2+} ions onto its cellular structure of biosorbents. The composition and kinetic stability of the biosorbent's cellular exterior verify the amount of Ca^{2+} and Mg^{2+} that the biosorbent can remove. The biosorption procedures were facilitating by the distinctive biological, physical, and chemical characteristics of each biosorbents those enabled the elimination of hardness from water. The research work has main objective of developing a perfect system to eliminate hardness from waste water by applying the strong solid waste biosorbents, i.e., pomegranate, orange peels, beetroot peels, lemon peels and banana peels. In these biosorbents the Beetroot peels bio-adsorbent represent that the best results as compare to other biosorbents in the removal of hardness from water. In the present investigation, the different parameters have been measured such as pH, temperature, time, and rotation speed and biosorbents dosage concentrations. After the removals of hardness from water, the biosorption procedures can be made cost-effective by reusing the biosorbents. The removal of hardness from a huge amount of water can be done by the applications of different bioreactors in the biosorption. This experimental work will assist in a basic groundwork for the eliminations of hardness from water. The effectiveness of the removal percentage can be achieved additional by optimizing the different parameters at diverse conditions by applying recent equipment’s those can be addressed as the potential scope.

Keywords: Biosorptions, Efficiency, Hardness, Optimization, Parameters, Solid waste and Water

SUYUTI'S RESHF AL-ZULAL MIN AL-SAHAR AL-HALAL AS A WORK WHERE LITERATURE, SCIENCE, AND LIFE INTERSECT

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ABSTRACT

Introduction and Purpose: It is an examination of a work related to the subject of marriage. Jalal al-Din Abd al-Rahman b. Abi Bakr al-Suyuti was an Islamic scholar born on 1 Rajab 849 (September 3, 1445) in Cairo. One of his notable works is Reshf al-Zulal min al-Sahar al-Halal, which addresses literature, sciences, culture, and life as an integrated whole. In this work, Suyuti delves into the topic of family law. Its originality lies in highlighting the importance, nature, and essence of marriage while employing various artistic techniques to convey the concepts and texts of the scientific world. This characteristic preserves the work's originality even today. Here is the Content Overview: The narrator of the work is a fictional character named Abu al-Dar al-Nafs. The plot involves 20 scholars, each specializing in a different field, coming together to discuss the night of consummation (zifaf).

Materials and Methods: The subject we are examining is related to social sciences. Therefore, the method that constitutes the data of this research is books, articles, that is, written texts.

Results: The book we are examining is a literary work referred to as maqamat. Authors who wrote works in the maqamat genre have addressed social events in society in a somewhat humo-rous, somewhat educational and somewhat entertaining way.

Keywords: Suyuti, marriage, literature, Egypt

SYNTHESISE CHARACTERIZATION AND ANTIMICROBIAL ACTIVITY OF OXADIAZOLE-THIONE DERIVATIVES

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Abstract

The synthesis of oxadiazole-thione derivatives represents a significant area of research in medicinal chemistry due to their diverse biological activities, including antimicrobial properties. This study outlines the design and synthesis of novel oxadiazole-thione derivatives through a multi-step reaction process involving cyclization and functional group modification. The synthesized compounds were characterized using advanced spectroscopic techniques, including Fourier-transform infrared (FTIR) spectroscopy, nuclear magnetic resonance (NMR) spectroscopy, and mass spectrometry, confirming their chemical structures and purity. The antimicrobial activity of the derivatives was evaluated against a range of Gram-positive and Gram-negative bacterial strains, as well as fungal species, using standard in vitro techniques such as the disk diffusion and minimum inhibitory concentration (MIC) assays. The results revealed that several derivatives exhibited potent antimicrobial activity, with MIC values comparable to or better than standard antibiotics. This study underscores the potential of oxadiazole-thione derivatives as promising candidates for the development of novel antimicrobial agents, addressing the rising challenge of antimicrobial resistance.

Key words: Oxadiazole-thione, Antimicrobial activity, Spectroscopy, Biological activities

SYNTHESISE CHARACTERIZATION AND BIOLOGICAL ACTIVITY OF 1,3,4-OXADIAZOLE DERIVATIVES

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Abstract

1,3,4-Oxadiazole derivatives have garnered significant attention in medicinal chemistry due to their versatile pharmacological activities. This study explores the synthesis, characterization, and evaluation of the biological activities of novel 1,3,4-oxadiazole derivatives. The derivatives were synthesized through a systematic approach involving cyclization reactions of hydrazides with appropriate reagents under optimized conditions. The synthesized compounds were characterized using advanced analytical techniques, including Fourier-transform infrared (FTIR) spectroscopy, proton nuclear magnetic resonance (^{1}H NMR) spectroscopy, carbon nuclear magnetic resonance (^{13}C NMR) spectroscopy, and mass spectrometry, ensuring structural confirmation and purity.

The biological activities of these compounds were evaluated in vitro for antimicrobial, antioxidant, and cytotoxic properties against selected bacterial and fungal strains, free radicals, and cancer cell lines, respectively. Several derivatives demonstrated potent antimicrobial and antioxidant activities, with minimum inhibitory concentration (MIC) values and free radical scavenging capacities comparable to standard drugs. Cytotoxicity assays indicated selective activity against specific cancer cell lines, highlighting their potential as chemotherapeutic agents. The results underscore the therapeutic potential of 1,3,4-oxadiazole derivatives, paving the way for their further development as multifunctional bioactive agents.

Key words: 1,3,4-Oxadiazole derivatives, Cytotoxicity assays, Spectroscopy, therapeutic potential

THE EFFECT OF TEACHERS' GENDER DIFFERENCE ON THEIR SITUATION ON HOUSEWORK SHARING

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ABSTRACT

Introduction and Purpose: There are many responsibilities we must fulfill in our daily lives. Some of these responsibilities belong to the home environment where we spend our daily lives. However, our gender roles place a significant portion of domestic responsibilities on women. The aim of this research is to reveal the effect of gender on the domestic work sharing of teachers and which parent teachers prefer to see as a parent as an educated group.

Materials and Methods: The research is quantitative research, and a general survey model was used in the research. The population of the research consists of teachers working in schools in Çiğli district. 450 teachers participated in the research. One data collection tool was used in the research. In this data collection tool, after socio-demographic information, there are questions aimed at revealing teachers' domestic work sharing and which of the students' parents they prefer to call in some cases as parents.

In this research, the frequency distribution of the data obtained with the socio-demographic information form was calculated and these findings were presented with number and percentage distributions in simple tables. Chi-square test was used to reveal the relationship between teachers' home responsibilities sharing and gender

Findings: Relationship was found at the level of $p < 0.001$ between teachers' domestic work sharing and gender. Male teachers are less to do domestic work than women, whether their wives work or not. In addition, the majority of teachers prefer to call mothers as parents to take care of the child.

Discussion and Conclusion: This study shows that women who work take on more domestic responsibilities than men. It is possible to say that although the teachers are university graduates, they display a traditionalist perspective on domestic work sharing and gender roles.

Key Words: Housework, shared responsibility, gender, teacher, parent.

EXAMINING THE PERFORMANCE OF ATHLETES WHO COMPLETED THE 20 KM WALKING COMPETITION AT THE PARIS 2024 OLYMPIC GAMES, IN TERMS OF SEASONAL VARIABLES

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ABSTRACT

The purpose of this study is to examine the performance of athletes who completed the 20 km walking competition at the Paris 2024 Olympic Games, in terms of seasonal variables. We aimed to answer the question whether in the world's most important sporting organization, the Olympic Games, athletes achieve their best performance? The athletes' best times (PB) and the results of the competition for the 2024 season are taken from the official website of the World Athletics (WA). The total number of competitions in which the athlete participated during the Olympic season, the percentage and frequency values of the best (SB) performances of the season, the percentage and frequency values of the SB, PB and season lowest (SW) performances of the athletes in the Olympic Games were obtained. In addition, the average number of the percentage (%) of the differences between the performance of the athletes in the Olympic Games and their PB and SB performances were also calculated. It was observed that the athletes participated in a maximum of eight competitions for women and seven competitions for men during the season. It was determined that 33% of female athletes participated in a maximum of four competitions, and 37% of male athletes participated in a maximum of three competitions. Almost all of the athletes took part in the Olympic Games as the last competition of the 2024 season. Only one male athlete participated in one more competition after the Olympic Games. The vast majority of the female walkers (72%) performed the SB in their first two competitions. A similar situation was found in men (72%). Of the male Olympic walkers in the research group, 18 athletes walked in the first competition of the season and 18 female athletes walked their best times of the season in the second competition of the season. In the 20 km race walk at the Olympic Games, nine athletes achieved SB and three athletes achieved PB in the women's race and six athletes achieved SB and two athletes achieved PB in the men's race. For both genders, the performance of the Paris 2024 athletes was approximately 3 % lower than the SB times and 4 % lower than the PB times. Almost half of the athletes (20 women: 47%, 20 men: 43%) had their worst performance of the season (SW) at the Olympics. During the period of WA Race Walking 20 km participation in the Paris 2024 Olympic Games, 33 athletes for women and 36 athletes for men have the time criteria. The rest of the athletes gained the right to take part in the Olympic Games through the ranking system. The study found that all medal-winning athletes in both men's and women's events met the Olympic eligibility criteria by time class and earned the right to compete in the Olympic Games. It can be assumed that athletes who have been gathered an Olympic criterion will concentrate on preparing for the Olympic Games by competing in fewer events, while athletes who are competing for the right to participate through the rankings system will have to compete in more events.

ANALYSIS OF THE RISKS OF STEEL EXTERNAL ESCAPE STAIRS IN STUDENT DORMITORIES

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ABSTRACT

Due to the existence and persistence of problems related to the access and use of external steel escape stairs in buildings, dangerous situations in terms of fire safety in buildings may arise. The aim of the study is to eliminate or reduce the hazardous elements in steel external escape stairs in student dormitories and to prevent the damages that these resources may cause to users during fire evacuation. In this context, it is emphasized that both a technical and user-oriented approach should be developed to improve the safety of steel external escape stairs. In this study, a new risk analysis model is proposed in order to determine which hazard elements should be taken into account in the arrangements to be made to reduce the potential hazards in the steel external escape stairs of the dormitory buildings where students are provided accommodation and to offer solutions. This model was applied to the steel exterior fire escape stairs of male and female student dormitories around the university campus in Sakarya province. According to the observations in the field, the main hazards encountered in the steel exterior escape stairs were material inadequacies, maintenance deficiencies and user errors. According to the evaluation made according to these results, it was determined that the steel exterior escape stairs of the analyzed dormitory buildings may pose a high risk during evacuation. The results concluded that the model can be successfully used to classify the existing hazards in steel external escape staircases considering the number of student dormitory buildings and hazard levels and to produce solutions for these hazards through risk analysis. The applicability of the developed model in other buildings with similar characteristics will contribute to the provision of safe evacuation processes.

Key Words: Steel Exterior Fire Escape; Risk Analysis; Sakarya

INVESTIGATION of FAÇADE DEMAGES in MASS HOUSING STRUCTURES: THE CASE OF BEYKÖY-DÜZCE

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ABSTRACT

National and international studies conducted in the field of building physics continue to provide significant insights aimed at optimizing building performance. In particular, numerous studies focus on damages and deteriorations occurring on building façades, which are critical in addressing building physics problems. The analysis of façade damages highlights the necessity of adopting a holistic approach that integrates design, implementation, and maintenance processes. The aim of this study is to contribute to the identification of structural problems and the development of necessary preventive measures. By doing so, more effective protection and improvement methods can be devised within the field of building physics, offering solutions to enhance the long-term performance of structures. Factors causing damages to building façades have been examined under three main categories: damages caused by natural events and living organisms, damages resulting from human errors, and damages arising from the material itself. The damages observed on building façades due to these factors have been categorized into five subtypes: corrosion, crack formation, efflorescence, surface contamination, and peeling or spalling. In this context, a field study was conducted in the Beyköy district of Düzce Province, where the façade damages of residential buildings were recorded through observations and photographs. The findings indicate that the façades of the examined residential buildings exhibit structural issues such as plaster cracks, peeling of cladding materials, water leakage, paint blistering, efflorescence, and corrosion-related deterioration. These damages were predominantly observed on façades exposed to external environmental factors. It is thought that most of these deteriorations stem from material quality and selection, insufficient maintenance, improper design, or implementation errors.

Key Words: Façade damages, Factors causing damage to facades, Building physics issues, Deteriorations, Düzce

MIGRATIONS OF PROPHET IBRAHIM AND HIS FAMILY IN THE CONTEXT OF THE BIBLE AND THE QUR'AN

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Abstract

The phenomenon of migration has always been an interesting subject for researchers working in various fields of social sciences. On the other hand, it has been observed that the religious factor has generally been neglected in studies conducted to examine the phenomenon of migration for a long time. When we look at the migration studies conducted in our country, we see that the subject is mostly addressed in its sociological, psychological, economic and cultural dimensions. However, it is obvious that in order to fully understand migration, which is a multidisciplinary field by its nature, religion-focused migrations must also be known. Because the migrations carried out by the prophets and the first believers have great importance in history in terms of their causes and consequences. These migrations have played a decisive role in the shaping of the Jewish, Christian and Islamic societies and civilizations that exist in a wide geography today. In this report prepared with this understanding, the migrations carried out by Hz. Ibrahim and his family, who are seen as the common ancestor and/or prophet in three divine religions, will be discussed in the context of the Holy Book and the Quran. When we look at the expressions in the holy book collections, it can be seen that from the first prophet Hz. Adam to the last prophet Hz. Until Muhammad, almost all prophets had to migrate from the lands where they were born and raised. One of these prophets was Hz. Ibrahim. In this context, the Genesis section of the Bible, after the narratives of the first man and the flood, moves on to the life story of Hz. Ibrahim. Hz. Ibrahim was born in the city of Ur in Mesopotamia and migrated with his family to the north of Harran. After living here for a while, he left these lands with a divine command and traveled to the land of Canaan (Tekvin 12:10-20), and from there to places such as Mecca and Egypt (Genesis 12:10-20): "*Leave your country, your relatives, and your father's house, and go to the land that I will show you*!" (Tekvin 12:1-6;15:7). We also see similar expressions in the Holy Quran: "…*He said to his people: "I will leave this land and go wherever my Lord directs me*" (Saffat 37/99). "*I migrate to where my Lord commands me*" (Ankebut 29/26). In conclusion, the main purpose of this paper is to identify the migrations of Prophet Abraham mentioned in the holy books by using descriptive and phenomenological methods in the context of the history of religions and to analyze and interpret the findings.

Key Words: History of Religions, Migration, Emigration, Holy Books.

WORKPLACE INJURIES AMONG HEALTHCARE WORKERS: A RETROSPECTIVE ANALYSIS OF TRAUMA TYPES, AFFECTED REGIONS, AND RETURN-TO-WORK PATTERNS

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ABSTRACT

Workplace accidents in healthcare settings pose significant risks to workers, with needlestick injuries and falls being the most common ones. This study aimed to analyze workplace accidents among healthcare workers, focusing on injury types, affected body regions, and return-to-work patterns. This retrospective study was conducted at a tertiary care hospital, analyzing 150 workplace accidents between January 1, 2021, and December 31, 2022. Data on age, sex, job category, injury type, body region affected, and return-to-work times were collected. The injuries were categorized as needle-stick injuries, falls/slips, and compression injuries. Of the 150 cases, 72% were needle-stick injuries, 24.67% were falls, and 2% were compression injuries. Nurses experienced the highest number of accidents (33.33%), followed by technicians (31.33%) and cleaning staff (31.33%). Doctors and midwives experienced the fewest accidents (2% each). The most affected body regions were the hands and arms (33.33%), chest (25.33%), and legs and feet (28.67%). Most workers (75%) returned to work on the same day, 14.67% required 1-3 days for recovery, and 10% required more than 4 days. Male workers accounted for 60% of the cases. Healthcare workers, particularly nurses and technicians, are at high risk for needle-stick injuries and falls, with the hands and chest being the most affected areas. Most accidents occurred outside working hours, suggesting a need for improved safety protocols during non-regular shifts.

Keywords: Workplace injuries, healthcare workers, needle stick injuries, falls, return-to-work patterns

COMPARISON OF THE PERFORMANCE OF A STOPWATCH CIRCUIT BUILT WITH THE PIC16F877 AND CONVENTIONAL DIGITAL ICS

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ABSTRACT

Today, even for simple circuit designs, microcontrollers are often preferred without exploring alternative options. However, this approach does not always provide an advantage. While it may simplify design and assembly, circuits designed with classical digital ICs often outperform microcontroller-based designs, particularly in terms of speed (propagation delay). In this study, the performance of stopwatch circuits designed with the PIC16F877 microcontroller and classical digital ICs were experimentally compared. The stopwatch circuit was chosen as a sample application to analyze the differences between these two technologies. The study focused on propagation delay to assess performance differences and aimed to evaluate which technology is more suitable for specific applications. The experiments were conducted in the Basic Electrical-Electronics Laboratory of the Faculty of Engineering at Karabük University using a high-precision 100 MHz Rigol oscilloscope. Connections were made carefully to ensure correct operation, and thorough tests were performed to verify system stability. The results showed that the circuit designed with classical digital ICs outperformed the PIC16F877-based circuit in terms of propagation delay. Classical digital ICs were found to be a more efficient choice for applications requiring high speed and low delay. However, the PIC16F877 microcontroller offers greater flexibility for tasks requiring complex functions and programmability. This study aims to guide the selection of the appropriate technology by evaluating the advantages and disadvantages of different approaches using the stopwatch circuit as a case study.

Key Words: Propagation delay, Digital ICs, PIC16F877, Stopwatch Circuit

INNOVATIONS IN HIGH-VOLTAGE TRANSMISSION LINES: ENHANCING EFFICIENCY, RESILIENCE, AND SUSTAINABILITY

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ABSTRACT

High-voltage transmission lines play a critical role in the efficient transmission of electrical energy and form the backbone of modern power grids. This study focuses on the historical development, design innovations, material selection, and manufacturing processes of high-voltage transmission lines. A literature review methodology was employed in preparing this study. Since the late 19th century, insulating materials such as glass and porcelain have gradually been replaced by composite polymers, which enhance performance and ensure reliability. This evolution marks a significant step toward improving the efficiency and durability of high-voltage transmission lines. In recent years, the integration of carbon fiber core conductors into designs has been observed, aiming to reduce transmission losses and improve line resilience under extreme conditions. For instance, the use of carbon fiber core conductors has achieved up to a 20% reduction in transmission losses. This innovation minimizes energy losses, thereby increasing energy transmission efficiency. Furthermore, advanced manufacturing techniques such as low-temperature plasma and nano-dielectrics play a critical role in optimizing material properties. These technologies ensure that transmission lines become more efficient and long-lasting. Considering environmental concerns, design improvements have been implemented to enhance the sustainability of systems. In the future, ongoing advancements in materials and technologies will enable the design of high-voltage transmission lines that are more efficient and safer, addressing increasing energy demands while reducing environmental impacts. This study highlights the developments in the design and manufacturing of energy transmission systems and demonstrates how innovative solutions in this field can lead to improved efficiency and environmentally friendly practices in energy transmission.

Keywords: High voltage transmission lines, Carbon fiber conductors, Transmission design

EFFECTIVE WATER MANAGEMENT PLANS AGAINST DIMINISHING WATER RESOURCES IN AGRICULTURE

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ABSTRACT

Introduction and Purpose: Depleting water resources, climate change, population growth, and the increasing demand for agricultural water have become a growing global concern**.** The heavy pressure on water resources necessitates the development and implementation of effective water management plans. Preserving and sustainably using water resources is vital for both present and future generations. Effective water management encompasses a range of strategies aimed at using water more efficiently and protecting water resources.

These strategies include promoting water-saving practices, adopting modern irrigation techniques, and recycling wastewater for reuse in agriculture or industry. In agricultural irrigation, modern methods such as drip irrigation and sprinkler systems consume significantly less water compared to traditional flood irrigation methods. These techniques not only improve water efficiency but also help maintain soil moisture balance, fostering healthier plant growth. In urban areas, effective water management involves reducing water losses and leaks, upgrading aging infrastructure, and encouraging individuals to conserve water. In rural areas, practices such as rainwater harvesting, protecting natural reservoirs, and reusing irrigation water can be particularly impactful.

Effective water management promotes an understanding of the value of water and encourages its conscious use across all sectors of society. This process requires the organization of educational programs on water management and raising public awareness, which are key components of a successful water management strategy. Furthermore, governments and local authorities can contribute by developing policies aimed at preserving water resources and supporting sustainable agricultural practices.

Conclusion: In conclusion, conserving and sustainably using depleting water resources is achievable through the development of effective water management plans. These plans should include the use of modern agricultural irrigation techniques, the promotion of water conservation, and the recycling of wastewater. This review aims to highlight the importance of effective water management plans in addressing water scarcity and to outline measures for the sustainable use of agricultural water resources.

Key Words: Scarcity, Sustainability, Water Conservation, Water Management, Water Resources

INVESTIGATION OF AGRICULTURAL LOAN CUSTOMERS' SATISFACTION LEVELS WITH BANKING SERVICES

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ABSTRACT

Introduction and Purpose: The strategic role of food in our lives is understood more and more every day. Food safety needs to be established, especially in times of adversity such as epidemics, wars and the danger of drought. The agricultural sector has a very important place in meeting people's nutritional needs. The development of the agricultural sector is necessary not only for people but also for the country's economy. In order for the agricultural sector to grow and become more functional, providing financial support for investments in this field plays an important role in the development of the sector. In our country, the necessary financing can be provided with agricultural loans provided by the banking sector and some organizations. Determining customer satisfaction levels in providing agricultural loans has an important place for both sector stakeholders and people in need of financing. This study aimed to determine the satisfaction levels of individuals regarding the agricultural credit services offered by banks. In addition, determining whether consumers' opinions about agricultural credit services differ in terms of demographic variables constitutes the second purpose of the research.

Materials and Methods: The population of the research consists of people aged 18 and over who are engaged in farming, animal husbandry or both in Sivas province. The sample of the study includes 390 people. Survey technique was used in the research. The designed surveys were administered face to face using the convenience sampling method. The survey includes questions reflecting the demographic characteristics of the participants, as well as the "Scale for Determining Satisfaction Levels of Agricultural Loan Customers with Banking Services", which was created by the researcher by scanning the relevant literature. Descriptive Research Method was used in the study. Kolmogorov-Smirnov, Bonferroni Corrected Mann Whitney U and Kruskal Wallis H Tests were used during the analysis of the research data.

Results: In the research, it was concluded that there are statistically significant differences between the satisfaction levels of agricultural loan customers regarding banking services according to the variables of gender, age, education level, business activity period and number of agricultural loan usage, but there are no statistically significant differences according to marital status and business field of activity variables.

Discussion and Conclusion: As a result of the research; It was determined that the participants were generally satisfied with the banking service, personalized service, bank employee behavior and trust factors, but were generally dissatisfied with the credit service factor.

Key Words: Agriculture Sector, Agricultural Finance, Banking Services, Non-Parametric Tests

EXAMINATION OF THE RELATIONSHIP BETWEEN SCORES OBTAINED FROM MULTIPLE CHOICE AND OPEN-ENDED QUESTIONS

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ABSTRACT

Introduction and Purpose: Multiple choice items and open-ended questions are among the most frequently used measurement methods. The methods have various similarities and various pros and cons against each other. These features are evaluated by the people performing the measurement process and the method to be used is selected. Depending on the purpose of the measurement process, these methods can also be used simultaneously. In the mixed measurement form formed by the use of these two methods in the same measurement process, it was aimed to examine the performances of the respondents in multiple choice items and open-ended questions. In addition, the relationship between the scores obtained from these two methods is one of the focuses of the research.

Materail and Method: The data were obtained from the midterm exam attended by 179 students taking the Educational Measurement and Evaluation course in three different departments of the Faculty of Education of a state university in the 2022-23 fall semester. 22 multiple choice items and 5 open-ended questions were used in the exam. Multiple choice items are worth 66 points in total, and open-ended questions are worth 34 points in total. The relationship between the total scores obtained from the methods was examined with the Pearson correlation coefficient. Whether there is a difference between the correct percentages of students according to the methods was examined with a paired sample t-test.

Results: A significant positive relationship was found at the level of 0.52 between the total scores obtained from multiple-choice items and open-ended questions ($p<0.001$). A significant difference was observed between the correct percentages of students according to the methods in favor of multiple-choice items.

Discussion and Conclusion: The moderate correlation between the scores obtained from the methods indicates that the success rates are partially stable according to the method. However, this result does not lead to the conclusion that the success rates of the methods are similar. The correct answer rates of students for multiple-choice items are extremely high compared to open-ended questions. This situation can be explained by chance success in multiple-choice tests, remembering when seen, or thinking about the options and answering correctly. Possible differences in the difficulty levels of the questions may also have contributed to this result.

Key Words: Multiple-choice item; Open-ended question; Success

THE EFFECT OF GLOBALIZATION ON HEALTH POLICIES

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ABSTRACT

Globalization; the integration of world states into a single system by becoming dependent on each other as a result of the intensification of their economic, political and socio-cultural relations; a historical process that causes significant changes in the spatial reach of networks and systems related to intercontinental or interregional human organization, activity and use of power; the phenomenon in which markets and production in different countries become dependent on each other due to the flows of goods, capital and technology; The increasing volume and diversity of cross-border transactions of goods, services and international capital flows, as well as the increasing economic interdependence of world countries through the faster and more widespread flow of technology; a series of processes leading to the integration of economic, cultural, political and social systems across geographical borders; a system in which the internationalization process is completed, the production and consumption of non-regional production structures are planned on a global scale, free competition and market order are supervised by supranational organizations, and the rules operate with a supranational understanding. The increase in inequalities, which is one of the most important results of the economic and political dimensions of the global system, has also affected the field of health, and the health level gap has widened both between poor and rich countries and between the poor and rich of the same country. Rapid technological changes in the field of health, increasing cost pressures, increases in the number of health institutions, intensification of competition, changing patient-doctor relationships, consumer awareness, and consumer dissatisfaction make health institutions dependent on globalization processes and the direct or indirect effects of globalization. WHO has developed a model that focuses on the connection between globalization and health at five points, three of which are direct and two of which are indirect. Direct effects include the health system, the effects of health policies, and exposure to certain harmful situations such as infectious diseases and the cigarette market. Indirect effects include the management of the health sector through the national economy and social risks arising from factors such as nutrition, living conditions, etc. As stated above, the most obvious effects of globalization are primarily on the health system and then on health policies. The purpose of this report is to evaluate the impact of globalization on health systems and health policies.

Keywords: Globalization; Health Systems; Health Policies

THE IMPACT OF ERP SYSTEMS ON ENTERPRISE MANAGEMENT: A COMPARATIVE ANALYSIS OF GLOBAL PRACTICES AND AZERBAIJAN

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Abstract

Enterprise Resource Planning (ERP) systems have emerged as critical tools for enhancing the efficiency and competitiveness of organizations worldwide. By integrating various business processes into a unified platform, ERP systems streamline operations, improve data accuracy, and facilitate informed decision-making (DM). However, the application and impact of ERP systems vary significantly between global corporations and local enterprises due to differences in scale, resources, and organizational culture.

This study investigates the impact of ERP systems on business processes by surveying both local and international companies. The primary objective is to obtain a comparative analysis of the effectiveness of ERP systems in Azerbaijan and the international market, identifying how modern Enterprise Resource Planning (ERP) systems more optimally utilize resources thanks to innovations and the use of artificial intelligence (AI). Through a comprehensive analysis of case studies and employee surveys, the research examines the role of ERP systems in streamlining operations, enhancing collaboration, and ensuring regulatory compliance. Findings reveal that while global organizations benefit from standardized processes and advanced technological integration, local enterprises often prioritize cost-effectiveness and flexibility. This research offers a nuanced perspective on the unique dynamics of ERP system adoption in Azerbaijan, focusing on how local enterprises navigate challenges such as resource limitations and technical constraints. The comparative analysis underscores the significance of tailoring ERP solutions to meet the specific needs of Azerbaijani businesses while learning from global best practices. By analyzing real-world case studies and data-driven insights, this research demonstrates the transformative impact of ERP systems on operational efficiency, decision-making, and regulatory compliance. Furthermore, the findings highlight the importance of integrating innovations, such as artificial intelligence, to enhance the scalability and competitiveness of local ERP implementations. This work not only bridges the gap between theory and practice but also lays a foundation for future strategies aimed at optimizing ERP adoption in developing markets.

Key Words: Enterprise Resource Planning (ERP), Artificial Intelligence (AI), Decision Making (DM)

THE IMPORTANCE OF DEVELOPING LISTENING SKILLS AT ESL LESSONS

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Abstract. The article addresses the issue of listening comprehension skills, highlighting its essential role in developing second language proficiency. Despite its significance, listening has often been overlooked in second language learning, research, and teaching. This paper examines the components of listening, explains the teacher's role in fostering listening skills, and outlines the fundamental principles of listening comprehension.

The article provides an overview of the listening comprehension process, emphasizing its importance in shaping effective teaching strategies and techniques. It argues that learners' listening skills can be enhanced through teacher support, appropriate learning materials, and targeted activities. Additionally, the paper explores the practical and methodological benefits of implementing specific listening strategies.

The role of university lecturers is particularly emphasized, as they play a crucial part in teaching students how to listen effectively and develop their metacognitive awareness. Prioritizing listening comprehension and applying strategic approaches can help learners better utilize language input and achieve greater success in language acquisition.

The authors suggest that their teaching experiences reveal opportunities for further research, particularly in bridging the gap between theoretical insights and practical applications in second language instruction. A significant portion of the article is dedicated to pedagogical recommendations and specific activities aimed at enhancing listening strategies.

This article will be valuable for those interested in speech perception issues and improving existing methods for teaching listening comprehension.

Key words: listening comprehension, teaching techniques, language learning .

THE INVESTIGATION OF PHOTON INTERACTION PARAMETERS OF DEXAMETHASONE DRUG

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ABSTRACT

Introduction and Purpose: The anti-inflammatory and antiangiogenic properties of corticosteroids (glucocorticoids or steroids) have made them an attractive treatment option. Dexamethasone, one of the synthetic glucocorticoids, is used as an adjunct in the treatment of many diseases due to its good inflammatory, antiexudative, immunosuppressive and antiemetic effects. Dexamethasone is given as prophylaxis together with certain drugs to patients receiving highly emetogenic chemotherapy such as carboplatin and is a widely used drug when necessary. In some types of cancer, the patient may receive chemotherapy and radiotherapy simultaneously (chemoradiotherapy). In addition, the patient receiving dexamethasone may undergo any radiological examination. In such a case, dexamethasone interacts with radiation. Pharmacological drugs can reduce radiation damage in the body when administered before or after radiation exposure. The aim of the study was to investigate the interaction parameters of dexamethasone with radiation.

Materials and Methods: In the study; The mass attenuation coefficient (μ_ρ) values were calculated in the energy range of 1 keV-1 GeV using the WinXCom code. Then, the effective atomic numbers (Z_{eff}) and electron densities (N_{el}) were theoretically derived using the $\mu\rho$ values.

Results: As a result, it was observed that the $\mu\rho$ values decreased with increasing energy, while the Z_{eff} and N_{el} values decreased sharply between 1 keV and 100 keV. These parameters generally remained constant between 100 keV and 500 keV, while the values increased with increasing energy.

Discussion and Conclusion: As a result, it was evaluated how the radiation shielding parameters of the examined sample changed depending on the energy.

Key Words: Dexamethasone**,** effective atomic number, mass attenuation coefficients

THE MENTAL HEALTH IN DIGITAL AGE

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ABSTRACT :

Mental Health in the Digital Age

In the digital age, the interplay between technology and mental health has become increasingly complex, presenting both significant opportunities and challenges. This abstract explores how digital platforms—particularly social media, mobile applications, and online communities—impact mental health outcomes across diverse populations. The rise of social media has transformed communication, but it also fosters a culture of comparison that can lead to anxiety, depression, and feelings of inadequacy. Users often curate idealized representations of their lives, which can create unrealistic expectations and exacerbate self-esteem issues, particularly among adolescents and young adults. Studies show that individuals who engage excessively in social media are more likely to experience mental health issues, including social anxiety and depression. Additionally, the prevalence of cyberbullying has emerged as a critical concern, leading to severe psychological distress for many victims. However, the digital landscape is not solely detrimental. Online platforms can provide invaluable support networks, allowing individuals to connect with others facing similar challenges. Mental health apps and teletherapy services have made professional help more accessible, especially for those in remote areas or those hesitant to seek traditional face-to-face therapy. These resources offer anonymity and convenience, helping to reduce stigma associated with mental health issues. Moreover , social media can serve as a powerful tool for advocacy and awareness. Campaigns that promote mental health education and encourage open conversations have gained traction, fostering environments where individuals feel empowered to seek help. As we navigate this dual-edged sword, it is essential to implement strategies that enhance the benefits of digital technology while addressing its risks. This requires a concerted effort from policymakers, educators, and mental health professionals to promote digital literacy, encourage responsible technology use, and develop comprehensive support systems. By doing so, we can cultivate a healthier digital environment that prioritizes mental well-being and supports individuals in their journey toward mental health.

THE MIGRATION POLICIOES OF THE EUROPEAN UNION: THE BANKRUPTCY OF THE CONCEPT OF NORMATIVE POWER IN THE FACE OF THE MIGRANT CRISIS

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ABSTRACT

This study examines the European Union's migration policies in the light of the concept of "normative power" and analyzes the effects of the migrant crisis that erupted in 2015 and has continued until today on the EU's value-based foreign policy. Especially in the post-Cold War period, the EU has built its actor position in international relations on normative power and has put forward the ideal of leadership in promoting values such as human rights, democracy and the rule of law. This identity constructed by the EU constitutes the main determinant of its foreign policy actions and the EU aims to spread these values in its outward relations. However, with the migrant crisis, significant contradictions started to emerge, especially between the policies implemented by member states against migrants and the EU's normative power-based agency in international relations. The migrant crisis became a humanitarian crisis that transcended the EU's borders and turned into a turning point that tested the EU's claims to normative power in international politics. While the EU has made commitments to accept migrants and protect the rights of refugees, it has also been confronted with practical factors such as border security, economic and social concerns, and national interests. As a natural consequence of these contradictions, the EU's migration policies and its claims to normative power have been weakened and criticized internationally. In this context, the main question of this study is to what extent the European Union's migration policies overlap with the concept of normative power. In particular, it will be discussed how the EU tries to manage the tension between normative values and security and border policies during the migrant crisis. Thus, the study will analyze how the EU's normative power is tested in the context of the migrant crisis and how the limits of this power are determined.

Keywords: European Union, Normative, Power, Migrant, Crisis

THE PRINCIPLES OF TRUTH, JUSTICE, AND IMPARTIALITY IN THE SCIENCE OF HISTORY ACCORDING TO TAQI AL-DIN AL-SUBKI

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ABSTRACT

Introduction and Purpose: This presentation focuses on the principles of fairness, truthfulness, impartiality, and avoiding sectarian biases, which hold a crucial place in historical writing, alongside the method of *jarh* and *ta'dil* used in the science of hadith, as discussed in Taqi al-Din al-Subki's work *"Qa'idah fi al-Jarh wa al-Ta'dil wa Qa'idah fi al-Mu'arrihin."* Subki offers an important model for ensuring the accuracy of information recorded in historical studies and preventing misunderstandings.

Materials and Methods: Subki presents significant perspectives on the moral and methodological responsibilities that historians should uphold in their work. This paper highlights the importance of the principles of objectivity and impartiality for historians, examining the criteria proposed by Subki to ensure that historical writing is conducted accurately and justly. Additionally, the reliability of the sources used by historians, the accurate transmission of historical events, and the necessity of preventing errors are emphasized. Subki's methodological suggestions serve as a guiding framework for achieving fair historical writing, free from sectarian and ideological biases.

Discussion and Conclusion: This study adopts a theoretical approach to Subki's views on historical writing. It discusses the rational and objective methods historians should follow to ensure a writing process that reflects truth and accuracy, supported by various historical examples. Particular emphasis is placed on how historians should avoid subjective opinions and ideological biases in their work. The process of verification through evidence and reliable sources and how it strengthens accuracy in historical writing has been discussed. In this regard, Subki's historical methodology provides a roadmap for developing a scientific, accurate, and impartial approach to ensure fair historical writing.

Keywords: Taqi al-Din al-Subki, historical methodology, truth, objectivity, bias.

THE PURPOSES OF REMOTE SENSING IN PHOTOVOLTAIC SYSTEM PERFORMANCE

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With the evolving lifestyle and rapid population growth, energy demand is rising at an unprecedented rate, leading to an increase in greenhouse gas emissions associated with conventional energy sources. To address this, renewable energy, particularly photovoltaic energy, has been widely adopted as part of the Moroccan government's strategic initiatives.
While photovoltaic technology offers an environmentally friendly solution, its field performance still faces significant challenges. This is where remote sensing and GIS tools play a crucial role by enabling the identification of optimal installation areas, monitoring of installed photovoltaic panels, and evaluation of their performance.
This study focuses on assessing the performance of photovoltaic systems using digital imaging. Transitioning from satellite images to more precise digital imagery offers the opportunity to enhance the evaluation of photovoltaic generator performance. By leveraging thermal behavior analysis and reflectance data on a panel-by-panel basis, it becomes possible to improve accuracy and efficiency in performance assessment.
Remote sensing is instrumental in identifying the presence, absence, and performance of photovoltaic panels. Satellite imagery, for instance, allows for the selection of suitable locations and orientations for photovoltaic installations while monitoring general system conditions. It helps track solar irradiation, panel temperature, module fouling, vegetation growth, and water levels. However, satellite imagery has limitations in precision compared to drone-based thermal imaging, which provides higher spatial resolution, greater flexibility, and close-range imaging from multiple angles.
Drone thermal imaging allows for more detailed performance evaluations of photovoltaic panels. It facilitates the detection of individual panel dysfunctions, enabling real-time problem resolution and improving system sustainability. This approach reduces maintenance time and costs while ensuring the long-term efficiency of photovoltaic systems.
Keywords: remote sensing; drone; satellite imaging; photovoltaic generator; performance

THE ROLE OF ARCHITECTURAL VARIABLES IN REDUCING ENERGY CONSUMPTION IN BUILDINGS

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Abstract

The growing demand for energy efficiency in buildings has become a critical focus in the field of sustainable architecture. As buildings are responsible for a significant portion of global energy consumption, understanding the architectural factors that influence energy use is essential for designing energy-efficient structures. This study aims to identify and analyze the most important architectural variables affecting energy consumption in buildings.

In this regard, four categories of architectural factors—building envelope, building orientation, building form and size, and interior design—are introduced, and their roles in energy savings are examined. Furthermore, appropriate architectural strategies for different climatic conditions are discussed, and existing studies are reviewed. The findings indicate that architecture plays a pivotal role in reducing energy consumption in buildings. Adopting passive architectural principles is highlighted as one of the most effective approaches for energy savings in construction.

Keywords: Passive architecture, energy consumption, building envelope, building orientation, interior design, building form and size.

THE ROLE OF GENETICS IN PERSONALIZED MEDICINE

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ABSTRACT:

Personalized medicine, an innovative approach to healthcare, tailors medical treatment to the individual characteristics of each patient, particularly their genetic makeup. This abstract explores the pivotal role of genetics in developing personalized medical strategies that enhance treatment efficacy and minimize adverse effects. By analyzing genomic data, healthcare providers can identify genetic predispositions to diseases, enabling proactive interventions and targeted therapies.

The advent of technologies such as next-generation sequencing has revolutionized our ability to decode complex genetic information quickly and affordably. As a result, conditions ranging from cancer to rare genetic disorders can now be treated with precision. For instance, specific mutations in tumor DNA can guide oncologists in selecting therapies that are most likely to succeed for individual patients, exemplifying the shift from a one-size-fits-all model to a more nuanced approach.

Moreover, personalized medicine extends beyond treatment; it encompasses prevention strategies based on genetic risk factors. Genetic screening can inform patients about their susceptibility to various diseases, allowing for lifestyle modifications and early interventions.

However, the integration of genetics into healthcare raises ethical considerations, including issues of privacy, genetic discrimination, and the need for informed consent. Balancing the potential benefits of personalized medicine with these ethical dilemmas is crucial as the field continues to evolve.

In conclusion, genetics plays a transformative role in personalized medicine, offering the promise of more effective and individualized healthcare solutions. As research advances, the challenge remains to ensure that these innovations are accessible, equitable, and ethically sound.

KEYWORDS: Personalized Medicine, Genetics, Targeted Therapy, Genomic Technologies, Ethical Considerations

THE ROLE OF MUSIC IN ENHANCING PHYSICAL FITNESS FOR A HEALTHY LIVING THROUGH THE USE OF GYMS WITH EXERCISE PHYSIOLOGY SERVICES

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Abstract

Over the years, there have been different methods of enhancing good health and sustainability of human wellbeing. Research has shown that the use of music in physical fitness has been found helpful in sustaining good health and human wellbeing. Therefore, this paper examines the role of music in enhancing physical fitness for a healthy living through the use of gyms with exercise physiology services with reference to University of Ilesa, Ilesa, Osun State, Nigeria. The study comprised of selected students and staff of the university who are involved in physical fitness with reference to their personal need for a healthy wellbeing. The findings of the study show that consistent engagement in physical fitness with the use of selected music enhances overall human wellbeing. It is therefore recommended that consistent engagement in physical fitness with desired/selected music should be constantly utilized in order to enhance a healthy living.

Keywords: Physical Fitness, Good Health, Human Wellbeing, Music, Exercise Physiology Services.

THE USE OF GEOGRAPHIC INFORMATION SYSTEMS FOR THE ANALYSIS OF COMMERCIAL ACTIVITY IN CONSTANTINE: CHALLENGES AND PERSPECTIVES

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Abstract :

This study focuses on the use of Geographic Information Systems (GIS) to study and optimize commercial activity in the city of Constantine. It highlights the benefits of using GIS for the study of commercial activity in Constantine in order to explore how GIS can facilitate the collection and analysis of spatial data related to businesses, their geographical distribution and their impact on local urban planning. This work illustrates the application of GIS in the mapping of commercial areas, the assessment of informal trade dynamics, and strategic planning to improve the accessibility and attractiveness of commercial spaces. We also illustrate through this research, the challenges related to the integration of geographic data into public policies and economic development strategies in Constantine.

Keywords : Geographic Information Systems (GIS), Commercial activity, Constantine, Spatial analysis, Cartography, Informal trade.

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APPLICATION OF EMBEDDED SYSTEMS TO THE ASSESSMENT OF THE OPERABILITY OF A COMPLEX OBJECT

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The rapid development of digital electronics today opens up wide horizons for potential researchers in the field of data processing, microprocessor technology, forecasting the fault tolerance of various systems. It is especially important to be able to process signals of both physical nature and artificially created by man, since their qualitative and quantitative composition are very different.

In many cases, the output signals from various measuring devices are analyzed, which are located separately from their final location. However, such an approach may not be acceptable in the case when a complex measuring system is being considered, since in this case there is a relationship and mutual influence of some objects on others. Accordingly, in this case, it is worth considering the measuring system as a whole. Then let us assume that there is some black box in which a previously known input signal, after some interactions of measuring devices, turns into an information output signal that is advantageous for further analysis.

Since this system is complex, it is worth providing for some embedded system that monitors functional parameters, while not being an integral part of the main system. It should have compact dimensions, monitor the required parameters in real time and inform the operator about any deviations. Therefore, it is possible to implement a so-called traffic light type system, where a green light indicates the serviceability of the system, yellow indicates the available permissible deviations, red indicates a failure in the operation of the measuring system as a whole. Undoubtedly, for the effective functioning of the system, it is necessary to provide for the calibration procedure of measuring equipment.

Key words: measuring system, data processing, calibration.

HOSPITAL AIR QUALITY AND HEALTH OF MEDICAL WORKERS

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One of the urgent problems of medical organizations is air quality. As is known, hospital air is an environment with a diverse microbial composition, due to its contamination by various manipulations carried out for therapeutic or diagnostic purposes. The main sources of hospital air pollution are primarily patients who, as a result of coughing, breathing, sneezing, infect the air with various microorganisms.

Microorganisms circulating in the air as a result of exposure to various factors, such as disinfectants, drugs, etc. can mutate and acquire resistance to them, which enhances their pathogenicity. Microorganisms with acquired various properties can be the causes of nosocomial infections. Medical organizations due to the full working day, usually 24 hours a day, due to functioning without downtime and rest, pose a danger primarily to medical workers of these organizations. Doctors, nursing and technical personnel due to their work spend a lot of time in medical and preventive institutions and may be exposed to the negative impact of the air environment of these organizations. The negative impact of air composition that does not meet hygienic indicators on medical workers can be manifested by subjective indicators such as headache, fatigue, irritation of the eyes and skin. Air quality has an impact on the general epidemiological indicators of this category of people, such as morbidity, as well as the number of days off work per year. Therefore, these epidemiological indicators are indicators of the quality of hospital air and their objective sanitary and biological assessment serves as one of the criteria for carrying out specific, non-specific and anti-epidemic measures.

Thus, air quality management in medical facilities, the use of quality control methods and technical means to improve the air environment are important for the safety of both patients and medical workers in general.

THE EXPERIENCE OF EUROPEAN COUNTRIES OF PROTECTING FREEDOM OF THOUGHT AND EXPRESSION

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ABSTRACT

The human right to freedom of thought and speech, free expression of one's views and beliefs has always been and remains one of the fundamental human rights. To date, the issue of ensuring the realization of this right has been repeatedly raised. The purpose of this thesis is to highlight and outline the experience of European countries in realizing the right to freedom of thought and expression. The main methods of this study are descriptive, statistical, and comparative legal.

KEYWORDS: law, Constitution, rights, justice

TIMSS 2023: A FOCUS ON EDUCATIONAL SUCCESS AND FAILURE DYNAMICS

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ABSTRACT

Introduction and Purpose: TIMSS (Trends in International Mathematics and Science Study), conducted every four years since 1995, evaluates 4th and 8th-grade students' competencies in mathematics and science across various countries. The purpose of this study is to examine the TIMSS 2023 assessment framework, focusing on an often-overlooked aspect of its reporting methodology. While TIMSS traditionally ranks countries based on the proportion of students achieving "Advanced" and "High" levels, this study highlights the overlooked "Lowest" level, comprising students scoring below 400 points.

Materials and Methods: By recalculating and analyzing the percentages of students at all five performance levels, this study introduces an alternative ranking system that spotlights reducing failure rates i.e. the inclusion of students performing below the 400-point threshold. The study analyzed data from the participating countries in four quadrants: Math and science achievement at 4^{th} and 8^{th} grades, Using Spearman's rank correlation coefficients in each quadrant, the research examined the relationship between traditional success-based rankings and alternative rankings based on decreasing failure rates in both 4th and 8th-grade Mathematics and Science assessments.

Results: Results revealed strong correlations between success-based and failure-based rankings. The study found that countries with minimal rank differences between success-based and failure-based rankings were generally more developed across multiple sectors, not just education. This complementary perspective suggests that reducing failure rates may serve as a more inclusive and equitable measure of educational success, aligning with global discourses on diversity, equity, and participation. The study concludes by advocating for a shift in focus from merely highlighting high achievers to addressing the needs of underperforming students.

Discussion and Conclusion: The findings indicate that future educational assessment frameworks should consider both achievement excellence and eradication of failure as complementary criteria in educational evaluation, particularly in the context of global educational equity and development goals.

Key Words: International Assessments; TIMSS; Math Education; Science Education; Equity in Education.

TIMSS 2023: SEARCH FOR A PATTERN WITHIN KNOWING, APPLYING, AND REASONING SKILLS

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ABSTRACT

Introduction and Purpose: The primary focus of this study is to analyze the rank order patterns within the cognitive domain skills—Knowing (K), Applying (A), and Reasoning (R)—as observed in TIMSS 2023 data. By examining these patterns, the study seeks to determine if a taxonomical relationship exists between these cognitive skills, thereby shedding light on the structure and validity of the assessment framework.

Materials and Methods: The study utilized four datasets from TIMSS 2019, covering mathematics and science for both 4th and 8th grades (M4, M8, S4, S8). The process involved: Kendall's Tau correlations between the cognitive domains (K, A, R) were computed to assess the relationships between these skills. Countries' cognitive domain scores were ranked, and non-parametric Friedman two-way analysis of variance was applied to test for significant patterns in the rank order of K, A, and R.

Results: The study revealed that the cognitive domain skills (K, A, R) exhibited extremely high positive correlations across all datasets, indicating strong interdependence to begin with. This satisfies the necessary condition for identifying a taxonomy but also suggests redundancy in the information provided by the measures. Secondly Friedman analysis did not detect a significant pattern (e.g., K > A > R) within the cognitive domain triplets across the datasets.

Discussion and Conclusion: The study's focus on cross-country comparisons aligns with TIMSS's goal of benchmarking educational progress globally. The study aligns its analysis with Bloom's Taxonomy, providing a well-established theoretical foundation. The high correlations between cognitive domains suggest that the measures may lack distinctiveness, raising concerns about their construct validity. In-depth qualitative analyses of test items is essential to verify the construct validity of the cognitive domains (K, A, R). Changes in cognitive domain performance over multiple TIMSS cycles to identify trends and patterns over time must be Analyzed.

Key Words: TIMSS; Taxonomy of Cognitive Skills; Math Education; Science Education;

THE ROLE OF TIRZEPATIDE IN OBESITY TREATMENT

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ABSTRACT

Obesity is a chronic disease and is rapidly increasing all over the world and in our country. The pathophysiology of obesity consists of genetic, metabolic predisposition, social, psychological and behavioral factors. Obesity is directly related to the development of cardiometabolic diseases and is the most common component of metabolic syndrome, especially with abdominal obesity, T2D, dyslipidemia and hypertension. In obese patients, the application of a personalized diet and regular exercise program are successful methods for weight loss and maintenance of appropriate weight. In addition, behavioral therapy, pharmacological treatment and surgical treatment methods are other methods applied in the treatment of obese patients. Tirzepatide is a dual receptor agonist of glucose-dependent insulinotropic polypeptide (GIP) and glucagon-like peptide 1 (GLP-1) and is therefore called twincretin. In obese models, the combined administration of GIP and GLP-1 can reduce body weight, reduce food consumption and fat mass, and improve lipid metabolism. Scientific interest in Tirzepatide, the first drug in its class, is rapidly increasing. This review examines the pathophysiological mechanisms and clinical aspects of tirzepatide in the treatment of obesity.

Key Words: Obesity, Treatment, Tirzepatide

GLOBAL TRENDS: INFLATION, INTEREST RATES, AND MONETARY POLICY

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ABSTRACT:

The interplay of inflation, interest rates, and monetary policy is pivotal in shaping global economic trends. Inflation, the general increase in prices over time, impacts purchasing power and economic stability, influencing both consumers and businesses. Central banks, through monetary policy, use tools like interest rate adjustments and quantitative easing to manage inflation and stimulate or cool down economic activity. In recent years, the global economy has faced challenges such as supply chain disruptions, geopolitical tensions, and shifts in energy markets, which have fueled inflationary pressures across nations.

Higher inflation has prompted central banks worldwide to raise interest rates, aiming to temper demand and restore price stability. However, these measures often present trade-offs, including slower economic growth and higher borrowing costs, which affect investments and employment. Additionally, the interconnectedness of global markets means monetary policy decisions in one country, particularly by major economies like the United States or the Eurozone, ripple through emerging and developed economies alike.

This abstract examines the dynamic relationship between inflation, interest rates, and monetary policy in the context of evolving global economic conditions. It explores the challenges policymakers face in balancing growth with stability, highlights the implications of monetary tightening on global debt levels and capital flows, and discusses the potential paths forward for fostering a sustainable economic recovery in an uncertain world.

KEYWORDS: Inflation, Interest Rates, Monetary Policy, Global Economy, Economic Stability, Central Banks, Quantitative Easing

TO BUILD OR TO BUY TALENT: A BIBLIOMETRIC AND META-ANALYSIS OF THE EXISTING LITERATURE ON TALENT MANAGEMENT

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Abstract:

The decision of whether to "build" or "buy" talent has long been a critical issue in the field of Talent Management, with organizations striving to optimize their workforce strategies in an increasingly competitive and dynamic environment. This study aims to capture the movement of research focus and to highlight the most influential authors, journals, and documents in the field of Talent Management. The paper presents a bibliometric and meta-analysis of the existing literature on the area of Talent Management and to build versus to buy talent debate, examining how different approaches to talent acquisition and development influence organizational performance, employee engagement, and value addition. The findings of the study highlight the growth trajectory of studies on the topic over the time and indicate the key themes including: and the sub-themes including: reveals nuanced perspectives on the trade-offs between internal talent development and external recruitment, suggesting that the optimal approach is often context-dependent, balancing long-term organizational growth with immediate business needs. This review contributes to the growing body of knowledge in Talent Management, offering valuable insights for HR practitioners and organizational leaders in making informed decisions about talent strategy, fostering a more agile and high-performing workforce and might serve as a roadmap for scholars who are new to this topic.

Keywords: Bibliometric Analysis, Meta-Analysis, Talent management, organizational growth, HR practitioners

PHYSIOLOGICAL EFFECTIVENESS OF TRAMADOL ON POST OPERATIVE PAIN PROCESSES

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ABSTRACT

Purpose: The main purpose of this study is to understand the physiological effects of pain by addressing the frequently encountered pain problem in the postoperative period and to examine the role of Tramadol, one of the narcotic analgesics, in this process. It is known that pain resulting from surgical interventions increases morbidity in patients and increases the risk of complications. Therefore, effective management of postoperative pain is important to accelerate the patient's recovery process by reducing complications.

Method: In this study, to evaluate the physiological effects of Tramadol in the postoperative period. By entering the keywords “analgesia, opioid, post-operative pain and tramadol”; from google scholar, pubmed academic databases existing literature was scanned. Within the scope of the research, 54 articles were examined and 39 studies whose methodological suitability was confirmed were included. Selected studies analyze in detail Tramadol's pharmacological effects, dosage practices and effectiveness in pain control.

Results: Postoperative pain has been defined as a type of acute inflammatory pain triggered by surgical trauma. This can lead to various problems such as pain, difficulty coughing, limitation of movement, cardiovascular complications and metabolic fluctuations. Tramadol Hydrochloride, thanks to both its opioid and non-opioid effects, effectively suppresses pain transmission by binding to mu receptors with its low affinity and inhibiting the reuptake of serotonin and noradrenaline. Studies have shown that Tramadol carries less risk of complications compared to other opioids and is therefore widely preferred in postoperative analgesic treatment.

Conclusion: Tramadol stands out as an effective and reliable analgesic in the management of postoperative pain. It improves patients' quality of life by reducing pain, shortens recovery time, and reduces the risk of infection by reducing hospital stay. However, it was emphasized that the effect of the drug should be optimized according to individual patient factors, otherwise side effects may occur. These findings support the widespread use of Tramadol in postsurgical analgesic protocols.

Keywords: *Post-operative pain; Analgesia; Tramadol; Opioid.*

CITATION IN ACADEMIC TEXTS IN THE FIELD OF SOCIAL SCIENCES

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ABSTRACT

Introduction and Purpose: Citation in academic texts is an academic demonstration used to enhance credibility and persuasiveness, serving to defend or refute arguments. In metadiscourse analysis, citations fall under the category of evidentials, which are linguistic markers that reveal the writer's attitude towards the subject. Researchers refer to the information found in other academic texts through citations to support their own arguments or to construct counterarguments. The purpose of this study is to examine how citations function and their role in persuading the reader.

Materials and Methods: The database of the study consists of academic texts written in Turkish in the fields of Linguistics, History, Philosophy, and Psychology from Social Sciences disciplines, published between 2020-2023 in peer-reviewed journals with at least 5 years of publication history and indexed by at least one national or international index. The citations in these research articles were examined according to the citation classification created by Swales (1990) and developed by Thompson and Tribble (2001). According to this classification, citations are divided into integral and non-integral citations. Integral citations are further divided into three categories: verb controlling, naming, and non-citations. Non-integral citations are categorized into four types: source, reference, mention, and origin. The database, determined using the proportional sample size calculation formula, was examined according to the rhetorical structures of academic texts (introduction, theoretical, method, conclusion) based on these classification criteria.

Results: In studies within the field of social sciences, integral citations have been found to include non-citations, verb controlling, and naming, respectively. No non-citations were found in the methods and findings sections. When examining non-integral citations, source, reference, origin, and mention citations were used, respectively. No origin citations were found in the introduction and conclusion sections.

Discussion and Conclusion: This study reveals the differences in citation types used by subfields of the discourse community to persuade readers when writing academic texts according to the rhetorical structures of the text and the attitudes of the authors.

Key Words: Academic Turkish; citations; social sciences; linguistics; textlinguistics

AN EXAMINATION OF PROSPECTIVE SPECIAL EDUCATION TEACHERS' VIEWS ON THE COURSE OF TEACHING MATHEMATICS IN SPECIAL EDUCATION

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ABSTRACT

Introduction and Purpose: Mathematics is a fundamental discipline that plays a critical role in developing individuals' cognitive, social, and everyday life skills. For individuals with special needs, mathematics education is an important tool for acquiring independent living skills and adapting to society. In this context, it is crucial for prospective special education teachers to perceive the process of learning mathematics not as a challenge but as an opportunity, understand the importance of individualized teaching methods, emphasize the connection of mathematics with daily life, and embrace the adaptability of lessons by considering students' individual differences. This study aims to examine the views of prospective special education teachers regarding the course on teaching mathematics in special education, which is part of their undergraduate curriculum.

Materials and Methods: This study was conducted with 35 prospective teachers in their third year of the Special Education Teaching Program at Buca Faculty of Education. The research was designed using a case study approach, one of the qualitative research methods. A semi-structured interview form was administered to deeply explore the participants' experiences, views, and perceptions regarding mathematics teaching. The collected data were analyzed using the content analysis method, and common themes and trends in participants' thoughts on mathematics teaching were identified and categorized.

Results: The analysis of this research revealed how prospective teachers perceive mathematics, their views on the teaching process, and their experiences. Participants, who gained new cognitive and affective insights during this process, expressed that the knowledge they acquired significantly enriched their professional experiences and contributed to the development of their teaching competencies. These findings are guiding in terms of improving the quality of mathematics teaching in special education and strengthening the professional attitudes of teacher candidates.

Discussion and Conclusion: The results of the study emphasize the importance of restructuring teaching programs and increasing the use of applied teaching methods to enhance the perspectives of prospective special education teachers on mathematics teaching. This study contributes to the literature by offering recommendations aimed at improving the quality of mathematics teaching in special education.

Key Words: Special Education, Mathematics, Attitude

REFLECTIONS OF DESIGN THINKING TRAINING ON THE PRACTICAL EXPERIENCES AND PERSPECTIVES OF PROSPECTIVE SPECIAL EDUCATION TEACHERS

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ABSTRACT

Introduction and Purpose: Design thinking is a method that adopts creative, human-centered, and innovative approaches in problem-solving processes**.** In the field of education, this approach stands out as an effective tool for developing students' critical thinking, collaboration, and innovative solution generation skills. This study examines the practices carried out during the design thinking training provided to a group of prospective teachers as part of the undergraduate course "Interdisciplinary Studies and Collaboration in Special Talents" and their views on this process.

Materials and Methods: The study was conducted with 8 prospective teachers enrolled in the Special Education Teaching program at Buca Faculty of Education, using the case study design, a qualitative research method. In the initial stage of the study, participants were introduced to the design thinking model and received 4 weeks of training within the course. Following the training, participants were divided into small groups, identified real-life problems based on their own lives or experiences, and developed solution proposals using design thinking processes. At the end of the process, participants provided written reflections expressing their implementation experiences and perceptions of the design thinking method.

Results: The findings revealed that the prospective teacher group increased their awareness during the empathy and problem-defining stages of applying this method, while enhancing their creativity during the ideation and prototyping processes. Additionally, they stated that the feedback received during the testing and sharing stages contributed positively to their learning processes. However, it was observed that some participants experienced challenges in areas such as time management and group communication, indicating a need for additional support to implement design thinking processes more effectively.

Discussion and Conclusion: These findings suggest that the design thinking method can serve as an important tool in the professional development of prospective special education teachers. Accordingly, it is recommended that design thinking training be systematically integrated into teacher education programs and supported with practical training sessions.

Key Words: Design Thinking, Teacher Education, Special Education

EVALUATING THE PERFORMANCE OF RESEARCH UNIVERSITIES IN TURKIYE

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ABSTRACT

Introduction and Purpose: This study evaluates the performance of research universities in Turkiye across three main dimensions: research capacity, research quality, and interaction and collaboration, based on the performance rankings published by the Higher Education Council (YÖK) between 2017 and 2023.

Materials and Methods: The three foundation universities included in the program as research universities in 2021 were not assessed by YÖK in previous years, and thus, these universities are not included in the study. The study focuses on the 20 public universities identified as research universities. Some of these universities were designated as candidate research universities in 2017 and were granted full research university status in 2020. Therefore, the performance of these universities is evaluated starting from 2020. For other universities, the analysis covers the period from 2017 to 2023.

Results: The Research Universities Program has had a broad and comprehensive impact on Turkish universities, not just those selected as research universities but also those that are not. While the program has significantly enhanced the research infrastructure, scientific output, and international collaborations of research universities, it has also indirectly motivated non-research universities to raise their standards and focus on innovation, collaboration, and technology transfer. The increased competition, better resource allocation, and stronger academic partnerships fostered by the program have contributed to a more dynamic and productive academic environment.

Discussion and Conclusion: The Research Universities Program has made significant progress in enhancing the research capacity and international competitiveness of universities in Turkiye. However, for the program to be more effective and efficient, several steps need to be taken. These include ensuring a more equitable distribution of resources, addressing regional disparities, promoting industry collaboration, and strengthening international partnerships. It is also crucial to strike a balance between research and education, improve career development opportunities, and enhance governance and monitoring processes. By addressing these deficiencies and implementing the suggested improvements, the Research Universities Program can further boost Turkiye's research capacity and innovation ecosystem, leading to more effective academic collaboration and improved national and international standing for Turkish universities.

Key Words: Research Universities in Türkiye; The Research Universities Program; The Performance of Research Universities

SUSTAINABLE DEVELOPMENT POLICIES IN UNIVERSITIES: INSTITUTIONAL STRATEGIES AND EFFECTIVE PRACTICES

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ABSTRACT

Introduction and Purpose: This study discusses how sustainable development policies can be developed in universities, the implementation stages, the obstacles encountered, and strategic directions to overcome these challenges. Universities play a crucial role in the development of societies and have the potential to lead the achievement of sustainable development goals. In this context, universities should support sustainable development by adopting not only environmental but also social and economic sustainability policies.

Materials and Methods: The capacity of universities to contribute to sustainable development is directly related to the policies they implement in key areas such as education, research, community service, and internal governance. In this context, the identification and effective implementation of sustainability policies are among the most important tools to enhance universities' capacity to achieve these goals. This study identifies priorities in several areas that will increase the sustainability of universities and develops a sustainability policy guide for higher education institutions.

Results: This study discusses how universities can contribute to sustainable development efforts and how sustainable development policies can be effectively implemented within universities. By taking a leadership role in sustainability, universities can produce high-level research, develop innovative solutions, and play a key role in transforming society. However, most universities adopt policies that focus solely on environmental issues. As a result, there is a lack of comprehensive sustainable development strategies that balance environmental, economic, and social factors. Universities need to institutionalize their sustainable development efforts in a systematic way. These efforts should be effectively implemented across various areas, including curriculum, research, campus operations, and community engagement.

Discussion and Conclusion: Sustainable development should be a goal that requires a holistic approach, encompassing not only the environmental but also the social and economic responsibilities of universities. To achieve these goals, more strategic planning, the involvement of all stakeholders, and a balance between academic freedom and change must be established. Universities' leadership in sustainability should not be limited to environmental issues but should be expanded to include the social and economic dimensions as well.

Key Words: Sustainable Development; Sustainability Policies in Universities; Institutional Strategies

TURKISH VALIDITY, RELIABILITY, AND CULTURAL ADAPTATION OF OUTPATIENT PHYSICAL THERAPY IMPROVEMENT IN MOVEMENT ASSESSMENT LOG WITH NON-OPERATIVE SHOULDER PAIN RECEIVING OUTPATIENT TREATMENT

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ABSTRACT

Introduction and Purpose: Shoulder injuries negatively affect the functional levels, occupational activities and quality of life of the patient by causing pain and reducing joint mobility. The evaluation of patients with shoulder pain is based on patients' own statements about their pain status. The Outpatıent Physıcal Therapy Improvement In Movement Assessment Log (OPTIMAL) questionnaire was developed to assess the functional (movement) improvement of shoulder patients. The aim of this study is to provide the Turkish adaptation of the OPTIMAL and to examine its reliability and validity.

Materials and Methods: Turkish translation and cultural adaptation of the OPTIMAL tool was achieved in 5 stages using the Beaton method. The OPTIMAL tool, the Penn Shoulder Score to compare validity and the Short Form Health Survey (SF 36) to understand quality of life were administered to non-operated shoulder patients. The study was conducted with 230 patients.

Results: Our data results, there is a significant relationship between Penn Shoulder Score and OPTIMAL tool (p=0.01). However, no significant correlation was found between the SF 36 and the OPTIMAL tool on any of the subscales. The reliability level of the OPTIMAL scale was found to be 0.91 on a 22-item scale. This shows that the scale is reliable. It was seen that there was no need to remove statements from the study in order to increase reliability.

Discussion and Conclusion: The Outpatient Physical Therapy Improvement In Movement Assessment Log (OPTIMAL) was adapted to Turkish, culturally adapted and found to be valid and reliable in non-opere shoulder patients.

Key Words: OPTIMAL, shoulder, non-operative, scale, functionality, confidence, ICF.

INVESTIGATION OF THE EFFECT OF ELECTRONIC WORD OF MOUTH COMMUNICATION (E-WOM) ON CONSUMERS' BRAND ATTITUDE IN TERMS OF VARIOUS VARIABLES

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ABSTRACT

Introduction and Purpose: Nowadays, digitalization has made it easier for information to be accessible and distributed worldwide, beyond the borders of the country. Consumers have the opportunity to present their experiences and opinions to another consumer on a global level using electronic word of mouth communication (eWOM). Especially social media etc. The advantage that internet communication environments provide in terms of easy interaction plays an important role in allowing consumers to share their experiences and recommendations regarding products and influencing other consumers. In this study, it is aimed to examine the effect of electronic word of mouth communication (e-WOM) on consumers' brand attitudes in terms of various variables.

Materials and Methods: The population of the study consists of people aged 18 and over who reside in Adana and have purchased white goods before. The sample of the research includes 270 people. The surveys were administered to these people face to face using the convenience sampling method. The survey includes questions reflecting the demographic characteristics of the participants, as well as the "Brand Attitude Scale", which measures consumers' thoughts about brand attitudes, and the "Electronic Word of Mouth Communication Scale", which measures the effect of electronic word of mouth communication. While creating the Brand Attitude Scale, Low and Lamb (2000), Vazguez et al. (2002), Dölarslan (2012), Özdemir and Koçak's (2012) studies were used. For the Electronic Word of Mouth Communication Scale, the scale developed by Chu and Kim (2011) and Sun et al., (2006) and finalized by Wang et al., (2016) was used. Descriptive Research Method was preferred in the study and Kolmogorov-Smirnov, Kruskal Wallis H and Mann Whitney U Tests were used to analyze the data.

Results: In the study, it was determined that there were statistically significant differences between consumers' perception levels of brand attitudes according to gender, marital status, education level and monthly income variables, and that there were no statistically significant differences according to daily internet use and age variables. In addition, it has been determined that there are statistically significant differences in consumers' perspectives on electronic word of mouth communication according to gender, marital status, daily internet use, age, education level and monthly income variables.

Discussion and Conclusion: As a result of the research; It was concluded that there were significant differences in the participants' perception levels of brand attitudes and their perspectives on electronic word of mouth communication.

Key Words: Electronic Word of Mouth Communication, Brand Attitude, Non-Parametric Tests

ACADEMIC AND THEMATIC ANALYSIS OF POSTGRADUATE THESES ON SPORT AND TOURISM IN TURKEY

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ABSTRACT

The aim of this study is to examine postgraduate studies on the subject of Sport and Tourism. In the research, postgraduate studies in the National Thesis Center of the Council of Higher Education are analyzed by the bibliometric method. An evaluation form was prepared by the researcher in order to conduct the reviews. In this form, the keywords, academic advisor title, publication years, types, languages, universities, institutes, main branches, university types and page numbers of the postgraduate studies on the subject of Sports and Tourism in the thesis database are given as titles. 65 postgraduate studies in the database between the years 1987-2024 were included in the analysis. As a result of the reviews, the most common keyword was "Sports Tourism", academic advisor title was "Assoc. Dr.", publication year "2023", study type "master's thesis", language "Turkish", university where it was written "Marmara University, Gazi University and Akdeniz University", institute "Social Sciences Institute", main science branch "Physical Education and Sports Department", university type "State", page count "101-200". These data are presented as a guide for postgraduate studies on Sports and Tourism to create a wider impact and increase academic diversity. Graduate studies in sport and tourism should be supported by international publications and collaborations. This could lead to greater recognition of Turkish research in a global context. In addition to the intensity at the master's level, doctoral level studies should be encouraged to provide in-depth analysis.

Key Words: Sport and tourism; Postgraduate; Bibliometric analysis

CAUSAL RELATIONSHIP BETWEEN TWITTER UNCERTAINTY INDEX AND STOCK RETURNS IN TÜRKİYE

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ABSTRACT

Introduction and Purpose: In recent years, many indices have been developed to measure uncertainty. However, given the growing importance of social media in today's world, Baker et al. (2021) constructed Twitter Uncertainty Indices (TUI), which reflect impressions of economic uncertainty based on the opinions of social media users, using posts made on Twitter (currently called X). The purpose of this study is to examine the impact of economic and market uncertainty on stock returns in Turkey using Twitter Uncertainty Indices. Twitter Economic Uncertainty (TEU) and Twitter Market Uncertainty (TMU) indices, which are constructed based on the content shared on Twitter, can reflect uncertainty more accurately than traditional news sources.

Materials and Methods: In this study, the data between June 1, 2011 and April 20, 2023 are used to determine the causal relationship between Twitter uncertainty indices (TUI) and stock returns in Turkey. For the analysis, the time-varying Granger causality method developed by Shi et al. (2020) is applied.

Results: The results reveal that Twitter policy and economic uncertainty indices vary over time, but these indices lead stock returns in Turkey during some periods of heightened global uncertainty. The findings suggest that Twitter uncertainty indices can be used to predict stock returns in Turkey, taking into account time-varying effects.

Discussion and Conclusion: The increasing importance of economic uncertainties can be quickly reflected in stock markets, especially with the widespread use of social media during the pandemic period. In this context, the findings are expected to provide important policy implications and strategic recommendations for policymakers and investors. Moreover, future studies can be extended at the sectoral level to examine in more detail how the Turkish stock market is affected by Twitter uncertainty.

Key Words: Twitter-based uncertainty; Stock market returns; Türkiye; Time-varying causality

TYPES OF SAMPLING AND SAMPLE SIZE DETERMINATION IN HEALTH AND SOCIAL SCIENCE RESEARCH

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Abstract:
While determining suitable sample size and sampling is one of the most crucial factors to take into account during the planning stage of a research project, researchers sometimes encounter difficulties in this regard. Inadequate sample sizes are commonly used by researchers, which always results in inaccuracies in the conclusions. The purpose of this methodological review is to highlight the importance of sample size estimation and sampling techniques and offer suggestions for describing sample sizes in an easy-to-understand way. A brief overview of sample size calculation in health sciences research and the terminology used are provided. Techniques for estimating the sample size for health research are described with examples depending on the kind of study design. To estimate sample size, researchers must: Be aware of the statistical analysis that will be used; Decide on acceptable precision levels; Decide on study power; and specify the confidence that will be used. This method review's displays a thorough explanation and simplicity of the sampling technique and the sample size formula that will assist in clarifying the mystery surrounding statistical equations for sampling technique and sample size estimates in healthcare and social science research. This review article offers a comprehensive discussion of various types of samples, sampling techniques, and sample size estimation formulas for observational and experimental research in health and social sciences. This information will assist health and social science researchers in identifying a suitable sample size for their research to generate more accurate and consistent results, thereby improving the generality of research results.

Keywords: Sampling, Sample Size, Health, Study design, Observational Studies, Case-Control, Cohort Studies, Experimental Studies

ULTRASONOGRAPHIC DIAGNOSIS AND TREATMENT OF INTESTINAL FOREIGN BODIES IN CATS AND DOGS

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ABSTRACT

Introduction and Purpose: This study aims to comprehensively evaluate the efficacy of ultrasonographic diagnostic methods and the outcomes of treatment approaches for intestinal foreign bodies in cats and dogs.

Materials and Methods: The study material consisted of 40 companion animals (29 cats, 11 dogs) of various breeds, ages, and sexes, admitted to the clinic between February 2019 and February 2024 with vomiting complaints and diagnosed with intestinal foreign bodies through clinical, radiographic, and ultrasonographic examinations. Ultrasonographic findings included fluid-filled, dilated intestinal loops, bidirectional intestinal contents movement, and hyperechoic lines with distinct distal acoustic shadows. These findings were evident in all cases except for linear foreign bodies lodged in the stomach or more cranial regions. No free abdominal fluid was detected in any case. In cases involving linear foreign bodies, intestinal plication and the foreign body at the center of the plication were clearly identified. Radiographic examination revealed no contrast-positive foreign bodies in 27 cases, whereas 13 cases displayed contrast-positive foreign bodies.

Results: Out of 40 cases that underwent laparotomy, enterotomy was performed on 32. The enterotomy site was closed with 4/0 monofilament polypropylene sutures using simple interrupted seromuscular patterns. In 2 cases where the foreign body was close to the stomach, it was redirected into the stomach via massage and removed with endoscopy. In 6 cases near the large intestine, foreign bodies were advanced into the colon and expelled naturally. The most common site of obstruction was the jejunum (n=19). Linear foreign bodies were more prevalent in cats (n=13), while fruit pits were more common in dogs (n=2). Postoperative complications were not observed, and all patients recovered rapidly.

Discussion and Conclusion: Ultrasonography was highlighted not only as a rapid, non-invasive diagnostic tool but also as a guide for surgical planning. Early diagnosis and timely intervention prevented irreversible intestinal pathologies and ensured uncomplicated recovery. These findings contribute to the development of effective diagnostic and therapeutic strategies for foreign body cases in veterinary practice.

Key Words: Small Intestine; Obstruction; Cat; Dog; Ultrasonography

STUDY OF THE ELECTROCHEMICAL AND OPTICAL BEHAVIOR OF POLYN-ETHYLCARBAZOLE-3-AMINE

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This study focused on the electropolymerization and characterization of poly N-ethylcarbazole-3-amine (PAECz) in an acidic medium. The resulting polymer films were analyzed using cyclic voltammetry, electrochemical impedance spectroscopy (EIS), UV-visible spectroscopy, and FTIR, providing a comprehensive understanding of their properties.

Cyclic voltammetry results highlighted distinct redox systems, confirming the *p*-doping of PAECz with a half-wave potential ($E_{1/2}$) of 0.42 V, indicating facilitated oxidation. EIS analysis revealed high resistivity (Rct) and slow charge transfer kinetics for PAECz, likely due to its structural properties.

In UV-visible spectra, a single absorption band in the visible region was observed, suggesting a homogeneous electronic structure. However, the broader bandwidth of PAECz may reflect some structural heterogeneity. FTIR analysis confirmed the involvement of functional groups in the polymerization process, with a reduction of the N-H band after reaction and the appearance of new characteristic C-N bonds.

Finally, the favorable energy alignment between PAECz and electron acceptors such as PC71BM, as well as with electrode materials (ITO and Cu), underscores its potential for applications in bilayer OPV devices. This study highlights the key role of structural and energy properties in designing advanced materials for organic photovoltaic technologies.

EFFECTS OF OBESITY ON PSYCHOLOGICAL AND SOCIAL LIFE IN SCHOOL AGE CHILDREN

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ABSTRACT

Today, obesity, one of the chronic diseases of childhood, is an important public health problem. Obesity, which occurs for various reasons such as malnutrition and physical activity, is an important issue concerning both child health and public health. Childhood obesity is a disease with serious effects in both physiological and psychosocial aspects. It increases the risk of obesity-related health problems such as type 2 diabetes, hypertension, metabolic syndrome, non-alcoholic fatty liver disease and polycystic ovary syndrome in children and also causes depression, low self-esteem and self-confidence, deterioration in social relations and consequently social isolation and worsening of quality of life. Therefore, there is a great need for school-based interventions and school health nurses to reduce the prevalence and effects of childhood overweight or obesity.

Keywords: Childhood, Obesity, School Health Nurse, Psycholog

THE ROLE OF DIGITAL TRANSFORMATION IN ECONOMIC DEVELOPMENT: AN EMPIRICAL ANALYSIS

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Abstract

Technology and digitalization have a major impact on economic variables. It is observed that countries that use the technological innovations required by the age in their production processes have positive results on economic variables, while countries that act in the opposite way have not been observed to have a positive picture, especially in their macroeconomic variables. In this study, where the relationship between digital transformation and development in Turkey is analyzed, the variable of broadband usage per 100 people represents digitalization, while the variable of economic growth rate represents economic development. Data between the years 2009-2021 were examined within the scope of the study. The FKPSS unit root test was applied to ensure that the econometric analysis between the variables could yield unbiased and consistent results. It was observed that the series that were not stationary at the level value became stationary when the first difference was taken. The existence of a cointegrated relationship between the variables was obtained with the help of the Fourier ARDL bounds test, and findings were reached that there was cointegration between the series. Finally, the coefficient estimation results of the variables were found to be statistically significant according to the OLS and FMOLS methods, and these coefficients show that the effect of digitalization on development is positive.

Keywords: Economic Development, Digital Transformation, Technology

EMPIRICAL EXAMINATION OF THE RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND WELFARE IN PERIODS

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The development of financial systems gives an idea about how much their economies have developed. Especially in countries like Turkey, where the liberal economic model was implemented, financial development also affects many macroeconomic variables. The aim of this study is to measure how much the level of welfare is affected by financial developments. In the study, how financial development affects welfare between the years 1980-2023 was analyzed. The financial development index data was taken from the database of the International Monetary Fund, and the economic growth data was taken from the World Bank. In this context, first, the ADF unit root test was performed to determine the stationarity of the series. Then, the existence of a cointegrated relationship between the series in the long term was determined with the ARDL bounds test. Finally, the existence of a causal relationship between the series in the short, medium and long term was investigated, and the findings obtained show that financial development has a causal effect on welfare in the short and long term. Results were obtained showing that the level of welfare is effective on financial development in the short and medium term, but does not have a causal effect in the long term.

Keywords: Financial Development, Welfare, Economic Growth

INVESTIGATION OF CHILDREN'S SONGS USED IN PRESCHOOL MUSIC EDUCATION IN TERMS OF CONTENT, CONCEPTUAL DIMENSION AND PROSODY

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ABSTRACT

Along with the fact that music is an educational tool that develops cognitive and affective areas before preschool perıod, it also has a great impact on language development. The songs learned presschool help children learn the rules of their native language and enable them to pronounce words correctly. This research aims to examine the children's songs used in music education in the preschool period in Turkey in terms of content, conceptual dimension and prosody. The aim of the study is to evaluate the pedagogical appropriateness of these songs to contribute to the holistic development of children and to provide music teachers with the opportunity to make more informed choices. In the research, songs released before and after 2018 were compared in terms of content themes, language used and musical structures. The study aimed to reveal the current situation with the screening model approach. A total of 110 preschool songs were used in the research. The sample group was selected from the works included in digital music platforms, source books used by music teachers and pedagogical music lists; 61 (67.1%) of them were published before 2018, and 49 (53.9%) of them were published in 2018 and later. In the light of the findings obtained in the research, it shows that songs before 2018 develop children's imagination by focusing on humorous and educational themes, while songs after 2018 are supported by more comprehensive content themes and current social dynamics. The research also examines the prosodic structures of the songs and emphasizes the elements that contribute to children's language and rhythm skills. As a result, suggestions were presented that children's songs used in music education should be enriched and diversified; updating educational curricula, developing interactive works that encourage children's participation, and highlighting cultural diversity.

Key Words: Preschool Music Education; Children's Songs; Prosody

BALANCED MANAGEMENT OF MIXED PASTURES UNDER CLIMATE CHANGE

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Abstract

Some researchers conclude that animal-based foods are the most resource-intensive foods and therefore the most environmentally harmful of all food types produced. On the other hand, livestock provide livelihoods for many people, especially in low-income countries. The benefits of livestock farming for poor livestock producers are diversified. The most successful examples of agroecology on a global scale come from smallholder family mixed farming. The problem lies in the lack of consideration of larger farms and the adoption of new technological opportunities for agroecology to enter the mainstream. A consistent feed supply is critical for grass-fed livestock and food security. Forage provides a cheap and primary source of nutrition for ruminant livestock. Forage crops and their wild relatives maintain biodiversity and ecosystem services and minimize the harsh effects of climate change. Feed supply plays an important role in providing ecosystem services such as biodiversity and soil carbon sequestration. Poor management of feed resources, excessive seasonality in feed availability, low utilisation of techniques/technology in production and improper storage of feeds are globally significant problems.

Keywords: Climate change, livestock, pastures

ECOLOGICAL INTENSIFICATION IN FEED PRODUCTION: AN OVERVIEW

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Abstract

The compatibility of "sustainability" and "intensification" was first used together with the study of African agriculture. The terms sustainability and intensification were used together in an effort to demonstrate that positive outcomes, like more food and improved ecosystem services, did not have to be mutually exclusive, even though intensification had previously come to be associated with agricultural practices that were harmful to the environment. Utilizing land, water, biodiversity, labor, information, and technology more effectively can help achieve both. A variety of tactics can be used to increase productivity per unit of land area or intensify animal feeding programmes. However, it is debated whether intensification is associated with increased economic and /or environmental efficiency.

Keywords: Ecological intensification, animal feed, pasture management