ABSTRACT BOOK

SELCUK 12TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCES
MAY 23 - 25, 2025
KONYA

ISBN: 978-625-5962-73-7

SELCUK 12TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCES
MAY 23 - 25, 2025
KONYA

Edited By
PROF. DR. BAŞAK HANEDAN

Issued: *15.06.2025*
ISBN: 978-625-5962-73-7

ASSOCIATION & ACADEMIC INCENTIVES :
In the conference 69 papers have been presented by Turkish participants and 80 apers by foreign participants.
Members of the organizing committees of the conference perform their duties with an "official assignment letter"

CONFERENCE ID

SELCUK 12TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCES

DATE – PLACE
MAY 23 - 25, 2025
KONYA

ORGANIIZATION
ACADEMY GLOBAL CONFERENCES & JOURNALS

EVALUATION PROCESS
All applications have undergone a double-blind peer review process.

PARTICIPATING COUNTRIES

Turkey – Spain – Iran – India- Azerbaijan- Pakistan- Romania- China- Nigeria- Singapore- Sweden- Lebanon- Senegal- Fiji- Kazakhstan- Germany- Algeria- Mongolia- Philippines- Afghanistan – Greece- South Korea- Mexico- Poland- Thailand- Kuwait- UAE – USA- Portugal- Czech Republic- Indonesia- Romania- Georgia-

PRESENTATION
Oral presentation

Accepted Languages in Conferencce

Turkish – English – Russian – Araabic- Persian

CONGRESS ORGANIZING BOARD

HEAD OF CONFERENCE : Prof. Dr. Başak HANEDAN

Prof. Dr. Hülya Çiçek

Prof. Dr. Ali Bilgili

Prof. Dr. Naile Bilgili

Prof. Dr. Başak Hanedan

Prof. Dr. Hajar Huseynova

Prof. Dr. Dwi Sulisworo

Prof. Zain Musa

Prof. Dr. Sameer Jain

Prof Yakup Babayev

Prof. Dr. Suyatno

Assoc. Prof. Dr. Irade Kerimova

Assoc. Prof. Dody Hartanto

Assoc. Prof. Dr. Rungchacadaporn

Assoc. Prof. Nazile Abdullazade

Assoc. Prof. Dr. Elif Akpınar Külekçi

Assoc Prof. Dr. Feran Aşur

Assoc. Prof. Dr. Dini Yuniarti

Assoc. Prof. Ivaylo Staykov

Assoc. Prof. Dr. Abbas Ghaffari

Assoc. Prof. Dr. Yeganə Qəhrəmanova

Assoc. Prof. Dr. Nurkan Yılmaz

Assoc. Prof. Dr. Həmzə Əliyev

Assist. Prof. Ihwan Ghazali

Assist. Prof. Dr. Abışov Elşad Şərəfxan oğlu

Assist. Prof. Dr. Mahrukh Dovlatzade

Assist. Prof. Dr. Naci Büyükkaracığan

Lecturer Mehmet Nuri Ödük

Assist. Prof. Dr. Mehdi Meskini Heydarlou

Dr. Dadash Mehravari

Dr. Gültekin Gürçay

Dr. Aynurə Əliyeva

Dr. Amaneh Manafidizajı

Scientific & Review Committee

Prof. Dr. Hülya Çiçek – Turkiye
Prof. Dr. Emine Koca – Turkiye
Prof. Dr. Fatma Koç – Turkiye
Prof. Dr. Valide Paşayeva - Türkiye
Prof. Dr. Ali Bilgili - Turkiye
Prof. Dr. Naile Bilgili - Turkiye
Prof. Dr. Başak Hanedan – Turkiye
Prof. Dr. Aysel Güven - Turkiye
Prof Dr. Bülent Kurtişoğlu – Turkiye
Prof. Dr. Hajar Huseynova – Azerbaijan
Prof. Dr. Dwi Sulisworo – Indonesia
Prof. Dr. Natalia Latygina – Ukraina
Prof. Dr. Yunir Abdrahimov – Russia
Prof. Muntazir Mehdi – Pakistan
Prof. Dr. T.Venkat Narayana Rao – India
Prof. Dr. İzzet Gümüş – Turkiye
Prof. Dr. Mustafa Bayram – Turkiye
Prof. Dr. Saim Zeki Bostan – Turkiye
Prof. Dr. Hyeonjin Lee – China
Prof. Yakup Babayev - Azerbaijan
Prof. Dr. Suyatno – Indonesia
Prof. Dr. Zain Musa – Cambodia
Prof. Dr. Sameer Jain – India
Prof. Mehdi Mohammadzade – Iran
Prof. Dr. Hasan Akan – Turkiye
Prof. Dr. Ika Maryani – Indonesia
Assoc. Prof. Dr. Sıddık BAKIR - Turkiye
Assoc. Prof. Dr. Yeliz Çakır Sahilli - Turkiye
Assoc. Prof. Dr. Berna Koçak - Turkiye
Assoc. Prof. Dr. Dhesi Ari Astuti – Indonesia
Assoc. Prof. Dr. Abdulkadir Aydın - Turkiye
Assoc. Prof. Dr. Elif Akpınar Külekçi - Turkiye
Assoc Prof. Dr. Feran Aşur – Turkiye
Assoc. Prof. Dr. Yasemin Taş – Turkiye
Assoc. Prof. Dr. Bülent Işık - Turkiye
Assoc. Prof. Dr. Nurkan Yılmaz - Turkiye
Assoc. Prof. Dr. Sevra Fırıncıoğulları - Turkiye
Assoc. Prof. Dr. Abdulsemet Aydın – Turkiye
Assoc. Prof. Dr. Mehmet Fırat Baran - Turkiye
Assoc. Prof. Dr. Dilorom Hamroeva - Ozbekstan
Assoc. Prof. Dr. Abbas Ghaffari – Iran

T.C.
ATATÜRK ÜNİVERSİTESİ REKTÖRLÜĞÜ
Veteriner Fakültesi Dekanlığı

Sayı : E-36643897-000-2300315795 05.10.2023
Konu : Görevlendirilme.

KLİNİK BİLİMLER BÖLÜMÜ BAŞKANLIĞINA

İlgi : 04.10.2023 tarihli ve E-36643897-000-2300313904 sayılı belge.

İlgide kayıtlı yazıda belirtildiği üzere, Bölümünüz Veterinerlik İç Hastalıkları Anabilim Dalı öğretim üyelerinden Prof. Dr. Başak HANEDAN'ın, "Academy Global Conferences & Publishing tarafından önümüzdeki tarihlerde düzenlenecek olan uluslararası kongrelerde; kongre başkanı, kongre düzenleme ve bilim kurulu üyesi olarak görevlendirilmesi Dekanlığımızca uygun görülmüştür.

Bilgilerinizi ve gereğini rica ederim.

Prof.Dr. Yavuz Selim SAĞLAM
Dekan

Atatürk Üniversitesi Veteriner Fakültesi 25240 Erzurum
Tel: +90 442 2317222
Elektronik Ağ: http://www.atauni.edu.tr/#!birim=veteriner-fakultesi
Kep Adresi: atauni@hs01.kep.tr
Bilgi: Derya FINDIK
Faks: +90 442 2317244
E-Posta: vetfak@atauni.edu.tr

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES
SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES
NewART 5TH INTERNATIONAL GROUP EXHIBITION
May 23 - 25, 2025
KONYA

Kongre Bağlantı Linki :

Join Zoom Meeting

https://us06web.zoom.us/j/88571518350?pwd=fOYazCWBmbAiWrHygjKSjkbbSvotfd.1

Meeting ID: 885 7151 8350

Passcode: 202224

ÖNEMLİ AÇIKLAMA (Lütfen okuyunuz)

- ZOOM bağlantısı için yukarıda verilen bağlantıyı veya yine yukarıda verilen giriş bilgilerini kullanabilirsiniz.
- Oturum içerisinde en KIDEMLİ olan moderator olarak seçilir. Moderatörün oturum düzenini gözetmesi, akademisyen adaylarını yönlendirmesi beklenmektedir.
- Oturuma bağlanmadan önce Salon numaranızı adınızın önüne aşağıdaki gibi ekleyiniz. Bu sayede kongre açılışında beklemeden oturumlarınıza gönderilebileceksiniz. Ör. 5 Ahmet Ahmetoglu
- Sunum süresi 10 dakikadır. Bu sürenin aşılmamasını moderatörler temin edecektir.
- Sunum sonrası 5 dakikayı geçmeyen soru-cevap, tartışma süresi verilmektedir.
- Sunumlar TÜRKÇE veya İNGİLİZCE yapılabilmektedir.
- Kameralar, oturum süresince toplam % 70 oranında açık olmak zorundadır.
- Sunum yapan katılımcının kamerası açık olmak zorundadır.
- Sunum yapmak zorunludur. Herhangi bir nedenle sunum yapmamış olan katılımcıya sertifika verilmesi ve çalışmasının yayınlanması sözkonusu olamaz.
- Katılımcı, kendi oturumda, oturum bitene kadar bulunmak zorundadır.
- Katılımcıların kendi oturumları dışındaki oturumlara katılma zorunluluğu yoktur.
- ZOOM platformunun kapasite sınırı nedeniyle, DİNLEYİCİ, sadece kapasite izin verdiği sürece kabul edilebilmektedir.

IMPORTANT, PLEASE READ CAREFULLY

- To be able to make a meeting online, login via https://zoom.us/join site, enter ID instead of “Meeting ID
- or Personal Link Name” and solidify the session.
- The Zoom application is free and no need to create an account.
- The Zoom application can be used without registration.
- The application works on tablets, phones and PCs.
- Speakers must be connected to the session **10 minutes before** the presentation time.
- All congress participants can connect live and listen to all sessions.
- During the session, your camera should be turned on **at least %70** of session period
- Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

TECHNICAL INFORMATION

- Make sure your computer has a microphone and is working.
- You should be able to use screen sharing feature in Zoom.
- Attendance certificates will be sent to you as pdf at the end of the congress.
- Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.
- Before you login to Zoom please indicate your name surname and hall number,

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 1	**Dr. Amaneh Manafidizaji**	1	KÜR TİPİ VE KÜR REJİMİNİN GEÇİRİMLİ GEOPOLİMER BETONLARIN BASINÇ DAYANIMINA ETKİSİNİN İNCELENMESİ	İnşaat Mühendisi SEDAT AKAR Dr. Öğretim Üyesi ADİL GÜLTEKİN
		2	INVESTİGATİON OF NOİSE POLLUTİON DURİNG THE DEMOLİTİON OF HEAVİLY AND MODERATELY DAMAGED BUİLDİNGS AFTER THE FEBRUARY 6 EARTHQUAKES: “THE CASE OF ADIYAMAN PROVİNCE”	Dr. Öğr. Üyesi MEHMET FATİH AYDIN Doç. Dr. KADİR GÜÇLÜER
		3	BÜKÜM YIĞILMALARININ STRES VE YORULMA ÖMRÜ ÜZERİNDEKİ ETKİSİ	Berkay MENDİ Ömer Faruk TALAY
		4	VİRAJ DENGE ÇUBUKLARINDA YÜZEY KUSURUNUN YORULMA ÖMRÜNE ETKİSİ	Ömer Faruk TALAY Berkay MENDİ
		5	INVESTIGATION OF MICROSTRUCTURES OF NANOPOLIVE COMPOSITE SURFACES CONTAINING PVP/CHITOSAN/TIO2 PRODUCED BY ELECTROSPINING METHOD	Cansu ATAR Elif KARDAŞ Prof. Dr. Gül TOSUN Prof. Dr. Nihat TOSUN
		6	INVESTIGATION OF NEW TECHNOLOGIES USED IN VEHICLE TYRES	Öğr. Gör., METİN KAYNAKLI
		7	INVESTIGATION OF THE USE OF NITROGEN GAS INSTEAD OF AIR IN VEHICLE TYRES	Öğr. Gör., METİN KAYNAKLI

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 2	**Asst. Prof. Dr. Kemal KAYA**	1	COLOR REMOVAL FROM BIOLOGICALLY TREATED PAPER INDUSTRY WASTEWATER BY COAGULATION-FLOCCULATION PROCESS	M.Sc.Demet DARCAN, Prof. Dr.Deniz İzlen ÇİFÇİ Prof.Dr.Ali Rıza DİNÇER
		2	ADVANCED TREATMENT OF PAPER INDUSTRY WASTEWATER USING UV/TiO_2 OXIDATION PROCESS	M.Sc.Demet DARCAN, Prof. Dr.Deniz İzlen ÇİFÇİ Prof.Dr.Ali Rıza DİNÇER
		3	Co 3 O 4 -MnO HİBRİT METAL OKSİTLERİNİN FOTOKATALİTİK TETRASİKLİN GİDERİMİNDE DEĞERLENDİRİLMESİ	SENEM AKSOY Doç. Dr. MEHMET BUĞDAYCI Dr. NERGİZ KANMAZ Prof. Dr. PELİN DEMİRÇİVİ
		4	KOBALT-MANGAN OKSİT KOMPOZİTLERİNİN ATIK SUDAN BOYA ARITIMINDA KULLANIMI	Doç. Dr. Mehmet BUĞDAYCI Dr. Nergiz KANMAZ Prof. Dr. Pelin DEMİRCİVİ
		5	DEVELOPMENT OF IRON BASED ORGANOMETALLIC COMPLEXES FOR ATOM TRANSFER RADICAL POLYMERIZATION	Mustafa Semih YILDIRIM Huseyin Cem KILICLAR Emirhan GENCOSMAN Cuneyt Huseyin UNLU
		6	SYNTHESIS AND CHARACTERIZATION OF pH-DEPENDENT BORON DIPYRROMETHENE-LYSINE COMPOUND FOR CANCER THERAP	Asst. Prof. Dr. Kemal KAYA

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 3	**Assist. Prof. Dr. Necmi YARBAŞI**	1	FREEZE DRYING AND KINETIC MODELING OF SLICED EGGPLANT WITH VARIOUS THICKNESSES	Doç. Dr. Bahadır ACAR Dr. Öğr. Üyesi Ahmet CANAN
		2	MACHINE LEARNING BASED ULTRASONIC MODULE DESIGN FOR FLOW AND TEMPERATURE MEASUREMENT	OKAN GÜNDÜZ, ALKIM GÖKÇEN, Prof. Dr. SAVAŞ ŞAHİN,
		3	VIBRATION AND SHOCK DAMPING WITH TPU FILAMENT	Sümeyye ELİEYİ Dr. Öğr. Üyesi, Beytullah BOZALİ
		4	IŞKOR: IMAGE PROCESSING BASED AUTONOMOUS ROBOT SYSTEM THAT CAN AVOID OBSTACLES AND TRACK COLORED OBJECTS	Rukiye ÖZDEN Serkan ÖZER Dr. Öğr. Üyesi, Beytullah BOZALİ
		5	THE ROLE OF NUMERICAL METHODS IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	Melike GÜREL Dr. Öğr. Üyesi, Beytullah BOZALİ
		6	ARTIFICIAL INTELLIGENCE-SUPPORTED PROTOTYPE SMART AGRICULTURAL SYSTEM: OPTIMIZING PRODUCTIVITY, SUSTAINABILITY AND PLANT HEALTH WITH A MULTI-LAYERED APPROACH	Işıl İrem SAĞLAM Dr. Öğr. Üyesi, Beytullah BOZALİ
		7	ANALYSIS METHODS OF GEOLOGICAL DATA USED IN CITY PLANNING WITH ARTIFICIAL INTELLIGENCE TECHNOLOGIES	Assist. Prof. Dr. Necmi YARBAŞI
		8	TORQUE MEASUREMENT TECHNIQUE IN HYDRAULIC SYSTEMS USED IN AVIATION ENGINES	AHMET CAN AKSU Doç. Dr. BUĞRAHAN ALABAŞ

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 4	**Dr,AHMET YILDIRIM**	1	BREAST CANCER DIAGNOSIS USING K-NEAREST NEIGHBOR ALGORITHM	Şahin YILDIRIM Mehmet Safa BİNGÖL
		2	EBOB-EKOK Tahmini için GAP Destekli Veri Üretimi ve Yapay Zeka Yöntemleri ile Sınıflandırılması	Doç.Dr,NECAT GÖRENTAŞ Öğrenci,AYTEN ERGİOĞUZ
		3	MAKİNE ÖĞRENMESİ İLE SAKIZ AĞACI FİDANLARINDA SU HASADI YÖNTEMLERİNİN ANALİZİ	Ömer Avşar
		4	MODİFİYE HARMONİK BALANS YÖNTEMİ YARDIMIYLA LİNEER OLMAYAN OSKİLATÖRLER İÇİN YÜKSEK MERTEBEDEN YAKLAŞIMLAR	Dr,MD ALAL HOSEN Dr,MSH CHOWDHURY Dr,GM ISMAIL Dr,AHMET YILDIRIM
		5	FIRST AND SECOND TYPE CHEBYSHEV MATRIX POLYNOMIAL SEQUENCES	Asist.Prof.Dr. Mehmet Emre ERDOĞAN Canan KELEŞ

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 5	**Doç. Dr. İbrahim BOZACI**	1	A LITERATURE REVIEW ON CONSUMPTIONS FOR POSITIVE PSYCHOLOGY PURPOSES	Doç. Dr. İbrahim BOZACI
		2	A LITERATURE REVIEW ON THE RELATIONSHIP BETWEEN PSYCHOLOGICAL PROBLEMS AND PERSONALITY DISORDERS AND CONSUMPTION	Doç. Dr. İbrahim BOZACI
		3	YAPAY ZEKANIN ÇALIŞMA YAŞAMI ÜZERİNDEKİ ETKİLERİ	Doç. Dr. Gökhan OFLUOĞLU
		4	ÇALIŞMA HAYATINDA YEŞİL İŞLER VE YEŞİL İSTİHDAM	Doç. Dr. Gökhan OFLUOĞLU
		5	The Effect of Visuals on Sales in Digital Marketing	Prof. Dr., NİLSUN SARIYER Yüksek Lisans Öğrencisi, MUALLA TUĞBA ÖZER
		6	WEB OF SCİENCE (WOS) VERİ TABANINA GÖRE ENTEGRE RAPORLAMA ALANINDA YAPILAN ÇALIŞMALARIN BİBLİYOMETRİK ANALİZİ	Doç.Dr. Semih BÜYÜKİPEKCİ
		7	YEŞİL TURİZM ALANINDA BİBLİYOMETRİK ANALİZ: WEB OF SCİENCE VERİTABANI ÜZERİNE BİR İNCELEME	Doç.Dr. Semih BÜYÜKİPEKCİ Islam ISLAMZADE
		8	CHANGING CULTURAL DIMENSIONS AND GREEN CONSUMPTION: THE GREEN CONSUMER CAUGHT IN THE COLLECTIVIST AMBIVALENCE	Dr. Öğr. Üyesi Selman TEMİZ

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 6	**Doç. Dr. SEVRA FIRINCIOĞULLARI**	1	SELF-ACTUALIZATION AND THE LIMIT OF MADNESS IN GOGOL'S THE MEMORIAL "BOOK OF A MADMAN"	Doç. Dr. SEVRA FIRINCIOĞULLARI
		2	Justice in Ahmed Pasha's Qasidas: The Idealized Image of Sultan Mehmed the Conqueror	Öğr. Abdulbaki KÖLGE Doç. Dr. Kenan BOZKURT
		3	SAİT FAİK ABASIYANIK'IN BABAMIN İKİNCİ EVİ ÖYKÜSÜNDEN RAYMOND CARVER'IN BABAMIN CANINI ALAN ÜÇÜNCÜ ŞEY ÖYKÜSÜNE KÜLTÜREL BELLEĞİN KARŞILAŞTIRMALI SERÜVENİ	Yüksek Lisans Öğrencisi, YUNUS DÜNDAR
		4	HOLLANDA'DA TÜRKÇE KONUŞAN TOPLUMUN KONUŞMA DİLİNDE RASTLANILAN KARIŞIK BİRLEŞİK FİİLLER ÜZERİNE	Nursel ÇALIŞKAN
		5	TÜRK DİLLERİNDE AĞIRLIK ÖLÇÜSÜNDEN ZIRHA UZANAN YOLCULUK: KÜRENKE ~ KÜREWKE	Arş. Gör. Ayberk Furkan DEMİREL
		6	A RELİGİOUS WORK WRİTTEN İN EASTER TURKİ: *MESIḤNİD CEMĀᶜATİ*	Yüksek lisans Öğrencisi YUNUS EMRE CAN
		7	"SAPSARI" SÖZCÜĞÜNÜN CÜMLE BAĞLAMINDAKI KULLANIMI VE ALMANCAYA AKTARIMI: YAŞAR KEMAL'IN ÖLMEZ OTU ROMANI ÜZERINE BIR İNCELEME	Hatice YILDIZ AKSOY
		8	KONYA İLİ YUNAK İLÇESİ AĞIZLARI	EMİNE TAŞKIN

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 7	**Dr. N. Mthembu**	1	Title: REFORMING RETIREMENT BENEFIT DIVISION IN SOUTH AFRICAN DIVORCE LAW: ENSURING EQUITY FOR NON-MEMBER SPOUSES	Dr. N. Mthembu Prof. Dr. T. Khumalo
		2	MAPPING ILLICIT CROPS THROUGH SPECTRAL ANALYSIS: A REMOTE SENSING STRATEGY FOR SECURITY AND AGRICULTURAL STABILITY	Dr. Reza Mohammadi Prof. Dr. Sara Alizadeh
		3	COMPULSORY MEDIATION IN DEFAMATION CASES: NAVIGATING THE TENSION BETWEEN SPEECH RIGHTS AND PERSONAL REPUTATION	Dr. T. Mokoena
		4	HISTORICAL TRAJECTORIES OF REFUGEE AND ASYLUM POLICIES IN AUSTRALIA: A CRITICAL REVIEW OF IMMIGRATION ATTITUDES	Mohammad Reza Farhadi Amina Fatou Ndiaye Dr. Dawid Marek Nowak
		5	THE DYNAMICS OF DECENTRALIZATION IN THE EUROPEAN UNION: IMPLICATIONS AND FUTURE DIRECTIONS FOR UKRAINE	Sofiya Ivanenko
		6	CRIMINAL LIABILITY IN COPYRIGHT VIOLATIONS: A COMPARATIVE OVERVIEW FROM THE WESTERN BALKANS REGION	Elira Dreshaj Arlinda Petrova Fjona Kelmendi
		7	RETHINKING RESOURCE POLICIES: A COMPARATIVE PERSPECTIVE ON END-OF-WASTE LEGISLATION IN THE EUROPEAN UNION	Elena Petrova Dr. Ahmed Al-Rashid Marta Nowak
		8	TRANSFORMATIONAL LEADERSHIP AND POLITICAL DYNAMICS: THEIR IMPACT ON CORPORATE PERFORMANCE IN NATIONAL ENERGY ENTERPRISES	Muhammad Faris Abdullah, Chidinma Grace Okafor

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 8	**Assis. Prof. Dr. Emma Davis**	1	REDEFINING GOVERNANCE: COMBATING LEADERSHIP FAILURE AND SYSTEMIC CORRUPTION IN POST-INDEPENDENCE NIGERIA	Ahmed Boubacar Diallo, Fatoumata Aminata Diop, Ibrahim Musa Sani
		2	THE CRISIS OF DEMOCRACY IN PAKISTAN: AN ANALYTICAL STUDY THROUGH ISLAMIC AND WESTERN PHILOSOPHICAL PERSPECTIVES	Ahmed Rashid Dr. Fatima Noor Hassan Khalil
		3	TRANSFORMATION AND CHALLENGES IN NATIONAL LAND USE PLANNING SYSTEMS: A COMPARATIVE PERSPECTIVE	Aisha Mahmoud Hassan Leila Fatima Khan Assis. Prof. Dr. Mohammad Reza Darvishi
		4	THE IMPLEMENTATION OF ANTI-CIRCUMVENTION LEGISLATIONS IN THE THAI COPYRIGHT SYSTEM	Somchai Srisai, Lec. Naree Panya, Ananya Nontawat, Dr. Kittisak Jitpaisarn
		5	THE SUCCESS AND CHALLENGES OF EMBEDDING EVIDENCE-BASED RESEARCH METHODS IN POLICING INTERVENTIONS	Dr. Sarah Williams, Assis. Prof. Dr. Emma Davis
		6	TAIWAN'S POLITICAL LANDSCAPE: THE RISE AND FALL OF HAN KUO-YU IN KAOHSIUNG	Emily Williams, Robert Johnson
		7	INTELLECTUAL PROPERTY CHALLENGES IN SPACE EXPLORATION: FOCUS ON EUROPEAN SPACE AGENCY REGULATIONS	Maria Linda Ana Ungureanu Thomas Nikolaus Wagner Isabelle Veronique Dupont Robert Heinrich Schmidt
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 9	**Dr. Bayarmaa Tsogtbaatar**	1	EVALUATION OF THE IMPLEMENTATION OF PUBLIC EXAMINATION CHIEF EXAMINERS' REPORTS IN MATHEMATICS CURRICULUM CONTENT	Olamide Oginni Adeola Johnson Chijioke Okafor
		2	IMPLEMENTATION MECHANISMS OF CONTINUOUS PROFESSIONAL DEVELOPMENT FOR EDUCATORS IN KAZAKHSTAN: A STUDY BASED ON THE "TEACHER" PROFESSIONAL STANDARD	Yelena Agranovich, Larissa Ageyeva, Violetta Tyan, Aigul Syzdykbayeva
		3	SKILL MISMATCH BETWEEN HEAVY EQUIPMENT REPAIRER STUDENTS AND EMPLOYERS' REQUIREMENTS	Lec. Bolormaa Dalanbayar, Dr. Batsaikhan Ulaankhuu, Dr. Bayarmaa Tsogtbaatar
		4	ASSESSING CHILDREN'S PROBABILISTIC AND CREATIVE THINKING IN A NON-FORMAL LEARNING CONTEXT	Maria Oliveira, João Santos, Carla Almeida, Pedro Costa
		5	APPLICATION OF CAUSAL INFERENCE AND DISCOVERY IN CURRICULUM EVALUATION AND CONTINUOUS IMPROVEMENT	Lunliang Zhong, Bin Duan
		6	ATTITUDE OF UNIVERSITY STUDENTS TOWARDS THE USE OF ARTIFICIAL INTELLIGENCE	Roberto Merlo, Dr. Maria González, Zoila Rivero, Dr. Laura González
		7	ENHANCING ONLINE EDUCATION IN ARABIC LANGUAGE TEACHING: CHALLENGES, OPPORTUNITIES, AND STRATEGIES	Salah Algabli, Mohammad Alharbi, Ahmed Al-Mansoori, Khalid Al-Jabri
		8	FUTURE PERSPECTIVES IN ARCHITECTURAL EDUCATION IN PORTUGAL: REVOLUTIONIZING THE TEACHING APPROACH FOR NEW GENERATIONS	Patricia Diogo, João Pereira, Maria Silva, Pedro Costa
		9	STRENGTHENING ADULT EDUCATION TO END FEMALE GENITAL MUTILATION AND ACHIEVE SUSTAINABLE DEVELOPMENT GOALS	Veronica Ngozi Odenigbo, Dr. Lorreta Chika Ukwuaba

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 10	**Dr. David Stewart**	1	THE ASSOCIATION BETWEEN ADHD MEDICATION, CANNABIS, NICOTINE USE, MENTAL DISTRESS, AND OTHER PSYCHOACTIVE SUBSTANCES	Nicole Scott, Emily Dwyer, Cara Patrissy, Samantha Bonventre, Lina Begdache
		2	THE IMPACT OF LIFE MEANING ON ACADEMIC PERFORMANCE AMONG JAPANESE COLLEGE STUDENTS	Jihyun Park, Naoko Tanaka, Dr. Satoshi Yamada, Haruki Ishida
		3	IMPROVING DECISION SUPPORT FOR ORGAN TRANSPLANT	lec. Ian McCulloh, Adam Placona, Dr. David Stewart,
		4	EFFECTS OF GRATITUDE PRACTICE ON RELATIONSHIP SATISFACTION AND THE ROLE OF PERCEIVED SUPERIORITY	Dr. Anomi Bearden, Brooke Goodyear, Dr. Alicia Khan
		5	LOVE AND MONEY: SOCIETAL ATTITUDES TOWARD INCOME DISPARITIES IN AGE-GAP RELATIONSHIPS	Assoc. Prof. Dr. Victoria S. Scarratt, Alexander B. Hopkins, Dr. Emily M. Thomas, Samuel J. Richardson
		6	MINDFULNESS-BASED INTERVENTIONS FOR ENHANCING SELF-ESTEEM AND PSYCHOLOGICAL WELL-BEING: EXAMINING THE INFLUENCE OF CONTINGENT SELF-ESTEEM	Sergio Luna, Dr. Raquel Rodríguez-Carvajal

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 11	**Lukáš Svoboda**	1	ISLAMIC CIVILIZATION IN WEST AFRICA: THE ROLE OF THE SOKOTO CALIPHATE IN SCIENCE AND TECHNOLOGY DEVELOPMENT	Mohammad Buba, Ibrahim Aliyu
		2	TEACHERS' PERCEPTIONS OF THE IMPACT OF TOBEPHOBIA ON JOB SATISFACTION AND EMOTIONS	Kwame Mensah, Akosua Yeboah
		3	KNOWLEDGE MANAGEMENT FOR SUSTAINABLE ENVIRONMENTAL MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS	Julian Vargas, Maria Gomez
		4	META-TEACHING SKILLS AND IMPROVEMENTS IN CLASSROOM TEACHING QUALITY	Zainab Haji, Faiza Amin
		5	THE ROLE OF STUDENT COUNSELORS IN PROMOTING WELL-BEING AMONG SCHOOLCHILDREN IN THE MIDDLE EAST	Hassan Al-Farhan
		6	THE EFFECTIVENESS OF DRAMA-BASED LEARNING IN FOSTERING CREATIVITY IN PRESCHOOL EDUCATION	Michaela Nováková
		7	PARENTS' PERSPECTIVES ON THE FUTURE OF EDUCATION: A STUDY FROM CENTRAL EUROPE	Lukáš Svoboda
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 12	**Dr. Carlos Rodríguez,**	1	MOTIVATION TYPES FOR LEARNING ENGLISH: A STUDY AT A RURAL UNIVERSITY IN QUINTANA ROO, MEXICO	Ayanbek Nurkadilov, Altynai Akhmetova, Dr. Kamila Kassenova,
		2	THE IMPACT OF POOR TEACHER-STUDENT RELATIONSHIPS ON CHRONIC ABSENTEEISM IN SECONDARY SCHOOLS IN WEST JAVA, INDONESIA	Yenni Anggrayni, Dian Suryani, Rudi Hadi, Dr. Iwan Setiawan
		3	APPLICATION OF EXTREME-BASED TEACHING MODEL IN POST-SECONDARY ONLINE CLASSROOM SETTING: A FIELD EXPERIMENT	Johnathan Smith, Maria Johnson, Dr. Carlos Rodríguez, Lec. Anna Williams
		4	IMPACT OF NON-PARENTAL EARLY CHILDHOOD EDUCATION ON DIGITAL FRIENDSHIP TENDENCY	Sheel Chakraborty, Assis. Prof. Dr. Rajeev Verma, Aarti Kumar,
		5	STUDYING THE EFFICIENCY OF DIGITAL TECHNOLOGY IN ENHANCING ASSESSMENT METHODS IN HIGHER EDUCATION	Dr. Bashir Ferdousi Mohammad Rafiq Rahman Dr. Tariq Hossain Khan Shamsul Alam Choudhury
		6	IMPACT OF STUDENTS' PERCEPTION OF SUCCESS POSSIBILITY ON PERFORMANCE IN SUMMATIVE EXAMS	Rəchelle Elva, Assoc. Prof. Dr. Mikayıl Tofiqov,
		7	DIGITAL CONTENT STRATEGY: COMPREHENSIVE EXAMINATION OF CRITICAL CONTENT ELEMENTS	Oksana Razina, Dr. Shakeel Ahmad, Jessie Qun Ren, Dr. Olufemi Isiaq
		8	THE ROLE OF QUALITY CULTURE IN THE SUCCESSFUL IMPLEMENTATION OF QUALITY ASSURANCE SYSTEMS IN HIGHER EDUCATION	Lec. Leonardo Mion, Sarah Johnson, Dr. Maria Garcia, Ahmed Al-Rashid
		9	SMART LEARNING ENVIRONMENT FOR MUSIC EDUCATION	Konstantinos Sofianos, Michael Stefanidakis

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 13	**Prof. Dr. Daniel Wilson**	1	THE IMPACT OF SLEEP ON SELECTIVE ATTENTION IN ADOLESCENTS	Emily Harrison, Dr. Michael Collins, Sophia Adams, Prof. Dr. Daniel Wilson
		2	THE ADOLSCENT VAPING CRISIS IN URBAN INDIA	Arushi S. Goyal, Jo Aggarwal,Dr. Ravi Jasuja
		3	MODELING GENERALIZATION IN THE ACQUIRED EQUIVALENCE PARADIGM WITH THE SUCCESSOR REPRESENTATION	Assoc. Prof. Dr. Ahmed Al-Mahri, Layla Al-Mansoori, Dr. Fahad Al-Said, Nourah Al-Harthy
		4	HARNESSING THE POWER OF LOSS: THE DISCRIMINATORY DYNAMICS OF NON-EMANCIPATORY ORGANIZATIONAL IDENTITY	Dr. Alexandru Popescu, Maria Ionescu, Ms .Andrei Vasilescu, Elena Radu
		5	SUCCESS FACTORS IN PLAY-BASED INTERVENTION PROGRAMS FOR CHILDREN WITH DIVERSE ABILITIES: A COMPARATIVE STUDY	Assis. Prof. Dr. Shuaa A. Mutawally, Budor H. Saigh, Dr. Ebtehal A. Mutawally
		6	THE SOCIAL DYNAMICS OF PANDEMICS: A CLINICAL SOCIOLOGICAL ANALYSIS OF PRECAUTIONS AND RISKS	Dr. Minh Tu Nguyen, Thi Lan Tran, Dr. Bao Anh Pham, Duc Hoang Le
		7	TEACHING STRATEGIES AND BIAS TOWARD IMMIGRANT AND DISABLED STUDENTS	M. Pellerone, S. G. Razza, L. Miano,
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 14	**Dr. Petra Gudelj,**	1	STUDENTS' PERCEPTIONS OF SEEKING PSYCHOLOGICAL ASSISTANCE	Dr. Petra Gudelj, Eva Franić, Dr. Martina Kolega
		2	CHILD ABUSE: EMOTIONAL, PHYSICAL, NEGLECT, SEXUAL AND THE PSYCHOLOGICAL EFFECTS: A CASE SCENARIO IN LAGOS STATE, NIGERIA	Ololade M. Aminu, Dr. Adebayo A. Olamide,
		3	THE QUALITY OF PRIMARY CAREGIVING RELATIONSHIPS BETWEEN ADOLESCENTS ORPHANED BY AIDS AND THEIR GRANDMOTHERS: INSIGHTS FROM STAKEHOLDER NARRATIVES	Assis. Prof. Dr. Mmapula Petunia Tsweleng
		4	SOCIO-DEMOGRAPHIC FACTORS AND POST-TRAUMATIC STRESS DISORDER AMONG ADOLESCENTS EXPOSED TO DOMESTIC VIOLENCE IN KENYA	Josephine Muchiri, Dr. Agnes Qdero
		5	SOCIETAL INSIGHT INTO EMOTIONAL ABUSE: A RETROSPECTIVE STUDY IN A JAPANESE PRIMARY SCHOOL	Naoko Fujisaka, Dr. Tetsuya Tanaka, Haruto Yamamoto, Dr. Akiko Sato
		6	EXPLORING THE ROLE OF EROTIC TRANSFERENCE IN THE DURATION OF PSYCHOANALYTIC TREATMENT: A CASE STUDY	M. Javid, R. Hassan, J. DeSilva
		7	ENVIRONMENTAL PERCEPTIONS OF DEPRIVED CHILDREN LIVING IN URBAN SLUMS: A STUDY IN PUNE, INDIA	Hrishikesh Purandare, Ashwini Pethe
		8	ADDRESSING GLOBAL TRAUMA: SOMATIC INTERVENTIONS IN PTSD TREATMENT AND CLINICIAN BURNOUT PREVENTION	Dr. Elena Markov, Prof. Dr. Ivan Petrov,

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 15	**Carlos Gomez, Laura Perez**	1	A THEORETICAL FRAMEWORK FOR CUSTOMER KNOWLEDGE MANAGEMENT IN EUROPEAN E-COMMERCE	Lars Johansson, Caroline Lindgren, Henrik Olsson
		2	DEVELOPING A COMPREHENSIVE E-MARKET FRAMEWORK USING INTELLIGENT AGENTS	Carlos Gomez, Laura Perez
		3	A NOVEL METHOD FOR SELECTING COMPLEX GOODS IN ONLINE MARKETS	Sofia Martins, Ricardo Costa, Marta Oliveira
		4	ANALYZING MIS DEGENERATION UNDER DYNAMIC CONDITIONS: A MATHEMATICAL APPROACH	Fatima Al-Mahdawi, Karim Al-Mansouri
		5	LEARNING MANAGEMENT LESSONS FROM CONTROL SYSTEMS: A THEORETICAL APPROACH	Jamal Zidan, Rania Al-Salem
		6	EXPLOITING SIP FOR ENHANCED MOBILITY IN MEDICAL COMMUNICATION SYSTEMS	Mansur Zayed, Fakhruddin Rashid, Jamil Al-Zahrani
		7	COGNITIVE REPRESENTATION OF VALUES IN ORGANIZATIONAL DECISION-MAKING	Kari Heikkinen, Dr. Markus Virtanen, Dr. Liisa Aalto
		8	EXPLORING THE USE OF SERIOUS GAMES IN SUPPORTING AUTISTIC CHILDREN'S DEVELOPMENT	Afiqah Rani, Nor Azura Zainuddin, Farhan Salleh

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 1	**Doç. Dr. Mine ERSEVİNÇ**	1	İŞGAL GÜNLERİNDE GEMLİK	Doç. Dr. Mine ERSEVİNÇ
		2	17. YÜZYILIN SONLARINDA OSMANLI'DA REAYAYA YÖNELİK MÜSADERE: BEYTÜLMAL EMİNİ MUSTAFA AĞA'NIN İSTANBUL DEFTERLERİ ÜZERİNDEN BİR SERVET ANALİZİ	Dr. Öğr. Üyesi Kamil Semih Kalyoncuoğlu
		3	An Assessment of Population Mobility in Iraq After the Baghdad Expedition of Murat IV	Bilge Yasemin ALABAŞ
		4	FEDOALİTE VE OSMANLI TIMARI ÜZERİNE DÜŞÜNCELER	Dr.Nihal Cihan Temizer
		5	3 NUMARALI KÜTAHYA ŞER'İYE SİCİLİ DEFTERİNDE TIMAR KAYDI	Yüksek lisans öğrencisi, Hülya KÖSE
		6		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 2	**Doç. Dr. Hakan Arıkan**	1	SANATTA GERÇEKÇİLİK ÜZERİNE BİR ANTİK YUNAN FİLOZOFU: PLATON	Doç. Dr. Hakan Arıkan
		2	SANAT VE İDEOLOJİ	Doç. Dr. Hakan Arıkan
		3	IF STREETS COULD TALK: WALKING WITH ALBERT CAMUS IN THE DUST OF THE COUNTRYSIDE	Dr. Öğr. Üyesi SERHAT SOYŞEKERCİ
		4	CAN CULTURE BE A TOOL OF THE SIMULATION ARGUMENT?	Gizem Nur Yaman
		5	MEVLANA AND HIS ADDRESS TO TURKISH GIRLS	Dr. Mukadder GÜNERİ
		6	ALBERT CAMUS'NÜN YAPITINDA VE DÜŞÜNCESİNDE KUTSALIN İZLERİNİN EDEBİ ELEŞTİRİ VE SİMGE-MOTİF YAKLAŞIMIYLA YORUMU	Doç.Dr.AHMET YILMAZ
		7	AKIL ÇAĞI'NIN HABERCİSİ OLARAK PASCAL'İN TAŞRA MEKTUPLARI	Doç.Dr.AHMET YILMAZ
		8	DECONSTRUCTION OF METAPHOR IN ECOFEMINIST PHILOSOPHY	Dr. Öğr. Üyesi DEMET KONUR ŞEN Arş. Gör. KAAN BATIN ÇETİNTAŞ
		9	ECOFEMINIST PERSPECTIVE IN THE ANTHROPOCENE: AN EXAMINATION THROUGH VAL PLUMWOOD AND VANDANA SHIVA	Arş. Gör. KAAN BATIN ÇETİNTAŞ Dr. Öğr. Üyesi DEMET KONUR ŞEN

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 3	**Öğr. Gör. Dr. Ayfer İNCİ**	1	ESKİ DÖNEM TÜRK KADININ GİYİM ÖZELLİKLERİ VE PUNCH TEKNİĞİYLE TASARIMLARA DÖNÜŞTÜRÜLMESİ	Doç. Dr. HÜSEYİN ÖZDEMİR Yüksek Lisans AYŞENUR ERÇELEBİ
		2	MEDUSA'NIN ÇIĞLIĞI: EFSANENİN SANATSAL TASARIMLARDA YENİDEN DOĞUŞU	Doç. Dr. HÜSEYİN ÖZDEMİR Yüksek Lisans ÖZLEM ÇÖREKÇİOĞLU
		3	ORNAMENTS ON HISTORICAL MANİSA CENTRAL MOSQUES	Dr. Öğr. Üyesi Ayşe Erdem Çetin Yüksek Lisans Öğrencisi, Gamze Kılınç,
		4	TECHNIQUES FOR ENHANCİNG CREATIVE THINKING IN BASIC DESIGN EDUCATION	Esra RUNA Doç. Dr. Elvan ENDER ALTAY
		5	ALTERNATİF SERAMİK ŞEKİLLENDİRME YÖNTEMİ OLARAK TORPİL KULLANIMI	Dr. Öğr.Üyesi, ÖNDER TERZİ
		6	USE OF TURQUOISE COLOR IN TURKISH ART	Lecturer. Emine CANTURK
		7	MODA TASARIM ÖĞRENCİLERİNE SÜRDÜRÜLEBİLİRLİK BİLİNCİNİ KAZANDIRMAYA YÖNELİK BİR ODAK GRUP ÇALIŞMASI	Öğr. Gör. Dr. Ayfer İNCİ
		8	DETERMINATION OF SUSTAINABLE DESIGN PRINCIPLES IN AMIGURUMI DOLL PRODUCTION	Yüksek Lisans Öğrencisi Şerife Serpil PULGAT Dr. Öğr. Üyesi Sertaç GÜNEY

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 4	**Dr, Mehmet Akif ARDUÇ Dr, Harun YALÇIN**	1	First-Grade Teachers' Views on the Ongoing Implementation of the TYMM (Türkiye Yüzyılı Maarif Modeli) Literacy Program	YL Öğrencisi, Mehmet EROĞLU Doç. Dr., Cenk AKAY Prof. Dr., Hacı İsmail ARSLANTAŞ
		2	AN EXAMINATION OF SINGLE-SUBJECT STUDIES CONDUCTED WITH STUDENTS WITH LEARNING DISABILITIES	Research Assistant, GİZEM TÜRKOĞLU BOYVAT Assistant Professor, TUĞBA PÜRSÜN
		3	TÜRKİYE'DE BİREYSELLEŞTİRİLMİŞ EĞİTİM PROGRAMLARI (BEP) ÜZERİNE YAPILMIŞ YÜKSEK LİSANS ÇALIŞMALARININ BETİMSEL ANALİZİ (2005–2025)	Dr. Öğr. Üyesi Ebru ÜNAY Öğretmen Kezban NARCI
		4	SCİENCE TEACHERS' VİEWS ON ARTİFİCİAL INTELLİGENCE-SUPPORTED TEACHİNG	Dr, Mehmet Akif ARDUÇ Dr, Harun YALÇIN
		5	EVALUATİON OF THE USE OF ARTİFİCİAL INTELLİGENCE İN EDUCATİON THROUGH SWOT ANALYSİS	Doç. Dr. Özlem Üzümcü Yüksek Lisans Öğrencisi Mustafa YAVNIK
		6	Türkiye ve Türkmenistan Lise Biyoloji Ders Kitaplarının Karşılaştırması	Yüksek Lisans öğrencisi, Shemshat AYDOGDYYEVA Prof. Dr. Munise Handan GÜNEŞ
		7	OKUL ÖNCESİ ÇAĞINDAKİ ÇOCUKLARIN SOSYAL DUYGUSAL İYİ OLUŞ VE PSİKOLOJİK SAĞLAMLIKLARI İLE TRAVMA SONRASI DUYGUSAL STRESLERİ ARASINDAKİ İLİŞKİNİN İNCELENMESİ	Prof. Dr., Saide ÖZBEY Yüksek Lisans Öğrencisi, Tuba Nur ÖZDEMİR YILMAZ
		8	ÜNİVERSİTE ÖĞRENCİLERİNDE STRESLE BAŞA ÇIKMA TARZLARININ YORDAYICILARI OLARAK BAĞLANMA, KENDİNE YANSITMA VE İÇGÖRÜ	Yüksek Lisans Öğr. Dilek KARAÇALI Dr. Başak BEYDOĞAN TANGÖR

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 5	**Assoc. Prof. Dr. Muhammet ÇANKAYA**	1	THE INFLUENCE OF ANCIENT SPORTS ON MODERN SPORTS	MERVE CAN Doç. Dr. YENER AKSOY Prof. Dr. OSMAN İMAMOĞLU
		2	REFLECTIONS OF MYTHOLOGY FROM ANCIENT GREEK CIVILIZATION ON THE CONTEMPORARY WORLD OF SPORTS	Doç. Dr. YENER AKSOY MERVE CAN Prof. Dr. OSMAN İMAMOĞLU
		3	INVESTIGATION OF MORAL DECISION-MAKING ATTITUDES AMONG STUDENTS OF THE FACULTY OF SPORTS SCIENCES	KARDELEN MIRIK Doç.Dr. EGEMEN ERMİŞ Prof.Dr. OSMAN İMAMOĞLU
		4	RESEARCH ON THE PASSION LEVELS OF SPORTS SCIENCES FACULTY STUDENTS	KARDELEN MIRIK Doç.Dr. EGEMEN ERMİŞ Prof.Dr. OSMAN İMAMOĞLU
		5	THE EFFECT OF HAPPINESS LEVELS ON EMPLOYEE PERFORMANCE: A STUDY ON NON-PHYSICIAN HEALTHCARE PERSONNEL	Assoc. Prof. Dr. Muhammet ÇANKAYA
		6	THE EFFECT OF CAREER SATISFACTION ON CAREER COMMITMENT AMONG NURSES	Assoc. Prof. Dr. Muhammet ÇANKAYA
		7		
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 6	**Prof. Dr. BELGİN COŞGE ŞENKAL**	1	SUSTAINABLE CULTIVATION OF MEDICINAL, AROMATIC AND SPICE PLANTS	Prof. Dr. BELGİN COŞGE ŞENKAL
		2	CHEMICAL COMPOSITION OF ESSENTIAL OIL OF *SALVIA FREYNIANA* BORNM. EX FREYN (ENDEMIC) AND IMPORTANCE OF ITS MAIN COMPONENTS	Prof. Dr. BELGİN COŞGE ŞENKAL
		3	OPİZA DÜJİTAL FÜG ÖLÇEĞİNİN GELİŞTİRİLMESİ VE PSİKOMETRİK ÖZELLİKLERİNİN İNCELENMESİ	Doç. Dr. Yalçın Kanbay Dr. Öğr. Üyesi Aydan Akkurt Yalçıntürk Dr. Öğr. Üyesi Elçin Babaoğlu Dr. Aysun Akçam Dr. Öğr. Üyesi Pınar Tektaş
		4	SİSİVET ŞİDDET TUTUM ÖLÇEĞİ'NİN GELİŞTİRİLMESİ VE PSİKOMETRİK ÖZELLİKLERİNİN İNCELENMESİ	Doç. Dr. Yalçın Kanbay Dr. Aysun Akçam Dr. Suna Köse Prof. Dr. Hatice Karakuş Öztürk
		5	ANNE SÜTÜNDEKİ OKSİTOSİN DÜZEYİ VE ETKİLEYEN FAKTÖRLER	Büşra Üstün, Arş. Gör. Dr. Özge Karakaya Suzan Prof. Dr. Nursan Çınar
		6	RATIONAL DRUG USE AND DIGOXIN INTOXICATION AWARENESS IN HEART FAILURE PATIENTS	Öğr. Hem. ESRA KAYMAZ Öğr. Hem. ÖMER KUŞCU Öğr. Hem. ABDULSAMET ÇETİN Prof. Dr. FERİDE TAŞKIN YILMAZ
		7	EFFECT OF EMOTIONAL STRESS LEVEL ON APPETITE STATUS AND GLYCEMIC PARAMETERS IN INDIVIDUALS WITH TYPE 2 DIABETES	Öğr. Hem. CEREN AVCI Öğr. Hem. BEYZA ZÜLAL AÇAR Prof. Dr. FERİDE TAŞKIN YILMAZ
		8	PAIN MANAGEMENT IN URINARY SYSTEM STONE DISEASE	Uzm. Hem. HİCRET DUMAN Prof. Dr. Mehtap KAVURMACI
		9	SHUNT AND NURSING CARE	Hemşire Kadriye ERBAŞ Prof. Dr Şenay ARLI

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 7	**Natalia Ivanova,**	1	THE HONG KONG LOW-FERTILITY DILEMMA: CAN MAINLANDERS' BIRTHS CONTRIBUTE TO REVITALIZING THE LOW-FERTILITY ISSUE?	Nancy Iri Dr. Ling Sze Leung
		2	A MULTI-AGENT SYSTEM FOR ENHANCING KNOWLEDGE MANAGEMENT AND E-LEARNING	Natalia Ivanova, Viktor Petrov
		3	PHYSICIAN BRAIN DRAIN: DRIVERS AND IMPACTS IN BANGLADESH	Amina Hossain, Farid Mahmud, Saifur Rahman
		4	TRANSITION FROM REGIONALISM TO COALITION: SHIFTS IN LANGUAGE POLITICS AND LEADERSHIP IN THE TAMIL MOVEMENT	Dr. Arun Natarajan
		5	A FRAMEWORK FOR EFFECTIVE KNOWLEDGE SHARING IN INTERCONNECTED ENTERPRISES	Sahar Makhmalbaf
		6	USER ENGAGEMENT AND SATISFACTION IN INFORMATION SYSTEMS	Hasan Kermani, Laila Abdelrahman
		7	ENVIRONMENTAL IMPACTS OF URBANIZATION ON RIVER HEALTH IN THE KERMAN REGION	Mohammad Rezaei, Zahra Tavakoli, Ali Amini, Reza Ghanbari
		8	A BAYESIAN FRAMEWORK FOR PREDICTING POLITICAL RISKS THROUGH IMPLICIT KNOWLEDGE	Dr. Kaveh Shafiei

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 8	**Dr. Fahad M. Al-Saleh**	1	RELATIONSHIP BETWEEN GENDER AND PERFORMANCE WITH RESPECT TO A BASIC MATH SKILLS QUIZ IN STATISTICS COURSES IN LEBANON	Hiba Naccache
		2	INSIGHTS AND VISUALS FROM VIRTUAL AND IN-PERSON LEARNING ENVIRONMENTS	Ranya Al-Fahad, Omar K. Salah
		3	STUDENT VIEWS ON CODE SWITCHING BY UNIVERSITY INSTRUCTORS: A PERSPECTIVE FROM THAILAND	Anong Srisai
		4	ADOPTING A STUDENT-CENTERED PEDAGOGY IN TERTIARY EDUCATION	Leila M. Farhat
		5	COMBINING HIGHER ORDER THINKING SKILLS WITH GEOGEBRA IN PRE-SERVICE TEACHER TRAINING	Samira J. Qassem, Fadi K. Marwan
		6	A FLIPPED CLASSROOM MODEL FOR STUDENTS IN THE HUMANITIES	Anjali Patel
		7	THE TECH-PEDAGOGICAL SHIFT: CREATING AND UTILIZING AN ONLINE WRITING PLATFORM	Sarah L. Hughes, Michael J. Tan, Emily R. Martin
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 9	**Prof. Dr. Jessica Albright**	1	OPEN EDUCATIONAL RESOURCE IN ONLINE MATHEMATICS LEARNING	Haohao Wang
		2	REDEFINING EDUCATIONAL REFORM: ALIGNING CURRICULUM WITH INSTITUTIONAL PRINCIPLES	Emma L. Thompson
		3	EXPLOITING BIG DATA TO ENHANCE EDUCATIONAL OUTCOMES	Ravi Nair
		4	LEVERAGING SOCIAL MEDIA AS AN INNOVATIVE LEARNING PLATFORM IN INDONESIAN TERTIARY EDUCATION: A STRUCTURAL EQUATION MODELING STUDY	Lina Hapsari, Rudi Santoso, Amir Rahman
		5	EMBRACING INFORMATION AND COMMUNICATION TECHNOLOGY TO MAXIMIZE CHILDREN'S SCIENTIFIC POTENTIAL: SUSTAINABLE DEVELOPMENT CHALLENGES IN KENYA	Samuel Karanja
		6	GLOBAL PERSPECTIVES ON HIGHER EDUCATION: CRAFTING A UNIVERSAL SUCCESS FRAMEWORK FOR PRE-CLINICAL MEDICAL STUDENTS – AN ACTION RESEARCH INITIATIVE	Prof. Dr. Jessica Albright
		7	TEAM COLLABORATION IN HIGHER EDUCATION: A DETAILED CASE STUDY	Ananya Verma
		8	EXAMINING TEACHER INTERACTIONS IN A "LEARNER-CENTERED" PEDAGOGICAL FRAMEWORK	Liu Chen

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 10	**Sukanya Pattharaporn**	1	ACCESS TO HIGHER EDUCATION IN NIGERIA: THE UNIVERSITY OF CALABAR PRE-DEGREE PROGRAM EXPERIENCE	Eni I. Eni, James Okon, Ashang J. Ashang
		2	MANAGING COOPERATIVE LEARNING IN GRADUATE MATHEMATICS COURSES	Dr. Aria Lee
		3	THE INTERCONNECTION BETWEEN ARM ACUPRESSURE POINTS AND TRADITIONAL MASSAGE THERAPY	Sukanya Pattharaporn
		4	ASSESSMENT RUBRICS IN TECHNICAL EDUCATION	Norafida Mohamad, Zainul Azhar, Shahrul Nizam
		5	KNOWLEDGE ABOUT DRUG USE AND BEHAVIOR TOWARD ANTIMICROBIAL MEDICATIONS	Nirun Phanwong
		6	INTEGRATING PROJECT-BASED LEARNING TO ADVANCE NATIONAL QUALIFICATIONS FRAMEWORK OBJECTIVES	Assis. Prof. Dr. Sithiporn Prasert
		7	DEVELOPING ONLINE MODULES TO ENHANCE THE LEARNING EXPERIENCE OF MASTER'S STUDENTS IN CURRICULUM DESIGN AT SRIPatum University	Dr. Pattama Khaopong
		8	FOSTERING COLLABORATIVE ONLINE LEARNING ENVIRONMENTS FOR FACULTY MEMBERS	Maya Chen, Sara Thompson, Alexei Ivanov

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 11	**Dr. Emilia Rodriguez**	1	VOICE IN PRE-SERVICE TEACHER DEVELOPMENT	Pintipa Seubsang, Suttipong Boonphadung
		2	NURTURING FUTURE EDUCATORS INTO COMPETENT PROFESSIONALS	Dr. Emilia Rodriguez
		3	DEVELOPING A CURRICULUM TO ENHANCE LEARNING ENGAGEMENT OF SECOND-YEAR STUDENTS IN THE COLLEGE OF EDUCATION THROUGH MULTIPLE INTELLIGENCES	Sofia Chen, Liam O'Sullivan
		4	EXPLORING UNIVERSITY STUDENTS' LEARNING STYLES IN BANGKOK: CHARACTERISTICS AND EFFECTIVE TEACHING CONTEXTS	Rajesh Kumar
		5	EXAMINING THE CONNECTION BETWEEN DISTRIBUTED LEADERSHIP AND STUDENT ACHIEVEMENT: A RESEARCH SYNTHESIS	Dr. Anja Müller
		6	EFFECTIVENESS OF THE NEUROLOGICAL IMPRESS METHOD AND RECURRENT READING ON THE READING FLUENCY OF CHILDREN WITH LEARNING DISABILITIES IN OYO STATE, NIGERIA	Samuel Okafor
		7	VIRTUAL CAMPUS AS A PEDAGOGICAL FRAMEWORK FOR ONLINE EDUCATIONAL SUPPORT	Dr. Naomi Patel
		8	VALIDATING PERSONAL IDENTITY THROUGH REMOTE ASSESSMENT IN E-LEARNING ENVIRONMENTS	Evelyn Johnson, Thomas Chen

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 12	**Dr. Mariana Costa**	1	EFFECTIVENESS OF DIGITAL TEACHING STRATEGIES FOR ENHANCED STUDENT PERFORMANCE IN TURKISH HIGH SCHOOLS: A QUANTITATIVE ANALYSIS	Lucas Silva
		2	THE ROLE OF SOCIAL MEDIA IN SHAPING PUBLIC OPINION ON ECONOMIC POLICIES IN BRAZIL: A CONTENT ANALYSIS OF LEADING NEWSPAPERS	Dr. Mariana Costa
		3	IMPACT OF FOREIGN DIRECT INVESTMENT ON REGIONAL DEVELOPMENT IN VIETNAM: AN EMPIRICAL STUDY	PHD Nguyen Thi Hoa
		4	JAPANESE INVESTMENT TRENDS IN SOUTHEAST ASIA: ECONOMIC AND STRATEGIC IMPLICATIONS	Takashi Nakamura
		5	CLIMATE CHANGE AND WATER-ENERGY-FOOD SECURITY NEXUS IN SOUTH AFRICA: A SYSTEMATIC REVIEW OF POLICY RESPONSES	Dr. Thabo Mokoena
		6	ENVIRONMENTAL IMPACT ASSESSMENT OF BIOFERTILIZER PRODUCTION USING WASTEWATER IN VIETNAM	Tran Van Minh
		7	FINANCIAL BURDEN AND SYMPTOM PREVALENCE OF POLYCYSTIC OVARY SYNDROME IN RURAL BANGLADESH: A CASE STUDY	Fatima Rahman Dr. Ayesha Siddiqui
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 13	**Ayesha Khan Imran Siddiqui**	1	CHALLENGES AND SATISFACTION LEVELS IN USING DIGITAL PAYMENT PLATFORMS	Neha Kulkarni Rohit Deshmukh
		2	EMOTIONAL INTELLIGENCE AND ITS IMPACT ON LEADERSHIP PERFORMANCE: A STUDY AMONG MBA STUDENTS IN SANGLI DISTRICT	Sneha Patil Rajat More
		3	SOCIO-ECONOMIC INFLUENCES ON DIETARY PATTERNS: A COMPARISON BETWEEN SOUTH ASIA AND G7 COUNTRIES	Ayesha Khan Imran Siddiqui
		4	INNOVATIVE GREEN SUPPLY CHAIN MANAGEMENT THROUGH TECHNOLOGY IN MALAYSIA'S MANUFACTURING SECTOR	Nurul Huda Ahmad Faizal
		5	THE EFFECTIVENESS OF TAX UTILIZATION IN PROMOTING NATIONAL DEVELOPMENT	Dewi Lestari Fajar Nugroho
		6	DIGITAL TAX ADMINISTRATION IN INDONESIA: ANALYSIS OF EFAKTUR AND E-BUPOT IMPLEMENTATION	Rina Sari Budi Santoso
		7	RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND FIRM FINANCING IN THE MENA REGION	Hassan El-Masri Layla Haddad
		8	SOCIAL DEVELOPMENT DRIVEN BY ENERGY TRANSITION IN MOROCCO	Youssef Benali Sara El-Fassi

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
23 Mayıs / May 23, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 14	**Dr. Amina Bello**	1	ADVANCING TRANSLATION PRACTICES IN THE ERA OF DIGITAL INTEGRATION	Maria Ivanova Olga Petrenko
		2	INNOVATIVE SUSTAINABILITY APPROACHES IN MODERN CORPORATE MANAGEMENT: A CASE STUDY OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) PRINCIPLES AT NNPC, ABUJA, NIGERIA	Dr. Amina Bello
		3	THE INFLUENCE OF SOCIAL SECURITY, PENSIONS, AND INSURANCE ON ECONOMIC DEVELOPMENT: INSIGHTS FROM NIGERIA	Ibrahim Musa
		4	POLITICAL PARTIES AND THEIR ROLE IN KNOWLEDGE DECOLONIZATION	Anna Kowalska
		5	COMMUNITY ENGAGEMENT IN ELDERLY SOCIAL SERVICE PROVISION: A STUDY FROM ROMANIA	Andrei Popescu Elena Ionescu
		6	EXPLORING LOCAL GOVERNMENT ADMINISTRATION CHALLENGES IN NIGERIA: A THEORETICAL ANALYSIS	Dr. Fatima Abdullahi Dr. Samuel Okoro
		7	SPATIAL BETA CONVERGENCE AMONG NEW EU MEMBER STATES BASED ON SOCIO-ECONOMIC INDICATORS	László Kovács
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 1	**Dr. Gültekin Gürçay**	1	CONSTRUCTING MEANING THROUGH ELLIPSIS: A SYNTACTIC AND RHETORICAL ANALYSIS OF THE QUR'AN	Dr. Öğr. Üyesi HÜSEYİN DURSUN
		2	Fatih Çollak'ın Kıraat İlmindeki Yeri Ve Öğretim Metodolojisi	Yüksek Lisans Öğrencisi, Büşra Baykal
		3	Kelam İlminde Bilgi Kaynakları ve İnsan Sınırları İle Pozitivist Düşüncede Bilgi Kaynakları ve Sınırları Üzerine Bir Araştırma	Yüksek Lisans Öğrencisi, Pınar İraç
		4	A Comparison of the Reported Views on Imamate in al-Ka'bī's Kitāb al-Maqālāt	Yüksek Lisans Öğrencisi, Ömer Karakaya
		5	Hâfızlıkta Modern Dönemin Zorlukları ve Çözüm Yolları	Yüksek Lisans Öğrencisi, Ömer Osman Gülbaş
		6	Evaluation of Mut'ah Marriage in Terms of Family and Criminal Law	Yüksek Lisans Öğrencisi, Rümeysa Bağcı
		7	Ahmedi Barış ve Nur Akımı	Yüksek Lisans Öğrencisi, Yücel Akbayır
		8	The Tension Between Language and Logic in Abū Ḥayyān al-Tawḥīdī: Meaning or Structure?	Dr. Zehra ORUK AKMAN

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 2	**Dr. Öğr. Üy. Elif Özel**	1	Rifâiyye Tarikatının Oluşum Süreci ve Günümüzdeki Durumu	Yüksek Lisans Öğrencisi, Melis Gül Demiryürek
		2	Tashih-i Hurufun Tarihsel Gelişimi ve Önemi	Yüksek Lisans Öğrencisi, Ümran Kapdan
		3	EVALUATION OF ASHRAF ALI THANWİ'S OPINIONS ON CONTEMPORARY FIQH ISSUES	Md Aminul İSLAM
		4	ABU SAID AL-HĀDIMĪ'S OF RISĀLA FI'L IZĀFAT AL-LAFZIYYA: EDITION AND CRITIQUE	Doç. Dr. Hasan UÇAR Yüksek Lisans Öğrencisi Semra ÇELİK
		5	Günümüz Dînî Akımlarından Biri Olarak Tebliğ Cemaati	Dr. Arş. Gör. Hasan Can ATEŞ
		6	Yöneticiye İsyan Meselesine Muhammed Takî Osmânî'nin Bakışı	Dr. Arş. Gör. Hasan Can ATEŞ
		7	ON THE LOGİCAL THOUGHT OF SİRÂCEDDÎN EL URMEVÎ	Dr. Öğr. Üy. Elif Özel
		8	Mîsâk, Fenâ ve Bekâ Kavramları Çerçevesinde Cüneyd-i Bağdâdî'nin Tasavvuf Anlayışı	Yüksek Lisans Öğrencisi, Büşra Sultan Dikici

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 3	**Asist. Prof. Dr. Bilal ÖZEL**	1	CLASSIFICATION OF EUROPEAN COUNTRIES ACCORDING TO ECONOMIC FREEDOMS WITH CLUSTER ANALYSIS AND MULTIDIMENSIONAL SCALING ANALYSIS	Doç. Dr., Aylin ALKAYA, Hasret Kevser KILINÇ, Beyza ÖZDEMİR, Hasan Sacit TAŞ,
		2	EFFECTS OF ECONOMIC GROWTH, FOSSIL ENERGY AND RENEWABLE ENERGY CONSUMPTION ON ENERGY CONSUMPTION: REGRESSION ANALYSIS ON OECD COUNTRIES	Doç. Dr., Aylin ALKAYA, İsmail Eren ÖZÇELİK, Mahmut PASLANMAZ,
		3	ENFLASYON VE GELİR DAĞILIMI İLİŞKİSİ: TÜRKİYE VE DİĞER OECD ÜLKELERİ İÇİN KARŞILAŞTIRMALI BİR ANALİZ	Doktora Öğrencisi, Ceren BAYDAK Prof. Dr., Gülden ÜLGEN
		4	AN ANALYSİS ON BASİC DETERMİNANTS OF FOREİGN DIRECT INVESTMENT: THE CASE OF TURKEY	Asist. Prof. Dr. Bilal ÖZEL
		5	WEARABLE TECHNOLOGIES ROLE ON PHYSICAL THERAPY APPLICATIONS FROM HEALTH TOURISM PERSPECTIVE: A QUALITATIVE STUDY	Ahmet Emin KARAHANOĞLU (MsC) Assoc. Prof. Züleyhan BARAN
		6	MEDICAL ERROR IN E HEALTH SERVICES; A GLOBAL PERSPECTIVE	DR. Furkan KARAHÜSEYİNOĞLU
		7	THE EFFECT OF SOCIAL CULTURE IN INTERNATIONAL HEALTH TOURISM	DR. Furkan KARAHÜSEYİNOĞLU
		8	THE ROLE OF DIETETIC SERVICES IN ADVANCING HEALTH TOURISM A CONCEPTUAL OVERVIEW	Mert GUL (MsC) Assoc. Prof. Zuleyhan BARAN
		9	THE IMPORTANCE OF LOCAL TASTES IN TERMS OF BRAND STRATEGIES: AN EVALUATION FOR RESTAURANT BUSINESSES	Yüksek Lisans Öğrencisi Elanur CAN Dr. Öğr. Üyesi Ahmet AYDIN

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 4	**Öğr. Gör. Dr. Nadide ÇAKIROĞLU**	1	HUKUK EĞİTİMİ ÜZERİNE	Dr. ÖNDER KAAN KESKİN
		2	HUKUK, YAPAY ZEKA VE İNSANLIĞIN YÜCE DEĞERLERİ ÜZERİNE	Dr. ÖNDER KAAN KESKİN
		3	KARMAŞIK SORUNLARLA MÜCADELEDE ETİK İLKELERİN ROLÜNÜN DEĞERLENDİRİLMESİ	Öğr. Gör. Dr. Nadide ÇAKIROĞLU
		4	TÜRK KAMU YÖNETİMİNDE LİDERLİK: BİR LİTERATÜR ANALİZİ	Öğr. Gör. Dr. Nadide ÇAKIROĞLU
		5	GROUNDS FOR REDUCTİON PLAYİNG A ROLE İN THE DETERMİNATİON OF PECUNİARY COMPENSATİON İN TORT LİABİLİTY	Avukat Muhammet Haluk NİTELİK
		6	THE RELATIONSHIP BETWEEN THE PRINCIPLE OF LEGAL ADMINISTRATION AND LEGAL DOGMATICS	Dr. Burcu Turan
		7	ASYA-PASİFİK EKONOMİK İŞBİRLİĞİ'NDE ÇİN'İN YÜKSELEN ROLÜ: EKONOMİK BÖLGESELLEŞME VE ÇİN'İN STRATEJİLERİ	Arş. Gör. Seniyye Kalyoncuoğlu Dr. Öğr. Üyesi Kamil Semih Kalyoncuoğlu

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 5	**Doç. Dr. ERKAN EFİLTİ**	1	FROM NATIONAL TELEVISION TO THE NETFLIX PLATFORM: WHO TELLS OLA'S STORY?	Hala Magdy Mohamed Ali
		2	TRANSFORMATION OF THE SUBJECT IN SCIENCE FICTION CINEMA: AN ANALYSIS IN THE PERSPECTIVE OF TRANSHUMANISM	Asst. Prof. Dr., FATMA ÖZTAT Lect., ALPASLAN DEMİRELİ
		3	YENİ MEDYANIN YENİ KURGU TEKNİĞİ: KAOS-KURGU	Dr. Öğr. Üyesi Hakan Kürkçüoğlu
		4	A STUDY ON THE LIFE CHANGES OF MARRIED WOMEN WITH CHILDREN AFTER MARRIAGE AND MOTHERHOOD WHILE ATTENDING UNIVERSITY	DİNARA GAZBEKOVA Doç. Dr. ERKAN EFİLTİ
		5	REVIEW OF STUDIES ON DEATH AND MOURNING	Doç. Dr. ERKAN EFİLTİ Y.L. Öğr. SERAP ÜLKER

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 6	**Dr. Öğr. Üyesi, ALPEREN MUSTAFA YİĞİT**	1	MUHASEBE VE DENETİM ALANINDA ÇALIŞANLARIN BAĞIMSIZ DENETİM STANDARTLARINA YÖNELİK ALGI VE TUTUMLARI	Eray ARAN Doç. Dr. Seval ELDEN ÜRGÜP
		2	TÜRK HIZLI MODA MARKALARI DİJİTAL PAZARLAMA KANALLARININ İNCELENMESİ	Nurcihan Kurt Dr. Öğr. Üyesi Meral İşler
		3	MUHASEBE MESLEK MENSUBU ADAYLARININ KARİYER DEĞİŞTİRME EĞİLİMLERİ: TR61 BÖLGESİ'NDE BİR ARAŞTIRMA	Prof. Dr., Reşat KARIOĞLU Dr. Öğr. Üyesi, Şerife KILIÇARSLAN
		4	KARBON MUHASEBESİ BİLİMSEL LİTERATÜRÜNÜN EVRİMİ: BİBLİYOMETRİK BİR YAKLAŞIM	Yüksek Lisans Öğrencisi, Berru KOZAN Dr. Öğr. Üyesi, Şahay OK
		5	ÜRETİM PLANLAMA VE KONTROLDE YAPAY ZEKANIN KULLANIMI	Dr. Öğr. Üyesi, ALPEREN MUSTAFA YİĞİT
		6	TEMİZ ÜRETİM İLKELERİ ÇERÇEVESİNDE SÜRDÜRÜLEBİLİRLİK RAPORLARININ İNCELENMESİ: ANA METAL SANAYİ ÖRNEĞİ	Dr. Öğr. Üyesi, ALPEREN MUSTAFA YİĞİT
		7		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 7	**Dr. Vivek Singh**	1	IMPACT OF TECHNOLOGICAL INNOVATION AND FDI ON INCOME DISTRIBUTION IN INDIA: A STUDY ON ECONOMIC DISPARITIES	Rohit Sharma Dr. Anjali Verma
		2	THE INFLUENCE OF ETHICAL LEADERSHIP ON PUBLIC SECTOR GOVERNANCE AND SERVICE DELIVERY	Dr. Arben Krasniqi, Dr. Luljeta Hoxha, Dr. Besnik Dreshaj
		3	ECONOMIC TRANSITION AND POLICY REFORMS IN BANGLADESH: AN ANALYSIS OF THE ERA 1976-1981	Farhana Rahman
		4	TRANSFORMATIONAL LEADERSHIP AND ORGANIZATIONAL PERFORMANCE IN INDIAN NONPROFIT SECTORS	Dr. Vivek Singh
		5	CONSUMER BEHAVIOR AND ADOPTION MOTIVATIONS FOR OTT PLATFORMS IN INDIA	Dr. Priya Sharma, Ankit Mehta,
		6	SCENARIO-BASED ASSESSMENT OF LAND USE CHANGES AND THEIR IMPACT ON ECOSYSTEM SERVICES IN PUNJAB, PAKISTAN	Zainab Khan, Dr. Imran Qureshi
		7	EVALUATING INDIA'S STRATEGIES AGAINST SINGLE-USE PLASTIC POLLUTION: INNOVATIONS AND POLICY GAPS	Rohit Gupta Dr. Nisha Mukherjee
		8	ASSESSING THE ROLE OF INDUSTRY 4.0 IN ENHANCING SUPPLY CHAIN RESILIENCE: A META-ANALYTICAL STUDY	Nur Aisyah Binti Ahmad,

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 8	**Assoc. Prof. Dr. Katarzyna Nowak**	1	EXPORT TRENDS AND MARKET ACCESS FOR ORGANIC MEDICINAL PLANTS FROM KOSOVO: AN ECONOMIC PERSPECTIVE	Dr. Arta Berisha
		2	STRATEGIC PROCUREMENT PRACTICES TO MITIGATE GLOBAL SUPPLY CHAIN RISKS: A FRAMEWORK FOR MALAYSIAN INDUSTRIES	Farid Hassan, Siti Nurhaliza Mohamad
		3	LEADERSHIP STYLES AND THEIR EFFECTS ON PROJECT OUTCOMES IN MALAYSIAN MANUFACTURING AND LOGISTICS SECTORS	Lim Wei Jie, Hafizah Zainal
		4	FINANCIAL INCLUSION CHALLENGES AND POLICY RESPONSES IN EU COUNTRIES AND CANDIDATE STATES: A 2023 COMPARATIVE STUDY	Assoc. Prof. Dr. Katarzyna Nowak
		5	FISCAL REFORMS AND ECONOMIC RECOVERY IN UTTAR PRADESH: ANALYSIS OF POLICY IMPACTS	Rajesh Singh, Anita Kumari
		6	DIGITAL TRANSFORMATION IN EDUCATION: OPPORTUNITIES AND CHALLENGES IN INDONESIAN HIGHER LEARNING INSTITUTIONS	Dewi Kartika, Fajar Nugroho, Sari Wulandari

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 9	**Assoc. Prof. Dr. Rania Khoury**	1	THE DIGITAL TRANSFORMATION OF CHILD WELFARE SERVICES IN ROMANIA – NAVIGATING POLICY AND PRACTICE	Dr. Ioana Popescu
		2	ONLINE CUSTOMER ENGAGEMENT STRATEGIES: A COMPARATIVE ANALYSIS BETWEEN ALBANIA AND ITALY	Msc. Erion Hoxha PhD. Francesca Russo
		3	EVALUATING THE EFFECTS OF INNOVATIVE AGRICULTURAL TECHNOLOGIES ON PRODUCTIVITY IN NORTHERN NIGERIA	Amina Yusuf, Chinedu Okafor, Ibrahim Bello
		4	ARTIFICIAL INTELLIGENCE IN EDUCATION: OPPORTUNITIES AND CHALLENGES FOR HIGHER LEARNING IN LEBANON	Assoc. Prof. Dr. Rania Khoury
		5	EU LAW AND NATIONAL SOVEREIGNTY: LEGAL DYNAMICS IN GEORGIA	Prof. Dr. Giorgi Kapanadze Assoc. Prof. Dr. Tamar Gelashvili
		6	GLOBAL ISLAMIC ECONOMICS: A CRITICAL REVIEW OF RECENT SCHOLARLY ARTICLES FROM INDONESIA	Ahmad Fauzi
		7	RENEWABLE ENERGY STRATEGIES FOR 2050: SUCCESS STORIES FROM ROMANIA	Cristina Ionescu Raluca Popa
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 10	**Assis. Prof. Dr. Rajesh Kumar**	1	ECONOMIC DEVELOPMENT AND POLICY CHALLENGES IN BANGLADESH DURING THE ERA OF SHEIKH MUJIB (1972-1975)	Amina Rahman
		2	PATENT LAWS AND ACCESS TO MEDICINES: NAVIGATING HEALTHCARE EQUITY IN BRICS COUNTRIES	Assis. Prof. Dr. Rajesh Kumar
		3	ASSESSING THE EFFECTS OF IRRIGATION TECHNOLOGIES ON AGRICULTURAL PRODUCTIVITY IN NORTHERN NIGERIA	Chinedu Okafor, Fatima Bello
		4	CIRCULAR ECONOMY STRATEGIES AND THEIR IMPACT ON SUSTAINABLE BUSINESS PRACTICES IN KOSOVO	Valon Hoxha, Luljeta Krasniqi
		5	GEOPOLITICAL CONFLICTS AND THEIR HUMANITARIAN IMPACTS IN THE 21ST CENTURY: AN INDIAN PERSPECTIVE	Dr. Anil Sharma, Dr. Priya Singh
		6	INTEGRATING INTERNAL AUDIT WITH IT SYSTEMS: A CRUCIAL LINK FOR EFFICIENCY IN SERBIAN BUSINESSES	Marko Jovanović, Ivana Petrović
		7	THE ROLE OF IT SECTOR IN FINANCIAL MANAGEMENT AND CONTROL IN SERBIAN COMPANIES	Marko Jovanović, Ivana Petrović
		8		

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 11	**Dr. Sofia Alvarez**	1	MINDFULNESS INTERVENTIONS TO IMPROVE SELF-ESTEEM AND PSYCHOLOGICAL WELL-BEING: INVESTIGATING THE ROLE OF CONTINGENT SELF-ESTEEM	Dr. Sofia Alvarez, Lec. Ricardo Gomez, Elisa Martinez, Dr. Javier Lopez
		2	BIFORMERDTA: STRUCTURAL EMBEDDING OF PROTEIN IN DRUG TARGET AFFINITY PREDICTION USING BIFORMER	Leila Baghaarabani, Parvin Razzaghi, Mennatolla Magdy Mostafa,
		3	DECLEx-PROCESSING PIPELINE FOR TUMOR CLASSIFICATION	Gaurav Shinde, Sai Charan Gongiguntla, Prajwal Shirur, Ahmed Hambaba
		4	MICROFLUIDIC MANIPULATION FOR BIOMEDICAL AND BIOHEALTH APPLICATIONS	Assis. Prof. Dr. Reza Hadjiaghaie Vafaie, Dr. Sevda Givtaj
		5	MEDICAL IMAGE FUSION IN BIOMEDICAL ENGINEERING EDUCATION	Ioan D. Popescu, Elena M. Ionescu, Alexandru T. Vasile
		6	DEVELOPING OPTICAL SENSORS FOR CANCER DETECTION USING ELASTIC LIGHT SCATTERING SPECTROSCOPY	Ahmad Ali Khan, Sara Mehmood, Dr. Omar Zubair
		7	ELECTRODERMAL ACTIVITY MEASUREMENT USING CONSTANT CURRENT AC SOURCE	Cristian Chacha, Dr. David Asiain, Jesús Ponce de León, Prof. Dr. José Ramón Beltrán
		8	A NOVEL APPROACH FOR CORONARY HEART DISEASE PREDICTION USING ECG SIGNALS WITH RESNET AND BI-LSTM	Yang Zhang, Jian He

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 12	**Mariama Jallow**	1	THE IMPACT OF PRINCIPALS' EMOTIONAL INTELLIGENCE ON TEACHERS' JOB SATISFACTION J	Amal Okpara
		2	INTEGRATING SOCIAL MEDIA INTO UNIVERSITY CURRICULUMS: A STRATEGIC APPROACH	Dr. Ananya Kiran
		3	EXAMINING TEACHER PROFESSIONAL DEVELOPMENT PRACTICES IN SINGAPORE SECONDARY SCHOOLS	Ravi Tan
		4	PROMOTING ENTREPRENEURIAL THINKING THROUGH UNIVERSITY TRANSFORMATION: THE CASE OF SWEDEN	Lena Persson, Erik Olsson
		5	THE EFFECT OF GENDER ON STUDENT PERFORMANCE IN STATISTICS COURSES IN LEBANON	Assis. Prof. Dr. Maya Farah
		6	THE IMPACT OF SOCIAL MEDIA ON LEARNING IN HIGHER EDUCATION: A STRATEGIC APPROACH	Aminata Diop, Idriss Bah
		7	ENHANCING TEACHER PROFESSIONAL DEVELOPMENT: A STUDY FROM A SECONDARY SCHOOL IN GAMBIA	Mariama Jallow
		8	BUILDING ENTREPRENEURIAL UNIVERSITIES: THE CASE OF EGYPTIAN INSTITUTIONS	Hassan El-Sharif, Mona Abdelrahman
		9	GENDER AND ACADEMIC PERFORMANCE IN STATISTICS: A CASE STUDY FROM NIGERIA	Chinonso Okoro, Fatimah Bello

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 11:30 – 13:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 13	**Assoc. Prof. Dr. Farzad Karimi Ghaleh Jough,**	1	SUSTAINABLE MANUFACTURING OF SOLENOID VALVE HOUSING IN FIJI: FUSED DEPOSITION MODELING AND EMERGY ANALYSIS	Hisham Cabemaiwai, Assis. Prof. Dr. Prasad Dauvakatini,
		2	OPTIMIZATION OF CONSTRUCTION PRACTICES: IMPLEMENTATION OF MODERN WORK MODULES TO INCREASE ATTRACTIVENESS FOR EMPLOYEES	Robin Becker, Nane Roetmann, Manfred Helmus
		3	USE OF SEISMIC ISOLATION SYSTEMS IN HIGH-RISE HOSPITAL BUILDINGS: A HYBRID APPROACH	Emre Bakkaloğlu, Dr. Nisa Torunbalcı
		4	EFFECT OF AGRICULTURAL WASTE AS A FILLER IN FIBRE CEMENT BOARD REINFORCED WITH NATURAL CELLULOSIC FIBRES	Anuoluwapo S. Taiwo, David S. Ayre, Morteza Khorami, Sameer S. Rahatekar
		5	IN-PLANE SHEAR TESTS OF PREFABRICATED MASONRY PANEL SYSTEM WITH TWO-COMPONENT POLYURETHANE ADHESIVE	Erdem Fehling, Dr. Peter Capewell
		6	IDENTIFICATION OF IMPACT LOADS AND SYSTEM PARAMETERS USING 1D-CNN	Xuewen Yu, Danhui Dan
		7	CONSIDERING THE EFFECT OF SEMI-RIGID CONNECTIONS IN STEEL FRAME STRUCTURES FOR PROGRESSIVE COLLAPSE	Assoc. Prof. Dr. Farzad Karimi Ghaleh Jough, Dr. Mohammad Soori
		8	DECISION SUPPORT STRATEGIES FOR MODULARIZATION IN ENGINEERING CONSTRUCTION: CASE STUDIES IN OIL, GAS, AND POWER PLANTS	Bat-Erdene Nyamsuren, Tungalag Batbold, Chuluunbaatar Enkhbaatar

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 1	**Prof.Dr. REYHAN ATASÜ TOPCUOĞLU**	1	FROM CRISIS RESPONSE TO SOCIAL RESILIENCE: RETHINKING HUMANITARIAN AID THROUGH SOCIAL POLICY AND SOCIAL WORK IN PROTRACTED MASS MIGRATION CONTEXTS	Prof.Dr. REYHAN ATASÜ TOPCUOĞLU
		2	THE ROLE OF COMMUNITY CENTERS IN POST-EARTHQUAKE SOCIAL SERVICE DELIVERY: A PERSPECTIVE ON DISABILITY, INCLUSION, AND CARE	Prof.Dr. REYHAN ATASÜ TOPCUOĞLU
		3	TOWN RESEARCH IN TURKEY AND SLOW CITY KÖYCEĞİZ	Dr.Öğr. Üyesi A. Ünal BOZYER Dr. Öğr. Üyesi Ümmü BULUT KESKİN
		4	PUBLIC INTERVENTIONS IN SETTLEMENTS AND SOCIAL CHANGE: THE CASE OF DALAMAN	Dr.Öğr. Üyesi A. Ünal BOZYER Yasin ÜLKER
		5	CHANGİNG MOTHERHOOD ROLES FROM PAST TO PRESENT	İlkay Uysal Doç. Dr. Meyrem Tuna Uysal
		6	YURTTAŞLIK ve EĞİTİM	Doç. Dr. Ercan ŞAHBUDAK Sena ÇOLAK
		7	TURNING CRISIS INTO OPPORTUNITY: SOME RECENT EXAMPLES OF OPPORTUNISM AND THEIR ANALYSIS	Doç. Dr., Mustafa SOLMAZ
		8	ISN'T IT TIME FOR SOCIOLOGY TO INTEGRATE WITH NATURE? BRINGING TOGETHER DURKHEIMIAN SOCIOLOGY AND NATURE: THE NEW ECOLOGICAL PARADIGM	Doç. Dr., Mustafa SOLMAZ

SELCUK 12th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 2	**Prof. Dr. Şafak ULUÇINAR SAĞIR,**	1	CHALLENGES ENCOUNTERED İN PEER AND SELF-ASSESSMENT PROCESSES İN MULTİGRADE CLASSROOMS	Mahmut KARA, Prof. Dr. Şafak ULUÇINAR SAĞIR,
		2	2018 ÖĞRETİM PROGRAMI ve TÜRKİYE YÜZYILI MAARİF MODELİ KAPSAMINDAKİ İLKOKUL 1. SINIF HAYAT BİLGİSİ KİTAPLARININ ALTERNATİF DEĞERLENDİRME YÖNTEMLERİ AÇISINDAN İNCELENMESİ	Fatmanur Eren Prof. Dr. Şafak Uluçınar Sağır
		3	3. VE 4. SINIF ÖĞRENCİLERİNİN “FOSİLLER” KONUSUNDAKİ KWL ÇALIŞMALARININ DOKÜMAN ANALİZİ İLE İNCELENMESİ	Yüksek Lisans Öğrencisi Fatmanur EREN Doç. Dr. Neşe KUTLU ABU
		4	İLKOKUL 1. SINIF ÖĞRENCİLERİYLE RAFT UYGULAMALARI: ÖZGÜRLÜK TEMALI YAZMA ÇALIŞMALARININ DEĞERLENDİRİLMESİ	Yüksek Lisans Öğrencisi, Burcu ÖZTAŞ Doç. Dr. Neşe KUTLU ABU
		5	OKUL ÖNCESİ DİN EĞİTİMİNDE DİYANET 4-6 YAŞ KUR’AN KURSLARI	Danışman,Prof.Dr.Sevim Özdemir Yüksek Lisans Öğrencisi, Aslıhan YALMAN

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 3	**Doç. Dr. Nazlı ŞAHİN**	1	THE ROLE DRYING SYSTEMS ON BIOACTIVE COMPOUNDS AND PHENOLIC CONSTITUENTS OF BITTER ORANGE LEAVES AT DIFFERENT DRYING TIMES	Doç. Dr. Nurhan USLU Yüksek Lisans Öğrencisi, Özlem ARINÇ Yüksek Lisans Öğrencisi, İlknur ÜNAL Prof. Dr. Mehmet Musa ÖZCAN
		2	THE QUANTITATIVE VALUES OF CHANGES IN BIOACTIVE COMPOUNDS AND PHENOLIC PROFILES IN PARSLEY LEAVES EXPOSED TO SONICATION FOR DIFFERENT TIMES	Doç. Dr. Nurhan USLU Yüksek Lisans Öğrencisi, Özlem ARINÇ Yüksek Lisans Öğrencisi, İlknur ÜNAL Prof. Dr. Mehmet Musa ÖZCAN
		3	USE OF OCTENYL SUCCINATE ANHYDRIDE (OSA) STARCH AS AN EMULSIFIER	Mahinur GÜRBÜZ Dr. Öğretim Üyesi Betül OSKAYBAŞ EMLEK Dr. Öğretim Üyesi Ayşe ÖZBEY
		4	YEŞİL BEZELYE, SARI BEZELYE VE NOHUT UNLARI KATKILI HURMA VE CEVİZ İLE YAPILAN GLÜTENSİZ KURABİYELERİN BAZI FİZİKSEL, TEKSTÜREL VE DUYUSAL ÖZELLİKLERİNİN KARŞILAŞTIRILMASI	Doç. Dr. Nazlı ŞAHİN Arzu Bengi ŞEN
		5	KARABUĞDAY İLAVELİ GLUTENSİZ MAYALI BAZLAMA ÜRETİMİ	Doç. Dr. Nazlı ŞAHİN Gülsemin Çayır
		6	Aspergillus flavus'UN TOKSİN ÜRETME POTANSİYELİNİN MOLEKÜLER OLARAK GÖSTERİLMESİ	Prof. Dr., IŞIL VAR Doktora Öğrencisi, BERFİN SUCU
		7	ERZİNCAN İLİ ATMOSFERİ ALTERNARIA VE CLADOSPORIUM SPORLARI (OCAK–HAZİRAN 2022)	Tülay ATALAY NAKİ Dr. Öğr. Üyesi Gül Esma AKDOĞAN KARADAĞ
		8	ADANA İLİNDE 1992–2022 YILLARI ARASINDA YAĞIŞ VE KURAKLIK TRENDLERİNİN ANALİZİ	Dr. Öğr. Üyesi Umut ERCAN
		9	MORPHOMETRIC EXAMINATION OF THE CANINE HUMERUS	Prof. Dr. Zekeriya ÖZÜDOĞRU Prof. Dr. Şükrü Hakan ATALGIN Arş. Gör. Mustafa KORKMAZ
		10	MORPHOMETRIC EXAMINATION OF FORAMEN SUPRATROCHLEARE IN DOGS	Prof. Dr. Zekeriya ÖZÜDOĞRU Prof. Dr. Mehmet CAN Arş. Gör. Mustafa KORKMAZ

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 4	**Prof. Dr.Arzu Özen Yavuz**	1	Taşın Hafızası: Yapay Zekâ ile Nablus'un Tarihsel Katmanlarının Görselleştirilmesi	Yüksek Lisans Öğrencisi Areen SOBOH Prof. Dr, ARZU ÖZEN YAVUZ
		2	THE INTEGRATION BETWEEN ARTIFICIAL INTELLIGENCE AND BIOMIMETIC APPROACH: CASE STUDY OF A THERMOREGULATION DESIGN CONCEPT FOR A CITY IN EXTREME CLIMATE CONDITION.	M.Sc. Student, NUR SYAHIRA BINTI MOHD NOR Prof. Dr., ARZU ÖZEN YAVUZ
		3	AN INNOVATİVE UNDERWATER LİVİNG SPACE DESİGN BASED ON FRACTAL GEOMETRY APPROACHES	M.Sc. Student, KUMUSHKHON ZOKIRKHUJA KIZI MUNAVVAROVA Prof. Dr., ARZU ÖZEN YAVUZ
		4	AN IMMIGRANT'S PERCEPTION OF THE CITY AND ECPHRASTIC IDENTIFICATION TECHNOLOGY, TRANSFORMATION, DIFFERENCE	Yusuf Melih Bahar Prof. Dr.Arzu Özen Yavuz
		5	BURSA İLİ GÜMÜŞTEPE MAHALLESİNDE (MİSİ KÖYÜ) POTANSİYEL KAMP ALANLARININ BELİRLENMESİ	Doç. Dr. ZEYNEP PİRSELİMOĞLU BATMAN PELİN ÖZUÇAR
		6	SÜRDÜRÜLEBİLİR PEYZAJLAR İÇİN İKLİM KIRILGANLIĞI ODAKLI PLANLAMA STRATEJİLERİ	Doç. Dr., Zeynep PİRSELİMOĞLU BATMAN Kübra Nur SAFALI
		7	CNC MAKİNASI İLE İŞLEM GÖREN MEŞE ODUNUNUN FARKLI DEVİR HIZI PARAMETRE DEĞERLERİNE GÖRE OLUŞAN AHŞAP TOZ MİKTARININ BELİRLENMESİ	Dr. Öğr. Üyesi Evren Osman ÇAKIROĞLU
		8	FROM BAUHAUS TO INDUSTRY 5.0, THE EVOLUTION OF THE RELATIONSHIP BETWEEN TECHNOLOGY AND ERGONOMICS: A READING ON SEATING FURNITURE	M. Interior Arch. Student,FATEMEH KHABIR M. Interior Arch. Student,GÜLŞAH KAMACI Prof. Dr.,ERKAN AYDINTAN
		9	THE PLACE OF ROBOTICS TECHNOLOGY IN THE TRANSFORMATION OF BIOMIMICRY INTO ARCHITECTURAL DESIGN: A CASE STUDY ON ICD/ITKE RESEARCH PAVILION (2013-14)	M. Interior Arch. Student,İLKNUR KIRBIYIK M. Interior Arch. Student,ENES AYDIN Prof. Dr.,ERKAN AYDINTAN

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 5	**Doç. Dr. Nurkan YILMAZ**	1	THE ROLE OF RECREATİONAL ACTİVİTİES AND SCİENCE, TECHNOLOGY, ENGİNEERİNG AND MATHEMATİCS (STEM) ACTİVİTİES İN ENHANCİNG LİFE SATİSFACTİON	Dilara HAMARAT Doç. Dr. Nurkan YILMAZ Doç. Dr. Özgür EKEN
		2	KORONER KALP HASTALIKLARINDA FİZİKSEL AKTİVİTENİN ROLÜ	Doç. Dr. Nurkan YILMAZ Dilara HAMARAT Doç. Dr. Özgür EKEN
		3	THE IMPORTANCE OF KINETIC CHAIN EXERCISES IN MUSCLE MOBILIZATION AND IMMOBILIZATION	Serkan YARDIM Doç. Dr. Nurkan YILMAZ Doç. Dr. Özgür EKEN
		4	THE IMPORTANCE OF KINETIC CHAIN EXERCISES IN THE REHABILITATION PROCESS AFTER INJURY	Doç. Dr. Nurkan YILMAZ Serkan YARDIM Doç. Dr. Özgür EKEN
		5	EFFECT OF RESISTANCE EXERCISES ON BODY TYPOLOGY (SOMATOTYPE)	Doç. Dr. Nurkan YILMAZ Yeşim BAŞCI
		6	THE EFFECT OF DISABLED LIFE CENTERS ON FAMILIES WITH DISABLED INDIVIDUALS	Yeşim BAŞCI Doç. Dr. Nurkan YILMAZ
		7	POST AKTİVASYON POTANSİYELİ VE ENERJİ SİSTEMLERİ: TEORİK BİR İNCELEME	Doç. Dr. Nurkan YILMAZ Bayram TAN Doç. Dr. Özgür EKEN
		8	POST AKTİVASYON TEMELLİ ÇALIŞMALARIN SPRİNT PERFORMANSINA ETKİSİ	Bayram TAN Doç. Dr. Nurkan YILMAZ Doç. Dr. Özgür EKEN
		9	FUTBOLCULARDA 8 HAFTALIK SOLUNUM KAS VE YÜKSEK YOĞUNLUKLU İNTERVAL ANTRENMANIN MAXVO2 VE SOLUNUM KAS KUVVETİNE ETKİSİ	Dr. Mehmet İsmail TOSUN Yüksek Lisans Öğrencisi Özge TOSUN Nezaket ÖZCAN

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:00 – 17:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 6	**Lecturer Dr. Elvan DENİZ**	1	EFFECT OF AUTOCLAVE CURİNG AND CARBON FİBER REİNFORCEMENT ON THE MECHANİCAL PROPERTİES OF GEOPOLYMER MORTARS	Abdul Basir YADGARI Prof. Dr. Harun TANYILDIZI Dr. Öğr. Üyesi Mahmoud ZIADA
		2	INVESTIGATION OF THE MECHANICAL PROPERTIES OF CEMENTITIOUS ALKALINE ACTIVATED MORTARS AT EARLY AGES	Zekeriya ARTUN Prof. Dr. Harun TANYILDIZI
		3	A TIME SERIES-BASED EVALUATION OF CONTAINER HANDLING AT THE PORT OF KOCAELİ	Lecturer Dr. Elvan DENİZ
		4	TIME SERIES ANALYSIS AND FORECASTING OF CONTAINER HANDLING AT THE PORT OF MERSİN	Lecturer Dr. , Elvan DENİZ
		5	A Bilayer Structural Approach in Dental Material Design: Ti6Al4V Coated NiCr Alloys	Zeynep KESKİN Prof. Dr. Rıdvan YAMANOĞLU

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 7	**Assoc. Prof. Dr. Varun Vijay,**	1	ANALYSIS OF NOODLE PRODUCTION PROCESS AT YAN HU FOOD MANUFACTURING: BASIS FOR PRODUCTION IMPROVEMENT	Rhadinia Tayag-Relanes, Felina C. Young
		2	BIOACTIVITY OF PEPTIDES FROM TWO MUSHROOM SPECIES	Assis. Prof. Dr. Parisa Farzaneh, Dr. Azade Harati
		3	THE IMPACT OF NUTRITION EDUCATION ON THE ADHERENCE TO THE MEDITERRANEAN DIET AND SUSTAINABLE EATING HABITS AMONG UNIVERSITY STUDENTS	Wahyu Agus Pamungkas, Riska Belinda Setyawati, Dr. Ahmad Fajri Rifai,
		4	ANTIMICROBIAL ACTIVITY OF A GREEN SYNTHESIZED DRUG SUPPLEMENT: NUTRITION BIO-SHIELD SUPERFOOD	Azam Bayat, Dr. Aref Khalkhali, Dr. Ali Reza Mahjoub
		5	PRODUCTION AND CHARACTERIZATION OF LACTOSE-FREE YOGURT USING MEMBRANE TECHNOLOGY AND MODIFIED MILK PROTEIN CONCENTRATE	Shahram Naghizadeh Raeisi, Ali Alghooneh
		6	FURNIKO FLOUR: A SYMBOLIC COMPONENT OF GREEK PONTIC CULINARY HERITAGE	A. Keramaris, T. Sawidis, E. Kasapidou, P. Mitlianga
		7	EXPLORING THE POTENTIAL OF INTEGRATING BLOCKCHAIN, CLOUD COMPUTING, AND ARTIFICIAL INTELLIGENCE IN ENHANCING DATA EXCHANGE WITHIN CONSTRUCTION SUPPLY CHAIN MANAGEMENT	Tran Duong Nguyen, Marwan Shagar, Qinghao Zeng,
		8	FLUOROMETRIC APTASENSOR: EVALUATION OF STABILITY AND COMPARISON TO STANDARD ELISA ASSAY	John Carlos Kuri, Assoc. Prof. Dr. Varun Vijay, Dr. Raymond James Turner,
		9	EFFECT OF ETHYL ALCOHOL FACTORY EFFLUENTS ON BARLEY GERMINATION AND GROWTH PERFORMANCE	Azadeh Vaziri, Reza Khodadadi, Niloofar Mohammadi, Samira Farzaneh

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 8	**Assoc. Prof. Emily Nguyen,**	1	A CRITICAL ANALYSIS OF CHITOSAN UTILIZATION AS A NATURAL ANTIMICROBIAL	F. Nejati Hafdani, N. Sadeghinia
		2	INVESTIGATING THE COGNITIVE-ENHANCING POTENTIAL OF BACOPA MONNIERI EXTRACT IN NEUROGENESIS	Dr. Ananya Patel
		3	FORMULATION AND EVALUATION OF PROBIOTIC VAGINAL SUPPOSITORIES INCORPORATING LACTOBACILLUS STRAINS	Dr. Lina García, Dr. Pablo Hernández
		4	ISOLATION OF STIGMASTEROL GLYCOSIDE FROM THE ROOTS OF CURCUMA LONGA	Prof. Dr. Sarah Collins, Dr. Michael Collins
		5	UTILIZING MACHINE LEARNING TECHNIQUES IN PHARMACEUTICAL COMPOUND DISCOVERY	Dr. Emma Novak, Dr. Jonathan Blume
		6	PHARMACOKINETIC MODELING OF THEOPHYLLINE MICROCAPSULES USING A DECONVOLUTION APPROACH	Assoc. Prof. Emily Nguyen, Dr. Farah Ibrahim
		7	ASSESSING THE ANTIBACTERIAL ACTIVITY OF METHANOL EXTRACTS FROM INDONESIAN HERBS AGAINST E. COLI	Dr. Siti Aisyah, Dr. Rizky Ardiansyah

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 9	**Prof. Dr. Amanda Griffin,**	1	DEDUCING THE DYNAMICS OF "CONCEALED" NEURONS FROM ELECTROPHYSIOLOGICAL RECORDINGS	Valeri A. Makarov, Nazareth P. Castellanos
		2	CLASSIFYING GENOMIC STRUCTURES AND REARRANGEMENT IN COMPUTATIONAL BIOLOGY: A UNIFIED APPROACH	Dr. Eliza Gorton, Samir Patel, Thomas Wright
		3	UNVEILING DISTANT PROTEIN EVOLUTIONARY LINKS USING SEQUENCE ALIGNMENT TECHNIQUES	Prof. Dr. Amanda Griffin, Dr. Thomas Allard
		4	PARENTAL COEFFICIENTS IN AGRICULTURAL HYBRIDIZATION ANALYSIS	Rajesh Sharma, Poonam Kapoor, Harinder Singh Dhillon
		5	A PARSIMONY-BASED MODEL FOR PHYLOGENETIC TREE RECONSTRUCTION IN INSECT EVOLUTION	Dr. Ananya Krishnan,
		6	PRELIMINARY ASSESSMENT OF SINGLE-GENE DISRUPTIONS ON GENETIC NETWORK INFERENCE	Carl Peterson, Dr. Sabine Muller
		7	EVALUATING FEATURE SELECTION TECHNIQUES FOR CLASSIFYING DIFFUSE LARGE B-CELL LYMPHOMA	Helena Sanchez, Pedro Carvalho
		8	IMPACT OF GUANIDINE HYDROCHLORIDE ON PHASE SEPARATION IN PEG-SALT AQUEOUS TWO-PHASE SYSTEMS	Nitin Deshpande
		9		

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 10	**Prof. Dr. Marta Kowalczyk**	1	ANALYSIS OF CLUSTER MECHANISM OF ANTI-GREENHOUSE EFFECT USING COMPUTER TECHNOLOGY	A. Galashev
		2	APPLICATION OF ADVANCED NANOFILTERS FOR SUSTAINABLE WATER SUPPLY IN THE CASPIAN SEA BASIN	*Olga Petrova, Dmitry Ivanov, Maria Sorokina*
		3	CRITICAL ANALYSIS OF EIA REPORTS EFFECTIVENESS: A CASE STUDY FROM INDIA	*Dr. Aakash Sharma, Assis. Prof. Dr. Neha Rao*
		4	ASSESSMENT OF GROUNDWATER QUALITY AND POLLUTION IDENTIFICATION IN THE KARUN RIVER WATERSHED, IRAN	*Hassan Rahimi, Fatemeh Jalali*
		5	EVALUATION OF AIR POLLUTION MITIGATION STRATEGIES	*Prof. Dr. Marta Kowalczyk*
		6	DEVELOPMENT OF A COST-EFFECTIVE HYDROGEN PRODUCTION SYSTEM USING BIOMASS RESOURCES IN SOUTH KOREA	*Yuki Matsumoto, Takeshi Ogawa, Ryoichi Nakamura*
		7	EFFECT OF MICROBIAL ACTIVATORS ON THE DECOMPOSITION OF INDUSTRIAL WASTE COMPOST	*Dr. Niran Phasuk, Dr. Araya Chaiwat*

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 11	**Dr. Salma Al-Qahtani,**	1	PALLADIUM-CATALYZED DECHLORINATION FOR WATER REMEDIATION: CATALYST INACTIVATION AND RENEWAL	Dalia Angeles-Wedler, Katrin Mackenzie, Frank-Dieter Kopinke
		2	OPTICAL PROPERTIES OF PURE AND DOPED ZINC OXIDE: FROM NANOCOATINGS TO BULK CRYSTALS Yasmina El Gharbi,	Nadia Laaroussi, Hamid Belkacem, Karim Fekir
		3	METHANE AND VOLATILE ORGANIC EMISSIONS FROM OIL REFINERIES IN SAUDI ARABIA	Dr. Salma Al-Qahtani, M. Abdur Rahman, F. Javed
		4	ADSORPTION KINETICS AND THERMODYNAMIC STUDIES OF LEAD (II) IONS USING COCONUT SHELL ACTIVATED CARBON	Tanvi Desai, Rajeev Chatterjee, S. Balakrishnan
		5	KINETIC ANALYSIS OF SILVER NANOPARTICLE INCORPORATION INTO ORGANIC MATRICES	Mehrdad Shirazi, Laila Farhad
		6	INVESTIGATION OF THE ELECTRICAL CHARACTERISTICS OF AU/POLYANILINE/AG SCHOTTKY DIODE VIA I-V MEASUREMENTS	Bilal Haider, Assis. Prof. Dr. Ahmed Farooq
		7	SEPARATION OF WATER-SOLUBLE VITAMINS USING HPTLC PLATES IMPREGNATED WITH OXALIC ACID	Dr. Jamal Al-Hassani, PhD. Reza Mansouri, Afsaneh Shirin
		8		
		9		

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 12	**Dr. Laila Hassan**	1	QUANTUM ENTANGLEMENT AND THE EXPANDING COSMOS: A THEORETICAL EXPLORATION	Amit Sharma
		2	MICROWAVE-ASSISTED SYNTHESIS AND ANALYSIS OF CARBON NANOTUBES FROM AGRICULTURAL WASTE	Dr. Laila Hassan
		3	DEVELOPMENT OF MAGNETIC SILICA-CHITOSAN NANOCOMPOSITES FOR EFFICIENT WASTEWATER REMEDIATION	Fatima Yusuf, Ahmed Khan, Sara Malik
		4	ENHANCED ITERATIVE METHODS FOR SOLVING ELLIPTIC PDES: A NOVEL PARAMETRIC APPROACH	Chinedu Okafor, Amina Bello
		5	FIRST-PRINCIPLES COMPUTATIONAL STUDY OF SR-BASED HYDRIDE PEROVSKITES FOR HYDROGEN STORAGE	Yousef Al-Mansouri, Layla Rahimi
		6	THE INTERPLAY OF SPORTS AND POPULAR CULTURE: HISTORICAL PERSPECTIVES AND CONTEMPORARY INSIGHTS	Dr. Reza Farhadi, Assis.Prof. Dr. Neda Karimi
		7	PRE-SERVICE TEACHERS' PERCEPTIONS AND MOTIVATIONS TOWARD AI INTEGRATION IN PHYSICS EDUCATION	Halima Ibrahim, Musa Abdullahi
		8	VIRTUAL LABORATORIES IN SCIENCE EDUCATION: IMPACT ON TEACHERS' USABILITY PERCEPTIONS AND STUDENT SKILL DEVELOPMENT	Amina Bello, Ibrahim Musa
		9		

SELCUK 12th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES May 23 - 25, 2025 KONYA Meeting ID: 885 7151 8350 Passcode: 202224				
24 Mayıs / May 24, 2025 / 15:30 – 17:30 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
HALL / SALON 13	**Dr. Nino Beridze**	1	PSYCHOLOGICAL IMPACT AND PROJECT OUTCOMES: A MODERATED MEDIATION ANALYSIS IN CONSTRUCTION INDUSTRY	Maria Petrova
		2	YOLOv8-BASED AUTOMATED PAVEMENT CRACK IDENTIFICATION USING IMAGE PROCESSING TECHNIQUES	Assoc. Prof. Dr. Sophie JORIO
		3	THERAPEUTIC COUCH DYNAMICS IN MODERN PSYCHOTHERAPY PRACTICES	Andrei Popescu
		4	SUSTAINABLE IRRIGATION METHODS INCORPORATING ANTI-EROSION MEASURES	Dr. Nino Beridze
		5	EXPERIMENTAL INVESTIGATION ON CONCRETE STRENGTH WITH CEMENT PARTIALLY REPLACED BY BLACK CARBON AND TiO2 ADDITIVES	Ravi Kumar
		6	ASSESSING THE IMPACT OF UNREGULATED SOLID WASTE MANAGEMENT IN KADUNA URBAN AREAS	Chinedu Okafor
		7	DESIGN STRATEGIES FOR ENERGY-EFFICIENT HOUSING IN LOW-INCOME COMMUNITIES	Dr. Fatima Abiola

Contents

KÜR TİPİ VE KÜR REJİMİNİN GEÇİRİMLİ GEOPOLİMER BETONLARIN BASINÇ DAYANIMINA ETKİSİNİN İNCELENMESİ

İnşaat Mühendisi SEDAT AKAR
Düzce Üniversitesi,
sedatakar.mail@gmail.com - 0009-0006-0761-973X
Dr. Öğretim Üyesi ADİL GÜLTEKİN
Düzce Üniversitesi,
adilgultekin@duzce.edu.tr - 0000-0002-5267-5312

ÖZET

Geçirimli beton, birbiriyle bağlantılı boşluk yapısı sayesinde yağmur suyunun alt katmanlara süzülmesine olanak sağlayan özel bir beton türüdür. Son yıllarda, geopolimerlerin sağlamış olduğu avantajlar, geçirimli betonla birleştirilmekte ve geçirimli geopolimer betonlar hakkında çalışmalar yürütülmektedir. Geçirimli geopolimer betonlarda bağlayıcı olarak; uçucu kül, yüksek fırın cürufu ve metakaolin gibi alüminosilikatlar, sodyum silikat ve sodyum hidroksit gibi alkali aktivatörlerle birlikte kullanılmaktadır. Bugüne kadar yapılan çalışmalarda, geçirimli geopolimer beton üretiminde etüv kürü ve ortam kürlemesi sıklıkla tercih edilmiş ve bu betonların çeşitli özellikleri incelenmiştir. Bu çalışmada ise mikrodalga kürü kullanılarak uçucu kül esaslı geçirimli geopolimer betonlar üretilmiş; mikrodalga güç seviyesi ve kür süresinin basınç dayanımı üzerindeki etkisi araştırılmıştır. Bu amaçla ev tipi bir mikrodalga fırın kullanılmış; 5 dakika boyunca 120, 330 ve 600 watt güç seviyelerinde kürleme yapılmış, en yüksek basınç dayanımının 600 watt ile elde edildiği belirlenmiştir. Çalışmanın devamında 600 watt güç seviyesinde 2 ve 8 dakikalık kür süreleri de denenmiş ve sürenin basınç dayanımı üzerindeki etkisi değerlendirilmiştir. 600 watt güç seviyesinde yalnızca 5 dakikalık kürleme ile 5.3 MPa basınç dayanımına ulaşılabildiği tespit edilmiştir. Bunun yanı sıra, kıyaslama amacıyla etüv kürü de uygulanmış; farklı sıcaklık ve sürelerde elde edilen dayanım değerleriyle mikrodalga kürü karşılaştırılmıştır. Ayrıca her iki kür yönteminde de kürleme için gereken elektrik enerjisi harcaması bir wattmetre yardımıyla ölçülmüş ve enerji tüketimleri kıyaslanmıştır. Elde edilen sonuçlar, mikrodalga kürü ile çok kısa sürede geçirimli geopolimer beton üretiminin mümkün olduğunu ortaya koymuştur.

Anahtar Kelimeler: Geçirimli Beton, Geopolimer Beton, Mikrodalga Kürü, Basınç Dayanımı

6 ŞUBAT 2023 TARİHLİ DEPREMLER SONRASI HASARLI YAPILARIN YIKIMINDA ORTAYA ÇIKAN GÜRÜLTÜ: ADIYAMAN ÖRNEĞİ

Dr. Öğr. Üyesi Mehmet Fatih AYDIN

Adıyaman Üniversitesi
mfaydin@adiyaman.edu.tr - 0000-0002-3497-9910

Doç. Dr. Kadir GÜÇLÜER

Adıyaman Üniversitesi
mfaydin@adiyaman.edu.tr - 0000-0001-7617-198X

ÖZET

Deprem ve yaşattıklarının travması oldukça korkutucudur. Bu süreç çok kısa bir zamanda gerçekleşse de sonrasında açığa çıkan problemler göz ardı edilemeyecek boyutlardadır. Bu problemlerin en önemlilerinden bir tanesi enkazlar ve hasar almış yapıların ortadan kaldırılmasında ortaya çıkan gürültüdür. Yıkılması gereken kategoride yer alan ağır hasarlı, orta hasarlı ve acil yıkılacak yapılar meskûn mahaller içinde hasarsız ya da az hasarlı yapılar ile birlikte bulunabilmektedir. Yıkım işlemini gerçekleştirecek olan yıkım makineleri büyük hacimli ve yüksek gürültü çıkarma potansiyeline sahiptir. Bu amaçla, bu çalışmada hasarsız yapılar içerisinde var olan ağır hasarlı bir yapının yıkımı esnasında dış ortam ve iç ortamda oluşan gürültü değerleri ölçümleri yapılmış ve insan sağlığı üzerine olan etkileri açıklanmaya çalışılmıştır.

Anahtar kelimeler: Adıyaman, Gürültü kirliliği, Deprem, Yıkım süreci

6 FEBRUARY 2023 EARTHQUAKES AND THE NOISE ARISING IN THE DEMOLITION OF DAMAGED BUILDINGS: THE CASE OF ADIYAMAN

ABSTRACT

The trauma of an earthquake and what it causes is quite frightening. Although this process occurs in a very short time, the problems that emerge afterwards are of a size that cannot be ignored. One of the most important of these problems is the noise generated during the removal of debris and damaged structures. Severely damaged, moderately damaged and urgently demolished structures in the category of demolition can be found together with undamaged or slightly damaged structures in residential areas. The demolition machines that will perform the

demolition process have a large volume and high noise potential. For this purpose, in this study, the external and internal noise values generated during the demolition of a severely damaged structure within undamaged structures were measured and their effects on human health were tried to be explained.

Key words: Adıyaman, Noise pollution, Earthquake, Demolition process

BÜKÜM YIĞILMALARININ STRES VE YORULMA ÖMRÜ ÜZERİNDEKİ ETKİSİ

Berkay MENDİ
PHI Metal Otomotiv Sanayi ve Ticaret A.Ş.,
berkay.mendi@phimetal.com.tr - 0009-0003-5633-0762

Ömer Faruk TALAY
PHI Metal Otomotiv Sanayi ve Ticaret A.Ş.,
omer.talay@phimetal.com.tr - 0009-0001-2784-4313

ÖZET

Viraj denge çubukları, otomobillerin viraj alma esnasında gövde salınımını azaltarak sürüş stabilitesini artıran önemli süspansiyon elemanlarıdır. Araç viraj alırken oluşan merkezkaç kuvvetine karşı koymak amacıyla, sağ ve sol tekerlekleri birbirine bağlayarak gövde hareketini sınırlarlar ve aracın ağırlık merkezini yere yaklaştırırlar. Günümüzde elektrikli araçların gelişimiyle birlikte otomotiv sektöründe parça hafifletme çalışmaları büyük önem kazanmıştır. Bu doğrultuda, mukavemet özelliklerini koruyarak daha hafif yapılar üretme yönünde çeşitli araştırmalar yapılmaktadır. Bu çalışmada, boru tipi viraj denge çubuklarında üretim süreci sırasında oluşabilecek büküm yığılmalarının, parçanın gerilme dağılımı ve yorulma ömrü üzerindeki etkileri incelenmiştir. Büküm yığılmaları, boru malzemenin plastik şekillendirilmesi (büküm) prosesi sırasında oluşabilen lokal deformasyonlardır ve yorulma performansını olumsuz yönde etkileyebilir. Bu amaçla, büküm yığılması hesaba katılarak tasarlanmış bir denge çubuğu ve büküm yığılması ihmal edilmiş modellerin stres hesabı incelenmiştir. Bir numune üzerinde yüzey geometrileri taranarak kritik bölgelerdeki gerilme birikimleri analiz edilmiş, ardından yorulma ömrü karşılaştırmaları yapılmıştır. Elde edilen sonuçlar, büküm yığılmalarının özellikle yüksek stres konsantrasyon bölgelerinde yorulma ömrünü önemli ölçüde azalttığını göstermektedir. Bu bulgular, üretim süreçlerinin iyileştirilmesi ve kalite kontrol adımlarının optimize edilmesi açısından önemli geri bildirimler sunmaktadır.

Anahtar Kelimeler: Denge çubuğu, Büküm yığılması, Stres hesabı, Ömür hesabı, Yorulma mekaniği.

VİRAJ DENGE ÇUBUKLARINDA YÜZEY KUSURUNUN YORULMA ÖMRÜNE ETKİSİ

Ömer Faruk TALAY
PHI Metal Otomotiv Sanayi ve Ticaret A.Ş.,
omer.talay@phimetal.com.tr - 0009-0001-2784-4313

Berkay MENDİ
PHI Metal Otomotiv Sanayi ve Ticaret A.Ş.,
berkay.mendi@phimetal.com.tr - 0009-0003-5633-0762

ÖZET

Viraj denge çubukları otomobilin viraj esnasında stabilizasyonunu sağlayan parçadır. Araç viraj esnasında merkez kaç kuvveti ile virajın aksi yönüne savrulmaktadır. Viraj denge çubuğu iki tekerlek arasında bağlantı kurarak aracın savrulmasını minimize eder. Teknolojinin hızla ilerlemesi ve elektrikli araçların gelişimi ile otomotiv sektöründe araçların hafifletilmesi söz konusu olmaya başlamıştır. Yapılan araştırmalar araçlarda kullanılan parçaların sertliğini ve tokluğunun artması yanı sıra parçaların hafifletilmesi yönündedir. Bu çalışmada gelişen denge çubuklarının yorulma ömrünü önemli ölçüde etkileyen yüzey kusurları incelenmiştir. Parçanın yüzeyinde bulunan kusurlar yorulma mekaniğinin doğası gereği yorulma ömrünü direkt olarak etkilememektedir. Denge çubuklarının ağırlıklarını azaltmak için yorulma ömrünü arttırmak gerekmektedir. Bu çalışmanın amacı denge çubuğu üretiminde kullanılan yarı mamul olan boru üretiminde oluşabilecek ayrıca denge çubuğu üretiminde oluşabilecek kusurların denge çubuğunun yorulma ömrüne etkisi incelenmiştir. Çalışmada 4 adet üretim sırasında oluşmuş birbirinden farklı ölçülerde ve geometride yüzey kusuru içeren denge çubuğu incelenmiştir. Bulunan yüzey kusurları yorulma ömrüne etkisi araştırılmış.

Anahtar Kelimeler: Yorulma ömrü, Denge çubuğu, Yorma testi, Yorulma mekaniği, Mikroyapı.

ELEKTROEĞİRME YÖNTEMİ İLE ÜRETİLEN PVP/KİTOSAN/TiO_2 İÇEREN NANOLİFLİ KOMPOZİT YÜZEYLERİN MİKROYAPILARININ İNCELENMESİ

Cansu ATAR
Fırat Üniversitesi, Fen Bilimleri Enstitüsü, Makine Mühendisliği Teknolojileri Anabilim Dalı, Elazığ, Türkiye
cansuatar23@hotmail.com- 0009-0007-8465-1810

Elif KARDAŞ
Fırat Üniversitesi, Teknoloji Fakültesi, Kimya Mühendisliği Bölümü, Elazığ, Türkiye
elifkardas4@gmail.com - Orcid:0000-0003-4726-0072

Prof. Dr. Gül TOSUN
Fırat Üniversitesi, Teknoloji Fakültesi, Makine Mühendisliği Bölümü, Elazığ, Türkiye
gultosun@firat.edu.tr, **Orcid**: 0000-0001-8828-827X

Prof. Dr. Nihat TOSUN
Fırat Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Elazığ, Türkiye
ntosun@firat.edu.tr, **Orcid**: 0000-0002-6211-5044

ÖZET

Bu çalışmada, PVP (Polivinilpirolidon) sentetik polimeri ile Kitosan ve TiO_2 malzemeleri farklı oranlarda karıştırılarak ve elektro çekim yöntemiyle farklı çözeltileri kullanılarak, sabit besleme hızı, besleme mesafesi ve uygulama gerilimi şartları altında dönen silindir bir altlık (toplayıcı) vasıtasıyla toplanarak nanolif üretimi yapıldı. Nanolifler üretilirken farklı çözeltiler hazırlanmıştır. Elektroeğirme (elektro çekim) işleminde işlem parametrelerinden uygulama voltajı 17.000 volt, iğne-toplayıcı arası mesafe 12 cm, besleme hızı 50 µl/dak ve toplayıcı silindir devri 500 dev/dak olarak tüm deneyler boyunca sabit tutulmuştur. Bu parametrelerin belirlenmesi için hem daha önce yapılmış çalışmalar hem bu çalışmada yapılan ön deneyler neticesinde seçilmiştir. Bu çalışmada, elektro çekim metoduyla elde edilen farklı konsantrasyonlardaki PVP/Kitosan/TiO_2 nanoliflerinin yüzey morfolojisinin incelenmesinde ve mikro yapının tespitinde önemli analizler arasında yer alan SEM ve EDX analizleri ile karakteristik özellikler belirlenmiştir.

Anahtar Kelimeler: Elektroeğirme, nanolif, PVP, Kitosan, TiO_2

INVESTIGATION OF MICROSTRUCTURES OF NANOPOLIVE COMPOSITE SURFACES CONTAINING PVP/CHITOSAN/TIO2 PRODUCED BY ELECTROSPINING METHOD

ABSTRACT

In this study, PVP (Polyvinylpyrrolidone) synthetic polymer was mixed with Chitosan and TiO_2 materials at different ratios and different solutions were used by electrospinning method and collected under constant feeding speed, feeding distance and application voltage conditions by means of a rotating cylinder base (collector) to produce nanofibers. Different solutions were prepared while producing nanofibers. In the electrospinning (electrospinning) process, the application voltage was kept constant as 17,000 volts, the needle-collector distance was 12 cm, the feeding speed was 50 µl/min and the collector cylinder speed was 500 rpm throughout all experiments. These parameters were selected as a result of both previous studies and preliminary experiments conducted in this study. In this study, characteristic features were determined by SEM and EDX analyzes, which are among the important analyzes in the examination of the surface morphology and determination of the microstructure of PVP/Chitosan/TiO_2 nanofibers with different concentrations obtained by electrospinning method.

Keywords: Electrospinning, nanofiber, PVP, Chitosan, TiO_2

INVESTIGATION OF NEW TECHNOLOGIES USED IN VEHICLE TYRES

Öğr. Gör., Metin KAYNAKLI

Bitlis Eren Üniversitesi,
mkaynakli@beu.edu.tr – 0000-0001-8372-1345

ABSTRACT

Technological advancements in automotive tires are rapidly continuing, and it is evident that the future of tires largely depends on these developed technologies. These new technologies in the automotive industry have not yet been presented to consumers as they must undergo a series of tests and daily technological advancements. Tire manufacturers are working on technological developments focused on durability, better fuel efficiency, improved tire performance, reduced waste, and so on. One of the most important elements for a safe and comfortable driving experience is traction. Traction determines how well the vehicle "sticks" to the road, playing a critical role, especially at high speeds, sharp turns, and in adverse weather conditions. Tires that provide good traction help the vehicle move more steadily, achieve shorter braking distances, and offer the driver greater safety. Today, tire manufacturers have researched various technological developments to enhance traction. In the current automotive industry, smart tire technologies that continually evolve to increase driver safety, performance, and comfort offer a wide range of user benefits. This study examines certain technologies present in tires, such as puncture-proof tires, tire pressure sensors, rim-protected tires, seal tires, and the quietest tires.

Anahtar Kelimeler: En Az 3 Anahtar Kelime yazılması gerekmektedir.

INVESTIGATION OF THE USE OF NITROGEN GAS INSTEAD OF AIR IN VEHICLE TYRES

Öğr. Gör., METİN KAYNAKLI

Bitlis Eren Üniversitesi,

mkaynakli@beu.edu.tr – 0000-0001-8372-1345

ABSTRACT

In land vehicles equipped with inflatable rubber tires, air is commonly used to inflate the tires. However, inflating tires with nitrogen gas has become increasingly popular in recent years. Nitrogen gas, also known as dinitrogen, is an inert gas. It is unaffected by dust, oil, and moisture. Due to its structure, which does not expand significantly with temperature, nitrogen gas maintains a stable form, and since its molecules move much more slowly compared to those of air, the pressure loss is less significant. This study found that nitrogen gas provides several benefits for vehicles and tires. Most notably, tire pressure remains stable under all weather conditions, ensuring maximum road grip at all times. In addition, it increases driving comfort, and with improved road grip, braking safety is also enhanced. Since nitrogen does not contain water or moisture, it prevents oxidation inside the tire and extends tire life. It also reduces the transmission of tire noise into the vehicle cabin and eliminates tire hum. It improves fuel efficiency by approximately 2% and can extend tire lifespan by up to 35%. By reducing heat inside the tire, it lowers rolling resistance. Because nitrogen contains no oxygen, it is non-flammable. It has been observed that in the event of a tire blowout, tires inflated with nitrogen deflate three times more slowly compared to those inflated with air. This characteristic suggests that certain accidents might be prevented. Inflating tires with nitrogen is expected to extend tire life by approximately 30–35% and to provide around 2% fuel savings. Furthermore, since nitrogen does not carry water molecules, it will never cause rust inside the tire.

Keywords: Vehicle Tires, Nitrogen Gas, Air, Efficiency

KAĞIT ENDÜSTRİSİ ATIK SUYUNUN UV/TiO_2 OKSİDASYON PROSESİ KULLANILARAK İLERİ ARITIMI

M.Sc.Demet DARCAN, *Akpa Kimya, Muratlı-Tekirdağ, Türkiye,*
demet.darcan@akpakimya.com, ORCID:0000-0002-6676-2345
Prof. Dr.Deniz İzlen ÇİFÇİ, *Tekirdağ Namık Kemal Üniversitesi, Çorlu-Tekirdağ, Türkiye,*
dicifci@nku.edu.tr, ORCID:0000-0001-7527-6130
Prof.Dr.Ali Rıza DİNÇER, *Tekirdağ Namık Kemal Üniversitesi, Çorlu-Tekirdağ, Türkiye,*
adincer@nku.edu.tr, ORCID:0000-0002-9294-0643

ÖZET

Bu çalışmada biyolojik arıtılmış kağıt endüstrisi atıksuyunun UV/TiO_2 oksidasyon prosesi ile ileri arıtımı incelenmiştir. Bu amaçla biyolojik arıtılmış kağıt endüstrisi atıksuyu farklı pH değerlerinde ve farklı TiO_2 konsantrasyonlarında arıtılarak zamana bağlı olarak ABS-254 nm ve renk giderimi gözlenmiştir. Biyolojik arıtılmış kağıt endüstrisi atıksuyunun UV/TiO_2 ile oksidasyonunda 500 mg/L TiO_2 konsantrasyonunda 60 dakika oksidasyon sonunda en iyi ABS-254 (%54,0) ve renk (%80,3) giderimi pH 3 değerinde elde edilirken, pH değerinin artması ile ABS-254 nm ve renk gideriminin azaldığı görülmüştür. pH 3 değerinde TiO_2 konsantrasyonunun 750 mg/L'ye kadar artması ile ABS-254 nm ve renk giderimi artmaktadır. Biyolojik arıtılmış kağıt endüstrisi atıksuyunun UV/TiO_2 ile oksidasyonunda ilk 10 dakika oksidasyon süresinde ABS-254 nm ve renk giderimi hızlı bir şekilde artarken, 60 dakika oksidasyon süresine kadar giderimin yavaş bir şekilde gerçekleştiği görülmüştür. pH 3 değerinde ve 750 mg/L TiO_2 konsantrasyonunda 60 dakika oksidasyon sonunda %65,4 ABS-254 nm ve %90,0 renk giderimine ulaşılmıştır. Sonuç olarak bu çalışma ile kağıt endüstrisi atıksuyunun biyolojik arıtma sonrasında UV/TiO_2 oksidasyonu ile ileri arıtımında yüksek renk giderimine ulaşılabileceği ve aynı zamanda ABS-254 nm giderimi ile de organik kirleticilerin de giderilebileceği belirlenmiştir.

Anahtar Kelimeler: Fotokataliz, kağıt endüstrisi atıksuyu, katalizör

ADVANCED TREATMENT OF PAPER INDUSTRY WASTEWATER USING UV/TiO_2 OXIDATION PROCESS

M.Sc.Demet DARCAN, Akpa Chemical, Muratlı-Tekirdağ, Türkiye,
demet.darcan@akpakimya.com, ORCID: 0000-0002-6676-2345
Prof. Dr.Deniz İzlen ÇİFÇİ ,Tekirdağ Namık Kemal University, Çorlu Engineering Faculty, Environmental Engineering Department, Çorlu 59860- Tekirdağ, Türkiye. dicifci@nku.edu.tr, ORCID: 0000-0001-7527-6130
Prof.Dr.Ali Rıza DİNÇER,Tekirdağ Namık Kemal Üniversity, Çorlu Engineering Faculty, Environmental Engineering Department, Çorlu 59860- Tekirdağ, Turkey, adincer@nku.edu.tr, ORCID:0000-0002-9294-0643

ABSTRACT

In this study, advanced treatment of biologically treated paper industry wastewater by UV/TiO_2 oxidation process was investigated. For this purpose, biologically treated paper industry wastewater was treated at different pH values and different TiO_2 concentrations and ABS-254 nm and color removal were observed depending on time. In the oxidation of biologically treated paper industry wastewater with UV/TiO_2, at the end of 60 minutes oxidation at 500 mg/L TiO_2 concentration, the best ABS-254 (%54.0) and color (80.3%) removal was obtained at pH 3, while it was observed that ABS-254 nm and color removal decreased with increasing pH value. ABS-254 nm and color removal increased with increasing TiO_2 concentration up to 750 mg/L at pH 3. In the oxidation of biologically treated paper industry wastewater with UV/TiO2, it was observed that ABS-254 nm and color removal increased rapidly in the first 10 minutes of oxidation, while removal occurred slowly up to 60 minutes of oxidation. At pH 3 and 750 mg/L TiO_2 concentration, 65.4% ABS-254 nm and 90.0% color removal were achieved at the end of 60 minutes of oxidation. As a result, it was determined with this study that high color removal can be achieved in advanced treatment of paper industry wastewater with UV/TiO_2 oxidation after biological treatment and at the same time, organic pollutants can be removed with ABS-254 nm removal.

Keywords: Photocatalysis, paper industry wastewater, catalyst

BİYOLOJİK ARITILMIŞ KAĞIT ENDÜSTRİSİ ATIK SUYUNDA KOAGÜLASYON-FLOKÜLASYON PROSESİ İLE RENK GİDERİMİ

M.Sc.Demet DARCAN,Akpa Kimya, Muratlı-Tekirdağ, Türkiye,
demet.darcan@akpakimya.com, ORCID:0000-0002-6676-2345
Prof. Dr.Deniz İzlen ÇİFÇİ,Tekirdağ Namık Kemal Üniversitesi, Çorlu Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, Çorlu 59860- Tekirdağ, Türkiye, dicifci@nku.edu.tr, ORCID:0000-0001-7527-6130
Prof.Dr.Ali Rıza DİNÇER,Tekirdağ Namık Kemal Üniversitesi, Çorlu Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, Çorlu 59860- Tekirdağ, Türkiye, adincer@nku.edu.tr, ORCID:0000-0002-9294-0643

ÖZET

Bu çalışmada biyolojik arıtılmış kağıt endüstrisi atıksuyunun polialuminyum klorür, $FeCl_3$ ve $Al_2(SO_4)_3$ koagülantları kullanılarak koagülasyon-flokülasyon prosesi ile renk giderimi incelenmiştir. Çalışmada koagülasyon-flokülasyon prosesinde polialuminyum klorür için pH 8, $FeCl_3$ ve $Al_2(SO_4)_3$ için pH 5 değerinde en yüksek ABS-254 nm giderimi ve renk giderimine ulaşılmıştır. En yüksek ABS-254 nm ve renk giderimi 500 mg/L koagülant dozunda elde edilmiştir. Polialuminyum klorür, $FeCl_3$ ve $Al_2(SO_4)_3$ koagülantları karşılaştırıldığında en yüksek arıtım $FeCl_3$ koagülantı ile sağlanırken, pH 5 ve 500 mg/L $FeCl_3$ dozunda %73,6 ABS-254 nm ve %97,0 renk giderimi sağlanabilmektedir. pH 8 ve 500 mg/L Poli aluminyum klorür ile %58,2 ABS-254 nm giderimi ve %92,3 renk giderimi elde edilirken, pH 5 ve 500 mg/L $Al_2(SO_4)_3$ ile %55,4 ABS-254 nm giderimi ve %90,8 renk giderimi elde edilmiştir. Sonuç olarak biyolojik olarak arıtılmış kağıt endüstrisi atıksuyunda koagülasyon-flokülasyon ile renk giderimi sağlanabileceği ve 254 nm dalga boyunda gözlenen aromatik bileşiklerinde gideriminin olabileceği görülmektedir.

Anahtar Kelimeler: $Al_2(SO_4)_3$, $FeCl_3$, polialuminyum klorür, renk giderimi

COLOR REMOVAL FROM BIOLOGICALLY TREATED PAPER INDUSTRY WASTEWATER BY COAGULATION-FLOCCULATION PROCESS

M.Sc.Demet DARCAN, Akpa Chemical, Muratlı-Tekirdağ, Türkiye,
demet.darcan@akpakimya.com, ORCID: 0000-0002-6676-2345
Prof. Dr.Deniz İzlen ÇİFÇİ,Tekirdağ Namık Kemal University, Çorlu Engineering Faculty, Environmental Engineering Department, Çorlu 59860- Tekirdağ, Türkiye. dicifci@nku.edu.tr, ORCID: 0000-0001-7527-6130
Prof.Dr.Ali Rıza DİNÇER,Tekirdağ Namık Kemal Üniversity, Çorlu Engineering Faculty, Environmental Engineering Department, Çorlu 59860- Tekirdağ, Turkey, adincer@nku.edu.tr, ORCID:0000-0002-9294-0643

ABSTRACT

In this study, color removal of biologically treated paper industry wastewater by coagulation-flocculation process using polyaluminum chloride, $FeCl_3$ and $Al_2(SO_4)_3$ coagulants was investigated. In the study, the highest ABS-254 nm removal and color removal were achieved at pH 8 for polyaluminum chloride, and at pH 5 for $FeCl_3$ and $Al_2(SO_4)_3$ in the coagulation-flocculation process. The highest ABS-254 nm and color removal were obtained at 500 mg/L coagulant dose. When polyaluminum chloride, $FeCl_3$ and $Al_2(SO_4)_3$ coagulants were compared, the highest treatment was provided with $FeCl_3$ coagulant, while 73.6% ABS-254 nm and 97.0% color removal could be achieved at pH 5 and 500 mg/L $FeCl_3$ dose. While 58.2% ABS-254 nm removal and 92.3% color removal were obtained with pH 8 and 500 mg/L Poly aluminum chloride, 55.4% ABS-254 nm removal and 90.8% color removal were obtained with pH 5 and 500 mg/L $Al_2(SO_4)_3$. As a result, it is seen that color removal can be achieved by coagulation-flocculation in biologically treated paper industry wastewater and removal of aromatic compounds observed at 254 nm wavelength can be achieved.

Keywords: $Al_2(SO_4)_3$, $FeCl_3$, poly aluminum chloride, color removal

Co_3O_4-MnO HİBRİT METAL OKSİTLERİNİN FOTOKATALİTİK TETRASİKLİN GİDERİMİNDE DEĞERLENDİRİLMESİ

SENEM AKSOY
Yalova Üniversitesi, Lisansüstü Eğitim Enstitüsü, Kimya Mühendisliği Anabilim Dalı, Yalova Türkiye
e-posta: senemaksooy@gmail.com-ORCID: 0009-0000-1160-262X
Doç. Dr. MEHMET BUĞDAYCI
Yalova Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Yalova Türkiye
e-posta:mehmet.bugdayci@yalova.edu.tr-ORCID: 0000-0001-6276-9251
Dr. NERGİZ KANMAZ
Yalova Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Yalova Türkiye
e-posta:nzeynep.kanmaz@yalova.edu.tr-ORCID: 0000-0002-5598-4911
Prof. Dr. PELİN DEMİRÇİVİ
Yalova Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Yalova Türkiye
e-posta:pelin.demircivi@yalova.edu.tr-ORCID: 0000-0002-1068-9310

ÖZET

Tetrasiklin, geniş spektrum etkisi ve düşük maliyeti nedeniyle yaygın olarak kullanılan bir antibiyotik olmakla birlikte, aşırı kullanımı ve bozunma zorluğu nedeniyle çevresel kirliliğe yol açmaktadır. Bu nedenle, tetrasiklin kaynaklı kirliliğin kontrol altına alınması büyük önem taşımaktadır. Bu çalışmada, manganez oksit ve kobalt oksit içeren bir kompozit fotokatalizör, mekanik bilyalı öğütme yöntemiyle sentezlenmiş ve tetrasiklinin fotokatalitik bozunmasında etkin bir ajan olarak kullanılmıştır. Sentezlenen fotokatalizör, XRD ve UV-DRS analizleriyle karakterize edilmiştir. XRD analizi, manganez-kobalt bileşiminin kompozite başarılı bir şekilde entegre olduğunu ve bu kompozit malzemenin, görünür ışık altında tetrasiklinin verimli bir şekilde fotokatalitik bozunmasına imkân tanıdığını göstermiştir. Çözeltinin pH değerleri sırasıyla 3-11 arasına ayarlanmıştır. Analiz sonuçlarına göre, en yüksek fotokatalitik bozunmanın pH-3 değerinde olduğu gözlenmiştir. Asidik koşullarda pozitif yüklü tetrasiklin ile negatif yüklü fotokatalizör arasındaki etkileşimin arttığı, bunun fotodegradasyon verimini arttırdığı belirlenmiştir. Tetrasiklin antibiyotiğinin fotokatalitik bozunmasında etkili olan

radikal türünün belirlenmesi amacıyla 3 adet radikal türü kullanılmıştır. Deneyler sonucunda IPA radikal türünün %77'lik bir inhibisyon göstermesi sebebiyle -OH radikalinin fotokatalitik bozunmada baskın bir rol oynamadığı belirlenmiştir.

Anahtar Kelimeler : Fotokatalitik, Fotokatalizör, MnO, Co_3O_4.

KOBALT-MANGAN OKSİT KOMPOZİTLERİNİN ATIK SUDAN BOYA ARITIMINDA KULLANIMI

Doç. Dr. Mehmet BUĞDAYCI

Yalova Üniversitesi, Mühendislik Fak. Kimya Mühendisliği Bölümü, 77200-Merkez/Yalova, mehmet.bugdayci@yalova.edu.tr - 0000-0001-6276-9251

Dr. Nergiz KANMAZ

Yalova Üniversitesi, Mühendislik Fak. Kimya Mühendisliği Bölümü, 77200-Merkez/Yalova, nzeynep.kanmaz @yalova.edu.tr - 0000-0002-5598-4911

Prof. Dr. Pelin DEMİRCİVİ

Yalova Üniversitesi, Mühendislik Fak. Kimya Mühendisliği Bölümü, 77200-Merkez/Yalova, pelin.demircivi @yalova.edu.tr - 0000-0002-1068-9310

ÖZET

Sentetik boyaların sucul ortamlardan giderilmesi, toksik etkileri nedeniyle çevresel sürdürülebilirlik açısından büyük önem taşımaktadır. Bu çalışmada, kobalt oksit (Co_3O_4) ve manganez oksit (MnO), bilyalı öğütme yöntemiyle hibrit CoMnOx oksitlerini sentezlemek amacıyla kullanılmış ve bu malzemelerin Kongo kırmızısı (CR) adsorpsiyonu üzerindeki etkileri incelenmiştir. Elde edilen adsorban örnekleri, yapısal özellikleri XRD tekniğiyle karakterize edilmiştir. Adsorpsiyon deneyleri sonucunda, 1,0 g Co_3O_4 içeren CoMnOx2 örneğinin deneysel olarak ulaştığı maksimum adsorpsiyon kapasitesi 108,70 mg/g olarak elde edilmiştir. Bu bağlamda, çalışma, MnO ve Co_3O_4'ün çift işlevli özelliklerini bir araya getiren CoMnOx hibritlerinin boya giderimi için etkili adsorbanlar olduğunu göstermektedir.

Anahtar Kelimeler : Azo Boya, Co_3O_4, MnO_3, Kompozit, Adsorpsiyon

DEVELOPMENT OF IRON BASED ORGANOMETALLIC COMPLEXES FOR ATOM TRANSFER RADICAL POLYMERIZATION

Mustafa Semih YILDIRIM [1]

[1] Istanbul Techinical University, The Faculty of Science and Letters, Chemistry, Istanbul, Turkiye.

[1]ORCID ID: https://orcid.org/ 0000-0003-3700-5086

[1]m.semihyildirim@gmail.com

Huseyin Cem KILICLAR [1]

[1] Istanbul Techinical University, The Faculty of Science and Letters, Chemistry, Istanbul, Turkiye.

[1]ORCID ID: https://orcid.org/0000-0002-2119-8568

[1]kiliclar@itu.edu.tr

Emirhan GENCOSMAN [1]

[1] Istanbul Techinical University, The Faculty of Science and Letters, Chemistry, Istanbul, Turkiye.

[1]ORCID ID: https://orcid.org/ 0000-0002-4856-8194

[1]gencosman15@itu.edu.tr

Cuneyt Huseyin UNLU [1]

[1] Istanbul Techinical University, The Faculty of Science and Letters, Chemistry, Istanbul, Turkiye.

[1]ORCID ID: https://orcid.org/ 0000-0001-7337-9697

[1]unlucu@itu.edu.tr

ABSTRACT

Atom Transfer Radical Polymerization (ATRP) has become a superior method for preparing wide range of materials used in various area such as pharmaceuticuals, bioenginering and, cosmetics due to the controlled enviroment of polymerization reactions with different metal complexes in course of more than 20 years. Even though copper/nitrogen catalysts are the main metal complexes used in ATRP reactions, iron, ruthenium, osmium and, titanium metals are also under investigation to develop more suitable and active catalysts in this field. Especially, iron based catalytic systems have attracted by researchers owing to their more enviromentally

friendly nature and biocompatibility as well as lower toxicity and cost compared to extensively studied copper based catalytic systems. Thus, development of new generation ATRP catalysts is an important research realm to bring more efficient solution into the field by exploring new ligands and metals. N-heterocyclic carbene (NHC) ligands are such a powerful ligand skeletons as a consequence of their strong sigma donation ability and allowing for fine tuning steric and electronic density in homogenous catalysts. In this study, electronically modified N-heterocyclic carbene based iron complexes synthesized and characterized in order to utilize in ATRP reactions. With the substitution of cyano (CN), methoxy (OMe), iodide (I) and, non modified (H) on the para position of diisopropyl aryl unit of the NHC, ligands have different electronic density on the metal complexes has obtained. Electrochemistry studies showed that catalysts have different oxidation and reduction potential which are crucial parameter for evaluating the catalytic activity of the complexes in ATRP. Polymerization and optimization studies conducted by using these electronically modified catalysts to evaluate the activity and morphology over styrene and methyl metachralate monomers.

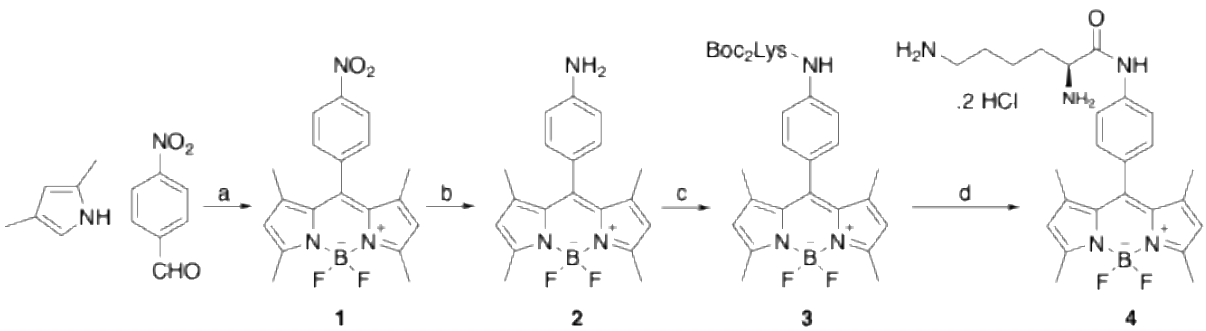
Keywords: ATRP, N-Heterocyclic carbene, Iron catalyst

SYNTHESIS AND CHARACTERIZATION OF pH-DEPENDENT BORON DIPYRROMETHENE-LYSINE COMPOUND FOR CANCER THERAP

Asst. Prof. Dr. Kemal KAYA
Kutahya Dumlupinar University
kemal.kaya@dpu.edu.tr - ORCID ID 0000-0002-6907-8151

ABSTRACT

Cancer is one of the leading causes of death worldwide. Conventional chemotherapeutics lack selectivity, harming both healthy and cancerous cells. This lack of specificity represents a major challenge in cancer treatment, as the drugs damage normal tissues alongside malignant ones. Designing new molecules that selectively target cancer cells while sparing healthy tissues would reduce the side effects associated with chemotherapy. Due to high metabolic activity, cancer cells create an acidic extracellular environment. Molecules responsive to low pH can be selectively activated in tumors, sparing normal tissues. Light activation represents another strategy to enhance selectivity. Molecules can be designed to become active only upon exposure to light, meaning that healthy cells in non-illuminated areas remain undamaged. Based on these principles, this work represents the synthesis and characterization of a new BODIPY–lysine hybrid compound, designed for pH-sensitive and light-triggered activation to induce double-strand DNA cleavage in cancer therapy. The synthesis of BODIPY was accomplished via typical one-pot procedure involving TFA-catalyzed condensation of p-nitrobenzaldehyde with 2,4-dimethylpyrrole, followed by DDQ oxidation and subsequent treatment with NEt_3 and $BF_3{\cdot}OEt_2$. The resulting nitro compound was reduced with hydrazine hydrate and Pd/C in ethanol under reflux. Coupling of reduced compound with N-Boc protected lysine (Boc_2Lys-OH) was achieved using EDCI, HOBt and DIPEA in DCM. Deprotection of N-Boc groups with 4 M HCl in p-dioxane at 0 °C yielded the HCl salt. The synthesized compounds were characterized and confirmed by spectroscopic methods by ^1H, ^{13}C NMR, and HRMS spectrometry.



Reagents and conditions: **a)** i) TFA ii) DDQ iii) NEt_3, $BF_3.OEt_2$, DCM **b)** NH_2NH_2, Pd/C, EtOH, reflux **c)** EDCI, HOBt, DIPEA, Boc_2LysOH, DCM **d)** 4M HCl, p-dioxane, 0 °C

Keywords : Boron dipyrromethene, lysine, chemotherapy.

FARKLI KALINLIKLARDA DİLİMLENEN PATLICANIN DONDURARAK KURUTULMASI VE KİNETİK MODELİNİN İNCELENMESİ

Doç. Dr. Bahadır ACAR
Karabük Üniversitesi, bacar@karabuk.edu.tr - 0000-0002-9494-6301
Dr. Öğr. Üyesi Ahmet CANAN
Karabük Üniversitesi, ahmetcanan@karabuk.edu.tr - 0000-0002-9397-3949

ÖZET

Yapılan deneysel çalışmada, Dünyanın çeşitli tropikal ve ılıman bölgelerinde yetiştirilen ve kayda değer ekonomik değere sahip bir tür olan Patlıcanın dondurarak kurutulması ve kurutma kinetiğinin incelenmesi amaçlanmıştır. Deneyde kullanılmak üzere 4 mm ve 8 mm olacak şekilde iki farklı kalınlığa sahip patlıcan dilimleri kesilerek deneye hazır hale getirilmiştir. -40 °C de bir gün önceden derin dondurucuda bekletilen numuneler 24 saat sonra dondurarak kurutma cihazına yerleştirilerek deneyler başlatılmıştır. Kurutma işlemi süresince Patlıcan numunelerinde gerçekleşen ağırlık kayıpları gözlemlenerek kaydedilmiş ve bu elde edilen veriler, 10 farklı kinetik kurutma modeline uygulanmıştır. Deney süresi 14 saat olarak ayarlanmıştır. Bu süre içerisinde, 100 g ağırlığındaki her bir Patlıcan diliminin ağırlık kaybı her iki saatte bir ölçülmüş ve nem içeriği (MR) de hesaplanmıştır. Elde edilen deney sonuçlarına göre MATLAB programı kullanılarak on farklı kurutma modelinin parametreleri incelenmiştir. Bu veriler neticesinde; En küçük indirgenmiş ki-kare (X^2) değerleri 4 mm'lik patlıcan dilimleri için $1{,}333\times10^{-5}$ ve 8 mm'lik patlıcan dilimleri için $9{,}523\times10^{-5}$ olarak bulunmuştur. Bununla birlikte kök ortalama kare hatası (RMSE) değerleri sırasıyla 0,0004081 ve 0,01091 olarak belirlenmiştir. Ayrıca, belirleme katsayıları (R^2) 4 mm'lik numuneler için 0,9999 ve 8 mm'lik numuneler için ise 0,9994 olarak hesaplanmıştır ve bu sonuçlara bakıldığında da mükemmele yakın bir uyum olduğunu görülmektedir. Değerlendirilen on kinetik model arasında Midilli kurutma modeli her iki dilim kalınlığı için de en uygun model olarak belirlenmiştir. Patlıcan dilimlerinin kuruma davranışı nem içeriklerine bağlı olarak incelenmiştir. Kalınlığı 8 mm olan dilimlerin daha düşük bir kuruma hızı sergilediği görülmüştür; bu durum, bu numunelerde başlangıçta mevcut olan daha yüksek nem seviyelerine bağlanmıştır. Ayrıca, In (MR) ye bağlı olarak hesaplanan Efektif difüzyon katsayısı değerleri 4 mm için $1{,}348 \times 10^{-10}$ m^2/s, 8 mm için ise $5{,}032 \times 10^{-10}$ m^2/s olarak hesaplanmıştır. Efektif difüzyon katsayısı değerlerinin, literatürde gıda ürünleri için belirlenen $10^{-12} – 10^{-8}$ m^2/s aralığında olduğu görülmüştür.

Anahtar kelimeler: Patlıcanın kurutulması, Midilli model, kinetik kurutma modeli.

FREEZE DRYING AND KINETIC MODELING OF SLICED EGGPLANT WITH VARIOUS THICKNESSES

ABSTRACT

In this experimental study, it was aimed to freeze dry eggplant, which is grown in various tropical and temperate regions of the world and has a significant economic value, and to

investigate the drying kinetics. Eggplant slices with two different thicknesses, 4 mm and 8 mm, were cut and made ready for the experiment. The samples were kept in a deep freezer at -40 °C for one day beforehand and the experiments were started 24 hours later by placing them in a freeze-drying device. During the drying process, the weight losses of the eggplant samples were observed and recorded and these data were applied to 10 different kinetic drying models. The duration of the experiment was set as 14 hours. During this time, the weight loss of each Eggplant slice weighing 100 g was measured every two hours and the moisture content (MR) was also calculated. According to the experimental results obtained, the parameters of ten different drying models were examined using MATLAB program. As a result of these data; the smallest reduced chi-square (X^2) values were found as $1{,}333\times10^{-5}$ for 4 mm eggplant slices and $9{,}523\times10^{-5}$ for 8 mm eggplant slices. In addition, the root mean square error (RMSE) values were 0.0004081 and 0.01091, respectively. Furthermore, the determination coefficients (R^2) were calculated as 0.9999 and 0.9994 for the 4 mm and 8 mm samples, respectively, indicating a near-perfect fit. Among the ten kinetic models evaluated, the Midilli drying model was found to be the most appropriate model for both slice thicknesses. The drying behavior of eggplant slices was investigated in relation to their moisture content. Slices with a thickness of 8 mm were found to exhibit a lower drying rate, which was attributed to the higher moisture levels initially present in these samples. In addition, the effective diffusion coefficient values calculated depending on In (MR) were calculated as 1.348×10^{-10} m^2/s for 4 mm and 5.032×10^{-10} m^2/s for 8 mm. The effective diffusion coefficient values were found to be in the range of 10^{-12} - 10^{-8} m^2/s determined for food products in the literature.

Keywords: Drying eggplant, Midilli model, kinetic drying model.

MACHINE LEARNING BASED ULTRASONIC MODULE DESIGN FOR FLOW AND TEMPERATURE MEASUREMENT

OKAN GÜNDÜZ,
Izmir Kâtip Çelebi University, Faculty of Engineering and Architecture
okan.gunduz@outlook.com.tr - 0009-0008-1937-8886

ALKIM GÖKÇEN,
Baylan Ölçü Aletleri San.ve Tic.A.Ş., R&D/ Research and Development Department
a.gokcen@baylanwatermeters.com - 0000-0002-8131-388X

SAVAŞ ŞAHİN,
Izmir Kâtip Çelebi University, Faculty of Engineering and Architecture,
savas.sahin@ikcu.edu.tr - 0000-0003-2065-6907

ABSTRACT

Ultrasonic flow meters offer advantages over mechanical flow meters in terms of high accuracy, low maintenance and long service life. However, temperature variations can affect the propagation speed of ultrasonic waves in water, leading to measurement errors. This study presents an embedded ultrasonic measurement system that compensates for temperature related errors without relying on a physical temperature sensor. The system works with software developed on the ARM Cortex-M based STM32L476RG microcontroller and written in C programming language using STM32CubeIDE and two ultrasonic transducers, one acting as a transmitter and the other as a receiver, are mutually placed in the flow line. These transducers transmit sound waves through a reflective surface positioned at a 45° angle, allowing them to precisely measure the time of flight (TOF) of the sound in the upstream and downstream directions. TOF measurement, both flow velocity and water temperature can be estimated, and temperature-induced measurement deviations are compensated in real time by machine learning algorithms that are trained offline using MATLAB/Simulink and subsequently embedded into the microcontroller-based measurement module. The flow rate of the water is calculated from the collected TOF data, and then this flow rate value is combined with the temperature data to estimate the actual flow rate using machine learning algorithms (linear regression and artificial neural networks), thereby dynamically correcting for temperature-related errors. These models provide corrected flow estimates-based on TOF differences. Cross-correlation techniques are also applied to improve robustness against signal interference. The developed system has been evaluated in terms of applicability in industrial environments and necessary optimizations have been made due to its potential for conversion into real products. SPI control is used for real-time data communication and Analog-to-Digital Converter structure is used for signal acquisition. The results show that data-driven compensation algorithms improve the accuracy and adaptability of ultrasonic measurement systems to environmental variables.

Keywords: Ultrasonic Flow Measurement, Temperature Compensation, Machine Learning, Embedded Systems,

TPU FİLAMENTİ İLE TİTREŞİM VE DARBE SÖNÜMLEME

Sümeyye ELİEYİ
Düzce Üniversitesi
s.elieyi78@gmail.com - 0009-0006-9134-7414
Dr. Öğr. Üyesi, Beytullah BOZALİ
Düzce Üniversitesi
beytullahbozali@duzce.edu.tr - 0000-0002-3633-5780

ÖZET

Titreşim ve darbe sönümleyiciler, mekanik sistemlerde oluşan istenmeyen hareketleri kontrol altına alarak sistemin kararlılığını artıran kritik bileşenlerdir. Titreşim sönümleyiciler, yapıya etki eden periyodik salınımları azaltarak yorulma ve yapısal hasar riskini düşürürken; darbe sönümleyiciler ise ani ve yüksek şiddetli kuvvetleri emerek sistem üzerinde oluşabilecek ani gerilimleri sönümler. Bu bileşenler, özellikle havacılık ve uzay gibi hassasiyetin ön planda olduğu alanlarda büyük önem taşımaktadır. Roket fırlatmaları sırasında ortaya çıkan şok ve sarsıntılar, uydu ve uzay araçlarındaki hassas bileşenler üzerinde ciddi riskler oluşturabileceğinden, bu tür sistemlerde özel olarak tasarlanmış sönümleyici elemanlar kullanılmaktadır. Bu çalışmada, esnek ve dayanıklı yapısıyla bilinen TPU 95A (Termoplastik Poliüretan) filamentin titreşim ve darbe sönümleme performansı deneysel olarak incelenmiştir. Testler, birden fazla sonda roketi uygulamasında gerçekleştirilmiştir. Bu amaçla, uygun geometri ve doluluk oranına sahip dairesel bir plaka tasarlanmıştır. Sönümleme testlerinde kullanılmak üzere Arduino Nano tabanlı bir elektronik ölçüm sistemi kurulmuştur. Sistem, bir adet Micro SD kart okuyucu modülü, iki adet 801S titreşim sensörü ve özel tasarlanmış bir PCB karttan oluşmaktadır. Sensörlerden biri TPU plaka üzerine, diğeri ise referans olarak masa üzerine yerleştirilmiştir. Gerçekleştirilen testler sonucunda TPU 95A filamentinin, titreşim ve darbe kaynaklı etkileri önemli ölçüde azalttığı gözlemlenmiştir. Elde edilen bulgular, bu malzemenin roket ve uzay teknolojilerinde sönümleyici eleman olarak kullanılabilirliğini ortaya koymaktadır.

Anahtar Kelimeler : Titreşim sönümleme, Darbe sönümleme, TPU 95A, Termoplastik poliüretan, Mekanik sistemler

VIBRATION AND SHOCK DAMPING WITH TPU FILAMENT

ABSTRACT

Vibration and shock absorbers are critical components that increase the stability of the system by controlling unwanted movements in mechanical systems. Vibration absorbers reduce the risk of fatigue and structural damage by reducing periodic oscillations affecting the structure; shock absorbers absorb sudden and high-intensity forces and dampen sudden stresses that may occur on the system. These components are of great importance, especially in areas where sensitivity is at the forefront, such as aviation and space. Since the shocks and vibrations that occur during rocket launches can pose serious risks to sensitive components in satellites and space vehicles, specially designed damping elements are used in such systems. In this study, the vibration and impact damping performance of TPU 95A (Thermoplastic Polyurethane) filament, known for its flexible and durable structure, was experimentally investigated. The tests were carried out in multiple probe rocket applications. For this purpose, a circular plate with appropriate geometry and filling ratio was designed. An Arduino Nano based electronic measurement system was established to be used in damping tests. The system consists of a Micro SD card reader module, two 801S vibration sensors and a specially designed PCB board. One of the sensors is placed on the TPU plate and the other on the table as a reference. As a result of the tests performed, it was observed that the TPU 95A filament significantly reduces the effects of vibration and impact. The findings reveal the usability of this material as a damping element in rocket and space technologies.

Keywords: Vibration damping, Impact damping, TPU 95A, Thermoplastic polyurethane, Mechanical systems

YAPAY ZEKÂ DESTEKLİ PROTOTİP AKILLI TARIM SİSTEMİ: ÇOK KATMANLI YAKLAŞIM İLE VERİMLİLİK, SÜRDÜRÜLEBİLİRLİK VE BİTKİ SAĞLIĞI OPTİMİZASYONU

Işıl İrem SAĞLAM
Düzce Üniversitesi
isiliremsaglam344@gmail.com - 0009-0006-4635-6821
Dr. Öğr. Üyesi, Beytullah BOZALİ
Düzce Üniversitesi
beytullahbozali@duzce.edu.tr - 0000-0002-3633-5780

ÖZET

Küresel ölçekte artan nüfus ve değişen iklim koşullarının tarımsal üretim sürdürülebilirliği ve verimliliği üzerindeki baskısı, geleneksel tarım pratiklerinin kaynak yönetimi, ürün kalitesi ve bitki sağlığı alanlarındaki zorluklarını derinleştirmektedir. Bu bağlamda, yapay zekâ (YZ) ve sensör teknolojilerindeki hızlı ilerlemeler, tarım sektöründe dijital bir dönüşüm başlatarak akıllı tarım konseptini ortaya çıkarmıştır. Bu çalışmada, tarımsal üretimde verimliliği artırmayı, doğal kaynakların sürdürülebilir kullanımını desteklemeyi ve bitki sağlığını etkin bir şekilde izlemeyi amaçlayan çok katmanlı, YZ destekli özgün bir akıllı tarım sistemi sunulmaktadır. Geliştirilen sistem, tarımsal ortamdaki temel çevresel değişkenleri (sıcaklık, nem, ışık yoğunluğu, hava kalitesi, toprak nemi ve pH düzeyi) sürekli olarak izleyen, düşük maliyetli ve enerji verimli dağıtık bir sensör ağı içermektedir. Bu ağdan elde edilen ham veriler, yerel mikrodenetleyiciler vasıtasıyla eş zamanlı olarak işlenmekte ve bitkilerin anlık gereksinimlerine yönelik otomatik ayarlamaların gerçekleştirilmesine olanak tanımaktadır. Sistemin önemli bir yeniliği, bitki hastalıklarının erken ve yüksek doğrulukla teşhisi için entegre edilen YZ tabanlı gelişmiş görüntü işleme altyapısıdır. Yüksek çözünürlüklü görüntü yakalama yeteneğine sahip ESP32-CAM modülleri aracılığıyla elde edilen bitki yaprağı görüntüleri, Python programlama dili kullanılarak geliştirilen derin öğrenme algoritmaları aracılığıyla detaylı bir şekilde analiz edilmektedir. Bu analizler sonucunda, yapraklardaki patolojik belirtiler tespit edilmekte ve kullanıcılara zamanında müdahale imkânı sunularak potansiyel ürün kayıplarının en aza indirilmesi hedeflenmiştir. Sunulan çok katmanlı, yapay zekâ destekli akıllı tarım sistemi prototipi, ölçeklenebilir mimarisi, ekonomik uygulanabilirliği ve çevresel sürdürülebilirliği destekleme potansiyeli ile farklı ölçekteki tarım işletmeleri için tarımsal otomasyonun dijital dönüşümünde öncü bir rol oynayabilir ve çağdaş akıllı tarım uygulamalarına yönelik özgün bir model teşkil edebilir.

Anahtar Kelimeler: Akıllı Tarım Sistemi, Yapay Zekâ, Sürdürülebilirlik, Verimlilik, Python

ARTIFICIAL INTELLIGENCE-SUPPORTED PROTOTYPE SMART AGRICULTURAL SYSTEM: OPTIMIZING PRODUCTIVITY, SUSTAINABILITY AND PLANT HEALTH WITH A MULTI-LAYERED APPROACH

ABSTRACT

The pressure of globally increasing population and changing climate conditions on agricultural production sustainability and efficiency deepens the challenges of traditional agricultural practices in terms of resource management, product quality and plant health. In this context, rapid advances in artificial intelligence (AI) and sensor technologies have initiated a digital transformation in the agricultural sector and have brought about the concept of smart agriculture. In this study, a multi-layered, AI-supported novel smart agriculture system is presented, which aims to increase efficiency in agricultural production, support sustainable use of natural resources and effectively monitor plant health. The developed system includes a low-cost and energy-efficient distributed sensor network that continuously monitors key environmental variables (temperature, humidity, light intensity, air quality, soil moisture and pH level) in the agricultural environment. Raw data obtained from this network is processed simultaneously by local microcontrollers, allowing automatic adjustments to be made according to the current needs of the plants. An important innovation of the system is the advanced image processing infrastructure based on AI, which is integrated for early and high-accuracy diagnosis of plant diseases. Plant leaf images obtained through ESP32-CAM modules with high-resolution image capture capability are analyzed in detail using deep learning algorithms developed using the Python programming language. As a result of these analyses, pathological symptoms on the leaves are detected and users are provided with the opportunity for timely intervention, aiming to minimize potential product losses. The presented multi-layered, artificial intelligence-supported smart agriculture system prototype can play a leading role in the digital transformation of agricultural automation for agricultural enterprises of different sizes and constitute an original model for contemporary smart agriculture applications with its scalable architecture, economic viability and potential to support environmental sustainability.

Keywords: Smart Agriculture System, Artificial Intelligence, Sustainability, Productivity, Python

YAPAY ZEKA VE MAKİNE ÖĞRENMESİNDE SAYISAL YÖNTEMLERİN ROLÜ

Melike GÜREL
Düzce Üniversitesi
melike200714@ogr.duzce.edu.tr - 0009-0000-0901-0465
Dr. Öğr. Üyesi, Beytullah BOZALİ
Düzce Üniversitesi
beytullahbozali@duzce.edu.tr - 0000-0002-3633-5780

ÖZET

Bu çalışma, yapay zeka ve makine öğrenmesi sistemlerinde sayısal analiz yöntemlerinin teorik temellerini, uygulama alanlarını ve performanslarını kapsamlı şekilde incelemeyi amaçlamaktadır. Günümüz teknolojisinde, veri miktarının ve çeşitliliğinin hızla artması, bu verilerin işlenmesi ve modellenmesi için güçlü matematiksel altyapıların kullanımını zorunlu hale getirmiştir. Bu bağlamda sayısal analiz, yalnızca mühendislik alanlarında değil, aynı zamanda yapay zeka tabanlı sistemlerin eğitilmesi, optimize edilmesi ve değerlendirilmesi süreçlerinde de kritik bir rol üstlenmektedir. Özellikle kök bulma, optimizasyon ve lineer denklem çözümleri gibi temel matematiksel problemler, yapay zeka algoritmalarında sıkça karşılaşılan yapılar arasında yer almaktadır. Çalışmada, klasik sayısal yöntemler olan Bisection, Regula Falsi, Newton-Raphson, Gauss- Seidel ve LU ayrıştırma teknikleri detaylı bir biçimde incelenmiş; bu yöntemlerin yakınsama özellikleri, hesaplama karmaşıklıkları, bellek gereksinimleri ve hata toleransları gibi yönleri karşılaştırılmıştır. Ayrıca hibrit yaklaşımlar kullanılarak klasik yöntemlerin eksik yönlerinin giderilmesi ve çözüm süreçlerinin daha etkin hale getirilmesi hedeflenmiştir. Bu bağlamda, Bisection ve Newton-Raphson yöntemlerinin birleşimiyle oluşturulan hibrit yapıların hem global kararlılık hem de hızlı yakınsama açısından avantajlar sunduğu gösterilmiştir. Uygulama kısmında, çeşitli mühendislik problemleri için kullanılan gerçek veri setleri aracılığıyla yöntemlerin etkinliği test edilmiştir. IEEE 14-Bus elektrik güç sistemi, UR5 robot kolunun ileri-geri kinematik hesaplamaları ve lityum-iyon batarya ömür tahminlerine ilişkin veriler, yöntemlerin çok disiplinli kullanım alanlarını ortaya koymaktadır. Simülasyonlar MATLAB ve Python ortamlarında gerçekleştirilmiş, deneysel sonuçlar hesaplama süresi, yakınsama hızı ve bellek kullanımı açısından değerlendirilmiştir. Elde edilen sonuçlar, sayısal analiz yöntemlerinin yalnızca teorik olarak değil, çok disiplinli gerçek dünya problemlerinde de önemli katkılar sunduğunu ortaya koymaktadır. Bu bağlamda çalışma, yapay zeka alanında çalışan araştırmacılara yöntem seçimi konusunda sistematik bir yaklaşım sunmakta ve hibrit yöntemlerin taşıdığı potansiyele dikkat çekmektedir.

Anahtar Kelimeler: Sayısal Analiz, Optimizasyon Algoritmaları, Kök Bulma Yöntemleri, Lineer Cebir Uygulamaları, Makine Öğrenmesi Matematiği

THE ROLE OF NUMERICAL METHODS IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

ABSTRACT

This study aims to comprehensively examine the theoretical foundations, application areas and performances of numerical analysis methods in artificial intelligence and machine learning systems. In today's technology, the rapid increase in the amount and diversity of data has made it necessary to use strong mathematical infrastructures for processing and modeling this data. In this context, numerical analysis plays a critical role not only in engineering fields but also in the training, optimization and evaluation processes of artificial intelligence-based systems. Basic mathematical problems such as root finding, optimization and linear equation solutions are among the structures frequently encountered in artificial intelligence algorithms. In the study, classical numerical methods such as Bisection, Regula Falsi, Newton-Raphson, Gauss-Seidel and LU decomposition techniques were examined in detail; their convergence properties, computational complexities, memory requirements and error tolerances were compared. In addition, it was aimed to eliminate the shortcomings of classical methods and to make the solution processes more effective by using hybrid approaches. In this context, it is shown that hybrid structures formed by combining Bisection and Newton-Raphson methods offer advantages in terms of both global stability and fast convergence. In the application part, the effectiveness of the methods is tested through real data sets used for various engineering problems. Data on IEEE 14-Bus electric power system, forward-backward kinematic calculations of UR5 robot arm and lithium-ion battery life estimations reveal the multidisciplinary usage areas of the methods. Simulations were performed in MATLAB and Python environments, and experimental results were evaluated in terms of computation time, convergence speed and memory usage. The results obtained reveal that numerical analysis methods provide significant contributions not only theoretically but also in multidisciplinary real-world problems. In this context, the study offers a systematic approach to method selection for researchers working in the field of artificial intelligence and draws attention to the potential of hybrid methods.

Keywords: Numerical Analysis, Optimization Algorithms, Root Finding Methods, Linear Algebra Applications, Machine Learning Mathematics

IŞKOR: GÖRÜNTÜ İŞLEME TABANLI, ENGELDEN KAÇINABİLEN VE RENKLİ NESNE TAKİBİ YAPABİLEN OTONOM ROBOT SİSTEMİ

Rukiye ÖZDEN
Düzce Üniversitesi
ozdenrukiye88@gmail.com - 0009-0004-5803-8789
Serkan ÖZER
Düzce Üniversitesi
serkan.ozer201120@gmail.com - 0009-0004-6727-4468
Dr. Öğr. Üyesi, Beytullah BOZALİ
Düzce Üniversitesi
beytullahbozali@duzce.edu.tr - 0000-0002-3633-5780

ÖZET

Bu çalışma, endüstriyel ortamlarda sıkça karşılaşılan taşıma kaynaklı iş kazalarının önlenmesi ve buna bağlı yaralanmalar ile ekonomik kayıpların azaltılmasını hedefleyen otonom bir mobil robot sisteminin tasarım ve geliştirme sürecini kapsamaktadır. Geliştirilen robot, kullanıcı etkileşimini artırmak amacıyla sesli komutlarla kontrol edilebilmekte ve GPS modülü aracılığıyla konum tabanlı yönlendirme gerçekleştirebilmektedir. Sistem, özellikle kuru yük taşımacılığı gibi insan gücüne dayalı faaliyetlerde karşılaşılan iş kazalarının önüne geçmek amacıyla, görüntü işleme ve sensör teknolojileri ile donatılmıştır. Robot, gerçek zamanlı çevre algılama, belirli renklerdeki nesneleri takip etme ve engellerden kaçınma yeteneklerine sahiptir. Bu işlevler sayesinde, insan hatasına bağlı risklerin azaltılması ve iş güvenliğinin artırılması amaçlanmaktadır. Yazılım altyapısı Python programlama dili ile geliştirilmiş olup, görüntü işleme ve nesne tanıma işlemleri için OpenCV, NumPy ve YOLOv7 kütüphaneleri kullanılmıştır. Donanım bileşeni olarak düşük enerji tüketimi ve uygun maliyeti ile öne çıkan Raspberry Pi platformu tercih edilmiştir. Sistem mimarisinde motor kontrolü için L9110 çift motor sürücü kartı kullanılmış; mesafe algılama, renk tanıma ve engel tespiti gibi görevler için çeşitli sensörler entegre edilmiştir. Ayrıca, algılama hassasiyeti ve operasyonel doğruluğun artırılması amacıyla, yüksek çözünürlüklü görüntüleme birimleri ile gelişmiş sensör teknolojileri entegre edilmiştir. Deneysel bulgular, sistemin düşük enerji tüketimine rağmen yüksek operasyonel verimlilik sağladığını ve kullanıcı dostu, güvenli bir yapı sunarak endüstriyel otomasyon uygulamalarında etkin bir şekilde kullanılabileceğini ortaya koymuştur.

Anahtar Kelimeler: İş Güvenliği, Endüstriyel Otomasyon, Renkli Nesne Takibi, Görüntü İşleme, Engellerden Kaçabilen Robot

IŞKOR: IMAGE PROCESSING BASED AUTONOMOUS ROBOT SYSTEM THAT CAN AVOID OBSTACLES AND TRACK COLORED OBJECTS

ABSTRACT

This study covers the design and development process of an autonomous mobile robot system that aims to prevent occupational accidents caused by transportation frequently encountered in industrial environments and to reduce related injuries and economic losses. The developed robot can be controlled with voice commands in order to increase user interaction and can perform location-based guidance via GPS module. The system is equipped with image processing and sensor technologies to prevent work accidents, especially in activities that rely on human power, such as dry cargo transportation. The robot can perceive the environment in real time, follow objects of certain colors, and avoid obstacles. These functions aim to reduce risks related to human error and increase work safety. The software infrastructure was developed with the Python programming language, and OpenCV, NumPy and YOLOv7 libraries were used for image processing and object recognition. The Raspberry Pi platform, which stands out with its low energy consumption and affordable cost, was preferred as the hardware component. In the system architecture, L9110 dual motor driver card is used for motor control; various sensors are integrated for tasks such as distance detection, color recognition and obstacle detection. In addition, high-resolution imaging units and advanced sensor technologies have been integrated to increase detection sensitivity and operational accuracy. Experimental findings have shown that the system provides high operational efficiency despite low energy consumption and can be used effectively in industrial automation applications by providing a user-friendly and safe structure.

Keywords: Work Safety, Industrial Automation, Color Object Tracking, Image Processing, Obstacle Avoiding Robot

ANALYSIS METHODS OF GEOLOGICAL DATA USED IN CITY PLANNING WITH ARTIFICIAL INTELLIGENCE TECHNOLOGIES

Assist. Prof. Dr. Necmi YARBAŞI
Atatürk University
nyarbasi@atauni.edu.tr - Orcid ID: 0000-0003-4259-1278

ABSTRACT

Geological data is one of the important parameters that form the basis of urban planning. Soil and rock properties, distribution of active and potential fault lines, groundwater levels, and areas with active and potential landslide, avalanche, flood, and inundation risks, meteorological data, and topographic features play a decisive role in urban planning decisions. It is known and practiced more today that urban or regional planning studies are carried out by a multidisciplinary working group (such as geology, geophysics, construction, architecture, and landscape). Such a study group will significantly strengthen the additional decision support systems of artificial intelligence technologies and software engineering, which are widely used today. It will also be useful in terms of saving time and analyzing diversity in the evaluation of geological data of these engineering branches. Urban planning has a critical structure in creating cities with expanding geological data, settlement security, sustainability, and infrastructure-superstructure quality and resistance to natural disasters. These talented artificial intelligence (AI) techniques are used for geological data analysis, and this marketing consists of elements in programming. With Geographic Information Systems (GIS), remote sensing, and deep learning analyses, accurate and fast results can be obtained in risk analyses, land use, and spatial decision making.

Keywords: Geological data, disaster risk, planning, artificial intelligence

HAVACILIK MOTORLARINDA KULLANILAN HİDROLİK SİSTEMLERDE TORK ÖLÇÜM TEKNİĞİ

AHMET CAN AKSU

Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Uçak Ve Uzay Mühendisliği Anabilim Dalı, Kayseri, Türkiye,

ahmetcan.aca08@gmail.com - ORCID ID: 0009-0008-1435-8851

Doç. Dr. BUĞRAHAN ALABAŞ

Erciyes Üniversitesi, Havacılık Ve Uzay Bilimleri Fakültesi, Kayseri, Türkiye,

bugrahanalabas@erciyes.edu.tr - ORCID ID: 0000-0002-1040-1110

ÖZET

Havacılık Motorlarında yakıt ya da yağ pompaları gibi hidrolik sistemler kullanılmaktadır. Bu hidrolik sistemlerin içinde kullanılan akışkanlar farklı sıcaklıklarda farklı viskozite ve yoğunluk değerlerine sahip olmaktadır. Çalışmanın amacı sıcaklıktan dolayı farklı viskozite ve yoğunluk değerlerine sahip akışkanın havacılık motorunda kullanılan yakıt pompası tarafından hareket ettirilebilmesi için dişli kutusunun (testler sırasında dişli kutusu yerine elektrik motoru kullanılmıştır) yakıt pompasına uygulaması gereken en uygun güç dolayısıyla devir (rpm) değerinin hangi sıcaklıkta olduğunu tork ölçüm tekniği ile testler yaparak ölçmektir. Bu testler sırasında; havacılık motoru yakıt pompası, pompayı sürecek olan elektrik motoru, elektrik motoru ve pompa şaftını birleştirmek amacıyla kullanılan güç aktarımı ve hizalama (alignment) konusunda yardımcı olan kaplin, akışkanın sıcaklığını değiştiren şartlandırıcı, sıcaklık ve basınç ölçümü yapan sensörler ve veri toplama sistemi kullanılmıştır. Bu sistemler kullanılarak belirlenmiş koşullarda testler gerçekleştirilmiştir. Sonuç olarak test sisteminde kullanılan havacılık motoru yakıt pompasının dişli kutusundan (test sırasında dişli kutusu yerine elektrik motoru kullanılmıştır) çekeceği en düşük güç miktarının hangi sıcaklık ve devir (rpm) değerinde olduğu elektrik motorunda bulunan tork sensörü yardımı ile ölçülmüştür. Böylece test edilen havacılık motoru yakıt pompasının fazla yakıt ve yağ sarfiyatının önüne geçip verimli ve daha az emisyonlu uçuşu hakkında önemli bilgiler elde edilmesi sağlanacaktır.

Anahtar Kelimeler : Havacılık Motorları, Hidrolik Sistemler, Dişli Kutusu, Pompa, Tork Ölçüm Tekniği

TORQUE MEASUREMENT TECHNIQUE IN HYDRAULIC SYSTEMS USED IN AVIATION ENGINES

ABSTRACT

Hydraulic systems such as fuel or oil pumps are used in Aviation Engines. The fluids used in these hydraulic systems have different viscosity and density values at different temperatures. The aim of the study is to measure the optimum power and speed (rpm) value that the gearbox (electric motor was used instead of gearbox during the tests) should apply to the fuel pump in order to move the fluid with different viscosity and density values due to temperature by the fuel pump used in the aviation engine by performing tests with torque measurement technique. During these tests, the aviation engine fuel pump, the electric motor to drive the pump, the coupling used to connect the electric motor and the pump shaft to assist in power transmission and alignment, the conditioner to change the temperature of the fluid, sensors to measure temperature and pressure, and the data acquisition system were used. Using these systems, tests were run under specified conditions. As a result, the temperature and speed (rpm) at which the lowest amount of power the aviation engine fuel pump used in the test system will draw from the gearbox (an electric motor was used instead of a gearbox during the test) was measured with the help of the torque sensor on the electric motor. Thus, important information will be obtained about the efficient and less emission flight of the tested aviation engine fuel pump by preventing excessive fuel and oil consumption.

Keywords : Aviation Engines, Hydraulic Systems, Gearbox, Pump, Torque Measurement Technique

HAVACILIK MOTORLARINDA KULLANILAN HİDROLİK SİSTEMLERDE TORK ÖLÇÜM TEKNİĞİ

AHMET CAN AKSU

Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Uçak Ve Uzay Mühendisliği Anabilim Dalı, Kayseri, Türkiye,

ahmetcan.aca08@gmail.com - ORCID ID: 0009-0008-1435-8851

Doç. Dr. BUĞRAHAN ALABAŞ

Erciyes Üniversitesi, Havacılık Ve Uzay Bilimleri Fakültesi, Kayseri, Türkiye,

bugrahanalabas@erciyes.edu.tr - ORCID ID: 0000-0002-1040-1110

ÖZET

Havacılık Motorlarında yakıt ya da yağ pompaları gibi hidrolik sistemler kullanılmaktadır. Bu hidrolik sistemlerin içinde kullanılan akışkanlar farklı sıcaklıklarda farklı viskozite ve yoğunluk değerlerine sahip olmaktadır. Çalışmanın amacı sıcaklıktan dolayı farklı viskozite ve yoğunluk değerlerine sahip akışkanın havacılık motorunda kullanılan yakıt pompası tarafından hareket ettirilebilmesi için dişli kutusunun (testler sırasında dişli kutusu yerine elektrik motoru kullanılmıştır) yakıt pompasına uygulaması gereken en uygun güç dolayısıyla devir (rpm) değerinin hangi sıcaklıkta olduğunu tork ölçüm tekniği ile testler yaparak ölçmektir. Bu testler sırasında; havacılık motoru yakıt pompası, pompayı sürecek olan elektrik motoru, elektrik motoru ve pompa şaftını birleştirmek amacıyla kullanılan güç aktarımı ve hizalama (alignment) konusunda yardımcı olan kaplin, akışkanın sıcaklığını değiştiren şartlandırıcı, sıcaklık ve basınç ölçümü yapan sensörler ve veri toplama sistemi kullanılmıştır. Bu sistemler kullanılarak belirlenmiş koşullarda testler gerçekleştirilmiştir. Sonuç olarak test sisteminde kullanılan havacılık motoru yakıt pompasının dişli kutusundan (test sırasında dişli kutusu yerine elektrik motoru kullanılmıştır) çekeceği en düşük güç miktarının hangi sıcaklık ve devir (rpm) değerinde olduğu elektrik motorunda bulunan tork sensörü yardımı ile ölçülmüştür. Böylece test edilen havacılık motoru yakıt pompasının fazla yakıt ve yağ sarfiyatının önüne geçip verimli ve daha az emisyonlu uçuşu hakkında önemli bilgiler elde edilmesi sağlanacaktır.

Anahtar Kelimeler : Havacılık Motorları, Hidrolik Sistemler, Dişli Kutusu, Pompa, Tork Ölçüm Tekniği

TORQUE MEASUREMENT TECHNIQUE IN HYDRAULIC SYSTEMS USED IN AVIATION ENGINES

ABSTRACT

Hydraulic systems such as fuel or oil pumps are used in Aviation Engines. The fluids used in these hydraulic systems have different viscosity and density values at different temperatures. The aim of the study is to measure the optimum power and speed (rpm) value that the gearbox (electric motor was used instead of gearbox during the tests) should apply to the fuel pump in order to move the fluid with different viscosity and density values due to temperature by the fuel pump used in the aviation engine by performing tests with torque measurement technique. During these tests, the aviation engine fuel pump, the electric motor to drive the pump, the coupling used to connect the electric motor and the pump shaft to assist in power transmission and alignment, the conditioner to change the temperature of the fluid, sensors to measure temperature and pressure, and the data acquisition system were used. Using these systems, tests were run under specified conditions. As a result, the temperature and speed (rpm) at which the lowest amount of power the aviation engine fuel pump used in the test system will draw from the gearbox (an electric motor was used instead of a gearbox during the test) was measured with the help of the torque sensor on the electric motor. Thus, important information will be obtained about the efficient and less emission flight of the tested aviation engine fuel pump by preventing excessive fuel and oil consumption.

Keywords : Aviation Engines, Hydraulic Systems, Gearbox, Pump, Torque Measurement Technique

BREAST CANCER DIAGNOSIS USING K-NEAREST NEIGHBOR ALGORITHM

Şahin YILDIRIM
Erciyes University,
sahiny@erciyes.edu.tr - ORCID ID: 0000-0002-7149-3274
Mehmet Safa BİNGÖL
Nigde Omer Halisdemir University,
msbingol@ohu.edu.tr - ORCID ID: 0000-0002-4188-2025

ABSTRACT

Breast cancer occurs when cells in the breast grow uncontrollably and abnormally and develop into tumorous tissue. Breast cancer, which is highly prevalent worldwide, can occur in both women and men. It is much more likely to occur in women than in men. Mortality rates from breast cancer provide general information about the health systems of countries. Early diagnosis and treatment are of great importance in breast cancer. Breast cancers are divided into 2 types: benign and malignant. The correct classification of tumors as benign or malignant can prevent patients from undergoing unnecessary treatments. As machine learning methods have developed, their use in health systems has also increased. K-Nearest Neighbor (K-NN) algorithm is a machine learning algorithm used for classification problems. In this study, Wisconsin Breast Cancer dataset is classified using K-NN algorithm. The dataset has a total of 699 samples belonging to 2 classes, benign and malignant. In the study, the effect of 3 different distance metrics and 3 different number of neighborhoods on K-NN performance is evaluated over different metrics. The results are presented in tables and graphs.

Keywords: Breast cancer, distance metric, K-nearest neighbor algorithm.

EBOB-EKOK Tahmini için GAP Destekli Veri Üretimi ve Yapay Zeka Yöntemleri ile Sınıflandırılması

Doç.Dr,NECAT GÖRENTAŞ
Van Yüzüncü Yıl Üniversitesi,
ngortas@yahoo.com – 0000-0002-9861-5753
Öğrenci,AYTEN ERGİOĞUZ
Van Yüzüncü Yıl Üniversitesi,
ergioguzayten65@gmail.com - 0009-0002-8920-6752

ÖZET

Bu çalışmada, sayı teorisinin temel kavramlarından En Büyük Ortak Bölen (EBOB) ve En Küçük Ortak Kat (EKOK) değerlerinin, makine öğrenmesi yöntemleriyle sınıflandırıla bilirliği incelenmiştir. Bu amaçla GAP (Groups, Algorithms, Programming) yazılımı kullanılarak otomatik bir veri üretim süreci tasarlanmış ve bu süreçte rastgele sayı çiftleri üretilmiştir. Üretilen sayı çiftlerinin EBOB ve EKOK değerleri deterministik matematiksel formüllerle hesaplanarak etiketlenmiş; sayıların asal çarpan sayısı, bölen sayısı ve modüler özellikleri gibi matematiksel nitelikler öznitelik olarak belirlenmiştir.

Elde edilen veri seti, sınıflandırma problemlerine uygun hale getirilmiş ve Karar Ağaçları, Rastgele Orman, k-En Yakın Komşu (k-NN) ve Naive Bayes gibi algoritmalarla eğitilmiştir. Modellerin performansı doğruluk, F1-skoru ve ROC-AUC metrikleri ile değerlendirilmiştir. Rastgele Orman algoritması %94 doğruluk oranıyla en başarılı sonuçları vermiştir. Bu sonuç, ensemble yöntemlerinin matematiksel veri setlerindeki karmaşık ilişkileri yakalamadaki başarısını ortaya koymuştur. Naive Bayes'in daha düşük performansı ise öznitelikler arasındaki koşullu bağımlılıkların modele uygun olmamasıyla açıklanmıştır.

Çalışmada, GAP tabanlı veri üretim sürecinin tekrarlanabilir ve ölçeklenebilir olması, matematiksel problemlerde yapay zekâ uygulamaları için standart bir veri üretim altyapısı sunmaktadır. Sonuç olarak bu çalışma, teorik matematik kavramları ile makine öğrenmesi arasında disiplinler arası bir köprü kurarak, gelecekteki araştırmalar için metodolojik bir temel oluşturmaktadır.

Anahtar Kelimeler : EBOB, EKOK, GAP, Makine Öğrenmesi, Sınıflandırma, Veri Üretimi.

Machine Learning-Based Analysis of the Sturdiness Index of Mastic Tree (*Pistacia lentiscus* var. *chia* Duham.) Seedlings Grown with Water Harvesting Technique

Ömer Avşar
İzmir Kâtip Çelebi University
omeravsaroa@gmail.com - https://orcid.org/0009-0004-0876-1856

Doç. Dr. Bülent Toprak
İzmir Kâtip Çelebi University
bulent.toprak@ikcu.edu.tr - https://orcid.org/0000-0001-6500-7885

Prof. Dr. Merih Palandöken
İzmir Kâtip Çelebi University
merih.palandöken@ikcu.edu.tr - https://orcid.org/0000-0003-3487-2467

ABSTRACT

This study analyzes the development of mastic tree seedlings under different water harvesting techniques using machine learning algorithms and develops predictive models. The research was conducted in experimental areas within Çeşme and Urla regions under the İzmir Regional Directorate of Forestry.

Four different treatments (Mycorrhiza, Polymer, Osmoprotectant, and Polymer+Osmoprotectant) were applied in V-shaped micro catchments, and their effectiveness was evaluated. A total of 150 V-shaped micro catchments were used, measuring sturdiness index at the end of two growing seasons.

The obtained dataset was analyzed using Artificial Neural Networks, Random Forest, and XGBoost algorithms. Different variations of each algorithm were developed, their performances were compared, and the most effective models were combined to create an ensemble model.

Results showed that the Residual Connected Artificial Neural Network model exhibited the best performance with the lowest MAE (0.3645) and highest R^2 (0.8357) values. The ensemble model further improved prediction accuracy by reducing the MAE value to 0.3397. The significant superiority of V-shaped micro catchments compared to traditional terracing methods was demonstrated.

Keywords: Machine Learning, Artificial Neural Networks, Mastic Tree, Water Harvesting Techniques, Prediction Models

MODİFİYE HARMONİK BALANS YÖNTEMİ YARDIMIYLA LİNEER OLMAYAN OSKİLATÖRLER İÇİN YÜKSEK MERTEBEDEN YAKLAŞIMLAR

Dr,MD ALAL HOSEN

Rajshahi Mühendislik Teknoloji Üniversitesi, alal_ruet@yahoo.com -0000-0002-8801-310X

Dr,MSH CHOWDHURY

Malezya Uluslararası İslam Üniversitesi, sazzadbd@iium.edu.my- 0000-0002-0417-7976

Dr,GM ISMAIL

Sohag Üniversitesi, gismail@iu.edu.sa- 0000-0003-3580-0625

Dr,AHMET YILDIRIM

Ege Üniversitesi, yahmet49ege@gmail.com - 0000-0001-8989-4271

ÖZET

Bu çalışmada, modifiye harmonik balans yöntemi ile kübik ve harmonik oskilatörler için yaklaşık periyodik çözümler sunuyoruz. Mevcut harmonik denge yöntemi, zorlama teriminden ötürü bu tür doğrusal olmayan oskilatörlere doğrudan uygulanamaz. Bu denklemlerin analitik incelemesi, özellikle salınımın genliği büyük olduğunda zahmetlidir. Bu sınırlamalar önerilen yöntemde ortadan kaldırılmıştır. Ek olarak, çözümün mevcut çözümlerden daha iyi sonuçlar elde ettiği uygun bir kesme ilkesi de kullanılmıştır. Yaklaşık sonuçlar, sayısal olarak elde edilen kesin çözümlerle iyi bir şekilde uyuşmaktadır.

Anahtar Kelimeler : Yaklaşık çözümler, kübik ve harmonik oskilatörler, harmonic balans yöntemi.

FIRST AND SECOND TYPE CHEBYSHEV MATRIX POLYNOMIAL SEQUENCES

Asist.Prof.Dr. Mehmet Emre ERDOĞAN
Selcuk University,
eerdogan@selcuk.edu.tr - ORCID ID: 0000-0002-7421-0815
Canan KELEŞ
Selcuk University
canan_sonsuz_0701@hotmail.com - ORCID ID: 0009-0008-8003-2307

ABSTRACT

This study defines matrices for Type I and Type II Chebyshev polynomial sequences, which are based on matrix sequences derived from Fibonacci and Lucas number sequences. While defining the matrices obtained for these two types, the method of defining Fibonacci and Lucas matrix sequences is used. Various inequalities and identities are proved using matrix algebra on these newly defined Type I and Type II Chebyshev polynomial matrices. Then, the relations between Type I and Type II Chebyshev polynomial matrices are examined.

Keywords: Fibonacci Matrix Sequences, Lucas Matrix Sequences, First Type Chebsyhev Polynomials Sequences, Second Type Chebsyhev Polynomials Sequences, First Type Chebsyhev Polynomial Matrix Sequences, Second Type Chebsyhev Polynomial Matrix Sequences

CHEMICAL COMPOSITION OF ESSENTIAL OIL OF *SALVIA FREYNIANA* BORNM. EX FREYN (ENDEMIC) AND IMPORTANCE OF ITS MAIN COMPONENTS

Prof. Dr. BELGİN COŞGE ŞENKAL
Yozgat Bozok Univesity,
belgin.senkal@yobu.edu.tr - ORCID ID: 0000-0001-7330-8098

ABSTRACT

One of the richest families in the world in terms of species, Lamiaceae, includes a significant portion of plant taxa specific to the Mediterranean Region. The *Salvia* L. genus, a member of this family, is distributed in Central America, Southwest and Central Asia with nearly 1000 species. The Flora of Türkiye is represented by 100 species and 114 taxa, and the endemism rate is 50.88%. The taxa in the *Salvia* genus are used in a wide range of areas including medicine, pharmacy, food sector, perfumery, cosmetics industry, and cleaning products. *Salvia* taxa, which are generally herbaceous, semi-shrub or shrubby perennial, rarely biennial or annual plants, have strong aromatic odors. The aromatic properties of the plants are due to the essential oils they contain. An endemic species of the Flora of Türkiye, *Salvia freyniana* Bornm. Ex Freyn has perennial, 15-35 cm long, lilac-blue flowers in the form of clusters. The species blooms in May-June and spreads at an altitude of 900-1200 m. The essential oil obtained from the flowering herb of *S. feyniana* collected from the natural environment during the full flowering stage was analyzed by GC-MS. Among the 31 components that make up the essential oil, camphor (16.6%), eucalyptol (15.9%) and spathulenol (11.1%) had the highest values. In this study, the chemical composition of *S.freyniana* essential oil and the importance of its main components will be evaluated with literature data.

Keywords: *Salvia* L., Essential oil, GC-MS, camphor

SALVIA FREYNIANA BORNM. EX FREYN (ENDEMİK) UÇUCU YAĞININ KİMYASAL KOMPOZİSYONU VE ANA BİLEŞENLERİNİN ÖNEMİ

Prof. Dr. BELGİN COŞGE ŞENKAL
Yozgat Bozok Üniversitesi,
belgin.senkal@yobu.edu.tr - ORCID ID: 0000-0001-7330-8098

ÖZET

Tür sayısı bakımından dünyanın en zengin familyalarından biri olan Lamiaceae özellikle Akdeniz Bölgesine özgü bitki taksonlarının önemli bir bölümünü içermektedir. Bu familyanın bir üyesi olan *Salvia* L. cinsi 1000'e yakın tür sayısı ile Orta Amerika, Güneybatı ve Orta Asya'da yayılış göstermektedir. Türkiye Florası ise 100 tür ve114 takson ile temsil edilmekte ve endemizm oranı %50.88'dir. *Salvia* cinsi içerisinde yer alan taksonlar tıpta, eczacılıkta, gıda sektöründe, parfümeride, kozmetik sanayinde, temizlik ürünlerinde olmak üzere geniş bir alanda kullanıma sahiptirler. Genellikle otsu, yarı çalımsı veya çalımsı çok yıllık nadiren iki ya da tek yıllık bitkiler olan *Salvia* taksonları kuvvetli aromatik kokulara sahiptirler. Bitkilerin aromatik özellikleri içerdikleri uçucu yağlardan kaynaklanmaktadır. Türkiye Florasının endemik bir türü olan *Salvia freyniana* Bornm. Ex Freyn çok yıllık, 15-35 cm uzunluğunda, leylak-mavi renkte salkım şeklinde çiçeklere sahiptir. Çiçeklenmesi Mayıs-Haziran aylarında olan tür 900-1200 m rakımda yayılış sergilemektedir. Tam çiçeklenme döneminde doğal ortamdan toplanan *S. feyniana*'nın çiçekli herbasından elde edilen uçucu yağı GC-MS ile analiz edilmiştir. Uçucu yağı oluşturan 30 bileşenden camphor (%16.6), eucalyptol (%15.9) ve spathulenol (%11.1) en yüksek değere sahip olmuşlardır. Bu çalışmada *S.freyniana* uçucu yağının kimyasal kompozisyonu ve ana bileşenlerinin önemi literatür verileri ile değerlendirilmiştir.

Anahtar Kelimeler: Salvia L., Uçucu yağ, GC-MS, Camphor

SUSTAINABLE CULTIVATION OF MEDICINAL, AROMATIC AND SPICE PLANTS

Prof. Dr. BELGİN COŞGE ŞENKAL
Yozgat Bozok Univesity,
belgin.senkal@yobu.edu.tr - ORCID ID: 0000-0001-7330-8098

ABSTRACT

Interest in medicinal and aromatic plants, which have widespread use in many areas including food, spices, paints, medicines, cosmetics and perfumes, is increasing day by day. Today, a large portion of medicinal and aromatic plants are collected from flora. It is known that there are more than 70,000 medicinal and aromatic plants worldwide. Less than 1% of these plants are cultivated. It is reported that there is a decrease in plant habitats in the natural environment globally. In parallel with this decrease, it is also a known fact that the demand for medicinal, aromatic and spice plants (considering their areas of use) is constantly increasing. Increasing demand brings about excessive collection. This situation negatively affects the stocks of plant populations exposed to this situation, causing loss of biodiversity and extinction of some plant taxa. Therefore, to protect plant genetic resources, it is necessary to move to the cultivation of plant species that are collected intensively from nature and have a wide market. Selection of ecologically appropriate plant species, supply of production material, use of mechanization, correct cultivation techniques are among the priority issues for sustainable cultivation of medicinal, aromatic and spice plants. In this study, what needs to be done for sustainable cultivation of medicinal, aromatic and spice plants will be evaluated with sample applications and current literature data.

Keywords: Soil tillage, irrigation, quality, yield, harvest

TIBBİ, AROMATİK VE BAHARAT BİTKİLERİNDE SÜRDÜRÜLEBİLİR YETİŞTİRİCİLİK

Prof. Dr. BELGİN COŞGE ŞENKAL
Yozgat Bozok Üniversitesi,
belgin.senkal@yobu.edu.tr - ORCID ID: 0000-0001-7330-8098

ÖZET

Gıda, baharat, boya, ilaç, kozmetik ve parfüm olmak üzere birçok alanda yaygın bir kullanıma sahip olan tıbbi ve aromatik bitkilere olan ilgi her geçen gün artmaktadır. Günümüzde tıbbi ve aromatik bitkilerin büyük bir kısmı floradan toplanmaktadır. Dünya genelinde 70.000'den fazla tıbbi ve aromatik bitki bulunduğu bilinmektedir. Bu bitkilerin %1'den daha azının yetiştiriciliği yapılmaktadır. Küresel olarak doğal ortamdaki bitki habitatlarında azalma olduğu bildirilmektedir. Bu azalmaya paralel olarak, tıbbi, aromatik ve baharat bitkilerine olan talebin (kullanım alanları dikkate alındığında) sürekli arttığı da bilinen bir gerçektir. Artan talep aşırı toplamayı beraberinde getirmektedir. Bu duruma maruz kalan bitki popülasyonlarının stokları olumsuz etkilemekte, biyolojik çeşitliliğin kaybına ve bazı bitki taksonlarının ise yok olmasına neden olmaktadır. Bu nedenle bitki gen kaynaklarının korunmasında doğadan yoğun olarak toplanan ve geniş pazarı olan bitki türlerinin tarımına geçilmesi bir zorunluluktur. Tıbbi, aromatik ve baharat bitkilerinde sürdürülebilir yetiştiricilik için ekolojiye uygun bitki türlerinin seçimi, üretim materyalinin temini, mekanizasyon kullanımı, doğru yetiştirime teknikleri öncelikli konular arasındadır. Bu çalışmada tıbbi, aromatik ve baharat bitkilerinde sürdürülebilir yetiştiricilik için yapılması gerekenler örnek uygulamalar ve güncel literatür verileri ile değerlendirilecektir.

Anahtar Kelimeler: Toprak işleme, sulama, kalite, verim, hasat

SİSİVET ŞİDDET TUTUM ÖLÇEĞİ'NİN GELİŞTİRİLMESİ VE PSİKOMETRİK ÖZELLİKLERİNİN İNCELENMESİ

Doç. Dr. Yalçın Kanbay
Artvin Çoruh Üniversitesi Sağlık Bilimleri Fakültesi
yalcinkanbay@gmail.com - 0000-0002-8025-9877
Dr. Aysun Akçam
Bağımsız Araştırmacı
Akcamaysun1@gmail.com – 0000-0001-9428-3942
Dr. Suna Köse
Bağımsız Araştırmacı
kosesuna26@gmail.com – 0000-0003-2899-7204
Prof. Dr. Hatice Karakuş Öztürk
Artvin Çoruh Üniversitesi/Fen Edebiyat Fakültesi
hatice_karakus@artvin.edu.tr – 0000-0002-9929-3637

ÖZET

Bu çalışmada, 18 yaş üstü bireylerin şiddete yönelik tutumlarını belirlemek amacıyla Sisivet Şiddet Tutum Ölçeği'nin Türk kültüründe geçerlik ve güvenirlik analizlerinin yapılması hedeflenmiştir. Ölçeğin geliştirilme süreci; kapsam geçerliği, yapı geçerliği, benzeşim ve ayrışım geçerliği, güvenirlik çalışmaları ve elde edilen yapının doğrulanması aşamalarını içermektedir. Çalışma kapsamında, veri toplama aşaması sonucunda Açımlayıcı Faktör Analizi (AFA) için 322, Doğrulayıcı Faktör Analizi (DFA) için ise 312 katılımcıya ulaşılmıştır.

Ölçek 4 faktör ve 16 maddeden oluşan beşli Likert tipi bir ölçüm aracıdır. Ölçeğin açıkladığı toplam varyans %76 olup, genel Cronbach's α güvenirlik katsayısı .96'dır. "Otoriterlik" faktörü, 1-4 numaralı maddelerden oluşmakta olup, açıkladığı varyans %49.6 ve Cronbach's α güvenirlik katsayısı .92'dir. "Saldırganlık" faktörü, 5-8 numaralı maddeleri içermekte olup, açıkladığı varyans %11.02 ve Cronbach's α güvenirlik katsayısı .82'dir. "Ayrımcılık" faktörü, 9-12 numaralı maddelerden oluşmakta olup, açıkladığı varyans %8.79 ve Cronbach's α güvenirlik katsayısı .92'dir. "Meşrulaştırma" faktörü, 13-16 numaralı maddelerden oluşmakta olup, açıkladığı varyans %6.65 ve Cronbach's α güvenirlik katsayısı .88'dir.

Ölçekte ters puanlanan madde bulunmamaktadır. Tüm maddelerden alınan puanların toplanmasıyla ölçek toplam puanı elde edilir ve ham puan 0 ile 64 arasında değişmektedir. Bu puanın yönergeye uygun şekilde 100 puana standardize edilmesi gerekmektedir. Puanın artması, bireyin şiddete yönelik tutumunun daha yüksek olduğunu göstermektedir.

Anahtar Kelimeler: Şiddet, geçerlik, güvenirlik

OPİZA DÜJİTAL FÜG ÖLÇEĞİNİN GELİŞTİRİLMESİ VE PSİKOMETRİK ÖZELLİKLERİNİN İNCELENMESİ

Doç. Dr. Yalçın Kanbay
Artvin Çoruh Üniversitesi/Sağlık Bilimleri Fakültesi
yalcinkanbay@gmail.com - 0000-0002-8025-9877
Dr. Öğr. Üyesi Aydan Akkurt Yalçıntürk
Sağlık Bilimleri Üniversitesi Üniversitesi/ Hamidiye Hemşirelik Fakültesi
aydanyalcinturk@gmail.com – 0000-0002-5386-0624
Dr. Öğr. Üyesi Elçin Babaoğlu
Üsküdar Üniversitesi/ Sağlık Bilimleri Fakültesi
elcin.babaoglu@uskudar.edu.tr – 0000-0002-0952-2652
Dr. Aysun Akçam
Bağımsız Araştırmacı
akcamaysun1@gmail.com – 0000-0001-9428-3942
Dr. Öğr. Üyesi Pınar Tektaş
İzmir Bakırçay Üniversitesi/ Sağlık Bilimleri Fakültesi
Pinar.tektas@bakircay.edu.tr – 0000-0002-0694-2782

ÖZET

Bu çalışma kapsamında geliştirilen OPİZA Dijital Füg Ölçeği, 18 yaş ve üstü bireylerin dijital cihazlara yönelerek sosyal, çevresel ve duygusal uyaranlardan uzaklaşma eğilimlerini ölçmek amacıyla hazırlanmıştır.

Ölçeğin geliştirilme süreci, kapsam geçerliği, yapı geçerliği, benzeşim ve ayrışım geçerliği, güvenirlik çalışmaları, elde edilen yapının doğrulanması ve test tekrar test tutarlığı aşamalarından oluşmuştur. Çalışmada veri toplama aşaması sonucu AFA için 308 ve DFA için 300 kişilik farklı sosyokültürel arka plana sahip bireye ulaşılmıştır.

Açımlayıcı ve doğrulayıcı faktör analizleri sonucunda, iki faktörlü ve 10 maddeli bir yapı elde edilmiştir. Ölçeğin açıkladığı varyans %67.6, Cronbach α .81, Gutman .81 ve McDonald's Omega ω .93'tür. Kaçınma faktörü 1-5 maddelerden oluşmakta olup bu faktörün açıkladığı varyans %55.4, Cronbach α .87, Gutman .84 ve McDonald's Omega ω .86'dır. Soyutlanma

faktörü 6-10 maddelerden oluşmakta olup bu faktörün açıkladığı varyans %12.2, Cronbach α .89, Gutman .87 ve McDonald's Omega ω .87'dir

OPİZA Dijital Füg Ölçeği 5'li likert tipte (0= Hiçbir Zaman, 4= Her Zaman) bir ölçektir. Ölçekte ters puanlanan madde bulunmamaktadır. Bütün maddelerin puanlarının toplanmasıyla ölçek toplam puanı elde edilmektedir ve ham puan 0-40 puan arası bir değerdir. Ham puanın yönerge doğrultusunda 0-100 puan aralığında standardize edilmesi gerekmektedir. Puan artışı dijital füg düzeyinin yüksek olduğunu göstermektedir.

Anahtar Kelimeler: Dijital Füg, Geçerlik, Güvenirlik

ANNE SÜTÜNDEKİ OKSİTOSİN DÜZEYİ VE ETKİLEYEN FAKTÖRLER

Büşra Üstün,

Sakarya Üniversitesi, Sağlık Bilimleri Enstitüsü, Sakarya/ Türkiye

busra.ustun2@ogr.sakarya.edu.tr - 0009-0000-5030-7738

Arş. Gör. Dr. Özge Karakaya Suzan

Sakarya Üniversitesi Sağlık Bilimleri Fakültesi, Çocuk Sağlığı ve Hastalıkları Hemşireliği Anabilim Dalı, Sakarya/ Türkiye

ozgekarakayasuzan@sakarya.edu.tr - 0000-0003-4526-4619

Prof. Dr. Nursan Çınar

Sakarya Üniversitesi Sağlık Bilimleri Fakültesi, Çocuk Sağlığı ve Hastalıkları Hemşireliği Anabilim Dalı, Sakarya/ Türkiye
ndede@sakarya.edu.tr - 0000-0003-3151-9975

Özet

Oksitosin, doğum ve emzirme süreçlerinde temel bir rol oynayan, hipotalamustan salınan ve hipofiz bezinden kana karışan bir nöropeptid hormondur. Emzirme sırasında meme başına uygulanan mekanik uyarı, oksitosin salınımını uyararak süt salınım refleksinin gerçekleşmesini sağlar. Bu süreç yalnızca fizyolojik değil, aynı zamanda psikolojik bir boyut da taşımakta; oksitosin hormonu aynı zamanda anne ile bebek arasındaki duygusal bağın güçlenmesine katkıda bulunmaktadır. Anne sütünde bulunan oksitosinin sadece bir hormon değil, aynı zamanda bir sinyal molekülü olarak da etki edebileceğini ve bebeğe geçişinde fizyolojik ve davranışsal olumlu etkiler yaratabileceğini bilinmektedir. Bebeğin üzerinde bağışıklık sisteminden beyin gelişimine, stres yanıtından sosyal ve duygusal davranışlara kadar çeşitli alanlarda oksitosin kritik öneme sahip olduğu görülmektedir. Oksitosin salınımını artırmaya yönelik doğal uygulamalar arasında bebekle göz teması kurulması, annenin gevşeme ve rahatlama tekniklerini kullanması, ten tene temasın sağlanması ve sessiz, güvenli bir emzirme ortamının oluşturulması yer almaktadır. Hemşireler, emzirmenin desteklenmesi sürecinde önemli bir görev üstlenmektedir. Hemşireler; annelere doğru emzirme tekniklerinin öğretilmesi, stres ve kaygının azaltılması, ten tene temasın sağlanması, doğum sonrası psikososyal desteğin sunulması gibi konularda rehberlik ederek oksitosin salınımını olumlu yönde etkileyebilir. Oksitosin düzeyinin optimal seviyede tutulması, yalnızca süt salınımı açısından değil, aynı zamanda emzirme başarısı, anne-bebek bağlanması ve uzun vadede bebek sağlığı açısından da büyük önem taşımaktadır.

Anahtar kelimeler: Anne sütü, emzirme, oksitosin

TİP 2 DİYABETLİ BİREYLERDE DUYGUSAL STRES DÜZEYİNİN İŞTAH DURUMUNA VE GLİSEMİK PARAMETRELERE ETKİSİ

Öğr. Hem. CEREN AVCI
Sakarya Uygulamalı Bilimler Üniversitesi,
cerenavci.263@gmail.com - 0009-0003-5938-0351

Öğr. Hem. BEYZA ZÜLAL AÇAR
Sakarya Uygulamalı Bilimler Üniversitesi,
beyzazulall@gmail.com - 0009-0005-0581-442X

Prof. Dr. FERİDE TAŞKIN YILMAZ
Sakarya Uygulamalı Bilimler Üniversitesi,
feridetaskinyilmaz@subu.edu.tr - 0000-0003-0568-5902

ÖZET

Bu çalışma, tip 2 diyabetli bireylerde duygusal stres düzeyini ve duygusal iştah durumunu belirlemek, duygusal stres düzeyinin iştah durumuna ve glisemik parametrelere etkisini ortaya koymak amacıyla yapılmıştır. Tanımlayıcı ve kesitsel dizaynda gerçekleştirilen çalışmaya, bir kamu hastanesinin iç hastalıkları polikliniklerine başvuran tip 2 diyabet tanısı alan 150 hasta dahil edilmiştir. Veriler hasta tanılama formu, Diyabetle İlgili Sorunlu Alanlar (DİSA) Ölçeği ve Duygusal İştah Ölçeği kullanılarak elde edilmiştir. Çalışmaya dahil edilen hastaların yaş ortalaması 62,38±8,71 ve hastalık süresi ortalaması 9,25±7,07 yıldır. Hastaların HbA1c değeri ortalaması %7,97±1,39 olarak belirlenmiş olup %70,7'sinin glisemik hedef değerinin üzerinde HbA1c düzeyine sahip olduğu tespit edilmiştir. Hastaların DİSA puan ortalamasının 50,18±14,54 olduğu ve duygusal stres seviyesinin orta düzeyde olduğu belirlenmiştir. Katılımcıların Duygusal İştah Anketi puan ortalaması incelendiğinde, pozitif duygu ve durumlarda daha fazla yemek yediği (6.16±1,37), bunun aksine negatif duygu ve durumlarda daha az yemek yediği (3,82±1,46) görülmüştür. Tip 2 diyabetli bireylerin DİSA puan ortalaması ile Duygusal İştah Ölçeği'nin pozitif ve negatif duygu ve durum alt boyutları arasında istatistiksel olarak anlamlı farklılık bulunmuştur ($p<0,05$). Ayrıca DİSA puan ortalaması ile HbA1c değeri arasında pozitif yönlü anlamlı düzeyde ilişki olduğu tespit edilmiştir ($p<0,05$). Yapılan regresyon analizi sonucuna göre, tip 2 diyabetli bireylerin duygusal stres düzeyinin iştah durumu ve HbA1c üzerinde belirleyici olduğu belirlenmiştir ($p<0,05$). Diğer bir ifade ile duygusal stres düzeyi, iştah durumunda toplam varyansın %26'sını, HbA1c düzeyinde %4'ünü açıkladığı görülmüştür. Hastalara hastalık eğitimlerinin verilmesi başta olmak üzere psikolojik sağlığını güçlendirecek aktivitelere yönlendirmesi önerilmektedir.

Anahtar Kelimeler : Tip 2 diyabet, Duygusal stres, İştah, Glisemik kontrol

EFFECT OF EMOTIONAL STRESS LEVEL ON APPETITE STATUS AND GLYCEMIC PARAMETERS IN INDIVIDUALS WITH TYPE 2 DIABETES

ABSTRACT

This study was conducted to determine the emotional stress level and emotional appetite status in individuals with type 2 diabetes and to reveal the effect of emotional stress level on appetite status and glycemic parameters. The study, which was conducted with a descriptive and cross-sectional design, included 150 patients diagnosed with type 2 diabetes who applied to the internal medicine outpatient clinics of a public hospital. Data were obtained using the patient identification form, Diabetes Related Problem Areas (DRPA) Scale and Emotional Appetite Scale. The mean age of the patients included in the study was 62.38±8.71 and the mean disease duration was 9.25±7.07 years. The mean HbA1c value of the patients was determined as 7.97±1.39% and 70.7% were found to have HbA1c levels above the glycemic target value. The mean DRPA score of the patients was determined as 50.18±14.54 and the emotional stress level was determined as moderate. When the participants' Emotional Appetite Questionnaire mean score was examined, it was seen that they ate more in positive emotions and situations (6.16±1.37), and on the contrary, they ate less in negative emotions and situations (3.82±1.46). A statistically significant difference was found between the mean scores of the DRPA and the positive and negative emotions and situations sub-dimensions of the Emotional Appetite Scale of individuals with type 2 diabetes ($p<0.05$). In addition, a positive and significant relationship was found between the mean score of the DRPA Scale and the HbA1c value ($p<0.05$). According to the results of the regression analysis, it was determined that the emotional stress level of individuals with type 2 diabetes was a determinant on appetite status and HbA1c ($p<0.05$). In other words, it was seen that the emotional stress level explained 26% of the total variance in appetite status and 4% in HbA1c level. It is recommended that patients be provided with disease education and directed to activities that will strengthen their psychological health.

Keywords: Type 2 diabetes, Emotional stress, Appetite, Glycemic control

KALP YETMEZLİĞİ HASTALARINDA AKILCI İLAÇ KULLANIMI VE DİGOKSİN İNTOKSİKASYON FARKINDALIĞI

Öğr. Hem. ESRA KAYMAZ
Sakarya Uygulamalı Bilimler Üniversitesi,
esrakaymaz003@hotmail.com - 0009-0007-1217-8702

Öğr. Hem. ÖMER KUŞCU
Sakarya Uygulamalı Bilimler Üniversitesi,
omerkuscu.447@gmail.com - 0009-0001-6592-6555

Öğr. Hem. ABDULSAMET ÇETİN
Sakarya Uygulamalı Bilimler Üniversitesi,
abdulsametceetin0404@gmail.com - 0009-0009-7449-5636

Prof. Dr. FERİDE TAŞKIN YILMAZ
Sakarya Uygulamalı Bilimler Üniversitesi,
feridetaskinyilmaz@subu.edu.tr - 0000-0003-0568-5902

ÖZET

Bu çalışmada, kalp yetmezliği (KY) hastalarında akılcı ilaç kullanım davranışlarının belirlenmesi, digoksin intoksikasyon görülme durumunun saptanması ve digoksin intoksikasyonu yaşayan hastaların akılcı ilaç kullanım davranışının karşılaştırılması amaçlanmıştır. Tanımlayıcı ve karşılaştırmalı olarak gerçekleştirilen çalışmaya, bir kamu hastanesinin iç hastalıkları polikliniklerine başvuran, KY tanısı ile takip edilen ve tedavide digoksin kullanan 106 hasta dahil edilmiştir. Veriler hasta tanılama formu ve Akılcı İlaç Kullanım Ölçeği kullanılarak elde edilmiştir. Çalışmaya dahil edilen hastaların yaş ortalaması 64,65±9,53 yıl olup, %51,9'u erkektir. Hastaların hastalık süresi ortalaması 5,50±4,04 yıldır. Hastaların %85,8'i ilaçlarını düzenli olarak kullandığını belirtmiştir. Hastaların digoksin ilacı kullanma süresinin ortalama 3,43±2,78 yıl olduğu ve %71,7'sinin digoksin ilacı kullanımı ve yan etkileri konusunda eğitim aldığı saptanmıştır. Hastaların %56,6'sı son bir haftada digoksin kullanımı nedeniyle sağlık sorunu yaşadığı belirlenmiş olup en fazla yaşanan sağlık sorunlarının yorgunluk (%33), keyifsizlik (%31,1), iştahsızlık (%28,3), bulantı (%22,6) ve kusma (%17) olduğu tespit edilmiştir. Sağlık sorunu yaşayan hastaların %80,4'ünün yaşadığı sağlık sorununu doktora bildirdiği belirlenmiştir. Hastaların %13,2'sinin digoksin için tahlil yapılma zamanını bilmediği, %4,7'sinin ise hiç yaptırmadığı görülmüştür. Hastaların Akıllı İlaç Kullanım Ölçeği'nden aldıkları puan ortalamasının 35,33±5,63 olduğu, ölçekten alınabilecek min.-max. puan aralığına göre (0-42), akılcı ilaç kullanımına yönelik bilgi düzeyinin yüksek olduğu belirlenmiştir. Ayrıca çalışmada, digoksin nedeniyle sağlık sorunu yaşayan hastaların akılcı ilaç kullanım bilgi düzeylerinin daha yüksek olduğu görülmüştür ($p<0,05$). Hemşirelerin, digoksin kullanan hastalara yönelik hasta eğitimini gerçekleştirmesi önerilmektedir.

Anahtar Kelimeler : Kalp Yetmezliği, Digoksin, İntoksikasyon, Hemşire

RATIONAL DRUG USE AND DIGOXIN INTOXICATION AWARENESS IN HEART FAILURE PATIENTS

ABSTRACT

In this study, it was aimed to determine the rational drug use behaviors in heart failure HF patients, to determine the incidence of digoxin intoxication and to compare the rational drug use behaviors of patients experiencing digoxin intoxication. The descriptive and comparative study included 106 patients who applied to the internal medicine outpatient clinics of a public hospital, were followed up with the diagnosis of HF and used digoxin in treatment. Data were obtained using the patient identification form and the Rational Drug Use Scale. The mean age of the patients included in the study was 64.65±9.53 years, and 51.9% were male. The mean disease duration of the patients was 5.50±4.04 years. 85.8% of the patients stated that they used their medications regularly. It was determined that the mean duration of digoxin use was 3.43±2.78 years and 71.7% of them received training on digoxin use and side effects. It was determined that 56.6% of the patients had a health problem due to digoxin use in the last week, and the most common health problems were fatigue (33%), malaise (31.1%), loss of appetite (28.3%), nausea (22.6%) and vomiting (17%). It was determined that 80.4% of the patients with health problems reported their health problems to the doctor. It was observed that 13.2% of the patients did not know when to have their digoxin tested, and 4.7% never had it done. The mean score of the patients on the Rational Use of Drugs Scale was 35.33±5.63, and according to the minimum-maximum score range (0-42) that can be obtained from the scale, it was determined that the level of knowledge on rational use of drugs was high. In addition, it was observed in the study that patients who had health problems due to digoxin had higher levels of knowledge on rational use of drugs ($p<0.05$). It is recommended that nurses provide patient education for patients using digoxin.

Keywords: Heart Failure, Digoxin, Intoxication, Nurse

ÜRİNER SİSTEM TAŞ HASTALIĞINDA AĞRI YÖNETİMİ

Uzm. Hem. Hicret DUMAN
Atatürk Üniversitesi, Sağlık Bilimleri Enstitüsü, İç Hastalıkları Hemşireliği Anabilim Dalı, Erzurum, Türkiye.
hicret.duman20@ogr.atauni.edu.tr - ORCID ID 0009-0001-9032-2227

Prof. Dr. Mehtap KAVURMACI
Atatürk Üniversitesi, Sağlık Bilimleri Enstitüsü, İç Hastalıkları Hemşireliği Anabilim Dalı, Erzurum, Türkiye.
mehtap.kavurmaci@atauni.edu.tr - ORCID ID 0000-0001-7062-4845

ÖZET
Üriner sistem taş hastalığı antik çağdan beri bilinen ve prevelansı giderek artan multifaktöriyel bir hastalıktır. Ağrı, üriner sistem taş hastalığında en sık karşılaşılan semptomdur. Taşın üriner sistemde meydana getirdiği obstrüksiyon sebebiyle renal pelviste basınç artışı ve böbrek kapsülünde gerilim olmaktadır. Bunun sonucunda hastalarda renal kolik denilen şiddetli, dayanılmaz ağrı atakları yaşanmaktadır. Ağrı kostovertebral açıda başlayıp alt karına doğru yayılabilir. Ağrının şiddeti hastadan hastaya, taşın boyutuna, yerleşimine, obstrüksiyonun derecesine göre farklılık göstermektedir. Ağrının farmokolojik tedavisinde; Non-Steroid Anti İnflamatuar, opioidler, Medikal Ekspulsif Tedavi (Alfa-blokerler, kalsiyum kanal blokerleri, Fosfodiesteraz-5(PDE-5) inhibitörleri, beta 3 adrenerjik reseptör (AR) agonistleri), spazmolitik, desmopressin ve lokal anestezi ilaçları kullanılmaktadır. Hastaların tedaviye uyumları ilaç yan etkileri ve maliyetleri gibi sebeplerden ötürü olumsuz olabilmektedir. Ayrıca renal kolik ataklarının tekrarlaması hastaların tedaviye olan uyumlarını daha da zorlaştırmaktadır. Hastalar bu nedenlerden dolayı daha alternatif tedavilere yönelmektedirler. Literatür incelendiğinde üriner taş hastalığına bağlı ağrısı olan hastaların tamamlayıcı alternatif tedavi olarak kızılcık suyu, maydanoz, limon suyu, elma sirkesi, yeşil çay, ıhlamur gibi fitoterapötik ajanlar tükettikleri bildirilmiştir. Fitoterapötik ajanların renal kolikte analjezik etkinliğini bildiren çalışmalar netlik kazanmamıştır. Bazı fitoterapötik ajanların zararlı etkileri de olabilir. Bu sebeple hastaların tedavi ve bakımının her aşamasında rol alan hemşirelerin hastalara tamamlayıcı tedavi kullanımı hakkında kanıta dayalı bilgi vererek danışmanlık yapmaları gerekmektedir. Üriner sistem taş hastalığında ağrı ürolojik acile en sık başvurulan ve hastaları çok rahatsız eden bir semptom olup hastaların yaşam kalitesini olumsuz etkilemektedir. Dolayısıyla üriner sistemde taş hastalığına bağlı ağrının kontrolü en kısa sürede ve hızlı bir şekilde sağlanmalıdır.

Anahtar Kelimeler: Ağrı, ağrı yönetimi, üriner sistem, üriner sistem taş hastalığı

PAIN MANAGEMENT IN URINARY SYSTEM STONE DISEASE

ABSTRACT

Urinary system stone disease is a multifactorial disease known since ancient times and its prevalence is increasing. Pain is the most common symptom in urinary system stone disease. Due to the obstruction caused by the stone in the urinary system, there is an increase in pressure in the renal pelvis and tension in the renal capsule. As a result, patients experience severe, unbearable pain attacks called renal colic. The pain may start at the costovertebral angle and radiate to the lower abdomen. The severity of pain varies from patient to patient, depending on the size and location of the stone, and the degree of obstruction. In the pharmacological treatment of pain; Non-Steroidal Anti-Inflammatory, opioids, Medical Expulsive Therapy (Alpha-blockers, calcium channel blockers, Phosphodiesterase-5 (PDE-5) inhibitors, beta 3 adrenergic receptor (AR) agonists), spasmolytics, desmopressin and local anesthesia drugs are used. Patients' compliance with treatment may be negative due to reasons such as drug side effects and costs. In addition, recurrence of renal colic attacks makes it more difficult for patients to comply with treatment. For these reasons, patients turn to more alternative treatments. When the literature is examined, it has been reported that patients with pain due to urinary stone disease consume phytotherapeutic agents such as cranberry juice, parsley, lemon juice, apple cider vinegar, green tea, and linden as complementary alternative treatments.
Studies reporting the analgesic efficacy of phytotherapeutic agents in renal colic have not been clarified. Some phytotherapeutic agents may also have harmful effects. For this reason, nurses who play a role in every stage of patient treatment and care need to counsel patients by providing evidence-based information about the use of complementary therapies.
Pain in urinary system stone disease is the most common symptom that causes patients to be seen in urological emergency services and is a very disturbing symptom, negatively affecting the patients' quality of life. Therefore, the pain caused by urinary system stone disease should be controlled as soon as possible and quickly.

Keywords: Pain, pain management, urinary system, urinary system stone disease

ŞANT VE HEMŞİRELİK BAKIMI

Hemşire Kadriye ERBAŞ
Ondokuz Mayıs Üniversitesi, Lisansüstü Eğitim Enstitüsü,
kadriye.sakarya12@gmail.com ORCID ID: 0009-0004-3645-4159
Prof. Dr. Şenay ARLI
Ondokuz Mayıs Üniversitesi, Sağlık Bilimleri Fakültesi,
Cerrahi Hastalıkları Hemşireliği Ana Bilim Dalı,
senay1981@yahoo.com ORCID ID: 0000-0002-8231-3857

ÖZET

Şant ameliyatları, hidrosefali hastalarına en sık uygulanan cerrahi yöntemlerden biridir. Beyin omurilik sıvısının (BOS) üretiminde artma veya emiliminde azalma olması gibi sıvı seviyesinde dengesizlik oluştuğunda, sıvının dolanım yollarında herhangi bir patolojik tıkanmaya neden olacak durum nedeniyle ventriküllerin içinde BOS birikmesi durumunda hidrosefali gerçekleşir. Bu durum da ventriküllerde şişmeye ve buna bağlı olarak da kafa içi basınç artışı sendromu oluşmasına neden olur. Vücuda yerleştirilen şant sistemleri ventriküllerdeki fazla biriken BOS'un vücudun başka bir bölgesine drene edilmesini sağlar. Şant sistemlerinin oluşturabileceği bazı komplikasyonlar; şantın enfekte olması ve disfonksiyonu, organ hasarları, intraventriküler kanamalar, şantın kopması, hidrosefali gelişimidir. Hastalarda gelişebilen bu komplikasyonlar hastanede yatış süresinin uzamasına, artmış antibiyotik kullanımına, mortalite ve morbiditede artışa, tekrarlayan cerrahi müdahaleye neden olmaktadır. Şant takılma cerrahisi sonrasında enfeksiyon kontrolü, disfonksiyon bulgularının erken tespit edilmesi, profilaktik antibiyotik kullanımı ve pansuman yapılması kliniklerde hemşirelerin sorumluluklarındandır. Bunlar neticesinde hemşirelerin şant sistemi yerleştirilen hastalara bakım için yaklaşımında yeterli seviyede bilgi sahibi olmaları bakımın kalitesini arttıracaktır.

Anahtar Kelimeler : Bakım, Hemşirelik, Hidrosefali, Şant

SHUNT AND NURSING CARE

ABSTRACT

Shunt surgeries are one of the most frequently performed surgical methods on patients with hydrocephalus. Hydrocephalus occurs when there is an imbalance in the fluid level, such as an increase in the production or decrease in the absorption of cerebrospinal fluid (CSF), or when CSF accumulates in the ventricles due to any pathological obstruction in the fluid circulation pathways. This causes swelling in the ventricles and, as a result, the formation of intracranial pressure syndrome. Shunt systems placed in the body allow the excess CSF accumulated in the ventricles to be drained to another part of the body. Some complications that shunt systems may cause are; infection and dysfunction of the shunt, organ damage, intraventricular hemorrhages, rupture of the shunt, and development of hydrocephalus. These complications that may develop in patients cause prolonged hospitalization, increased antibiotic use, increased mortality and morbidity, and repeated surgical interventions. After shunt placement surgery, infection control, early detection of dysfunction signs, prophylactic antibiotic use and dressing are the responsibilities of nurses in clinics. As a result of these, nurses' having sufficient knowledge in their approach to care for patients with shunt systems will increase the quality of care.

Key Words: Care, Hydrocephalus, Nursing, Shunt

THE QUANTITATIVE VALUES OF CHANGES IN BIOACTIVE COMPOUNDS AND PHENOLIC PROFILES IN PARSLEY LEAVES EXPOSED TO SONICATION FOR DIFFERENT TIMES

Doç. Dr. Nurhan USLU

Selçuk University, nurhanuslu.gmuh@gmail.com - 0000-0002-1392-8604

Yüksek Lisans Öğrencisi, Özlem ARINÇ[1]

Selçuk University, oxemtux@gmail.com - 0009-0006-1519-8218

Yüksek Lisans Öğrencisi, İlknur ÜNAL

Selçuk University, uilknur901@gmail.com - 0009-0005-7106-4946

Prof. Dr. Mehmet Musa ÖZCAN

Selçuk University, mozcan@selcuk.edu.tr - 0000-0002-5024-9512

ASTRACT

In this study, the quantitative values of changes in bioactive compounds and phenolic profiles in parsley leaves exposed to sonication for different periods of time were revealed. The total phenol contents of parsley leaves extracted with methanol, methanol:water and ethanol:water were significantly higher than those extracted with ethanol and water. The extract with the highest total phenol content was parsley leaf extracted with methanol:water.Antioxidant activities of methanol and ethanol extracts of parsley leaves were reported between 13.92 (15 min) and 14.09 mmol/kg (5 min) to 2.29 (5 min) and 3.16 mmol/kg (15 min),respectively. The antioxidant capacities of water-extracts for parsley leaves were measured 13.16 (10 min) and 14.73 mmol/kg (control). Gallic acid, catechin rutin,ferulic acid, quercetin were dominant phenolic constituents of parsley leave extracts obtained by methanol:water. Also, gallic acid, 3,4-dihydroxybenzoic acid, catechin, caffeic acid, syringic acid, rutin and quercetin were the major phenolic compounds of parsley leave extracts extracted by ethanol:water solutions.

Key words: parsley, conication, bioactive properties, phenolic compounds, HPLC

THE ROLE DRYING SYSTEMS ON BIOACTIVE COMPOUNDS AND PHENOLIC CONSTITUENTS OF BITTER ORANGE LEAVES AT DIFFERENT DRYING TIMES

Doç. Dr. Nurhan USLU

Selçuk University, nurhanuslu.gmuh@gmail.com - 0000-0002-1392-8604

Yüksek Lisans Öğrencisi, Özlem ARINÇ[1]

Selçuk University, oxemtux@gmail.com - 0009-0006-1519-8218

Yüksek Lisans Öğrencisi, İlknur ÜNAL

Selçuk University, uilknur901@gmail.com - 0009-0005-7106-4946

Prof. Dr. Mehmet Musa ÖZCAN

Selçuk University, mozcan@selcuk.edu.tr - 0000-0002-5024-9512

ASTRACT

The total carotenoid quantities of bitter orange leaves dried in oven and microwave units at different drying times were depicted between 118.15 (50 min) and 129.52 (30 min.) to 95.02 (20 min.) and 128.25 µg/g (10 min.), respectively. Total phenolic contents of bitter orange leaves dried in oven were found between 360.60 mgGAE/100g (40 min) and 386.07 mgGAE/100g (50 min.) While total flavonoid contents of bitter orange leaves dried in oven vary between 2052.92 mgQE/100g (40 min.) and 2886.25 mgQE/100g (50 min.), total flavonoid quantities of bitter orange leaves dried in microwave system at different drying times (10, 15 and 20 minutes) were depicted to be between 1619.58 mgQE/100g (10 min.) and 2336.25 mgQE/100g (20 min.). The antioxidant activity values of bitter orange leaves dried in oven and microwave systems at different times were measured between 3.37 mmolTE/kg (20 min.) and 3.73 mmolkg/kg (10 min.), respectively. Total phenolic contents and antioxidant activities of bitter orange leaves dried in microwave decreased in parallel to the increase of drying times. The phenolic component amount of the dried bitter orange leaves in both drying units (oven and microwave) have shown an increase compared to the fresh sample (control).

Key words: Bitter orange leave, drying, microwave, antioxidant activit, phenolic compounds, HPLC

OKTENİL SÜKSİNİK ANHİDRİT (OSA) NİŞASTASININ EMÜLGATÖR OLARAK KULLANIMI

Mahinur GÜRBÜZ

Niğde Ömer Halisdemir Üniversitesi, Gıda Mühendisliği Bölümü, Niğde, Türkiye

e-mail: mahinurgbrz1999@gmail.com

ORCID ID: 0009-0008-3479-8563

Dr. Öğretim Üyesi Betül OSKAYBAŞ EMLEK

Niğde Ömer Halisdemir Üniversitesi, Gıda Mühendisliği Bölümü, Niğde, Türkiye

e-mail: betuloskaybas@ohu.edu.tr

ORCID ID: 0000-0002-0238-8948

Dr. Öğretim Üyesi Ayşe ÖZBEY

Niğde Ömer Halisdemir Üniversitesi, Gıda Mühendisliği Bölümü, Niğde, Türkiye

e-mail: ayse.ozbey@ohu.edu.tr

ORCID ID: 0000-0003-3210-4077

ÖZET

Nişasta, gıda işleme endüstrisinde önemli uygulamalara sahip, kullanışlı ve ekonomik açıdan önemli bir polimerdir ancak doğal nişastalar, endüstriyel kullanımlarını kısıtlayan eksiklikler göstermektedir. Bu nedenle doğal nişastaların olumlu özelliklerini artırmak ve sınırlamalarını ortadan kaldırmak için nişastanın modifikasyonu gerçekleştirilmektedir. Nişastanın oktenil süksinik anhidrit (OSA) modifikasyonu, nişasta bazlı emülgatör hazırlamak için kullanılan geleneksel bir kimyasal modifikasyon yöntemidir. OSA ile nişasta esterifikasyonu, nişasta hidroksil gruplarının hidrofobik gruplarla kısmi ikamesini içermekte, böylece modifikasyon sonrası nişastaya amfifilik bir karakter ve arayüz özellikleri kazandırılmaktadır. Bu sebeple OSA ile modifiye edilmiş nişastalar özellikle emülsifikasyon, enkapsulasyon gibi alanlarda geniş uygulama yelpazesine sahiptir. Bu derlemenin amacı, OSA ile modifiye edilmiş nişastalar ile ilgili mevcut bilgileri ve emülgatör olarak kullanımı hakkındaki bilgileri sunmaktadır.

Anahtar Kelimeler: OSA, Modifiye nişasta, Emülgatör

USE OF OCTENYL SUCCINATE ANHYDRIDE (OSA) STARCH AS AN EMULSIFIER

ABSTRACT

Starch is a useful and economically important polymer with important applications in food industry, but natural starches show deficiencies that limit their industrial use. Therefore, modification of starch is carried out to increase the positive properties of natural starches and eliminate their limitations. Octenyl succinic anhydride (OSA) modification of starch is a traditional chemical modification method used to prepare starch-based emulsifiers. Starch esterification with OSA involves partial replacement of starch hydroxyl groups with hydrophobic groups, thus providing amphiphilic character and interface properties to starch after modification. For this reason, OSA-modified starches have a wide range of applications, especially in areas such as emulsification and encapsulation. The purpose of this review is to present the current knowledge on OSA-modified starches and their usage as emulsifiers.

Key words: OSA, Modified starch, Emulsifier

YEŞİL BEZELYE, SARI BEZELYE VE NOHUT UNLARI KATKILI HURMA VE CEVİZ İLE YAPILAN GLÜTENSİZ KURABİYELERİN BAZI FİZİKSEL, TEKSTÜREL VE DUYUSAL ÖZELLİKLERİNİN KARŞILAŞTIRILMASI

Doç. Dr. Nazlı ŞAHİN

Karamanoğlu Mehmetbey Üniversitesi,

nsahin@kmu.edu.tr – ORCİD ID:0000-0002-0963-8882

Arzu Bengi ŞEN

Karamanoğlu Mehmetbey Üniversitesi,
dytarzubengisen@gmail.com -ORCİD ID: 0000-0001-7052-1053

ÖZET

Son yıllarda artan glütensiz beslenme eğilimleri, alternatif un kaynaklarıyla geliştirilen yeni ürünlerin önemini artırmıştır. Bu bağlamda, bitkisel protein ve lif içeriği yüksek olan baklagillerin fırıncılık ürünlerinde kullanımı dikkat çekmektedir. Bu çalışmada yeşil bezelye (YB), sarı bezelye (SB) ve nohut (N) unları katkılı hurma ve ceviz ile yapılan glütensiz kurabiye örneklerinde fiziksel (ağırlık, kalınlık, çap, renk), tekstürel (sertlik ve kırılganlık) ve duyusal analizler (renk, koku, tat, çiğnenebilirlik, gevreklik, dişe yapışmama, sertlik ve genel beğeni) gerçekleştirilmiştir. Kurabiye örneğinin pişmeden önce ve sonra ağırlık, yükseklik ve çap değerleri sırasıyla 25 ve 23 gram; 1,24 ve 1,24 cm; 5 ve 5,5 cm olarak ölçülmüştür ($p<0,05$). Örnekler arasında en yüksek L* ve a* değerleri ve en düşük b* değeri sarı bezelyeli kurabiyede (SBK), 62,10, 10,64 ve 34,43 olarak, en düşük L*, a* ve en yüksek b* değerleri sırasıyla, nohut katkılı kurabiye (NK) 54,10, yeşil bezelye katkılı kurabiye (YBK) 6,08 ve NK'de 39,73 olarak belirlenmiştir ($p<0.05$). Kurabiyelerin tekstürel özelliklerinde en yüksek sertlik SBK'de 867,92 g, en düşük sertlik NK'de 667,45 g olarak belirlenmiştir. En yüksek kırılganlık YBK'de 42,74 mm, en düşük kırılganlık NK'de 40,31 mm olarak kaydedilmiştir ($p<0,05$). Kurabiyelerin duyusal özellik parametrelerinden renk, koku ve tat değerleri en yüksek NK'de, sırasıyla 6,3, 5,9 ve 6,2; en düşük YBK'de sırasıyla 4,9, 4,6 ve 5,0 olarak değerlendirilmiştir ($p<0,05$). Çiğnenebilirlik, gevreklik, dişe yapışmama, sertlik ve genel beğeni değerleri açısından kurabiye örnekleri arasında farklar oldukça yakın bulunmuş ve bu farklar istatistiksel olarak anlamlı bulunmamıştır ($p>0,05$).

Anahtar Kelimeler: Glütensiz kurabiye, baklagil unu, fiziksel tekstür, duyusal

KARABUĞDAY İLAVELİ GLUTENSİZ MAYALI BAZLAMA ÜRETİMİ

Doç. Dr. Nazlı ŞAHİN
Karamanoğlu Mehmetbey Üniversitesi,
nsahin@kmu.edu.tr – ORCİD ID:0000-0002-0963-8882
Gülsemin Çayır
Karamanoğlu Mehmetbey Üniversitesi,
gulsemin.cayir@gmail.com - ORCİD ID:0009-0008-8091-8909

ÖZET

Bu çalışmada, üç farklı formülasyonla (%100 ticari glutensiz un - GE, %100 karabuğday unu - KE, ve %50 GE + %50 KE) üretilen glutensiz mayalı bazlama ekmeklerinin fiziksel, tekstürel ve duyusal özellikleri karşılaştırmalı olarak değerlendirilmiştir. Fiziksel analizlerde tüm örneklerin benzer hacim ve çap değerlerine sahip olduğu, ancak %100 KE içeren ekmeklerin kalınlık değerinin anlamlı şekilde daha yüksek olduğu belirlenmiştir. Renk analizleri, artan karabuğday unu oranına bağlı olarak L* (açıklık) ve b* (sarılık) değerlerinde azalma ve a* (kırmızılık) değerinde artış meydana geldiğini göstermiştir. Tekstürel analiz sonuçlarına göre, karabuğday unu ilavesi ekmeklerin sertlik ve çiğnenebilirlik değerlerini artırmış; esneklik ve elastikiyet değerlerinde ise düşüşe neden olmuştur. En yüksek sertlik ve çiğnenebilirlik değerleri %100 KE içeren örneklerde kaydedilmiştir. Duyusal değerlendirmelerde ise %100 GE içeren ekmek formülasyonu, şekil, yüzey yapısı, kabuk rengi, tat ve aroma gibi parametrelerde en yüksek puanları alarak toplamda 66,81 puanla en fazla tüketici beğenisi kazanan ürün olmuştur. %50 GE + %50 KE içeren örnek 61,24 puanla ikinci sırada yer alırken, %100 KE içeren ekmek duyusal açıdan en düşük puanı (49,19) almıştır. Sonuç olarak, karabuğday unu glutensiz ürünlere besin değeri açısından katkı sağlasa da, yüksek oranlarda kullanımının fiziksel, tekstürel ve duyusal kaliteyi olumsuz etkileyebileceği belirlenmiştir. Bu nedenle, glutensiz ekmek formülasyonlarında karabuğday ununun optimum düzeyde kullanımı kalite ve tüketici memnuniyeti açısından önem arz etmektedir.

Anahtar Kelimeler: glütensiz mayalı bazlama, karabuğday, tekstür, duyusal

Aspergillus flavus'UN TOKSİN ÜRETME POTANSİYELİNİN MOLEKÜLER OLARAK GÖSTERİLMESİ

MOLECULAR DETECTION OF THE TOXIN-PRODUCING POTENTIAL OF *Aspergillus flavus*

Prof. Dr., IŞIL VAR
Çukurova Üniversitesi,
ivar@cu.edu.tr - ORCID ID: 0000-0002-0421-6330

Doktora Öğrencisi, BERFİN SUCU
Çukurova Üniversitesi,
berfnsucu@gmail.com - ORCID ID: 0000-0002-7500-903X

ÖZET

Aspergillus flavus, birçok gıda ürününde kontaminant olarak bulunabilen ve ürettiği aflatoksinlerle ciddi gıda güvenliği sorunlarına yol açabilen bir küf türüdür. Özellikle sıcak ve nemli ortamlarda hızla çoğalan bu fungus, insan ve hayvan sağlığını tehdit eden yüksek toksisiteli aflatoksinler üretmektedir. Üretilen bu toksinlerden biri olan Aflatoksin B_1'in, hepatokarsinojenik, mutajenik ve immünsüpresif etkileri uzun yıllardır bilinmekte olup, bu toksinlere maruziyet ciddi sağlık riskleri doğurmaktadır. Bu nedenle, her ne kadar gıdalarda çeşitli kromotografik ve serolojik yöntemlerle toksin analizleri yapılmaktaysa da *A. flavus* izolatlarının da toksijenik potansiyellerinin moleküler düzeyde belirlenmesi önem arz etmektedir. Bu çalışmada, çeşitli gıda örneklerinden izole edilen ve tür düzeyinde tanımlanan 25 *A. flavus* izolatı, aflatoksin biyosentezinde düzenleyici rolü olan *aflR* geninin ve yapısal genlerden *aflQ, aflO, aflP, aflD*'nin varlığı açısından PCR ile analiz edilmiştir. Analizler sonucunda, izolatların 23 tanesinde *aflR*, 13'ünde *aflD*, 21'inde *aflP*, 22'sinde *aflO* ve 15'inde *aflQ* geni tespit edilmiştir. Bu sonuçlar, 25 izolatın toksijenik potansiyele sahip olabileceğini göstermektedir. Özellikle biyosentez yolunun aktivatörü olan *aflR* geninin yüksek oranda tespit edilmesi, potansiyel aflatoksin üretimi açısından dikkat çekicidir. Yapısal genlerin (*aflP, aflD, aflO, aflQ*) farklı oranlarda bulunması ise biyosentez yolunun çeşitli aşamalarındaki genetik çeşitliliği yansıtmaktadır. Ancak gen varlığı, aktif toksin üretimini kesin olarak göstermediğinden, bu genlerin aktivitelerinin belirlenmesi için Real-Time PCR gibi yöntemlerin kullanılması ve *A. flavus* tarafından üretilen aflatoksin miktarının belirlenebilmesi için HPLC gibi kromatografik yöntemler ya da ELISA gibi serolojik analizlerin yapılması gerekmektedir.

Anahtar Kelimeler: *Aspergillus flavus*, aflatoksin biyosentezi, PCR

Teşekkür

Bu çalışma Çukurova Üniversitesi Bilimsel Araştırma Projeleri Birimi (BAP) tarafından FDK-2023-16038 nolu proje kapsamında desteklenmektedir.

ABSTRACT

Aspergillus flavus is a mold species commonly found as a contaminant in various food products and poses significant food safety concerns due to its production of aflatoxins. This fungus proliferates rapidly under warm and humid conditions and produces highly toxic aflatoxins that threaten both human and animal health. Among these toxins, Aflatoxin B_1 is well-known for its hepatocarcinogenic, mutagenic, and immunosuppressive effects, and exposure to this toxin carries serious health risks. Therefore, although various chromatographic and serological methods are routinely employed for the detection of aflatoxins in food, molecular-level determination of the toxigenic potential of *A. flavus* isolates is of critical importance. In this study, 25 *A. flavus* isolates, obtained from diverse food samples and identified at the species level, were analyzed by PCR for the presence of the regulatory gene *aflR* and structural genes *aflQ*, *aflO*, *aflP*, and *aflD*, which are involved in aflatoxin biosynthesis. The results revealed that aflR was detected in 23 isolates, *aflD* in 13 isolates, *aflP* in 21 isolates, *aflO* in 22 isolates, and *aflQ* in 15 isolates. These findings suggest that the majority of the isolates possess toxigenic potential. Notably, the high prevalence of the *aflR* gene, which acts as an activator in the biosynthetic pathway, highlights the potential for aflatoxin production. The variable presence of the structural genes (*aflP*, *aflD*, *aflO*, *aflQ*) reflects genetic diversity at different stages of the biosynthesis pathway. However, the mere presence of these genes does not definitively indicate active toxin production. Therefore, further analyses such as Real-Time PCR for gene expression and chromatographic (e.g., HPLC) or immunological assays (e.g., ELISA) for quantifying aflatoxin levels produced by *A. flavus* are necessary.

Keywords: *Aspergillus flavus*, aflatoxin biosynthesis, PCR

Acknowledgement

This study was supported by the Çukurova University Scientific Research Projects Unit (BAP) under the project number FDK-2023-16038.

ERZİNCAN İLİ ATMOSFERİ *ALTERNARIA* VE *CLADOSPORIUM* SPORLARI (OCAK–HAZİRAN 2022)

Tülay ATALAY NAKİ
Kafkas Üniversitesi
tulaynaki@gmail.com - 0009-0009-2402-4692

Dr. Öğr. Üyesi Gül Esma AKDOĞAN KARADAĞ
Kafkas Üniversitesi
gulesmaakdogan@kafkas.edu.tr - 0000-0001-7959-2130

ÖZET

Atmosfer gazlar, su damlacıkları, polen, toz parçacıkları ve mikroorganizmalar (bakteri, küf, maya ve virüsler) içerir. Mantar sporları havadaki biyopartiküllerin önemli bir kısmını oluşturur. Atmosferde bulunan ve organizmaları olumsuz etkileyen mantar sporları aeropalinoloji tarafından incelenmektedir. Atmosferdeki mantar sporları insanlarda sinüzit ve astım gibi solunum yolu hastalıkları, deri enfeksiyonları ve alerjik reaksiyonlara sebep olur. Bitkilerde ise hastalık oluşturan patojenlerdir. *Alternaria* ve *Cladosporium* mantar sporları da atmosferde en sık rastlanan ve alerjenitesi en yüksek olan taksonlardır.

Bu çalışmada 1 Ocak 2022 ve 30 Haziran 2022 tarihleri arasında Lanzoni VPPS 2000 volümetrik örneklem cihazı ile Erzincan ili atmosferindeki *Alternaria* ve *Cladosporium* sporlarının aylık ve gün içi saatlik dağılımları belirlenmiştir.

Erzincan ili atmosferinde toplam 8514 spor/m^3 belirlenmiştir. Bunun 541 spor/m^3'ü *Alternaria*, 3777 spor/m^3'ü *Cladosporium* sporu olarak tespit edilmiştir. Her iki takson için mayıs ayı en yoğun konsantrasyonun gözlendiği ay olmuştur. *Alternaria* sporunun 6 aylık saatlik değişimi incelendiğinde en yoğun konsantrasyonlara öğle saatlerinde, en düşük konsantrasyonlara ise gece saatlerinde sahip olduğu gözlenmiştir. *Cladosporium* sporları saatlik değişimleri incelendiğinde ise genel olarak öğlen saatlerinde en yoğun konsantrasyona ulaştığı, gece saatlerinde de en düşük seviyelerde olduğu belirlenmiştir. *Cladosporium* sporları için mayıs ayında farklı olarak akşam saatlerinin en yoğun konsantrasyonun, sabah saatlerinin de en düşük konsantrasyonun gözlendiği saatler olduğu tespit edilmiştir.

Erzincan ili atmosferinin 2022 yılı ilk 6 aylık spor verileri değerlendirildiğinde tarım, hayvancılıktaki mantar kökenli hastalıklar ve alerjik açıdan hassas bireyler için mayıs ayının dikkat edilmesi gereken ay olduğu ve öğle saatlerinin de mantar sporları bakımından riskli zaman dilimi olduğu belirlenmiştir.

Anahtar Kelimeler: Erzincan, *Alternaria*, *Cladrosporium*, mantar sporları, volümetrik yöntem.

ADANA İLİNDE 1992–2022 YILLARI ARASINDA YAĞIŞ VE KURAKLIK TRENDLERİNİN ANALİZİ

Dr. Öğr. Üyesi Umut ERCAN
Batman Üniversitesi, Beşiri OSB MYO
umut.ercan@batman.edu.tr – ORCID: 0000-0003-1063-4480

Öz

Bu çalışma, Türkiye'nin Akdeniz Bölgesi'nde yer alan Adana iline ait 1992–2022 dönemine ilişkin aylık yağış verileri kullanılarak, yağış trendlerinin ve kuraklık durumlarının istatistiksel olarak incelenmesini amaçlamaktadır. Eğilim analizinde parametrik olmayan Mann-Kendall testi ile eğilimlerin varlığı, Sen's Slope yöntemi ile eğilimin yönü ve büyüklüğü, Spearman Rho testi ile değişkenler arası korelasyon belirlenmiştir. Ayrıca Standartlaştırılmış Yağış İndisi (SYI), Yağış Anomali İndisi (YAİ) ve Normal Yağışın Yüzdesi İndisi (NYİ) ile kuraklık analizi gerçekleştirilmiştir. Analiz sonuçlarına göre yıllık ve mevsimsel bazda istatistiksel olarak anlamlı bir artış veya azalış eğilimi saptanmamıştır. Ancak bazı yıllarda kuraklık eğilimleri gözlemlenmiş ve veriler bölgesel çalışmalarla karşılaştırıldığında, mikroklimatik farklılıkların etkili olduğu sonucuna ulaşılmıştır. Bulgular, Adana ili için iklimsel eğilimlerin zamansal olarak düzensiz seyrettiğini ortaya koymaktadır.

Anahtar Kelimeler: Adana, yağış eğilimi, Mann-Kendall, Sen eğimi, Spearman Rho, kuraklık indeksi, SPI

Abstract

This study aims to statistically analyze the precipitation trends and drought patterns in Adana province, located in the Mediterranean Region of Turkey, based on monthly rainfall data for the period 1992–2022. The Mann-Kendall test was employed to detect monotonic trends, Sen's Slope estimator to measure the trend magnitude and direction, and the Spearman Rho test to assess correlations. Additionally, drought conditions were evaluated using the Standardized Precipitation Index (SPI), Rainfall Anomaly Index (RAI), and Percentage of Normal Precipitation Index (PNPI). The findings indicated no statistically significant increasing or decreasing trends on annual or seasonal scales. Nonetheless, moderate drought conditions were observed in specific years. Comparative evaluations with regional studies suggested that microclimatic variations may play a role in local precipitation patterns. Overall, the results demonstrate the temporal irregularity of climatic trends in the Adana region.

Keywords: Adana, precipitation trend, Mann-Kendall, Sen's slope, Spearman Rho, drought index, SPI

KÖPEK HUMERUS'UNUN MORFOMETRİK OLARAK İNCELENMESİ

Prof. Dr. Zekeriya ÖZÜDOĞRU
Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Anabilim Dalı Balıkesir/TÜRKİYE
zekeriya.ozudogreu@balikesir.edu.tr- 0000-0002-0789-3628
Prof. Dr. Şükrü Hakan ATALGIN
Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Anabilim Dalı Balıkesir/TÜRKİYE
sukruhakan@balikesir.edu.tr- 0000-0001-9436-6270
Arş. Gör. Mustafa KORKMAZ
Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Anabilim Dalı Balıkesir/TÜRKİYE
mustafa.korkmaz@balikesir.edu.tr- 0000-0002-4493-0643

ÖZET

Bu çalışma, Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Laboratuvarı'nda bulunan farklı köpek ırklarına ait humerus'ların morfometrik özelliklerini ortaya koymak ve bu bölgenin innervasyonunu sağlayan sinirler üzerinde gerçekleştirilecek anestezi uygulamaları için gerekli cerrahi yaklaşımlara ön bilgi sağlamak amacıyla yapılmıştır. Materyal olarak, 3'ü sol ve 7'si sağ olmak üzere toplam 10 köpek humerus'u kullanıldı. Humerus'un morfometrik uzunluk ve genişliklerine ilişkin ölçümler dijital kumpas ile dört farklı noktadan gerçekleştirilmiş ve elde edilen veriler mevcut literatürle karşılaştırılmıştır. Gerçekleştirilen morfometrik ölçümler sonucunda humerus'un uzunluğu ve distal genişliği sırasıyla ortalama 18,3±0,7 cm ve 3,6±0,1 cm olarak ölçüldü. Trochlea humeri ve caput humeri'nin genişliklerinin ise sırasıyla ortalama 2,9±0,1 cm ve 3,0±0,1 cm olduğu belirlendi

Sonuç olarak, bu çalışma bölgedeki anatomik yapının detaylı bir şekilde ortaya konmasına katkı sağlamakla birlikte, gelecekte gerçekleştirilecek cerrahi müdahaleler için de pratik bir rehber niteliği taşımaktadır.

Anahtar Kelimeler: Humerus, Köpek, Morfometri.

ABSTRACT

This study was conducted to reveal the morphometric characteristics of humeri belonging to different dog breeds housed in the Anatomy Laboratory of the Faculty of Veterinary Medicine at Balıkesir University, and to provide preliminary information for the surgical approaches required in anesthesia procedures involving the nerves responsible for the innervation of this

region. As material, a total of 10 dog humeri were used, consisting of 3 left and 7 right specimens. Morphometric measurements of the humerus, specifically its length and width, were taken at four different points using a digital caliper. The data obtained were compared with existing literature. As a result of the morphometric measurements, the average length and distal width of the humerus were determined to be 18.3±0.7 cm and 3.6±0.1 cm, respectively. The average widths of the *trochlea humeri* and *caput humeri* were found to be 2.9±0.1 cm and 3.0±0.1 cm, respectively.

In conclusion, this study contributes to a detailed understanding of the anatomical structure of the region and also serves as a practical guide for future surgical interventions.

Key Words: Humerus, Dog, Morphometry.

KÖPEKLERDE FORAMEN SUPRATROCHLEARE'NİN MORFOMETRİK İNCELENMESİ

Prof. Dr. Zekeriya ÖZÜDOĞRU

Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Anabilim Dalı Balıkesir/TÜRKİYE

zekeriya.ozudogreu@balikesir.edu.tr- 0000-0002-0789-3628

Prof. Dr. Mehmet CAN

Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Anabilim Dalı Balıkesir/TÜRKİYE

mehmetcan@balikesir.edu.tr- 0000-0001-9409-026X

Arş. Gör. Mustafa KORKMAZ

Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Anabilim Dalı Balıkesir/TÜRKİYE

mustafa.korkmaz@balikesir.edu.tr- 0000-0002-4493-0643

ÖZET

Çalışmada Balıkesir Üniversitesi Veteriner Fakültesi Anatomi Laboratuvarında bulunan farklı köpek ırklarına ait humerus'larda foramen supratrochleare'nin morfometrik değerini ortaya koymak ve bu bölgenin innervasyonunu sağlayan sinirlerde anestezi işlemlerinin gerçekleştirilmesi için gerekli olan cerrahi yaklaşımlara ön bilgi oluşturmak amaçlanarak yapılmıştır. Materyal olarak 3'ü sol 7'si sağ olmak üzere toplam 10 adet köpek humerus'u kullanıldı. Dijital kumpas kullanılarak foramen supratrochleare ile ilgili 4 noktadan ölçüm yapıldı ve elde edilen veriler mevcut literatürler ile karşılaştırılmıştır. İncelenen foramen supratrochleare'lerden 4'ü oval 6'sı ise yuvarlak şekilli olarak görüldü. Bir adet humerus üzerinde ise foramen supratrochleare ise tam kapanmamakla beraber kıkırdaksal doku ile bir miktar örtülü biçimdeydi. Foramen supratrochleare'nin genişliği ve yüksekliğinin ise sırasıyla ortalama 0.92±0.06 ve 0.76±0.04 cm olduğu gözlemlendi. Yapılan morfometrik incelemeler sonucunda foramen supratrochleare'nin lateral kenara olan uzaklığı ortalama 0.88±0.04 cm ve medial kenara olan uzaklığı ise ortalama 1.54±0.07 cm olarak ölçüldü.

Sonuç olarak yapılan çalışma, hem bölgedeki anatomik yapının detaylı şekilde ortaya konulmasına katkı sağlayacak hem de ileride gerçekleştirilecek cerrahi müdahaleler için pratik bir rehber niteliği taşıyacaktır.

Anahtar Kelimeler: Foramen supratrochleare, Köpek, Morfometri

MORPHOMETRIC EXAMINATION OF FORAMEN SUPRATROCHLEARE IN DOGS

ABSTRACT

This study was conducted with the aim of determining the morphometric values of the foramen supratrochleare in humeri from different dog breeds found in the Anatomy Laboratory of the Faculty of Veterinary Medicine at Balıkesir University, and to provide preliminary anatomical data for surgical approaches required in anesthesia procedures involving the nerves that innervate this region. A total of 10 dog humeri were used as material, including 3 left and 7 right humeri. Measurements were taken from four specific points on the foramen supratrochleare using a digital caliper, and the obtained data were compared with existing literature. Among the examined foramen supratrochleare, 4 were observed to be oval-shaped and 6 were round. In one of the humeri, the foramen supratrochleare was not completely closed but was partially covered with cartilaginous tissue. The average width and height of the foramen supratrochleare were observed to be 0.92±0.06 cm and 0.76±0.04 cm, respectively. As a result of morphometric evaluations, the mean distance from the foramen supratrochleare to the lateral edge was measured as 0.88±0.04 cm, and to the medial edge as 1.54±0.07 cm.

In conclusion, this study is expected to contribute to the detailed understanding of the anatomical structure of the region and serve as a practical guide for future surgical interventions.

Key words: Foramen supratrochleare, Dog, Morphometry

Memory of a Stone: Visualizing Nablus's Historical Layers with Artificial Intelligence

M.Sc. Student in Architecture Areen SOBOH
Gazi University, 24831101046@gazi.edu.tr – ORCID: 0009-0000-6169-9749

Prof. Dr. ARZU ÖZEN YAVUZ[2]
[2]Gazi University, arzuozen@gazi.edu.tr – ORCID: 0000-0002-7197-289X

Abstract

This study aims to visualize the transformation of the city of Nablus across five different historical periods through a unique story told from the perspective of a stone. Representing the spatial memory of the city, this stone has been present in various structures over centuries, silently witnessing the socio-political and physical changes of the city. The narrative progresses through the Ottoman Period, the British Mandate, the Initial Conflicts, the Israeli Occupation, and the Present/Hope phase.

In the study, scenes belonging to each period of the narrative were constructed in detail, and then ChatGPT was assigned the role of a "visual storyteller" to transform these scenes into visual outputs. The text-to-image production process was carried out through a step-by-step, dialogue-based approach; for each period, scene descriptions, atmosphere, spatial elements, and color palettes were conveyed to the artificial intelligence in detail.

In the first phase of the method, the manually created photomontage and the AI-generated outputs were compared in terms of narrative strength, historical context, visual continuity, and emotional impact. Observations revealed that the dialogue-based interaction with artificial intelligence resulted in higher quality and consistency. The form of interaction established with AI determines not only the output but also the nature of the creative process. In this context, the study offers an experimental method that contributes to architectural storytelling and the representation of urban memory.

Keywords: Artificial intelligence, storytelling, urban memory, Nablus, stone, historical layers.

THE INTEGRATION BETWEEN ARTIFICIAL INTELLIGENCE AND BIOMIMETIC APPROACH: CASE STUDY OF A THERMOREGULATION DESIGN CONCEPT FOR A CITY IN EXTREME CLIMATE CONDITION.

M.Sc. Student, NUR SYAHIRA BINTI MOHD NOR
Gazi University, Institute of Science, Faculty of Architecture, Ankara,
e-mail: 23831101402@gazi.edu.tr - 0009-0002-5399-7118

Prof. Dr., ARZU ÖZEN YAVUZ
Gazi University, Faculty of Architecture, Department of Architecture, Ankara,
e-mail: arzuozen@gazi.edu.tr -0000-0002-7197-289X

ABSTRACT

Architecture evolves throughout human history and engages with multiple disciplines over time. One of the engagements, which we see in the blend of architecture and nature known as biomimetic: the study of natural's process and philosophy to solve problems in natural way. Simultaneously, artificial intelligence (AI) emerges as a powerful tool to identify the problem, explore, and retrieve data from databases that can be beneficial in architecture. The application of AI in biomimetic has been utilized on numerous occasions, from form-finding methods to the solution-finding for thermal problems. In this research, a scenario was created to assess how effectively AI could utilize a biomimetic design approach to address thermal challenges in extreme weather conditions. The scenario where: in the 23rd century, Earth has become a hostile place to live, with extreme global temperatures that fluctuate from 100°C to -70°C, forcing humans to create an adaptive city design. Among these, the most effective concept emerged is the biomimetic thermoregulation design approach, ensuring human survivability. Key mega prompt, BIDARA were entered to lead the step-by-step biomimetic design spiral. Followed by relevant prompts provided within each step are entered into multiple AI platforms to develop the city concept. In addition, several images were generated to illustrate both its operational system and the general visual concept of the city. This research aims to predict a situation where architects encounter extreme climate conditions, along with providing frameworks on how to employ advanced AI technology integrated with biomimetic design approach for addressing the challenges effectively.

Keywords: Artificial Intelligence, Biomimetic Design Approach, Thermoregulation, Extreme conditions.

AN INNOVATİVE UNDERWATER LİVİNG SPACE DESİGN BASED ON FRACTAL GEOMETRY APPROACHES

M.Sc. Student, KUMUSHKHON ZOKIRKHUJA KIZI MUNAVVAROVA
Gazi University, Institute of Science, Faculty of Architecture, Ankara, Turkey
e-mail: 23831101401@gazi.edu.tr – 0009-0000-9215-6296

Prof.Dr., ARZU ÖZEN YAVUZ
Gazi University, Institute of Science, Faculty of Architecture, Ankara, Turkey
e-mail: arzuozen@gazi.edu.tr – 0000-0002-7197-289X

ABSTRACT

This study is an underwater habitat model based on fractal geometry. Fractals are everywhere in nature and offer solutions for structural efficiency, spatial optimization and biological compatibility. In the design process a structure mimicking the natural habitats of marine life was envisioned through multilayered, self-replicating scalable forms. The theoretical basis of this study is a speculative scenario where after a global war in the 23rd century the Earth becomes uninhabitable. In this scenario some nations will retreat beneath the oceans and build AI supported, fully enclosed ecosystems to survive. In these environments AI will manage the critical life support functions like oxygen production, food cycles and environmental control. So, this fractal geometry spatial model is not only an architectural experiment but also a survival strategy for humanity in a dystopian future. To support the visualization of the design fractal forms and spatial scenarios were generated using the AI powered ChatGPT Image Generator, materializing the concept through imagery. The limitations and possibilities of modern AI systems to convey symbolic, emotional and plastic characteristics of underwater architecture are analyzed. The work pushes the boundaries of the architectural imagination and explores the potential of digital tools to create hypothetical environments beyond the earth's surface.

Keywords: fractal geometry, underwater architecture, closed ecosystem, extreme living conditions, technology-based habitats

BİR GÖÇMENİN ŞEHİR ALGISI VE EKFRASTİK TANIMLAMA TEKNOLOJİ, DÖNÜŞÜM, FARKLILIK

AN IMMIGRANT'S PERCEPTION OF THE CITY AND ECPHRASTIC IDENTIFICATION TECHNOLOGY, TRANSFORMATION, DIFFERENCE

M.Sc. Student Yusuf Melih Bahar
Gazi University
y.melihbahar@gmail.com - **ORCID: 0009-0009-4217-992X**

Prof. Dr.Arzu Özen Yavuz
Gazi University
arzuozen@gazi.edu.tr - **ORCID: 0000-0002-7197-289X**

ABSTRACT

This paper presents an experimental ekphrastic practice developed through the use of AI-assisted rendering tools. Traditionally, ekphrasis refers to the verbal description of a visual artwork; however, in the digital age, the term has expanded to include a dynamic and reciprocal transformation between language and image. In this study, an immigrant's observations and perceptions of the country he moved to are first created as a textual sequence, then visualised through artificial intelligence, and then reinterpreted with new textual expressions based on the resulting images. This cyclical model of moving from text to image and back to text defines the essence of this creative research.

The narrative follows the perspective of a migrant figure navigating unfamiliar urban environments such as airports, railway stations, city streets and hybridised architectures. These scenes are first imagined through written language and then transformed into visual artworks using generative AI tools. The main aim of the narrative is to reveal the difference between the perspective of the migrant and how people already living in the area experience the same spaces. Artificial intelligence was used not only as a production tool, but also as a collaborator capable of conveying atmosphere, emotional tone and narrative perspective.

This project argues that contemporary ekphrasis is no longer limited to the act of description. Instead, it can evolve into a multidisciplinary creative method that integrates technological processes. Artificial intelligence serves as both translator and co-creator, mediating between visuality and textuality. The resulting interaction redefines ekphrasis as an active and generative process rather than a passive interpretive process. Therefore, this paper positions digital ekphrasis as a powerful tool for narrative expansion and aesthetic innovation in the age of algorithmic creativity.

Keywords: Ekfrasis, Artificial Intelligence, Description, Technology, Social and Urban Transformation

ÖZET

Bu bildiri, yapay zekâ destekli görüntü oluşturma araçlarının kullanımıyla geliştirilen deneysel bir *ekfrastik* pratiği sunmaktadır. Geleneksel olarak ekfrasis, görsel bir sanat eserinin sözlü betimlemesini ifade etmektedir; ancak dijital çağda bu terim, dil ve görüntü arasında dinamik ve karşılıklı bir dönüşümü içerecek şekilde genişlemiştir. Bu çalışmada, bir göçmenin taşındığı ülkedeki gözlemleri ve orayı nasıl algıladığı önce metinsel bir dizi olarak oluşturulmuş, daha sonra yapay zekâ aracılığıyla görselleştirilmiştir. Metinden görüntüye geçişi içeren bu döngüsel süreç, bu araştırmanın özünü tanımlamaktadır.

Anlatı, havaalanları, tren istasyonları, şehir sokakları ve melezleşmiş mimariler gibi yabancı kentsel ortamlarda gezinen göçmen bir figürün perspektifini takip etmektedir. Bu sahneler önce yazılı dil aracılığıyla hayal edilmiştir ve daha sonra üretici yapay zekâ araçları kullanılarak görsel sanat eserlerine dönüştürülmüştür. Anlatıdaki temel amaç göçmenin perspektifi ve halihazırda o bölgede yaşayan insanların aynı mekanları nasıl deneyimledikleri olmuştur ve aradaki fark ortaya çıkartılmak istenmiştir. Ayrıca yapay zekâ yalnızca bir üretim aracı olarak değil, aynı zamanda atmosfer, duygusal ton ve anlatı perspektifini aktarabilen bir işbirlikçi olarak da kullanılmıştır.

Bu çalışma, ekfrasisin yeni bir bakış açısıyla üretilmesi artık betimleme eylemiyle sınırlı olmadığını savunmaktadır. Bunun yerine, teknolojik süreçleri entegre eden çok disiplinli yaratıcı bir yönteme dönüşebilir. Yapay zekâ, görsellik ve metinsellik arasında aracılık ederek hem çevirmen hem de ortak yaratıcı olarak hizmet vermektedir. Ortaya çıkan etkileşim, ekfrasisi pasif bir yorumlayıcı süreçten ziyade aktif ve üretken bir süreç olarak yeniden tanımlamaktadır. Bu nedenle, bu makale dijital ekfrasisi algoritmik yaratıcılık çağında anlatı genişletme ve estetik yenilik için güçlü bir araç olarak konumlandırmaktadır.

Anahtar kelimeler: Ekfrasis, Yapay Zekâ, Betimleme, Teknoloji, Sosyal ve Kentsel Dönüşüm

BURSA İLİ GÜMÜŞTEPE MAHALLESİNDE (MİSİ KÖYÜ) POTANSİYEL KAMP ALANLARININ BELİRLENMESİ

Doç. Dr. ZEYNEP PİRSELİMOĞLU BATMAN
Bursa Uludağ Üniversitesi
zeynepbatman@uludag.edu.tr- 0000-0003-2145-2682

PELİN ÖZUÇAR
Bursa Uludağ Üniversitesi
pelinozucar-97@hotmail.com – 0000-0002-2071-4866

ÖZET

Gümüştepe mahallesi Bursa şehir merkezine 12 km uzaklıkta, sunduğu çeşitli doğal ve kültürel peyzaj değerleri nedeniyle yerli halk ve turistler tarafından sıklıkla ziyaret edilen kırsal bir yerleşim bölgesidir. Doğa turizmi ve kırsal rekreasyon açısından Bursa ili için öneme sahip olan bölgede piknik, doğa yürüyüşü, çadırlı kamp gibi rekreasyonel etkinlikler yapılmaktadır. Kamp etkinliği doğada izole yaşama imkânı sunması, farklı rekreatif etkinlikler gerçekleştirmeye ve konaklamaya olanak sunması gibi özelliklerinden dolayı sıklıkla tercih edilmektedir. Kırsal alanlarda gerçekleştirilen rekreasyonel ve turistik etkinliklerin doğal yapıya zarar vermeden bir planlama dahilinde gerçekleştirilmesi gerekmektedir. Bu çalışmada CBS aracılığıyla bölgedeki uygun kamp bölgelerinin çok kriterli karar verme yöntemlerinden ağırlıklı çakıştırma analizi gerçekleştirilerek tespit edilmesi amaçlanmıştır. Bu kapsamda Gümüştepe mahallesi için kamp etkinliğine potansiyeli olan alanların belirlenmesine yönelik değerlendirme kriterleri belirlenmiştir. Kamp etkinliği için belirlenen kriterler önceliklerine göre puanlanarak ağırlıklandırılmıştır. Elde edilen veriler ArcGIS 10.8 programında sayısallaştırılarak Weighted Overlay (ağırlıklı çakıştırma) işlemi ile Gümüştepe mahallesi için uygun kamp alanları tespit edilmiştir.

Anahtar Kelimeler: CBS, Bursa, Kamp alanları, Uygunluk analizi

SÜRDÜRÜLEBİLİR PEYZAJLAR İÇİN İKLİM KIRILGANLIĞI ODAKLI PLANLAMA STRATEJİLERİ

Doç. Dr., Zeynep PİRSELİMOĞLU BATMAN
Bursa Uludağ Üniversitesi,
zeynepbatman@uludag.edu.tr - 0000-0003-2145-2682
Kübra Nur SAFALI
Bursa Uludağ Üniversitesi,
502230011@ogr.uludag.edu.tr - 0009-0002-7393-7294

ÖZET

Zaman içerisinde insan faaliyetleri ve doğal olaylar ile birlikte etkilerini eylemin gerçekleştiği bölgede sınırlandırmayıp bölgenin doğasına, çevresine ve dünya geneline yayılan; etkileri ve şiddeti coğrafi özelliklere ve kırılganlık durumuna göre değişkenlik gösteren küresel iklim değişikliği sorunu iklimde meydana gelen değişimler olarak tanımlanabilir. İklim değişikliğinin etkilerini herhangi bir sistem veya bir bölgede aynı etki derecesi ve hızla göstermemesi meydana geldiği bölgede bölgenin özellikleri, koşulları ve taleplerine yönelik strateji geliştirilmesini gerektirir. Bu bağlamda küresel iklim değişikliğinin etkileri, koşullara ve kırılganlıklara özgü geliştirilecek iyileştirme ve hafifletme stratejileriyle önlenebilir. Etkilerin en aza indirgenebilmesi ve önlenebilmesi için peyzajların varlığı, var olan yapılarının korunması ve sürdürülebilirliği amaç edinilerek geliştirilen her strateji iklim değişikliği ile mücadele kapsamında oldukça önemlidir. Bu çalışmada var olan peyzaj yapılarının ve yeni peyzajların oluşumunda doğal ve kültürel özelliklerin korunarak sürdürülebilirlik bakış açısı çerçevesinde geliştirilmiş peyzaj planlama yaklaşımları incelenmiş; iklim değişikliğinin neden olduğu olumsuz etkilerin ve iklim kırılganlığının azaltılarak kentsel çevre ve yaşam kalitesinin iyileştirilmesi bağlamında kentsel alanlarda uyum ve azaltım önerileri değerlendirilmiştir. Mevcut peyzajların kaybının ve tahribinin önlenmesi, oluşumunun ve sürdürülebilirliğinin sağlanması amacıyla oluşturulabilecek her yeşil stratejinin ve geliştirilecek diğer çözümler ile birlikte özellikle bu doğrultudaki sürdürülebilir peyzaj planlaması, kent ve kent kullanıcıları üzerindeki küresel iklim değişikliği etkilerinin azaltılması ve koşullara adaptasyonun sağlanması bağlamında önem kazandıracaktır.

Anahtar Kelimeler: İklim kırılganlığı, peyzaj planlama, sürdürülebilir peyzaj

CNC MAKİNASI İLE İŞLEM GÖREN MEŞE ODUNUNUN FARKLI DEVİR HIZI PARAMETRE DEĞERLERİNE GÖRE OLUŞAN AHŞAP TOZ MİKTARININ BELİRLENMESİ

Dr. Öğr. Üyesi Evren Osman ÇAKIROĞLU

Artvin Çoruh Üniversitesi, Artvin Meslek Yüksekokulu, Tasarım Bölümü, İç Mekân Tasarımı Programı/Artvin,
61evrenosman@artvin.edu.tr - https://orcid.org/0000-0001-5303-8967

Özet

Ahşabın işlenmesinde son dönemlerde artan CNC kullanımının sonucunda oluşan ahşap tozları insan sağlığı açısından önem arz etmektedir. Bu çalışmada CNC makinası ile işlem gören meşe odununun farklı devir hızı parametre değerlerine göre oluşan ahşap toz miktarının belirlenmesi amaçlanmıştır. İç ve dış mekanda tercih edilen meşe (Quercus *robur* L.) ağaç türü kullanılarak CNC makinasının farklı devir hızı parametrelerinin (10000, 15000 ve 18000 rpm) oluşturduğu ahşap toz oranları incelenmiştir. İşleme parametrelerinden; kesme hızı (feet rate) 8 m/min, dalma hızı (down feet) 4 m/min, kesme derinliği 2 mm ve bıçak çapı 3 mm olarak belirlenmiştir. İşlemelerin kesme yönü çizgisel (linear) olarak düzenlenmiştir. Meşe ağaç türüne göre ahşap tozu emisyonlarının PM2.5, PM10 belirlenerek analizleri yapılmıştır. Devir hızlarının PM üzerinde etkili olduğu görülmektedir. Meşe ağaç türünde en yüksek ahşap toz emisyonu devir hızı 18000 rpm olarak PM2.5'da 81 µg/m³ PM10'da 112 µg/m³ olarak ölçülmüştür. Bu değerleri devir hızı 15000 rpm ve 10000 rpm olan örnekler takip etmiştir. Bu çalışma ile insan sağlığı düşünülerek CNC makinası ile meşe odunun işlenmesi esnasında çok yüksek devir hızlı işlemler önerilmemektedir.

Anahtar Kelimeler: Ahşap toz emisyonu, CNC, Meşe, devir hızı

BAUHAUS'TAN ENDÜSTRİ 5.0'A TEKNOLOJİ VE ERGONOMİ ARASINDAKİ İLİŞKİNİN EVRİMİ: OTURMA MOBİLYALARI ÜZERİNDEN BİR OKUMA

M. Interior Arch. Student,FATEMEH KHABIR
Karadeniz Technical University,
fatemehkhabirr@gmail.com - 0009-0001-0989-7542

M. Interior Arch. Student,GÜLŞAH KAMACI
Karadeniz Technical University,
gulsahkamaci99@gmail.com - 0009-0005-5744-1610

Prof. Dr.,ERKAN AYDINTAN
Karadeniz Technical University,
aydintan@ktu.edu.tr - 0000-0001-8097-2384

ÖZET

Bu çalışma, Bauhaus'tan Endüstri 5.0'a teknolojik gelişmelerin ergonomi anlayışı üzerindeki etkilerini oturma elemanları tasarımı üzerinden incelemektedir. Teknolojik ilerlemelerin ergonominin mobilya tasarımına entegrasyonunu güçlendirdiği savına dayanan araştırma, geçmişten günümüze gözlemlenen dönüşümü betimsel bir yaklaşımla ele alıyor. Nitel araştırma yönteminin benimsendiği çalışmada, literatür taraması ve tarihsel analiz yoluyla farklı dönemlere ait akademik kaynaklar sistematik olarak inceleniyor. Amaç, süreçteki teknolojik ve tasarımsal kırılma noktalarını ergonomi ekseninde değerlendirmek ve insan merkezli tasarım anlayışının evrimini bütüncül bir anlayışla ele almaktır. Çalışmanın özgün yanı, farklı dönemlere ait tasarım felsefeleri ve teknolojik paradigmaları ergonomi odağında birleştirerek disiplinler arası bir bakış açısı sunmasıdır. Çalışma aynı zamanda geleceğin mobilya tasarımına dair bir perspektif sunuyor. Bulgular, her yeni teknolojik aşamada ergonomi bilincinin güçlendiğini; ancak bazı dönemlerde teknoloji ve insan ihtiyaçları arasındaki dengenin zayıfladığını gösteriyor.

Anahtar Kelimeler: ergonomi, bauhaus, endüstri 5.0, tasarım tarihi, mobilya tasarımı.

FROM BAUHAUS TO INDUSTRY 5.0, THE EVOLUTION OF THE RELATIONSHIP BETWEEN TECHNOLOGY AND ERGONOMICS: A READING ON SEATING FURNITURE

ABSTRACT

This study examines the effects of technological developments from Bauhaus to Industry 5.0 on the understanding of ergonomics through the design of seating elements. The research, which is based on the assertion that technological advances have strengthened the integration of ergonomics into furniture design, deals with the transformation observed from past to present with a descriptive approach. In the study, in which qualitative research method is adopted, academic sources from different periods are systematically analysed through literature review and historical analysis. The aim is to evaluate the technological and design breakpoints in the process on the axis of ergonomics and to evaluate the evolution of human-centred design understanding with a holistic understanding. The unique aspect of the study is that it offers an interdisciplinary perspective by combining design philosophies and technological paradigms of different periods in the focus of ergonomics. The study also offers a perspective on future furniture design. The findings show that the awareness of ergonomics is strengthened in each new technological stage; however, the balance between technology and human needs is weakened in some periods.

Keywords : ergonomics, bauhaus, industry 5.0, design history, furniture design

BİYOMİMİKRİ'NİN MİMARİ TASARIMA DÖNÜŞÜMÜNDE ROBOTİK TEKNOLOJİSİNİN YERİ: ICD/ITKE ARAŞTIRMA PAVYONU (2013-14) ÜZERİNDEN BİR VAKA ANALİZİ

M. Interior Arch. Student,İLKNUR KIRBIYIK
Karadeniz Technical University,
ilknurkrbyk07@hotmail.com - 0009-0001-4594-2056

M. Interior Arch. Student,ENES AYDIN
Karadeniz Technical University,
enes.aydin.0000@gmail.com - 0009-0008-4605-9194

Prof. Dr.,ERKAN AYDINTAN
Karadeniz Technical University,
aydintan@ktu.edu.tr - 0000-0001-8097-2384

ÖZET

Bir organizmanın, yaşamsal çevresinde var olma problemini; davranışı, yapısal, formal ve strüktürel özellikleri ile çözme yeteneği, mühendislik alanlarında olduğu gibi mimari tasarım ve üretim alanında da karşılık bulmaktadır. Biyomimikri olarak nitelendirilen "doğanın problem çözme stratejisi", günümüzde büyük ölçüde teknolojinin de katkısı ile mimarlık alanında; sürdürülebilirlik, verimlilik ve kullanıcı konforu gibi hedeflere ulaşmada etkin rol oynamaktadır. Teknolojik gelişmeler; mimarlıkta tasarım ve üretim anlayışını, tasarım süreçlerini, araçlarını ve yöntemlerini derin bir biçimde etkilemektedir. Bu bakış açısı ile doğadan esinlenerek tasarlanan ve robotik yöntemlerle inşa edilen mimari yapılarda bu teknolojinin, geleneksel tasarım ve üretim yöntemlerine göre ne tür avantajlar yaratabileceğinin, örnek bir yapı üzerinden okunabileceği düşünülmüştür. Çalışmada, biyomimikri yaklaşımının mimari tasarıma aktarılma sürecinde robotik üretim teknolojilerinin oynadığı belirleyici rol, ICD/ITKE 2013-14 Araştırma Pavyonu örneği üzerinden yapılan vaka analizi ile sistematik bir biçimde ortaya koyulmuştur. Biyomimikri ile ileri seviye robotik üretim tekniklerinin kullanıldığı yapıda, tasarıma nasıl yön verdiği de sorgulanmıştır. Bu bağlamda çalışma, mimarlıkta genel anlamda teknolojiye ve özellikle robotik üretime dikkat çekerek bu alanda yatırımlar ve araştırmalar yapılmasının gerekliliği konusunda farkındalık yaratmayı hedefleyen bir söylem olarak da nitelendirilebilir.

Anahtar Kelimeler: Biyomimikri, Biyomimetik, Biyomorfik, Robotik Üretim, Teknoloji.

THE PLACE OF ROBOTICS TECHNOLOGY IN THE TRANSFORMATION OF BIOMIMICRY INTO ARCHITECTURAL DESIGN: A CASE STUDY ON ICD/ITKE RESEARCH PAVILION (2013-14)

ABSTRACT

The ability of an organism to solve the problem of existence in its vital environment with its behavioral, structural, formal and structural features finds a response in the field of architectural design and production as in the fields of engineering. “Nature's problem-solving strategy”, which is characterized as biomimicry, plays an active role in achieving goals such as sustainability, efficiency and user comfort in the field of architecture with the contribution of technology. Technological developments have a profound impact on the understanding of design and production, design processes, tools and methods in architecture. From this point of view, it is thought that what kind of advantages this technology can create over traditional design and production methods in architectural buildings designed inspired by nature and built with robotic methods can be read through an exemplary building. In the study, the decisive role played by robotic production technologies in the process of transferring the biomimicry approach to architectural design is systematically revealed through a case study of the ICD/ITKE 2013-14 Research Pavilion. In the structure where biomimicry and advanced robotic production techniques are used, it is also questioned how they shape the design. In this context, the study can also be characterized as a discourse that aims to raise awareness about the necessity of investments and research in this field by drawing attention to technology in architecture in general and robotic production in particular.

Keywords: biomimicry, biomimetic, biomorphic, robotic production, technology.

KORONER KALP HASTALIKLARINDA FİZİKSEL AKTİVİTENİN ROLÜ

Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri Fakültesi
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093
Dilara HAMARAT
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
38241402003@ogr.inonu.edu.tr – 0009-0005-3826-3265
Doç. Dr. Özgür EKEN
İnönü Üniversitesi Spor Bilimleri Fakültesi
ozgur.eken@inonu.edu.tr – 0000-0002-5488-3158

ÖZET

Koroner arter hastalığı (KAH), küresel ölçekte önde gelen sağlık sorunlarından biri olarak kabul edilmekte ve her yıl milyonlarca insanın yaşamını yitirmesine neden olmaktadır. Bu çalışmanın amacı, fiziksel aktivitenin koroner kalp hastalıkları (KKH)'nın önlenmesi ve tedavisindeki rolünü incelemektir. Literatür taraması yöntemiyle gerçekleştirilen araştırmada, fiziksel aktivitenin kalp sağlığına etkilerine yönelik mevcut çalışmalar sistematik olarak değerlendirilmiştir. Elde edilen bulgular, düzenli fiziksel aktivitenin kolesterol ve lipid seviyelerinin düzenlenmesi, glukoz hemostazının sağlanması, insüline duyarlılığın artırılması, kan basıncının düşürülmesi gibi faydalarını ortaya koymaktadır. Ayrıca, fiziksel hareketsizliğin koroner kalp hastalıkları riskini artırdığını ancak düzenli egzersiz uygulamalarının ise koroner kalp hastalıklarının morbidite ve mortalitesini azaltmada önemli olduğu belirtilmiştir. Sonuç olarak, fiziksel aktivite, koroner kalp hastalığı (KKH)'nın önlenmesi ve tedavisinde kritik bir öneme sahip olup bireylerin kalp sağlığını korumak için önerilmektedir. Gelecek araştırmalarda fiziksel aktivitenin farklı popülasyonlarda etkileri üzerine daha kapsamlı çalışmalar yapılması önerilmektedir.

Anahtar Kelimeler: Fiziksel Aktivite, Koroner Kalp Hastalığı, Egzersiz.

ABSTRACT

The aim of this study is to investigate the role of physical activity in the prevention and treatment of coronary heart disease (CHD). The aim of this study was to examine the role of physical activity in the prevention and treatment of CHD. Utilizing a literature review methodology, existing studies regarding the effects of physical activity on cardiovascular health were systematically evaluated. The findings demonstrate that regular physical activity contributes to the regulation of cholesterol and lipid levels, maintenance of glucose homeostasis, enhancement of insulin sensitivity, and reduction of blood pressure. Furthermore, it was concluded that physical inactivity significantly increases the risk of CHD, while consistent exercise interventions effectively reduce the morbidity and mortality associated with this disease. In conclusion, physical activity holds critical importance in the prevention and management of CHD and is recommended for maintaining cardiovascular health. Future

research should focus on the effects of physical activity across diverse populations to provide a more comprehensive understanding of its benefits.

Keywords: Physical Activity, Coronary Heart Disease, Exercise.

REKREASYONEL AKTİVİTELER İLE BİLİM, TEKNOLOJİ, MÜHENDİSLİK VE MATEMATİK (BTMM) FAALİYETLERİNİN YAŞAM DOYUMUNU ARTIRMADAKİ ROLÜNÜN İNCELENMESİ

Doç. Dr. Nurkan YILMAZ

İnönü Üniversitesi Spor Bilimleri

nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093

Dilara HAMARAT

İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD

38241402003@ogr.inonu.edu.tr – 0009-0005-3826-3265

Doç. Dr. Özgür EKEN

İnönü Üniversitesi Spor Bilimleri Fakültesi

ozgur.eken@inonu.edu.tr – 0000-0002-5488-3158

ÖZET

Rekreasyonel aktiviteler ile Bilim, Teknoloji, Mühendislik ve Matematik faaliyetleri arasındaki etkileşimi incelemeyi ve bu iki alanın birleşiminin bireylerin yaşam doyumu üzerindeki etkilerini değerlendirmeyi amaçlamaktadır. İlk olarak, BTMM eğitiminin bireylerin bilişsel gelişimindeki önemine vurgu yapılmış ve bu alanlarda gerçekleştirilen etkinliklerin yaşam kalitesine katkıları araştırılmıştır. Araştırma, literatür taraması yöntemi ile gerçekleştirilmiş olup konu ile ilgili güncel ve mevcut çalışmalar sistematik olarak incelenmiştir. Rekreasyonel fiziksel aktiviteler, BTMM etkinlikleri ve yaşam doyumu arasındaki ilişkiyi belirlemek amacıyla çeşitli veriler derlenmiş ve analiz edilmiştir. Bu bağlamda, bireylerin bilişsel esneklik düzeyleri, sosyal bağlantıları ve fiziksel aktivitelerdeki düzenli katılımları göz önünde bulundurulmuştur. Elde edilen bulgular, rekreasyonel aktivitelerin ve BTMM etkinliklerinin bir arada uygulanmasının, bireylerin hem fiziksel hem de zihinsel sağlıklarını olumlu yönde etkilediğini göstermektedir. Ayrıca, grup çalışmaları ve takım aktiviteleri ile sosyal etkileşimin güçlendiği, bunun sonucunda bireylerin yaşam doyumlarının arttığı gözlemlenmiştir. Sonuç olarak, rekreasyonel aktiviteler ile BTMM faaliyetlerinin birleşimi, bireylerin yaşam doyumunu artırma potansiyeline sahip önemli bir etkileşim alanı olduğu söylenebilir. Bu araştırma, eğitim ve sağlık alanlarındaki uygulamalar için güçlü bir temel sunmakta olup bireylerin sağlıklı yaşam alışkanlıkları kazanmaları ve yaşam kalitelerini yükseltmeleri konusunda önemli bir çözüm önerisi teşkil etmektedir. Gelecek çalışmalarda, bu iki alanın entegrasyonu konusunda daha fazla pratik uygulama ve araştırma yapılması önerilmektedir.

Anahtar Kelimeler: Rekreasyonel Aktivite, BTMM Faaliyetleri, Yaşam Doyumu

THE ROLE OF RECREATİONAL ACTİVİTİES AND SCİENCE, TECHNOLOGY, ENGİNEERİNG AND MATHEMATİCS (STEM) ACTİVİTİES İN ENHANCİNG LİFE SATİSFACTİON

ABSTRACT

This study aims to examine the interaction between recreational activities and STEM activities and to assess the effects of their combination on individuals' life satisfaction. Initially, the importance of STEM education in cognitive development is emphasized, followed by an exploration of how activities in these fields contribute to quality of life. The research was conducted using a literature review method, systematically examining current and relevant studies. Various data were collected and analyzed to determine the relationship between recreational physical activities, STEM activities, and life satisfaction. In this context, individuals' levels of cognitive flexibility, social connections, and regular participation in physical activities were taken into consideration. The findings indicate that the combined application of recreational activities and STEM activities positively affects both the physical and mental health of individuals. Furthermore, it was observed that social interaction strengthened through group work and team activities leads to an increase in individuals' life satisfaction. In conclusion, the integration of recreational activities and STEM activities represents a significant interaction area with the potential to enhance individuals' life satisfaction. This research provides a solid foundation for practices in education and health fields, offering important solutions for individuals to develop healthy lifestyle habits and improve their quality of life. Future studies are recommended to implement more practical applications and research regarding the integration of these two fields.

Keywords: Recreational Activity, STEM Activities, Life Satisfaction

KAS MOBİLİZASYONUNDA VE İMMOBİLİZASYONUNDA KİNETİK ZİNCİR EGZERSİZLERİNİN ÖNEMİ

Serkan YARDIM
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
serkanyardim.7@icloud.com – 0000-0001-7850-2834
Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093
Doç. Dr. Özgür EKEN
İnönü Üniversitesi Spor Bilimleri
ozgur.eken@inonu.edu.tr – 0000-0002-5488-3158

ÖZET

Kas, hareketin sağlanması, organ fonksiyonlarının desteklenmesi ve ısı üretimi gibi fonksiyonel işlevleri yerine getiren, kasılma yeteneğine sahip bir dokudur. Kas yaralanmaları, yalnızca profesyonel veya amatör sporcuları değil, fiziksel aktivite düzeyinden bağımsız olarak genel popülasyonu da etkileyen yaygın ortopedik sorunlar arasında yer almaktadır. Dolayısıyla, kas mobilizasyonu ve immobilizasyonunda kinetik zincir egzersizlerinin önemi geçmişten beri tartışma konusu olmuştur. Bu çalışmada, öncelikle kas yaralanmalarını sporsal olan ve olmayan yönüyle ele alınarak, bu yaralanmaların oluşum mekanizmaları ve rehabilitasyon süreçleri incelenmiştir. Çalışma, kinetik zincir egzersizlerinin rehabilitasyon süreçlerinde sistematik bir yaklaşım olarak değerlendirilmesi gerektiğini ortaya koyarak, spor bilimleri ve fizyoterapi alanlarına katkı sunmayı amaçlamaktadır. Çalışmada yöntem olarak, konuya ilişkin literatür taraması ve doküman analizi yapılmıştır. Buradan hareketle, kinetik zincir egzersizlerinin, kas yaralanmalarının önlenmesi ve tedavisindeki rolü detaylandırılarak bu egzersizlerin kas fonksiyonları üzerindeki etkileri tartışılmıştır. Kasların mobilizasyon ve immobilizasyon süreçlerinde kinetik zincir egzersizlerinin biyomekanik ve nöromüsküler avantajlarına vurgu yapılarak bu egzersizlerin kas bütünlüğünün korunması, fonksiyonel kapasitenin artırılması ve hareket paternlerinin iyileştirilmesindeki kritik önemi vurgulanmıştır. Sonuç olarak, açık ve kapalı kinetik zincir egzersizlerinin kas mobilizasyon rehabilitasyon programlarında güvenle uygulanabileceğini ve her iki egzersiz türünün de kas fonksiyonu, stabilizasyon ve iyileşme süreçlerine önemli katkılar sağladığını göstermektedir. Bu araştırmamızın da konuyla ilgili alan yazımına katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Kinetik Zincir, Kas, Mobilizasyon, İmmobilizasyon

THE IMPORTANCE OF KINETIC CHAIN EXERCISES IN MUSCLE MOBILIZATION AND IMMOBILIZATION

ABSTRACT

Muscle is a contractile tissue responsible for facilitating movement, supporting organ functions, and generating heat. Muscle injuries are among the most common orthopedic issues, affecting not only professional or amateur athletes but also the general population, regardless of their level of physical activity. Therefore, the significance of kinetic chain exercises in muscle mobilization and immobilization has long been a topic of discussion. This study primarily examines muscle injuries from both athletic and non-athletic perspectives, analyzing their mechanisms of occurrence and rehabilitation processes. By highlighting the necessity of systematically incorporating kinetic chain exercises into rehabilitation programs, this research aims to contribute to the fields of sports sciences and physiotherapy. The study employs a literature review and document analysis as its methodological approach. Accordingly, the role of kinetic chain exercises in preventing and treating muscle injuries is explored in detail, with a discussion on their effects on muscle functions. Emphasizing the biomechanical and neuromuscular advantages of kinetic chain exercises during muscle mobilization and immobilization processes, the study underscores their critical importance in preserving muscle integrity, enhancing functional capacity, and improving movement patterns. In conclusion, the findings suggest that both open and closed kinetic chain exercises can be safely implemented in muscle mobilization rehabilitation programs, demonstrating significant contributions to muscle function, stabilization, and recovery processes. It is anticipated that this research will provide valuable contributions to the existing literature on the subject.

Key Words: Kinetic Chain, Muscle, Mobilization, Immobilization

SAKATLIK SONRASI REHABİLİTASYON SÜRECİNDE KİNETİK ZİNCİR EGZERSİZLERİNİN ÖNEMİ

Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093
Serkan YARDIM
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
serkanyardim.7@icloud.com – 0000-0001-7850-2834
Doç. Dr. Özgür EKEN
İnönü Üniversitesi Spor Bilimleri
ozgur.eken@inonu.edu.tr – 0000-0002-5488-3158

ÖZET

Sakatlık, bir bireyin kaza veya hastalık sonucu uzuvlarında ya da duyu organlarında meydana gelen fonksiyonel bozuklukları ifade eden bir durumdur. Sakatlık sonrası rehabilitasyon, kas kuvveti ve kondisyon kayıplarını en aza indirerek sporcunun güvenli ve etkili bir şekilde performans seviyesine ulaşmasını hedefleyen sistematik bir süreçtir. Ortaya çıkan bu sürecin yönetilmesinde kinetik zincir egzersizlerinin rolü, birçok araştırma ile tartışılmaktadır. Bu çalışmada, sakatlık ve spor sakatlıklarının sporcu olan ve olmayan bireyler üzerindeki kas-iskelet sistemi disfonksiyonları, hareket kısıtlılıkları ve performans kayıpları detaylandırılarak fiziksel, fonksiyonel ve psikolojik etkileri ele alınmıştır. Dahası, kinetik zincir egzersizlerinin rehabilitasyon sürecindeki rolü değerlendirilmiş, bu egzersizlerin kas kuvveti, eklem stabilitesi, hareket paternleri ve nöromüsküler kontrol üzerindeki etkileri tartışılmıştır. Araştırmamızda amaç, sakatlık sonrası rehabilitasyon sürecinde kinetik zincir egzersizlerinin önemini açıklamaktır. Bu amaç doğrultusunda, yöntem olarak konu ile ilgili kapsamlı literatür taraması yapılmıştır. Elden edilen bilgiler doğrultusunda, kinetik zincir yaklaşımının, sadece izole kas gruplarını değil, vücudu bütüncül bir sistem olarak ele alarak fonksiyonel hareketleri geliştirdiği ve yaralanma sonrası adaptasyon süreçlerini hızlandırdığı vurgulanmıştır. Ayrıca, bu egzersizlerin propriyoseptif farkındalığı artırarak bireylerin hareket kalitesini ve genel performanslarını nasıl iyileştirdiği bilimsel çerçevede ele alınmıştır. Sonuç olarak, çalışmada kinetik zincir egzersizlerinin rehabilitasyon protokollerine entegrasyonunun gerekliliği ortaya konmuş ve bu egzersizlerin hem sporcular hem de genel popülasyon için etkin bir iyileşme stratejisi sunduğu vurgulanmıştır. Çalışmanın sonuçlarına göre, araştırmamızın, spor bilimleri, fizyoterapi ve rehabilitasyon alanlarında kanıta dayalı uygulamalara katkı sunması beklenmektedir.

Anahtar Kelimeler: Kinetik Zincir Egzersizleri, Sakatlık, Rehabilitasyon

THE IMPORTANCE OF KINETIC CHAIN EXERCISES IN THE REHABILITATION PROCESS AFTER INJURY

ABSTRACT

Injury refers to a condition in which functional impairments occur in an individual's limbs or sensory organs due to an accident or illness. Post-injury rehabilitation is a systematic process aimed at minimizing muscle strength and conditioning losses while ensuring the athlete reaches their performance level safely and effectively. The role of kinetic chain exercises in managing this process has been widely discussed in numerous studies. This study examines injuries and sports-related injuries in terms of musculoskeletal dysfunctions, movement restrictions, and performance losses in both athletic and non-athletic individuals, addressing their physical, functional, and psychological effects. Furthermore, the role of kinetic chain exercises in the rehabilitation process is evaluated, and their effects on muscle strength, joint stability, movement patterns, and neuromuscular control are discussed. The primary aim of this research is to explain the significance of kinetic chain exercises in post-injury rehabilitation. To achieve this objective, a comprehensive literature review was conducted as the methodological approach. Based on the findings, it is emphasized that the kinetic chain approach does not focus solely on isolated muscle groups but considers the body as a holistic system, enhancing functional movements and accelerating adaptation processes after injury. Additionally, the study scientifically examines how these exercises improve proprioceptive awareness, thereby enhancing individuals' movement quality and overall performance. In conclusion, the necessity of integrating kinetic chain exercises into rehabilitation protocols is highlighted, emphasizing that these exercises provide an effective recovery strategy for both athletes and the general population. Based on the study's findings, it is expected that this research will contribute to evidence-based practices in the fields of sports sciences, physiotherapy, and rehabilitation.

Key Words: Kinetic Chain Exercises, Injury, Rehabilitation

ENGELLİ YAŞAM MERKEZLERİNİN ENGELLİ BİREYLERE SAHİP AİLELERÜZERİNDEKİ ETKİSİ

Yeşim BAŞCI
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
yes1mbsc1@gmail.com - 0009-0004-0717-5070
Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri Fakültesi
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093

ÖZET

Engelli bireylerin ailelerine yüklediği sorumluluklar, özellikle annelerin psikolojik sağlıklarını, sosyal yaşamlarını ve ekonomik durumlarını olumsuz yönde etkilemektedir. Bir ailede engelli bireyin varlığı, özellikle ebeveynler ve kardeşler üzerinde ciddi bir bakım sorumluluğu yaratırken bu bireylerin topluma entegrasyonu için çeşitli destek mekanizmalarına ihtiyaç duyulmaktadır. Engelli Yaşam Merkezleri (EYM), engelli bireylerin toplumsal katılımını desteklerken, ailelerin bakım yükünü hafifletmeyi amaçlayan bir hizmet sunmaktadır. Bu merkezler, ailelere bireysel danışmanlık, grup terapisi, sosyal etkinlikler, rehabilitasyon ve eğitim programları gibi çeşitli destekler sağlamaktadır. Ayrıca, EYM'nde sunulan fiziksel aktivite programları, engelli bireylerin motor becerilerini geliştirmekte, ailelerin de fiziksel sağlıklarını iyileştirmekte ve stres düzeylerini azaltmaktadır. Literatür taraması ve doküman analiz yöntemine dayalı bu çalışmada amaç, engelli yaşam merkezlerinin engelli bireylere sahip ailelerin üzerindeki etkilerini açıklamaktır.Bu amaç doğrultusunda, EYM'nin engelli bireyler ve aileleri üzerindeki psikolojik, sosyal ve ekonomik etkileri ele alınmış, ayrıca fiziksel aktivitelerin sağlık üzerindeki yararları vurgulanmıştır. Araştırmalar, EYM'nin ailelerin psikolojik dayanıklılıklarını artırdığı, sosyal izolasyonu azalttığı, ekonomik yüklerini hafiflettiği ve fiziksel sağlıklarına katkı sağladığı yönünde bulgular sunmaktadır. Özellikle annelerin, çocuklarının bakımına ilişkin yaşadıkları zorluklarla başa çıkabilmeleri için bu merkezlerin sunduğu hizmetler önemli bir rol oynamaktadır.Bununla birlikte, mevcut EYM'nin sayısının yetersiz olduğu ve bu hizmetlerin daha erişilebilir hale getirilmesi gerektiği vurgulanmaktadır. Sonuç olarak, EYM, hem engelli bireylerin hem de ailelerinin yaşam kalitesini iyileştirmek adına kritik bir öneme sahiptir, ancak hizmetlerin kapsamı ve erişilebilirliği artırılmalıdır.

Anahtar Kelimeler: Engelli Yaşam Merkezleri, Rehabilitasyon, Yaşam Kalitesi, Aile.

THE EFFECT OF DISABLED LIFE CENTERS ON FAMILIES WITH DISABLED INDIVIDUALS

ABSTRACT

The responsibilities that disabled individuals impose on their families negatively affect the psychological health, social life and economic status of mothers in particular. The presence of a disabled individual in a family creates a serious care responsibility, especially on parents and siblings, and various support mechanisms are needed for the integration of these individuals into society. Disabled Living Centers (DLC) provide a service that aims to alleviate the care burden of families while supporting the social participation of disabled individuals. These centers provide families with various supports such as individual counseling, group therapy, social activities, rehabilitation and education programs. In addition, the physical activity programs offered in DLC develop the motor skills of disabled individuals, improve the physical health of families and reduce their stress levels. The aim of this study, based on literature review and document analysis, is to explain the effects of disabled living centers on families with disabled individuals. In line with this purpose, the psychological, social and economic effects of DLC on disabled individuals and their families are discussed, and the health benefits of physical activities are emphasized. Studies show that DLC increases the psychological resilience of families, reduces social isolation, eases their economic burdens and contributes to their physical health. The services provided by these centers play an important role, especially for mothers to cope with the difficulties they experience regarding the care of their children. However, it is emphasized that the number of existing DLCs is insufficient and that these services should be made more accessible. In conclusion, DLC is of critical importance in improving the quality of life of both disabled individuals and their families, but the scope and accessibility of services should be increased.

Keywords: Disabled Living Centers, Rehabilitation, Quality of Life, Family.

DİRENÇ EGZERSİZLERİNİN VÜCUT TİPOLOJİSİ (SOMATOTİP)'NE ETKİSİ

Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri Fakültesi
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093
Yeşim BAŞCI
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
yes1mbsc1@gmail.com - 0009-0004-0717-5070

ÖZET

Direnç egzersizleri, kas gücünü artırmak, vücut kompozisyonunu iyileştirmek ve genel sağlığı desteklemek amacıyla yapılan antrenman türleridir. Vücut tipolojisi; genetik ve çevresel faktörlerin etkisiyle belirlenir ve üç ana vücut tipi bulunmaktadır: Ektomorf, mezomorf ve endomorf. Ektomorf bireyler ince yapılı olup kas kazanımı zorlaşırken, mezomorflar kas gelişimine yatkındır, endomorflar ise, yüksek yağ oranına sahip olup kilo vermekte zorlanabilirler. Çalışmada, direnç egzersizlerinin vücut tipleri üzerindeki etkilerinin incelenmesi amaçlanmıştır. Bu amaç doğrultusunda çalışmanın yöntemi olarak, araştırma kapsamına alınan konu hakkında güncel literatür taraması yapılarak ilgiliyayınlar irdelenmiştir. Ektomorf bireylerin kas kazanımını desteklemek için düşük tekrar ve yüksek ağırlıklı egzersizlere yönelmesi önerilmektedir. Mezomorf bireyler, kas gelişimine yatkın olduklarından yoğun antrenmanlara hızlı uyum sağladığı belirtilmektedir. Endomorflar ise, direnç egzersizlerini kardiyo ile destekleyerek yağ kaybını hızlandırmaları tavsiye edilmektedir. Araştırmalar, direnç egzersizlerinin vücut kompozisyonunu olumlu yönde etkilediğini göstermektedir. Kas hipertrofisini artırırken yağ oranını azalttığı, bazal metabolizma hızını yükselttiği ve genel sağlığı geliştirdiği söylenebilir. Ayrıca, düzenli direnç antrenmanları, bireylerin psikolojik iyi oluşunu da destekleyerek depresyon ve anksiyeteyi azaltabilir. Sonuç olarak, bireylerin vücut tipine uygun direnç antrenmanlarının planlanması, fiziksel gelişimi optimize etmek açısından önemlidir. Gelecekte yapılacak araştırmalar, vücut tipolojisi faktörlerinin egzersiz adaptasyonundaki rolünü inceleyerek kişiye özel antrenman programlarının oluşturulmasına katkı sağlayabilir. Buradan hareketle araştırmamızın konu ile ilgili alan yazımına katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Direnç Egzersizi, Vücut Tipolojisi, Somatotip.

EFFECT OF RESISTANCE EXERCISES ON BODY TYPOLOGY (SOMATOTYPE)

ABSTRACT

Resistance exercises are types of training performed to increase muscle strength, improve body composition and support general health. Body typology is determined by the effects of genetic and environmental factors and there are three main body types: ectomorph, mesomorph and endomorph. While ectomorph individuals are thin and have difficulty gaining muscle, mesomorphs are prone to muscle development, and endomorphs have a high fat content and may have difficulty losing weight. The study aimed to examine the effects of resistance exercises on body types. In line with this purpose, as the method of the study, current literature was scanned on the subject covered by the research and relevant publications were examined. It is recommended that ectomorph individuals focus on low repetition and high weight exercises to support muscle gain. It is stated that mesomorph individuals adapt quickly to intense training since they are prone to muscle development. Endomorphs are recommended to accelerate fat loss by supporting resistance exercises with cardio. Studies show that resistance exercises have a positive effect on body composition. It can be said that it increases muscle hypertrophy, reduces fat content, increases basal metabolic rate and improves general health. In addition, regular resistance training can support individuals' psychological well-being and reduce depression and anxiety. As a result, planning resistance training appropriate for individuals' body types is important in optimizing physical development. Future research can contribute to the creation of personalized training programs by examining the role of body typology factors in exercise adaptation. Based on this, it is thought that our research will contribute to the literature on the subject.

Keywords: Resistance Exercise, Body Typology, Somatotype.

POST AKTİVASYON POTANSİYELİ VE ENERJİ SİSTEMLERİ: TEORİK BİR İNCELEME

Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri Fakültesi
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093
Bayram TAN
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
tanbayram44@gmail.com – 0009-0007-0812-0129
Doç. Dr. Özgür EKEN
İnönü Üniversitesi Spor Bilimleri Fakültesi
ozgur.eken@inonu.edu.tr – 0000-0002-5488-3158

ÖZET

Post-Aktivasyon Potansiyeli (PAP), belirli bir egzersiz sonrası kaslarda meydana gelen kısa süreli performans artışı olarak tanımlanmakta ve özellikle anaerobik özellikli sportif faaliyetlerde etkin bir rol oynamaktadır. Bu çalışma, PAP ile enerji sistemleri arasındaki etkileşimi literatür taraması yöntemiyle incelemeyi amaçlamaktadır. Çalışmada, 2000–2025 yılları arasında yayımlanan ulusal ve uluslararası literatür taranarak, PAP'ın aerobik ve anaerobik enerji sistemleri üzerindeki etkileri değerlendirilmiştir. Bulgular, PAP'ın özellikle anaerobik sistemle yüksek düzeyde etkileşim içinde olduğunu ve sprint, atlama, güç gerektiren egzersizlerde performansı artırabildiğini göstermektedir. Öte yandan, aerobik dayanıklılığın ön planda olduğu spor branşlarında PAP'ın etkisi sınırlı kalmakta, bazı çalışmalarda anlamlı performans artışı sağlanamadığı görülmektedir. Sonuç olarak, PAP'ın bireysel özellikler dikkate alınarak kısa süreli, yüksek yoğunluklu aktiviteler öncesinde uygulanması sportif başarıya katkı sağlayabilir. Ancak aerobik etkinliklerdeki etkisinin daha net anlaşılabilmesi için ileri düzey araştırmalara ihtiyaç vardır.

Anahtar Kelimeler: Post-Aktivasyon Potansiyeli, Enerji Sistemleri, Aerobik Sistem, Anaerobik Sistem

ABSTRACT

Post-Activation Potentiation (PAP) is defined as a short-term performance enhancement in muscles following a specific exercise and plays an effective role particularly in anaerobic-oriented sports activities. This study aims to examine the interaction between PAP and energy systems through a literature review method. In this study, national and international literature published between 2000 and 2025 was reviewed to evaluate the effects of PAP on aerobic and anaerobic energy systems. Findings indicate that PAP interacts strongly with the anaerobic system and can enhance performance in activities requiring sprinting, jumping, and muscular power. On the other hand, in sports where aerobic endurance is dominant, the effect of PAP

appears to be limited, with some studies showing no significant improvement in performance. In conclusion, when tailored to individual needs, PAP protocols can contribute to performance in short-term, high-intensity activities. However, further advanced research is needed to clarify its effectiveness in aerobic-based activities.

Keywords: Post-Activation Potentiation, Energy Systems, Aerobic System, Anaerobic System,

POST AKTİVASYON TEMELLİ ÇALIŞMALARIN SPRİNT PERFORMANSINA ETKİSİ

Bayram TAN
İnönü Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor ABD
tanbayram44@gmail.com – 0009-0007-0812-0129
Doç. Dr. Nurkan YILMAZ
İnönü Üniversitesi Spor Bilimleri Fakültesi
nurkan.yilmaz@inonu.edu.tr – 0000-0002-8845-7093
Doç. Dr. Özgür EKEN
İnönü Üniversitesi Spor Bilimleri Fakültesi
ozgur.eken@inonu.edu.tr – 0000-0002-5488-3158

ÖZET

Post-aktivasyon potansiyeli (PAP), yüksek şiddetli bir aktivite, antrenman sonrasında meydana gelen performanstaki geçici artış olarak tanımlanmaktadır. Son yıllarda yapılan çalışmalar, PAP temelli ısınma protokollerinin sprint gibi patlayıcı performans gerektiren aktivitelerde performans artışına katkı sağlayabileceğini göstermektedir. Bu çalışmanın amacı, sprint performansına yönelik PAP uygulamalarının etkilerini incelemek, güncel literatür doğrultusunda bu etkileri değerlendirmek ve PAP protokollerinin sportif performans üzerindeki etkisini ortaya koymaktır. Google akademik veri tabanına "Post-Aktivasyon Potansiyeli, Sprint, Performans" anahtar kelimeleri yazılarak literatür taramasına geçildi. Literatürdeki çalışmalar, PAP'ın sprint performansı üzerinde olumlu etkileri birçok çalışmanın sonuçları arasında yer almaktadır. Ancak bu etkinin sporcuların bireysel özellikleri, uygulanan yüklenme tipi, toparlanma süresi ve antrenman düzeyi gibi faktörlere bağlı olarak değişkenlik gösterebileceğini çıkan sonuçlar arasında yer almaktadır. Sonuç olarak, PAP temelli ısınma protokollerinin sporcuların sprint performansını desteklemek amacıyla bireysel özelliklerin ön göz önünde bulundurularak planlanması, yeterli dinlenme ve yüklenme sürelerinin iyi bir şekilde belirlendikten sonra antrenman reçetesinin oluşturması sporcuların performansında olumlu etki edebilir.

Anahtar Kelimeler: Post-Aktivasyon Potansiyeli, Sprint, Performans

EFFECT OF POST ACTIVATION-BASED STUDIES ON SPRINT PERFORMANCE

ABSTRACT

Post-activation potentiation (PAP) is defined as a temporary increase in performance following a high-intensity activity or training. Recent studies have shown that warm-up protocols based on PAP may contribute to improvements in explosive activities such as sprinting. The aim of this study is to examine the effects of PAP applications on sprint performance, to evaluate these effects in light of current literature, and to reveal the impact of PAP protocols on athletic

performance. A literature review was conducted using Google Scholar with the keywords "Post-Activation Potentiation, Sprint, Performance." The reviewed studies indicate that PAP has a positive effect on sprint performance in many cases. However, this effect may vary depending on individual characteristics of athletes, the type of load applied, recovery duration, and training level. As a result, PAP-based warm-up protocols can positively impact sprint performance when planned with consideration of individual athlete characteristics, and when optimal rest and loading durations are properly determined during training programming.

Keywords: Post-Activation Potentiation, Sprint, Performance

FUTBOLCULARDA 8 HAFTALIK SOLUNUM KAS VE YÜKSEK YOĞUNLUKLU İNTERVAL ANTRENMANIN MAXVO2 VE SOLUNUM KAS KUVVETİNE ETKİSİ

Dr. Mehmet İsmail TOSUN
Hitit Üniversitesi
mehmetismailtosun@hitit.edu.tr - 0000-0003-3158-3942

Yüksek Lisans Öğrencisi Özge TOSUN
Hitit Üniversitesi
Ozgegenc2010@hotmail.com - 0009-0001-5012-0022

Nezaket ÖZCAN
Hitit Üniversitesi
nezeketozcan@outlook.com - 0009-0005-5049-5691

ÖZET

Bu çalışma, sekiz haftalık solunum kas eğitimi (SKA) ile yüksek yoğunluklu interval antrenmanın (HIIT) kombinasyonunun, futbolcularda maksimal oksijen tüketimi (VO_2max) ve solunum kas kuvveti üzerindeki etkilerini araştırmayı amaçlamaktadır. Futbol hem aerobik dayanıklılığı hem de anaerobik patlamaları gerektiren karmaşık bir fiziksel aktivite yapısına sahiptir. VO_2max düzeyinin yüksek olması, futbolcuların sahadaki dayanıklılığı ve toparlanma hızını doğrudan etkileyen temel bir fizyolojik parametre olarak öne çıkmaktadır. Son dönemde, klasik dayanıklılık antrenmanlarının ötesinde, HIIT protokollerinin VO_2max üzerinde daha kısa sürede anlamlı iyileşmeler sağladığı gösterilmiştir. Bununla birlikte, solunum kaslarının gücü ve dayanıklılığı da spor performansında önemli ancak genellikle ihmal edilen bir parametre olarak değerlendirilmektedir.

Bu bağlamda araştırmada, yaşları 18–27 arasında değişen 26 amatör erkek futbolcu, randomize olarak üç gruba ayrılmıştır: yalnızca mevcut kulüp antrenmanlarını sürdüren kontrol grubu, HIIT uygulayan grup ve HIIT ile SKA uygulayan grup. Tüm gruplar sekiz haftalık bir müdahale sürecine tabi tutulmuş; öncesinde ve sonrasında maksimum inspiratuar basınç (MIP), maksimum ekspiratuar basınç (MEP) ve VO_2max ölçümleri gerçekleştirilmiştir. Solunum kas

kuvveti, geçerliliği kanıtlanmış MicroRPM cihazıyla, aerobik kapasite ise Yo-Yo Intermittent Recovery Test Level 1 protokolü ile değerlendirilmiştir.

Bulgulara göre, tüm gruplarda ölçülen parametrelerde artış gözlenmiş; ancak HIIT + SKA grubunda bu artışlar istatistiksel olarak anlamlı düzeyde daha yüksek olmuştur. MIP değerinde bu grupta %5.83'lük, MEP'te %4.9'luk ve VO_2max'ta %1.79'luk artış kaydedilmiştir. HIIT grubunda bu artışlar sırasıyla %2.84, %1.36 ve %1.33 iken; kontrol grubunda %1.01, %0.87 ve %0.96 ile sınırlı kalmıştır. Bu sonuçlar, SKA'nın solunum kaslarında meydana getirdiği nöromüsküler ve yapısal adaptasyonların HIIT ile uygulandığında sinerjik etki yarattığını göstermektedir. Özellikle diyafragma dayanıklılığının artması ve inspiratuar kas yorgunluğunun azalması, periferik kaslara oksijen taşınımını iyileştirerek genel egzersiz performansını artırmaktadır.

Çalışma sonucunda, kombine protokolün futbolcular için sezon öncesi veya ara dönemlerde uygulanmasının hem dayanıklılık performansını hem de ventilatuvar ekonomiyi artırıcı etkiler sağlayabileceği sonucuna varılmıştır. Gelecekte yapılacak araştırmalarda, kadın sporcuların dahil edilmesi ve daha uzun süreli protokollerle ventilatuvar eşik gibi ileri düzey fizyolojik göstergelerin izlenmesi önerilmektedir.

Anahtar Kelimeler : Solunum Kas Antrenmanı, İnterval Antrenman, Maksimum İnspirasyon Basıncı

OTOKLAV KÜRÜ UYGULAMASI VE KARBON FİBER TAKVİYESİNİN GEOPOLİMER HARÇLARIN MEKANİK ÖZELLİKLERİNE ETKİSİ

Abdul Basir YADGARI
Fırat Üniversitesi
231139111@firat.edu.tr-0000-0002-7585-2609
Prof. Dr. Harun TANYILDIZI
Fırat Üniversitesi,
htanyildizi@firat.edu.tr- 0000-0002-7585-2609
Dr. Öğr. Üyesi Mahmoud ZIADA
İstanbul Aydın Üniversitesi
mahmoudm.s.ziada@aydin.edu.tr-0000-0003-2986-6759

ÖZET

Nüfusun artmasıyla birlikte, çevresel ve ekonomik açıdan önemli alanlar inşaat amaçlı kullanılmakta ve çimento kullanımı nedeniyle CO_2 emisyonları artmaktadır. Bu nedenle, bu çalışma sürdürülebilir ve dayanıklı bir inşaat malzemesi tasarlamayı amaçlamaktadır. Karbon liflerinin geopolimer harç kullanımı, malzemenin mukavemetini ve çatlaklara karşı direncini artırmak içindir. Karbon lifleri geopolimer harç yüksek çekme dayanımı, darbe dayanımı ve daha iyi dayanıklılık kazandırır. Ayrıca yapısal elemanların daha ince ve daha hafif tasarlanmasını sağlar. Geopolimer harç otoklavlanması, yüksek sıcaklık ve basınç altında gerçekleştirilen bir kürleme işlemidir. Bu işlem geopolimer harç mikro yapısını iyileştirir, dayanımını artırır ve kür süresini kısaltır. Otoklavlama özellikle erken yaş dayanımı üzerinde olumlu bir etkiye sahiptir, gözenekliliği azaltır ve daha kompakt bir yapı oluşturur. Geopolimer harç üretiminde (%0.5, %1, %1.5 ve %2) karbon fiber, ince agrega, sodyum hidroksit, sodyum silikat ve uçucu kül kullanıldığı bu çalışmada, otoklav ve kontrol kür koşullarında 3 ve 7 günlük eğilme ve basınç dayanımları araştırılmıştır. Sonuçlara göre, özellikle %0.5 ve %1 karbon elyaf oranı geopolimer harç mekanik dayanımını artırmıştır. En yüksek dayanım, eğilmede 10.78 MPa ve basınçta 40.83 MPa'ya ulaşan %1 karbon fiber ve otoklav kürü ile elde edilmiştir. Bu da liflerin çatlama önleyici etkisi ile matris yapısını güçlendirdiğini göstermektedir. Otoklav kürü erken yaş dayanımını artırırken, %1.5 ve %2 elyaf oranlarında elyaf topaklanması ve işlenebilirlik sorunları nedeniyle dayanım azalmıştır. Sonuç olarak, %1 karbon elyaf oranı ve otoklav kürü en verimli kombinasyon olarak önerilmektedir.

Anahtar Kelime: Geopolimer harç, karbon elyaf, otoklav kürü

EFFECT OF AUTOCLAVE CURİNG AND CARBON FİBER REİNFORCEMENT ON THE MECHANİCAL PROPERTİES OF GEOPOLYMER MORTARS

ABSTRACT

With population growth, environmentally and economically important areas are being used for construction purposes and CO_2 emissions are increasing due to the use of cement. Therefore, this study aims to design a sustainable and durable construction material. The use of carbon fibers in geopolymer mortar is to increase the strength and crack resistance of the material. Carbon fibers give geopolymer mortar high tensile strength, impact strength and better durability. It also allows structural elements to be designed thinner and lighter. Autoclaving of geopolymer mortar is a curing process carried out under high temperature and pressure. This process improves the microstructure of geopolymer mortar, increases its strength and shortens the curing time. Autoclaving has a particularly positive effect on early age strength, reduces porosity and creates a more compact structure. In this study, 0.5%, 1%, 1.5% and 2% carbon fiber, fine aggregates sodium hydroxide, sodium silicate and fly ash were used in the production of geopolymer mortar and 3 and 7 day flexural and compressive strengths were investigated under autoclave and control curing conditions. According to the results, especially 0.5% and 1% carbon fiber content increased the mechanical strength of geopolymer mortar. The highest strength was obtained with 1% carbon fiber and autoclave curing, reaching 10.78 MPa in flexure and 40.83 MPa in compression. This shows that the fibers strengthen the matrix structure with their anti-cracking effect. While autoclave curing increased the early age strength, the strength decreased at 1.5% and 2% fiber ratios due to fiber agglomeration and workability problems. As a result, 1% carbon fiber ratio and autoclave curing is recommended as the most efficient combination.

Keywords: Geopolymer mortar, carbon fiber, autoclave curing

ÇİMENTOLU ALKALİ AKTİVE EDİLMİŞ HARÇLARIN ERKEN YAŞLARDAKİ MEKANİK ÖZELLİKLERİNİN İNCELENMESİ

Zekeriya ARTUN
Muş Alparslan Üniversitesi,
z.artun@alparslan.edu.tr-0000-0002-4026-6351
Prof. Dr. Harun TANYILDIZI
Fırat Üniversitesi,
htanyildizi@firat.edu.tr- 0000-0002-7585-2609

ÖZET

Geleneksel çimento bazlı bağlayıcı sistemler, çevresel kaygılar nedeniyle alternatif malzeme arayışlarını gündeme getirmiştir. Bu bağlamda, alkali aktivasyon yöntemiyle geliştirilen bağlayıcılar, sürdürülebilir ve yüksek performanslı yapı malzemeleri üretimi açısından önem kazanmıştır. Bu çalışmada, farklı oranlarda çimento içeren (%20, %40, %60, %80 ve %100) alkali çözeltilerle aktive edilen karışımların mekanik performansları araştırılmıştır. Sodyum silikat ve 12 molar sodyum hidroksit (SS+SH) içeren karışım referans alkali aktivatör olarak kullanılmış ve karışımların eğilme ve basınç dayanımları erken (3 gün) ve geç (7 gün) kür sürelerinde değerlendirilmiştir. Bu çalışmada, ana bağlayıcı olarak cüruf ve Çimento ise PÇ 42.5R kullanılmıştır. Elde edilen sonuçlara göre, referans karışım 3 ve 7. günlerde sırasıyla 1.50 MPa ve 1.61 MPa eğilme dayanımı göstererek klasik çimento-su karışımına göre daha iyi performans sergilemiştir. %80 cüruf katkılı karışım ise 1.87 MPa eğilme ve 39.55 MPa basınç dayanımı ile en yüksek mekanik performansa ulaşmıştır. Genel olarak, cüruf oranı arttıkça basınç dayanımında artış gözlenmiş ve optimum performans %80 cüruf oranında elde edilmiştir. Sonuç olarak, alkali aktivatörlerin karışımların mekanik özelliklerini önemli ölçüde iyileştirdiği görülmüştür. Bulgular, alkali aktivasyon sistemlerinde çimento oranının optimize edilmesinin üstün mekanik performans için kritik olduğunu göstermektedir.

Anahtar Kelimeler: Alkali aktive edilmiş harç, çimento, mekanik özellikler.

INVESTIGATION OF THE MECHANICAL PROPERTIES OF CEMENTITIOUS ALKALINE ACTIVATED MORTARS AT EARLY AGES

ABSTRACT

Traditional cement-based binder systems have brought the search for alternative materials to the agenda due to environmental concerns. In this context, binders developed by alkaline activation method have gained importance for the production of sustainable and high performance building materials. In this study, the mechanical performances of mixtures containing different proportions of cement (20%, 40%, 60%, 80% and 100%) activated with alkaline solutions were investigated. A mixture containing sodium silicate and 12 molar sodium hydroxide (SS+SH) was used as a reference alkali activator and the flexural and compressive strengths of the mixtures were evaluated at early (3 days) and late (7 days) curing periods. In this study, slag was used as the main binder and PC 42.5R was used as cement. According to the results obtained, the reference mix performed better than the conventional cement-water mix by showing flexural strengths of 1.50 MPa and 1.61 MPa at 3 and 7 days, respectively. The

80% slag admixture mix achieved the highest mechanical performance with flexural strength of 1.87 MPa and compressive strength of 39.55 MPa. In general, an increase in compressive strength was observed as the slag content increased and the optimum performance was obtained at 80% slag content. As a result, it was observed that alkali activators significantly improved the mechanical properties of the mixtures. The findings indicate that optimizing the cement ratio in alkali activation systems is critical for superior mechanical performance.

Keywords: Alkali-activated mortar, cement, mechanical properties.

MERSİN LİMANI'NDA KONTEYNER ELLEÇLEME FAALİYETLERİNİN ZAMAN SERİSİ TABANLI DEĞERLENDİRMESİ

Öğr. Gör. Dr. , Elvan DENİZ
Çanakkale Onsekiz Mart Üniversitesi,
elvandeniz@comu.edu.tr - 0000-0002-4237-1358

ÖZET

Mersin Limanı, Türkiye'nin Akdeniz kıyısında yer alan en büyük ve en yoğun konteyner limanlarından biri olarak, ülkenin dış ticaret yapısında stratejik bir rol üstlenmektedir. Coğrafi konumu itibarıyla Orta Doğu, Avrupa ve Afrika pazarlarına erişimde önemli bir geçiş noktası olan liman, hem transit taşımacılık hem de doğrudan ithalat ve ihracat faaliyetleri açısından yüksek bir işlem hacmine sahiptir. Mersin Uluslararası Limanı (MIP) tarafından işletilen tesis, Türkiye'nin toplam konteyner elleçleme hacminin önemli bir kısmını karşılamaktadır. Limanın gelişmiş lojistik altyapısı, geniş hinterlant bağlantıları ve teknolojik kapasitesi, operasyonel verimliliği ve rekabet gücünü artırmaktadır. Yıl içinde gözlemlenen mevsimsel değişimler, konteyner elleçleme hacimlerinde belirgin dalgalanmalara yol açmakta; bu durum, liman planlamasında dinamik ve öngörüye dayalı yaklaşımları gerekli kılmaktadır. Özellikle otomotiv, tarım, tekstil ve kimya sektörlerine yönelik taşımalar limanın sektörel çeşitliliğini güçlendirmektedir. Bu çalışmada, 2012–2024 dönemi konteyner verileri analiz edilerek zaman serisi yöntemleriyle 2025 sonrası için öngörülerde bulunulmuştur. Geliştirilen tahmin modelleri, Mersin Limanı'nın gelecekteki kapasite planlaması ve altyapı yatırımları açısından yol gösterici bilimsel çıktılar sunmaktadır. Liman, bölgesel lojistik merkez işlevini sürdürerek Türkiye'nin tedarik zinciri sürekliliğinde kilit rol oynamaya devam etmektedir. Sonuç olarak, Mersin Limanı, Türkiye'nin konteyner limanları arasında bölgesel lojistik merkez işlevi görmekte; dış ticaretin sürekliliği ve tedarik zinciri verimliliği açısından stratejik bir rol üstlenmektedir.

Anahtar Kelimeler : Mersin limanı, Zaman serisi modelleme, Konteyner elleçleme tahmini.

ABSTRACT

Mersin Port, located on Turkey's Mediterranean coast, is one of the largest and heavily used container ports in the country, playing a strategic role in the national foreign trade structure. Due to its geographic location, the port serves as a crucial gateway to Middle Eastern, European, and African markets, handling substantial volumes of both transit transportation and direct import/export activities. Operated by Mersin International Port (MIP), the facility accounts for a significant share of Turkey's total container handling capacity. The port's advanced logistics infrastructure, extensive hinterland connections, and technological capabilities enhance its operational efficiency and competitive strength. Seasonal fluctuations observed throughout the

year result in notable variations in container handling volumes, necessitating dynamic and forecast-based planning approaches. Transport activities related to the automotive, agricultural, textile, and chemical sectors further strengthen the port's sectoral diversity. In this study, container handling data for the period between 2012 and 2024 were analyzed, and forecasts for the post-2025 period were developed using time series analysis methods. The forecasting models generated provide scientifically grounded insights for future capacity planning and infrastructure investments at Mersin Port. Continuing to function as a regional logistics hub, the port plays a key role in ensuring the continuity of Turkey's supply chain. In conclusion, Mersin Port serves as a regional logistics center among Turkey's container ports, holding a strategic role in sustaining foreign trade continuity and supply chain.

Key Words : Port of Mersin, Time series modeling, Container handling forecasting

KOCAELİ LİMANI'NDA KONTEYNER ELLEÇLEME FAALİYETLERİNİN ZAMAN SERİSİ TABANLI DEĞERLENDİRMESİ

Öğr. Gör. Dr. , Elvan DENİZ
Çanakkale Onsekiz Mart Üniversitesi,
elvandeniz@comu.edu.tr - 0000-0002-4237-1358

ÖZET

Kocaeli Limanı, Türkiye'nin dış ticaret hacmi açısından en stratejik limanlarından biri olarak öne çıkmakta olup, özellikle konteyner taşımacılığı alanındaki yüksek performansıyla dikkat çekmektedir. Marmara Denizi'nin doğu kıyısında yer alan liman, sanayi bölgelerine yakınlığı ve çok modlu taşımacılığa elverişli altyapısı sayesinde Türkiye'nin üretim ve ihracat kapasitesine doğrudan katkı sağlamaktadır. Buna ek olarak, limanın otomasyon sistemleri ve dijital liman yönetimi uygulamaları, sektöre örnek teşkil edecek düzeyde gelişmiş olup; terminallerde gerçekleştirilen yüksek hacimli ve düzenli ihracat operasyonları limanın operasyonel verimliliğini ve sürdürülebilirliğini ön plana çıkarmaktadır. DP World Yarımca, Evyapport, Yılport Gebze ve TCE gibi özel liman işletmecileri, bölgenin elleçleme kapasitesini ve rekabet gücünü önemli ölçüde artırmaktadır. 2012–2024 yılları arasında Marmara Bölgesi'nde elleçlenen konteyner trafiğinin önemli bir bölümü Kocaeli limanı kaynaklı olmuştur. Liman, ithalat, ihracat ve transit rejimleri kapsamında, özellikle otomotiv, kimya, demir-çelik ve petrokimya ürünlerinde düzenli olarak yüksek hacimli işlemler gerçekleştirmiştir. Liman, ithalat, ihracat ve transit rejimleri kapsamında, özellikle otomotiv, kimya, demir-çelik ve petrokimya ürünlerinde düzenli olarak yüksek hacimli işlemler gerçekleştirmiştir. Bu çalışma, 2012–2024 dönemine ait resmi veriler kullanılarak Kocaeli Limanı'nda TEU bazında konteyner elleçleme miktarlarını incelemektedir. 2025 sonrası döneme ilişkin öngörüler üretmek amacıyla zaman serisi analiz yöntemleri uygulanmıştır. Tahmin modelleri, Minitab 17 istatistik yazılımı kullanılarak geliştirilmiş ve değerlendirilmiş; en doğru model belirlenmiştir. Sonuç olarak, Kocaeli Limanı Türkiye'nin konteyner lojistiğinde kilit rolünü sürdürmekte; bölgesel ticaret akışında ve ekonomik-lojistik planlamalarda stratejik önemini pekiştirmektedir.

Anahtar Kelimeler : Kocaeli limanı, Zaman serisi modelleme, Konteyner elleçleme tahmini, Minitab yazılımı.

ABSTRACT

Kocaeli Port stands out as one of Türkiye's most strategic ports in terms of foreign trade volume, particularly due to its high performance in container transportation. Located on the eastern coast of the Sea of Marmara, the port directly contributes to the country's production and export capacity thanks to its proximity to industrial zones and its infrastructure that supports

multimodal transportation. Furthermore, its advanced automation systems and digital port management practices serve as a model for the industry, while the high-volume and regular export operations carried out at the terminals highlight its operational efficiency and sustainability. Private port operators such as DP World Yarımca, Evyapport, Yılport Gebze, and TCE have significantly enhanced the region's handling capacity and competitive power. Between 2012 and 2024, a substantial portion of the container traffic in the Marmara Region originated from Kocaeli Port. The port has consistently handled high-volume operations, particularly in the automotive, chemical, iron-steel, and petrochemical sectors, under import, export, and transit regimes. This study analyzes the container throughput (in TEUs) at Kocaeli Port using official data for the 2012–2024 period. Time series analysis methods were applied to generate forecasts for the post-2025 period. Forecasting models were developed and evaluated using Minitab 17 statistical software, and the most accurate model was identified. As a result, Kocaeli Port continues to play a key role in Turkey's container logistics and reinforces its strategic importance in regional trade flows and economic-logistical planning.

Key Words : Port of Kocaeli, Time series modeling, Container handling forecasting, Minitab software

Dental Malzeme Tasarımında İki Katmanlı Yapı Yaklaşımı: Ti6Al4V Kaplamalı NiCr Alaşımları

Zeynep KESKİN
Kocaeli Üniversitesi,
keskinzeynep274@gmail.com- 0009-0002-8715-3044
Prof. Dr. Rıdvan YAMANOĞLU
Kocaeli Üniversitesi,
ryamanoglu@kocaeli.edu.tr- 0000-0002-4661-8215

ÖZET

Dental uygulamalarda kullanılan malzemelerde, yüksek mekanik dayanım, biyouyumluluk ve üretim maliyetlerinin dengelenmesi önemli bir gerekliliktir. Özellikle metal destekli protez yapılarında kullanılan NiCr alaşımları, uygun maliyetleri ve işlenebilirlikleri nedeniyle tercih edilmekle birlikte, biyouyumluluk ve mekanik performans açısından çeşitli sınırlılıklar içermektedir. Bu nedenle, söz konusu dezavantajların giderilmesine yönelik yeni malzeme tasarımlarına ihtiyaç duyulmaktadır. Bu çalışmada, NiCr alaşımının mekanik ve biyouyumluluk özelliklerini iyileştirmek amacıyla, kaplama malzemesi olarak biyomedikal alanda yaygın kabul gören Ti6Al4V alaşımı kullanılmıştır. Titanyum alaşımlarının yüksek maliyetli olması, doğrudan tam malzeme olarak kullanımını kısıtlarken; NiCr alaşımı üzerine Ti6Al4V kaplanarak hem biyouyumlu hem de maliyet etkin bir kompozit yapı elde edilmesi hedeflenmiştir. Deneysel çalışmada, grafit kalıp içerisine toplam kalınlığı 4 mm olacak şekilde; alt tabakada 3 mm NiCr ve üst tabakada 1 mm Ti6Al4V alaşımı yerleştirilmiştir. Numuneler, 10^{-4} mbar vakum ortamında, 950 °C sıcaklık ve 30 MPa basınç altında 60 dakika süreyle basınç destekli sinterleme yöntemiyle birleştirilmiştir. Referans olması amacıyla, aynı parametrelerde Ti6Al4V kaplamasız NiCr numuneleri de hazırlanmıştır. Üretilen numuneler, metalografik hazırlık sonrasında mekanik performans açısından sertlik ve aşınma testlerine tabi tutulmuştur. Aşınma davranışı ball-on-disk yöntemi ile kuru ortamda değerlendirilmiş; numunelerin aşınma oranları ve sürtünme katsayıları karşılaştırılmıştır. Sertlik ölçümleri, kaplamalı numunelerin kesit alanında gerçekleştirilmiştir. Test sonuçları, Ti6Al4V kaplamasının NiCr alaşımının mekanik özelliklerini iyileştirdiğini göstermiştir. Kaplamalı numuneler, kaplamasız numunelere kıyasla daha yüksek sertlik ve aşınma direncine sahip bulunmuştur. Bu sonuçlar, Ti6Al4V kaplamalı NiCr alaşımının, maliyet etkinliği ve geliştirilmiş mekanik performansı ile dental malzeme uygulamalarında potansiyel bir alternatif sunabileceğini ortaya koymaktadır.

Anahtar Kelimeler: Dental malzeme, NiCr alaşımı, Ti6Al4V kaplama, mekanik özellik, biyouyumluluk

ABSTRACT

A Bilayer Structural Approach in Dental Material Design: Ti6Al4V Coated NiCr Alloys

In dental applications, achieving a balance between high mechanical strength, biocompatibility, and production cost is a critical requirement. Although NiCr alloys are preferred in metal-supported prosthetic structures due to their cost-effectiveness and workability, they exhibit certain limitations in terms of biocompatibility and mechanical performance. Therefore, new material designs are needed to overcome these disadvantages. In this study, Ti6Al4V alloy, which is widely accepted in the biomedical field, was used as a coating material to improve the mechanical and biocompatibility properties of the NiCr alloy. Since titanium alloys are costly and their direct use as bulk material is limited, it was aimed to develop a biocompatible and cost-effective composite structure by applying a Ti6Al4V coating on the NiCr alloy. In the experimental study, a graphite mold was prepared with a total thickness of 4 mm, consisting of a 3 mm NiCr alloy as the bottom layer and a 1 mm Ti6Al4V alloy as the top layer. The samples were consolidated using pressure-assisted sintering under a vacuum of 10^{-4} mbar at 950 °C with an applied pressure of 30 MPa for 60 minutes. For comparison, NiCr samples without Ti6Al4V coating were also produced under the same parameters. After metallographic preparation, the samples were subjected to hardness and wear tests to evaluate their mechanical performance. The wear behavior was assessed under dry conditions using the ball-on-disk method, and the wear rates and friction coefficients of the samples were compared. Hardness measurements were performed on the cross-sections of the coated samples. The test results demonstrated that the Ti6Al4V coating significantly improved the mechanical properties of the NiCr alloy. The coated samples exhibited higher hardness and wear resistance compared to the uncoated ones. These results indicate that the Ti6Al4V-coated NiCr alloy offers a promising alternative for dental material applications by providing improved mechanical performance and cost efficiency.

Keywords: Dental materials, NiCr alloy, Ti6Al4V coating, mechanical properties, biocompatibility

MINDFULNESS INTERVENTIONS TO IMPROVE SELF-ESTEEM AND PSYCHOLOGICAL WELL-BEING: INVESTIGATING THE ROLE OF CONTINGENT SELF-ESTEEM

Sofia Alvarez, Ricardo Gomez, Elisa Martinez, Javier Lopez

Department of Psychology, University of Madrid, Spain

Abstract: This study examines the effects of mindfulness interventions on psychological well-being, with a particular emphasis on self-esteem. In an age dominated by social media and the constant pressure of upward social comparisons, the role of self-esteem in personal well-being has become increasingly important. This research evaluates whether mindfulness practices can reduce the impact of contingent self-esteem, which is heavily dependent on external approval. An 8-week mindfulness-based stress reduction (MBSR) program was administered to 210 participants to assess its effectiveness. The results showed that the MBSR program significantly improved participants' trait mindfulness, self-esteem, and overall well-being, while notably decreasing contingent self-esteem. Furthermore, improvements in both types of self-esteem were positively associated with increased psychological well-being. However, contingent self-esteem was found to have a stronger predictive relationship with well-being than explicit self-esteem. These results highlight the importance of targeting various aspects of self-esteem in mindfulness interventions, indicating that such practices can be an effective tool for cultivating more stable self-esteem and enhancing psychological well-being.

Keywords: Mindfulness-based stress reduction, contingent self-esteem, explicit self-esteem, psychological well-being.

BIFORMERDTA: STRUCTURAL EMBEDDING OF PROTEIN IN DRUG TARGET AFFINITY PREDICTION USING BIFORMER

Leila Baghaarabani, Parvin Razzaghi, Mennatolla Magdy Mostafa,

Department of Bioinformatics, University of Tehran, Iran

Abstract:

Predicting interactions between drugs and their molecular targets plays a crucial role in the progression of drug discovery. Due to time and resource limitations, computational techniques have become essential for drug-target interaction (DTI) prediction. This study takes a step beyond conventional methods, which primarily use drug molecules and protein sequences, by introducing a novel protein representation via a masked protein language model. In this approach, each amino acid residue is assigned a probability distribution, indicating the likelihood of its position within the protein sequence. The similarity between pairs of amino acids is computed to create a similarity matrix, which is then utilized by Bi-Level Routing Attention (BiFormer), a model that combines transformer-based architectures with protein sequence analysis. BiFormer advances DTI prediction by identifying crucial regions in the protein sequence that are responsible for drug interactions. This method significantly improves the understanding of the local structural relationships in proteins, enhancing the accuracy of DTI predictions. The model was tested on the well-established Davis and KIBA datasets, demonstrating superior performance compared to existing methods in the field.

Keywords: BiFormer, transformer, protein language processing, self-attention mechanism, binding affinity, drug target interaction, similarity matrix, protein masked representation, protein language model.

DECLEx-PROCESSING PIPELINE FOR TUMOR CLASSIFICATION

Gaurav Shinde, Sai Charan Gongiguntla, Prajwal Shirur, Ahmed Hambaba
Department of Computer Science, University of Mumbai, India

Abstract:
The growing prevalence of health issues has put considerable pressure on healthcare systems worldwide, especially post-COVID-19. This has led to an increased adoption of machine learning techniques in the healthcare sector. In this paper, we present DeClEx, a robust pipeline designed to enhance tumor classification accuracy. DeClEx integrates data preprocessing techniques, including Gaussian noise addition and blurring, ensuring the model mirrors real-world conditions. We leverage autoencoders for intermediate feature learning, followed by a convolutional neural network (CNN) enhanced with spatial attention, which achieves comparable performance to state-of-the-art pre-trained models while tripling the training speed. Additionally, we integrate explainable AI techniques to offer interpretable results. The DeClEx pipeline combines noise reduction, image deblurring, classification, and explainability, providing a comprehensive solution for tumor classification.

Keywords: Machine learning, healthcare, tumor classification, explainability.

MICROFLUIDIC MANIPULATION FOR BIOMEDICAL AND BIOHEALTH APPLICATIONS

Reza Hadjiaghaie Vafaie, Sevda Givtaj

Department of Biomedical Engineering, Baku State University, Baku, Azerbaijan

Abstract:

The automation and manipulation of biological samples at the microscale are crucial for advancements in biochemistry and biomedical diagnostics. Despite the promising potential of miniaturized systems, fluid control at the microscale remains underexplored. In this study, we investigate the impact of electric fields within microfluidic channels and explore various electrode structures designed to generate forward, reverse, and rotational flows. Our simulations indicate that AC electro-thermal flow is highly effective for controlling and automating the movement of high-conductivity fluids. We numerically analyze the pumping and mixing effects by solving coupled equations for electric, temperature, hydrodynamic, and concentration fields within the microchannel. Experimentally, we fabricate the electrode structures on a silicon substrate and integrate them with a PDMS microchannel to create a functional microfluidic chip. Fluorescent particle motion under pumping and mixing conditions is captured using a CCD camera. By analyzing the frequency response and applying appropriate voltage to the electrodes, we observe fluid dynamics including pumping and mixing effects within the channel. The experimental results show strong agreement with the simulation data, validating the proposed method for microfluidic manipulation.

Keywords: Microfluidic, Nano/Micro Actuator, AC Electrothermal, Reynolds Number, Micropump

MEDICAL IMAGE FUSION IN BIOMEDICAL ENGINEERING EDUCATION

Ioan D. Popescu, Elena M. Ionescu, Alexandru T. Vasile

Department of Biomedical Engineering, University of Bucharest, Romania

Abstract:

The integration of computational tools has become a cornerstone in interactive learning, particularly within engineering education. In the medical sector, imparting knowledge of medical image processing is vital for training biomedical engineers, as it plays a key role in healthcare systems and hospitals. This paper introduces a teaching-learning simulation tool, designed using MATLAB with a Graphical User Interface, for medical image fusion, showcasing various image fusion methods alongside image pre-processing techniques. The application employs multiple algorithms and real-time medical fusion techniques, enabling users to view original and fused images, compare processed versus original images, adjust parameters, and save the results. This tool fosters a dynamic, engaging educational experience for biomedical engineering students, providing them with practical knowledge on medical image fusion techniques and skills critical to their professional training. In conclusion, the simulation tool offers real-time visualization of original and fused images, along with the ability to test and refine students' understanding of image fusion. It also encourages exploration of medical imaging applications, particularly in image fusion, which holds significant relevance in the medical field. Both instructors and students can customize the tool by making adjustments or creating new functions, ensuring the environment remains flexible and adaptable to emerging techniques and methodologies.

Keywords: Image fusion, image processing, teaching-learning simulation tool, biomedical engineering education.

DEVELOPING OPTICAL SENSORS FOR CANCER DETECTION USING ELASTIC LIGHT SCATTERING SPECTROSCOPY

Ahmad Ali Khan, Sara Mehmood, Omar Zubair

Department of Physics, University of Lahore, Pakistan

Abstract:

Cancer remains one of the leading causes of mortality globally, with early detection being a crucial factor in improving survival rates. Current diagnostic techniques, however, are often limited by low sensitivity and specificity. This study focuses on the development of an optical sensor for cancer detection, utilizing Elastic Light Scattering Spectroscopy (ELSS), a non-invasive optical method. The sensor was designed to analyze the scattering of light by particles suspended in a medium, which could be indicative of cancerous cells. The optical probe developed in this research featured a 100-µm-diameter core and a 132-µm centre-to-centre separation, making it capable of detecting particles in a range of sizes.

In this study, ELSS spectra were measured for polystyrene spheres of different diameters: 2 µm, 0.8 µm, and 0.413 µm. The results demonstrated that the probe was capable of distinguishing between the different particle sizes and could detect polystyrene spheres in concentrations as low as 0.01%. The study showed that ELSS could effectively differentiate between various sizes of particles, suggesting its potential in detecting cancerous cells by analyzing the size and concentration of cells within a tissue sample.

Additionally, ELSS can provide valuable insights into the stage of cancer by offering a clear characterization of the cellular structure. By analyzing light scattering patterns, this method could help identify cancerous cells early, contributing to better diagnosis and treatment outcomes. However, further clinical research is required to fully assess the diagnostic capabilities of ELSS for cancer detection.

Keywords: Elastic Light Scattering Spectroscopy, Optical Probe, Cancer Detection, Polystyrene Spheres, Non-Invasive Technique.

ELECTRODERMAL ACTIVITY MEASUREMENT USING CONSTANT CURRENT AC SOURCE

Cristian Chacha, Dr. David Asiain, Jesús Ponce de León, Prof. Dr. José Ramón Beltrán
Department of Biomedical Engineering, University of Barcelona, Spain

Abstract:
This study investigates the electrodermal activity (EDA) measurement technique using a constant current AC source, focusing on the performance of the AFE AD5941 in impedance measurement applications. The primary objective is to enhance the precision of impedance values for integration into wearable devices designed for EDA monitoring. The findings demonstrate that while using a constant current AC source introduces a higher level of dispersion in the results, it significantly improves measurement accuracy and produces a more linear response in terms of error. This research ultimately contributes to the development of more reliable and precise systems for EDA monitoring, especially for wearable technology.

Keywords: Electrodermal Activity, constant current AC source, wearable devices, impedance measurement, accuracy, precision.

A NOVEL APPROACH FOR CORONARY HEART DISEASE PREDICTION USING ECG SIGNALS WITH RESNET AND BI-LSTM

Yang Zhang, Jian He

School of Computer Science, Tsinghua University, Beijing, China

Abstract:

Coronary heart disease (CHD) remains a leading cause of mortality worldwide, with electrocardiogram (ECG) signals commonly used for its diagnosis. However, traditional methods for predicting CHD based on ECG signals require substantial expertise from healthcare professionals. This study introduces an innovative approach combining sliding window and continuous wavelet transform (CWT) to convert ECG signals into image-like representations. Subsequently, a deep learning model incorporating ResNet and Bi-LSTM is employed to extract features, forming a robust ECG feature extraction network, referred to as ECGNet. The proposed method leverages modified ResNet18 and Bi-LSTM architectures to develop an auxiliary system for CHD prediction, utilizing the publicly available MIMIC-3 ECG dataset for training and evaluation. Experimental results demonstrate an impressive accuracy of 83%, along with an F1-score of 83%. When compared to traditional methods like k-Nearest Neighbors (kNN), decision trees, and VGGNet, the proposed system not only enhances prediction accuracy but also mitigates the issues related to deep learning network degradation.

Keywords: Bi-LSTM, CHD, coronary heart disease, ECG, electrocardiogram, ResNet, sliding window.

THE IMPACT OF PRINCIPALS' EMOTIONAL INTELLIGENCE ON TEACHERS' JOB SATISFACTION

Jamal Okpara
University of Ibadan, Ibadan, Nigeria

Abstract:
For schools to thrive as productive environments, principals must effectively manage their emotional intelligence, particularly in recognizing and responding to the emotions of their teachers. This study examines the role of principals' interpersonal emotionally intelligent behaviors (EIBs) and their impact on teachers' job satisfaction. Emotional intelligence is crucial for school leaders, enabling them to foster positive relationships with staff and address the emotional needs of their teachers. This quantitative study found a significant correlation between the emotional intelligence of school principals and the job satisfaction of teachers. Data analysis revealed that teachers who felt their principals demonstrated high levels of emotional intelligence were more satisfied with their jobs. Conversely, those with principals who showed lower emotional intelligence reported lower job satisfaction. The study concludes that principals' interpersonal EIBs are a significant determinant of teachers' overall job satisfaction and should be considered a priority for leadership development in schools. Keywords: Emotional intelligence, teacher satisfaction, school leadership, interpersonal behaviors.

INTEGRATING SOCIAL MEDIA INTO UNIVERSITY CURRICULUMS: A STRATEGIC APPROACH

Ananya Kiran
Jawaharlal Nehru University, New Delhi, India

Abstract:
This research investigates the integration of social media into higher education curricula, offering practical guidelines for faculty members. The study uses a survey methodology with a questionnaire completed by 40 university professors. Results highlight several key findings: 1) Professors believe that the most effective learning theory for social media integration is Constructivist Learning. 2) The development of digital communication and collaboration skills is essential for students in the 21st century. 3) Professors suggest that authentic assessment methods are ideal for evaluating social media-based learning. 4) A blended learning model, with 60% of content delivered face-to-face and 40% online, is considered the most effective. This study provides valuable insights into how universities can use social media to enhance learning outcomes and prepare students for the digital world.
Keywords: Social media, higher education, instructional design, blended learning, assessment.

EXAMINING TEACHER PROFESSIONAL DEVELOPMENT PRACTICES IN SINGAPORE SECONDARY SCHOOLS

Ravi Tan
National Institute of Education, Singapore

Abstract:
This paper explores teacher professional development practices within secondary schools in Singapore, focusing on the methods perceived by educators as most beneficial. Data were collected through ethnographic techniques, including interviews, observations, and document analysis, across several schools. The study reveals that professional development in Singapore is largely driven by school leaders, teacher collaboration, and external educational policies. Teachers identified key strategies for professional growth, including mentoring, peer learning communities, and self-directed learning. The study suggests that professional development in Singapore is highly integrated into the school culture, with a strong emphasis on collegiality and continuous improvement. These findings provide important implications for policymakers and school leaders in other countries looking to enhance teacher development frameworks.
Keywords: Teacher professional development, teacher collaboration, school leadership, teacher empowerment.

PROMOTING ENTREPRENEURIAL THINKING THROUGH UNIVERSITY TRANSFORMATION: THE CASE OF SWEDEN

Lena Persson, Erik Olsson
Lund University, Lund, Sweden

Abstract:
Sweden's universities have long been at the forefront of supporting innovation and entrepreneurship, contributing significantly to the country's strong knowledge economy. This study investigates the transformation of Swedish universities into entrepreneurial institutions, with a focus on Lund University and the Swedish Institute of Innovation. The paper examines the structural elements of innovation support at these institutions, including faculty collaboration, research commercialization, and student-led start-ups. By analyzing the policies and practices of these universities, the study highlights how they foster an entrepreneurial culture that drives economic growth. The findings suggest that fostering an entrepreneurial mindset in universities requires not only structural changes but also a deep cultural shift that aligns education with innovation.
Keywords: Entrepreneurial university, Sweden, university transformation, innovation, entrepreneurship.

THE EFFECT OF GENDER ON STUDENT PERFORMANCE IN STATISTICS COURSES IN LEBANON

Maya Farah
American University of Beirut, Beirut, Lebanon

Abstract:
This study examines whether gender influences student performance in a basic statistics math quiz. The research involved 600 students from two universities in Lebanon. The analysis of the results indicates no significant gender-based differences in overall performance. However, a closer look at the data suggests that females tend to perform better when they possess a stronger foundation in basic algebra. The findings emphasize the importance of focusing on foundational skills, particularly for female students, to ensure equal academic opportunities. The study contributes to discussions on gender and education, suggesting that targeted academic support may improve performance outcomes for all students, regardless of gender.
Keywords: Gender, statistics education, academic performance, math skills, Lebanon.

THE IMPACT OF SOCIAL MEDIA ON LEARNING IN HIGHER EDUCATION: A STRATEGIC APPROACH

Aminata Diop, Idriss Bah
Department of Educational Technology, Faculty of Education, University of Dakar, Senegal

Abstract:
This research explores strategies for incorporating social media into higher education courses to enhance learning experiences. A mixed-method approach was used for data collection, which included surveys and interviews with 40 university lecturers. The findings highlight that 1) Collaborative Learning is regarded as the most effective learning theory in integrating social media. 2) Communication and collaboration skills are perceived as the most crucial 21st-century learning competencies. 3) Authentic assessment is seen as the most fitting evaluation method. 4) The optimal blended learning model recommended is 70% face-to-face interaction and 30% online. These findings provide insights for educators seeking to harness social media to foster more interactive and collaborative learning environments in higher education.
Keywords: Social media, instructional design, higher education, blended learning, collaboration.

ENHANCING TEACHER PROFESSIONAL DEVELOPMENT: A STUDY FROM A SECONDARY SCHOOL IN GAMBIA

Mariama Jallow
Department of Education, University of Banjul, The Gambia

Abstract:
This paper examines the current practices of teacher professional development in a secondary school in The Gambia, focusing on strategies perceived as most beneficial by the teachers. This study forms part of a broader qualitative investigation into teacher empowerment, employing ethnographic research methods such as participant observation, interviews, and document analysis. Data were collected over a six-month period in 2019. The results reveal that teacher professional development in this context is influenced by both school leaders and the wider teaching community. Teachers themselves play an active role in their development through self-driven initiatives. The findings provide valuable guidance for educational policymakers and school leaders aiming to enhance teacher development and empowerment in similar educational settings.
Keywords: Teacher professional development, empowerment, school leadership, Gambia, self-driven learning.

SUSTAINABLE MANUFACTURING OF SOLENOID VALVE HOUSING IN FIJI: FUSED DEPOSITION MODELING AND EMERGY ANALYSIS

Hisham Cabemaiwai, Assis. Prof. Dr. Prasad Dauvakatini,

University of Fiji, Fiji

Abstract:

A solenoid valve plays a crucial role in regulating fluid flow within various systems. In Fiji, the solenoid valve housing is not locally manufactured and is expensive to acquire due to its complexity and the lack of availability. In the health sector, the housing part of the solenoid valve is prone to damage with continuous machine use, and its high cost of replacement is a concern. This study investigates the sustainable manufacturing of solenoid valve housings through the Fused Deposition Modeling (FDM) process. An emergy analysis was conducted to assess the feasibility and sustainability of producing this component locally. The Unit Emergy Value (emergy transformity) of electricity in Fiji was found to be 1.27E + 05 sej/j. The total emergy of the manufacturing process was estimated at 3.05E + 12 sej, with the majority of energy sourced from imported services and materials. Only 16.04% of the total emergy came from renewable sources. Despite this, the solenoid valve housing can be produced locally in Fiji at a reasonable cost of $FJ 2.85 and acceptable quality. However, the environmental impact is significant, suggesting the need for exploring alternative raw materials, such as recycled PET, or alternative manufacturing processes to improve sustainability before proceeding with large-scale production using FDM.

Keywords: Emergy analysis, fused deposition modeling, solenoid valve housing, sustainable production.

OPTIMIZATION OF CONSTRUCTION PRACTICES: IMPLEMENTATION OF MODERN WORK MODULES TO INCREASE ATTRACTIVENESS FOR EMPLOYEES

Robin Becker, Nane Roetmann, Manfred Helmus
Department of Civil Engineering, University of Stuttgart, Germany

Abstract:
The construction sector faces a shortage of junior staff, with the appeal of the profession particularly lacking among students. A key challenge is the gap between the traditional job profile and the evolving preferences of young professionals for more flexible and contemporary work models. Addressing this conflict is crucial for the long-term sustainability of small and medium-sized enterprises in the construction industry. This paper examines the implementation of modern work modules designed to enhance employee attraction and retention. The results of applying these work modules in real-world construction practices are presented and analyzed, highlighting the impact on workforce satisfaction and productivity.

Keywords: Modern construction management, construction industry, work modules, employee attraction, flexible work practices.

USE OF SEISMIC ISOLATION SYSTEMS IN HIGH-RISE HOSPITAL BUILDINGS: A HYBRID APPROACH

Emre Bakkaloğlu, Dr. Nisa Torunbalcı

Department of Civil Engineering, Nazarbayev University, Kazakhstan

Abstract:

Earthquakes are inevitable natural disasters that pose significant risks to infrastructure, particularly in seismic zones like Turkey. In such regions, it is crucial to prepare buildings to withstand these hazards, especially hospital buildings that serve as essential facilities for disaster relief. While hospital structures are generally designed with a horizontal layout, the increasing urbanization, limited available land, and rising land values make multi-story hospital buildings a necessity. In Turkey, the use of seismic isolators has been mandated for public hospitals located in high seismic zones with more than 100 beds. This regulation has led to the construction of seismic-isolated multi-story hospital buildings in certain cities. Despite the widespread use of seismic isolation systems in countries like Japan, the application of these systems in multi-story hospital buildings in Turkey remains limited. Base isolation is recognized as one of the most effective methods for earthquake resistance. However, in multi-story buildings, the increasing number of floors raises the center of gravity, making the building more susceptible to overturning forces and reducing the effectiveness of isolation systems. This study aims to explore the structural systems of multi-story buildings that have incorporated seismic isolation technologies globally. Additionally, it proposes a hybrid working principle for seismic isolators used in multi-story hospital buildings. The findings of this research will provide valuable guidance to architects and engineers involved in the design of multi-story hospital buildings, contributing to more effective earthquake-resistant structures.

Keywords: Earthquake, energy absorption systems, hospital, seismic isolation systems.

EFFECT OF AGRICULTURAL WASTE AS A FILLER IN FIBRE CEMENT BOARD REINFORCED WITH NATURAL CELLULOSIC FIBRES

Anuoluwapo S. Taiwo, David S. Ayre, Morteza Khorami, Sameer S. Rahatekar
Department of Civil Engineering, University of Ibadan, Nigeria

Abstract:
This study investigates the use of agricultural waste, specifically corncob (CC), as a filler material to reduce cement content in fibre-reinforced cement composite boards for construction applications in low-cost housing in developing regions. Corncob is widely available in many West African countries but has not been effectively utilized in construction materials. The primary goal of this research is to transform this abundant agro-waste into a viable filler material for reducing cement content in fibre-cement board production. The study involved developing Kraft pulp fibre-reinforced cement composite boards by incorporating varying amounts of CC powder (1-4%) as a filler. A laboratory-based vacuum de-watering process was employed for board fabrication. Mechanical properties were assessed through a three-point bending test, while the fractured surfaces were analyzed using Scanning Electron Microscopy (SEM). The results indicated that the flexural strength of the composite boards improved significantly, with a 39% increase compared to the control sample without CC replacement. However, higher CC content slightly impacted the ductility of the boards. SEM analysis showed strong fibre-matrix bonding and a transition from ductile to brittle fracture behavior. The optimal properties were achieved with 2% CC powder as filler, meeting the relevant standards for fibre cement flat sheets.

Keywords: Kraft pulp fibre, fibre-cement board, agricultural waste, sustainability, building applications.

IN-PLANE SHEAR TESTS OF PREFABRICATED MASONRY PANEL SYSTEM WITH TWO-COMPONENT POLYURETHANE ADHESIVE

Erdem Fehling, Dr. Peter Capewell

Department of Structural Engineering, University of Berlin, Germany

Abstract:

The use of masonry bonded with polyurethane adhesive has gained significant attention in recent years. In 2021, the Department of Structural Engineering at the University of Berlin conducted quasi-static in-plane shear tests on prefabricated masonry panel systems using two-component polyurethane (2K PUR) adhesive to examine their performance under seismic loading. Alongside conventional deformation measurements via displacement transducers, all tests were monitored using an optical measuring system, allowing for detailed analysis of surface strains and deformations. To benchmark the results, additional reference tests were performed on specimens with traditional thin-bed mortar joints. This study presents the findings of these tests and compares the load-bearing behavior of masonry bonded with polyurethane adhesive to that of masonry bonded with thin-bed mortar, aiming to assist in the development of more accurate non-linear models for seismic design.

Keywords: Glued masonry, in-plane shear tests, shear resistance, polyurethane adhesive.

IDENTIFICATION OF IMPACT LOADS AND SYSTEM PARAMETERS USING 1D-CNN

Xuewen Yu, Danhui Dan

Department of Mechanical Engineering, Beijing Institute of Technology, Beijing, China

Abstract:

The identification of impact loads and difficult-to-measure system parameters is essential for effective analysis and validation in engineering applications. This study introduces a method based on 1D Convolutional Neural Networks (1D-CNN) to identify impact loads and key system parameters from recorded responses. In this approach, forward computations generate datasets containing parameter θ, input u, and output y. Two neural networks are trained: one to map output y to input u, and another to map both input and output (u, y) to parameter θ. By feeding the measured output response into these trained networks, the method calculates the impact load and system parameter. The method is validated using two simulated examples, demonstrating high accuracy in estimating impact load characteristics (waveform and location) and system parameters.

Keywords: Convolutional Neural Network, Impact Load Identification, System Parameters, 1D-CNN, Engineering Validation

CONSIDERING THE EFFECT OF SEMI-RIGID CONNECTIONS IN STEEL FRAME STRUCTURES FOR PROGRESSIVE COLLAPSE

Farzad Karimi Ghaleh Jough, Mohammad Soori

Department of Civil Engineering, University of Tehran, Tehran, Iran

Abstract:

The occurrence of progressive collapse in structures poses significant challenges, requiring effective strategies to enhance their resistance against such phenomena. In this study, the vulnerability of both existing and under-construction buildings to progressive collapse is examined. The lateral load-resisting system and the type of connections within the building are among the most critical factors influencing the structure's ability to resist progressive collapse. This research utilizes the "Alternative Path" methodology as outlined by the GSA2003 and UFC2013 guidelines to explore various semi-rigid connection configurations. The study uses the Opensees software to model nine different semi-rigid connection setups in a three-story Special Area of Conservation (SAC) building, with particular attention to the stiffness of the connections. Nonlinear dynamic analysis was conducted to simulate column removal scenarios, specifically corner and middle column removal at the first level. The results from nonlinear static analysis revealed that when a column was removed, structures with semi-rigid connections exhibited larger displacements, leading to the formation of plastic hinges. Furthermore, it was evident that the likelihood of progressive collapse increased as the number of semi-rigid connections in the structure grew.

Keywords: Semi-rigid, nonlinear static analysis, progressive collapse, alternative path.

FLOATING OFFSHORE WIND: A REVIEW OF INSTALLATION VESSEL REQUIREMENTS

Alex P. Crowle, Michael J. Stewart, William T. Carter

Department of Marine Engineering, University of Algiers, Algeria

Abstract:

Floating offshore wind farms are emerging as a promising source of renewable energy, with the potential to significantly contribute to the global energy transition. A key challenge in the deployment of these technologies is the provision of specialized installation vessels capable of supporting the offshore installation of floating wind turbines. This paper provides an overview of the current fleet of vessels utilized in the installation of floating wind turbines, highlighting the different types required for various stages of construction. Separate vessels are needed for the ocean tow-out, offshore installation, and the connection of essential infrastructure. Additionally, the paper discusses the need for new and innovative vessels to improve installation efficiency and reduce costs. Specialized vessels, such as anchor handling vessels, subsea workboats, and cable-laying ships, play a vital role in the mobilization, installation of moorings, and connection of subsea cables. The paper further explores the port infrastructure required for the vertical integration of turbine components, including the substructure, tower, nacelle, and blades.

Keywords: Floating wind, offshore wind turbines, installation vessels, renewable energy infrastructure, offshore ports

DECISION SUPPORT STRATEGIES FOR MODULARIZATION IN ENGINEERING CONSTRUCTION: CASE STUDIES IN OIL, GAS, AND POWER PLANTS

Bat-Erdene Nyamsuren, Tungalag Batbold, Chuluunbaatar Enkhbaatar

Mongolian University of Science and Technology, Mongolia

Abstract:

This paper explores decision support strategies in the engineering construction (EC) sector to identify the optimal degree of modularization. The study is based on case studies from three oil and gas (O&G) projects and two power plant projects. Data were gathered through semi-structured interviews (n = 59 for O&G and n = 27 for power plants), document analysis, and case-specific validation interviews (n = 12 and n = 8, respectively). A new terminology to differentiate modularization levels is proposed, along with a decision-making checklist and a visual support figure. The findings show that EC sub-sectors preferred component, structural, or traditional modularization over system modularization for certain types of modules. The key factors influencing modularization decisions varied depending on module types. This study aims to guide the EC sector in selecting the most effective degree of modularization through a structured decision-making approach.

Keywords: Modularization, engineering construction, case study, decision support

ANALYSIS OF NOODLE PRODUCTION PROCESS AT YAN HU FOOD MANUFACTURING: BASIS FOR PRODUCTION IMPROVEMENT

Rhadinia Tayag-Relanes, Felina C. Young

Department of Industrial Engineering, University of Philippines, Philippines

Abstract:

This research focuses on the analysis of the noodle production process at Yan Hu Food Manufacturing to provide a foundation for production improvements. The study employed the Plan, Do, Check, Act (PDCA) methodology, alongside record reviews for data collection covering the 2019 calendar year, from August to October. The research primarily targeted the production processes of three types of noodles: miki, canton, and misua. A causal-comparative research design was used to explore the cause-and-effect relationships between production variables, with descriptive statistics and correlation analysis applied to evaluate the data. The results revealed that the production of miki, canton, and misua follows distinct cycle times and varying output levels across different production stages, along with discrepancies in wastage rates. The company has not yet defined a formal acceptable rejection rate for wastage, and a 1% wastage limit was applied in this study. Based on the findings, several recommendations were made: ensuring the consistent maintenance and monitoring of the machinery used in the production process; conducting a statistical performance assessment of production operators, taking into account both output and machine efficiency; performing a root cause analysis to address production problems; and establishing an improved data recording system for input and output tracking to enhance the accuracy of production records.

Keywords: Production, continuous improvement, process, operations, Plan-Do-Check-Act approach.

BIOACTIVITY OF PEPTIDES FROM TWO MUSHROOM SPECIES

Assis. Prof. Dr. Parisa Farzaneh, Dr. Azade Harati

Department of Biotechnology, University of Tehran, Iran

Abstract:

Mushrooms, as a valuable source of bioactive compounds, particularly bio-peptides, have garnered significant interest for their health benefits. In this study, proteins were extracted from two mushroom species using a buffer solution, with or without salt (0.15 M), coupled with ultrasound treatment to facilitate the extraction of intercellular proteins. The proteins were primarily categorized as albumins. Subsequent hydrolysis of the proteins by both endogenous and exogenous proteases, including gastrointestinal enzymes, led to the formation of bioactive peptides. Notably, Agaricus bisporus exhibited higher enzymatic activity compared to Terfezia claveryi, with activity ceasing at 75% after 15 minutes. The application of various treatments, including blanching, endogenous enzymes, and combinations of gastrointestinal enzymes (pepsin-trypsin-α-chymotrypsin or trypsin-α-chymotrypsin), resulted in hydrolysates with diverse antioxidant and antibacterial properties. The peptides obtained through ultrafiltration exhibited distinct levels of radical scavenging, lipid peroxidation inhibition, and antibacterial activity. Furthermore, bio-peptides from Terfezia claveryi, particularly those with a molecular weight under 3 kD, displayed resilience to environmental conditions such as varying pH and temperature. These findings suggest that the bioactive peptides from these mushrooms are promising candidates for incorporation into nutraceutical, pharmaceutical, and functional food formulations, even under processing conditions.

Keywords: Bio-peptides, mushrooms, gastrointestinal enzymes, bioactivities.

THE IMPACT OF NUTRITION EDUCATION ON THE ADHERENCE TO THE MEDITERRANEAN DIET AND SUSTAINABLE EATING HABITS AMONG UNIVERSITY STUDENTS

Wahyu Agus Pamungkas, Riska Belinda Setyawati, Dr. Ahmad Fajri Rifai,

Department of Chemical Engineering, Kabul University of Science and Technology, Kabul, Afghanistan

Abstract:

This study investigates the influence of nutrition education on university students' adherence to the Mediterranean diet and their sustainable eating habits. Participants included second, third, and fourth-year students from the Faculty of Health Sciences, specifically the Nutrition and Dietetics, Midwifery, Nursing, Physical Therapy, and Rehabilitation departments at a university in Turkey. Adherence to the Mediterranean diet was assessed using the Mediterranean Diet Adherence Scale, while sustainable eating behaviors were evaluated through the Sustainable and Healthy Eating Behaviors Scale. Additionally, students' body weight, height, and Body Mass Index (BMI) were measured. A total of 181 students participated in the study, with 85 students from the Department of Nutrition and Dietetics and 96 from other departments. Of the participants, 75.7% were female, and 24.3% were male. The average body weight was 61.17 ± 10.87 kg, with an average BMI of 22.04 ± 3.40 kg/m2. The mean score on the Mediterranean Diet Adherence Scale was 6.72 ± 1.84. Results indicated that 25.4% of the students had poor adherence, while 66.9% required improvement. A comparison between students who received nutrition education and those who did not revealed significantly higher adherence scores for the educated group ($p < 0.05$). Furthermore, these students scored higher on the Sustainable and Healthy Eating Behaviors Scale ($p < 0.05$). A moderate positive correlation was found between the total scores of the Sustainable and Healthy Eating Behaviors Scale and Mediterranean Diet Adherence ($p < 0.05$). Linear regression analysis suggested that a 1-unit increase in Mediterranean diet adherence led to a 1.3-point increase in the total score of the Sustainable and Healthy Eating Behaviors Scale. These findings underscore the importance of sustainable and healthy eating for health promotion and disease prevention. The Mediterranean diet, a model of sustainable nutrition, was shown to be positively influenced by nutrition education, highlighting the need for further educational initiatives on sustainable nutrition, such as courses or seminars, during university programs.

Keywords: Healthy eating, Mediterranean diet, nutrition education, sustainable nutrition.

ANTIMICROBIAL ACTIVITY OF A GREEN SYNTHESIZED DRUG SUPPLEMENT: NUTRITION BIO-SHIELD SUPERFOOD

Azam Bayat, Dr. Aref Khalkhali, Dr. Ali Reza Mahjoub
Department of Biomedical Sciences, University of Tehran, Iran

Abstract:

This study focuses on the synthesis of a drug supplement using an environmentally friendly method, referred to as Nutrition Bio-Shield Superfood (NBS). With the growing global burden of infectious diseases and the scarcity of effective treatments, the research evaluates the antimicrobial properties of the NBS supplement. The experiment examined the effects of different concentrations of NBS on the inhibition of bacterial growth associated with common infectious diseases. The highest antimicrobial activity was observed at a concentration of 100 mg/ml, with a notable halo diameter. In contrast, a concentration of 12.5 mg/ml showed the lowest antibacterial effect. Overall, NBS supplementation is shown to enhance immune defense in the human body, suggesting its potential as an alternative antimicrobial agent.

Keywords: Drug supplement, biomaterial, antimicrobial, immune enhancement, human health.

PRODUCTION AND CHARACTERIZATION OF LACTOSE-FREE YOGURT USING MEMBRANE TECHNOLOGY AND MODIFIED MILK PROTEIN CONCENTRATE

Shahram Naghizadeh Raeisi, Ali Alghooneh

Department of Food Science and Technology, University of Tehran, Tehran, Iran

Abstract:

A lactose-free yogurt was developed through the use of membrane technology combined with the modification of milk protein structural properties. The functional, textural, and structural characteristics of the resulting yogurt were analyzed and compared to commercial products. The findings revealed that the modification of protein in high-fat set yogurt resulted in significant improvements, with 11.55%, 18%, 20.21%, and 7.08% higher hardness, consistency, water holding capacity, and shininess values, respectively, when compared to the control. Similarly, the modified low-fat set yogurt exhibited 21.40%, 25.41%, 28.15%, and 10.58% higher values for these same parameters. These enhancements were attributed to the microstructural changes in the gel network of the yogurt formulated with modified protein. Additionally, compared to the control yogurt, the high-fat modified yogurt showed a 22.10% increase in linkage strength (A), a 50.68% increase in the number of linkages (z), and a 21.82% increase in the time scale of linkages (λrel). On the other hand, the average linear distance between two adjacent crosslinks (ξ) was 16.77% lower. For the low-fat modified yogurt, the indices of A, z, λrel, and ξ increased by 34.30%, 61.70%, and 42.60%, while ξ decreased by 19.20% in comparison to the control. The shelf life of the modified yogurt was extended to 10 weeks when refrigerated, whereas the control yogurt had a shelf life of only 3 weeks. The acidity levels of both high-fat and low-fat modified yogurts increased from 76 to 84 and 72 to 80 Dornic degrees, respectively, over 10 weeks of storage, while control samples increased from 82 to 122 and 77 to 112 Dornic degrees. This behavior was likely due to the elimination of microbial energy sources in the modified yogurt. Furthermore, the calories in both high-fat and low-fat lactose-free yogurts were 25% and 40% lower than their respective control samples. Overall, the results indicated that lactose-free yogurt with modified protein, despite having 1% less protein content than the control, demonstrated superior functional properties, nutritional benefits, network parameters, and shelf stability, making it a promising alternative in the set yogurt industry.

Keywords: Lactose-free, low calorie, network properties, protein modification

FURNIKO FLOUR: A SYMBOLIC COMPONENT OF GREEK PONTIC CULINARY HERITAGE

A. Keramaris, T. Sawidis, E. Kasapidou, P. Mitlianga
Department of Culinary Arts, University of Thessaloniki, Greece

Abstract:
The culinary traditions of the Greek Pontic people have long been celebrated, yet they have not garnered the same academic attention as other regional Greek cuisines, such as that of Crete. This research aims to explore Greek Pontic cuisine, focusing on its unique ingredients, culinary techniques, and the cultural significance of its dishes. The Pontic Greeks, who have resided for centuries in the northern regions of modern-day Turkey and currently live predominantly in northern Greece, are known for their rich culinary heritage. This cuisine, while simple, includes a variety of flavorful and nutritious dishes that remain a vital part of the Pontic Greek identity. To begin understanding this cuisine, we examine one of its most iconic ingredients: furniko flour. Our study, conducted in Western Macedonia, northern Greece, investigates the traditional production of furniko flour, which is made from non-hybrid corn varieties. The production process begins with hand-harvesting the corn when the moisture content is sufficiently low for roasting. After harvesting, the cobs are roasted in a wood oven for 24 hours before being processed. The seeds are extracted by rubbing the cobs together and traditionally ground in a stone hand mill. The resulting dark golden flour is highly aromatic and is used in making havitz, a savory porridge-like dish. The preparation of havitz, a beloved dish in Greek Pontic cuisine, is straightforward yet offers significant nutritional benefits, as noted by our research participant. Beyond its nutritional value, havitz serves as a medium for fostering familial bonds and cultural exchange. This research serves as an initial effort to document the traditional production of furniko flour and its role in the culinary traditions of the Greek Pontic community. Future studies will focus on analyzing the nutritional composition of furniko flour to further highlight its value in traditional cooking.

Keywords: Furniko flour, Greek Pontic cuisine, Havitz, traditional foods, culinary heritage

EXPLORING THE POTENTIAL OF INTEGRATING BLOCKCHAIN, CLOUD COMPUTING, AND ARTIFICIAL INTELLIGENCE IN ENHANCING DATA EXCHANGE WITHIN CONSTRUCTION SUPPLY CHAIN MANAGEMENT

Tran Duong Nguyen, Marwan Shagar, Qinghao Zeng,
Department of Civil Engineering, University of Seoul, South Korea

Abstract:

The management of construction supply chains involves the coordination of various disciplines and actors, leading to the generation of vast amounts of data. However, traditional data storage methods are often inefficient, fragmented, and lacking standardization, which can hinder seamless data exchange. Building Information Modeling (BIM), a digital representation of a facility's physical and functional attributes, has been adopted in the industry to foster collaboration, ensure data security, and provide a unified platform for data exchange. Nevertheless, the sheer volume and complexity of data necessitate a more refined approach to organizing information in ways that meet stakeholders' diverse needs. To overcome these challenges, Artificial Intelligence (AI) can be leveraged to manage complex data sets effectively. This study aims to propose a novel approach to improve data exchange within construction supply chain management (CSCM) by integrating AI. The paper outlines five primary objectives: (1) Review the current frameworks and adoption of BIM, (2) Identify challenges related to data exchange, (3) Propose a comprehensive integrated framework, (4) Improve data transmission security, and (5) Enhance the efficiency of data exchange in CSCM. The framework suggests that the integration of BIM with advanced technologies such as cloud computing, blockchain, and AI can significantly enhance both the accuracy and efficiency of data exchange processes in construction supply chains.

Keywords: Construction supply chain management, Building Information Modeling, blockchain, cloud computing, artificial intelligence.

FLUOROMETRIC APTASENSOR: EVALUATION OF STABILITY AND COMPARISON TO STANDARD ELISA ASSAY

John Carlos Kuri, Assoc. Prof. Dr. Varun Vijay, Dr. Raymond James Turner,

Department of Biochemical Engineering, University of Mexico, Mexico City, Mexico

Abstract:

Celiac disease (CD) is an immune disorder triggered by gluten consumption. As the demand for gluten-free (GF) diets rises, a reliable diagnostic method has become essential. The enzyme-linked immunosorbent assay (ELISA) has long been considered the gold standard for such testing. However, ELISA has various limitations, prompting the search for alternative methods. Nucleic acid-based aptamers, known for their specificity, selectivity, and ease of use, have emerged as a promising alternative. Despite their potential, fluorescence-based aptasensors have been criticized for instability, although data on their longevity remain scarce. This study investigates the lifespan stability of a fluorescence-based aptasensor over an 8-week period. The sensor was tested across 22 different samples, including both GF and gluten-rich (GR) foods, soy sauce products, off-the-shelf items, and reference materials from laboratories, resulting in 836 tests. The results indicate an accuracy of 96.30% for classifying GF products and 100% for GR products when using molecular sieves. The overall accuracy remained around 94% during the first four weeks, gradually declining to 63% by the end of the study.

Keywords: Aptasensor, PEG, rGO, FAM, RM, ELISA.

EFFECT OF ETHYL ALCOHOL FACTORY EFFLUENTS ON BARLEY GERMINATION AND GROWTH PERFORMANCE

Azadeh Vaziri, Reza Khodadadi, Niloofar Mohammadi, Samira Farzaneh

Department of Environmental Science, University of Tehran, Iran

Abstract:

The use of effluents from industrial processes, such as those from ethyl alcohol factories, is an emerging strategy to conserve water resources in agriculture. This study evaluates the potential of vinasse, a by-product from the distillation of sugarcane molasses in ethyl alcohol production, as an alternative water source for irrigation. A controlled experiment was conducted to examine the effects of various ratios of water to vinasse on the germination and growth of barley seedlings. The experiment followed a completely randomized design with three replications and included a control treatment. Four irrigation treatments were tested, varying the proportion of water to vinasse: 100% water, 90% water and 10% vinasse, 75% water and 25% vinasse, and 50% water and 50% vinasse. Results indicated that increasing the vinasse concentration significantly reduced barley germination rates, with reductions of 20% and 93.33% compared to the control in the second and third treatments, respectively. The germination percentage was approximately 46.66%. Additionally, the average seedling stem length was 14.3 mm, and root length averaged 9.37 mm. Soil properties, including electrical conductivity (EC) and pH, were also impacted, with EC rising by 76.2% under vinasse irrigation treatments, reaching values of 5.85 dS/m and pH of 7.32.

Keywords: Electrical Conductivity, effluent, germination, vinasse, barley.

APPLICATION OF ADVANCED NANOFILTERS FOR SUSTAINABLE WATER SUPPLY IN THE CASPIAN SEA BASIN

Olga Petrova, Dmitry Ivanov, Maria Sorokina

Water University of Tehran

Abstract:

In a world worried about water resources with the shadow of drought and famine looming all around, the quality of water is as important as its quantity. The source of all concerns is the constant reduction of per capita quality water for different uses. Iran With an average annual precipitation of 250 mm compared to the 800 mm world average, Iran is considered a water scarce country and the disparity in the rainfall distribution, the limitations of renewable resources and the population concentration in the margins of desert and water scarce areas have intensified the problem. The shortage of per capita renewable freshwater and its poor quality in large areas of the country, which have saline, brackish or hard water resources, and the profusion of natural and artificial pollutant have caused the deterioration of water quality. Among methods of treatment and use of these waters one can refer to the application of membrane technologies, which have come into focus in recent years due to their great advantages. This process is quite efficient in eliminating multi-capacity ions; and due to the possibilities of production at different capacities, application as treatment process in points of use, and the need for less energy in comparison to Reverse Osmosis processes, it can revolutionize the water and wastewater sector in years to come. The article studied the different capacities of water resources in the Persian Gulf and Oman Sea watershed basins, and processes the possibility of using nanofiltration process to treat brackish and non-conventional waters in these basins.

Keywords: Membrane processes, saline waters, brackish waters, hard waters, zoning water quality in the Persian Gulf and the Oman Sea Watershed area, nanofiltration.

CRITICAL ANALYSIS OF EIA REPORTS EFFECTIVENESS: A CASE STUDY FROM INDIA

Dr. Aakash Sharma, Assis. Prof. Dr. Neha Rao

University of Engineering & Technology, Pakistan.

Abstract:

The preparation of good-quality Environmental Impact Assessment (EIA) reports contribute to enhancing overall effectiveness of EIA. This component of the EIA process becomes more important in situation where public participation is weak and there is lack of expertise on the part of the competent authority. In Pakistan, EIA became mandatory for every project likely to cause adverse environmental impacts from July 1994. The competent authority also formulated guidelines for preparation and review of EIA reports in 1997. However, EIA is yet to prove as a successful decision support tool to help in environmental protection. One of the several reasons of this ineffectiveness is the generally poor quality of EIA reports. This paper critically reviews EIA reports of some randomly selected projects. Interviews of EIA consultants, project proponents and concerned government officials have also been conducted to underpin the root causes of poor quality of EIA reports. The analysis reveals several inadequacies particularly in areas relating to identification, evaluation and mitigation of key impacts and consideration of alternatives. The paper identifies some opportunities and suggests measures for improving the quality of EIA reports and hence making EIA an effective tool to help in environmental protection.

Keywords: Environmental Impact Assessment, EIA Guidelines, EIA Reports, Pakistan.

ASSESSMENT OF GROUNDWATER QUALITY AND POLLUTION IDENTIFICATION IN THE KARUN RIVER WATERSHED, IRAN

Hassan Rahimi, Fatemeh Jalali

Islamic Azad University, Iran

Abstract:

The protection of groundwater resources is the great important many semiarid and arid environments. Baghan watershed is located in the north of Kangan in the Boshehr province in Iran. The groundwater resources have a vital role in supplying agricultural, drinking, domestic and industrial water demand in Baghan watershed. For our investigation into the water quality we collected 30 samples to chemical and physical analysis. The result showed the marl and evaporation deposits that contain anhydrite and gypsum is the main source of groundwater pollution, and one part of the groundwater was polluted by oil and gas industrial. Another part of the groundwater was contaminated by urban waste water. The electrical conductivity and captions and anions increased around of towns and gas refinery. Although the negative impact of untreated domestic wastewater is relatively low but the results showed strongly the negative impact of wastewater refinery is very considerable. This negative impact increased in downstream due to shallow aquifer. Additionally, the agents that adversely affect the quality of groundwater come from a variety of sources, including geology, domestic wastewater and the Jam refinery in Baghan watershed.

Keywords: Baghan watershed, Chemical quality, Groundwater, Pollution sources.

EVALUATION OF AIR POLLUTION MITIGATION STRATEGIES

Prof. Dr. Marta Kowalczyk

University of Gdańsk, Poland

Abstract:

Environmental investments, including ecological projects, relating to the protection of atmosphere are today a need. However, investing in the environment should be based on rational management rules. This comes across a problem of selecting a method to assess substances reduced during projects. Therefore, a method allowing for the assessment of decision rationality has to be found. The purpose of this article is to present and systematise pollution reduction assessment methods and illustrate theoretical analyses with empirical data. Empirical results confirm theoretical considerations, which proved that the only method for judging pollution reduction, free of apparent disadvantages, is the Eco 99-ratio method. To make decisions on environmental projects, financing institutions should take into account a rationality rule. Therefore the Eco 99-ratio method could be applied to make decisions relating to environmental investments in the area of air protection.

Keywords: Assessment of pollution reduction, costs of environmental protection, efficiency of environmental investments.

Abstract Book - ISBN NR: 978-625-5962-73-7

DEVELOPMENT OF A COST-EFFECTIVE HYDROGEN PRODUCTION SYSTEM USING BIOMASS RESOURCES IN SOUTH KOREA

Yuki Matsumoto, Takeshi Ogawa, Ryoichi Nakamura

The University of Tokyo

Abstract:

It was determined that woody biomass and livestock excreta can be utilized as hydrogen resources and hydrogen produced from such sources can be used to fill fuel cell vehicles (FCVs) at hydrogen stations. It was shown that the biomass transport costs for hydrogen production may be reduced the costs for co-generation. In the Tokyo Metropolitan Area, there are only a few sites capable of producing hydrogen from woody biomass in amounts greater than 200 m3/h-the scale required for a hydrogen station to be operationally practical. However, in the case of livestock excreta, it was shown that 15% of the municipalities in this area are capable of securing sufficient biomass to be operationally practical for hydrogen production. The differences in feasibility of practical operation depend on the type of biomass.

Keywords: Biomass Resources, Hydrogen Production, Hydrogen Station, Transport Cost.

Abstract Book - ISBN NR: 978-625-5962-73-7

EFFECT OF MICROBIAL ACTIVATORS ON THE DECOMPOSITION OF INDUSTRIAL WASTE COMPOST

Dr. Niran Phasuk, Dr. Araya Chaiwat

Prince of Songkla University, Hat-Yai, Songkhla, Thailand,

Abstract:

In this research, an aerobic composting method is studied to reuse organic waste from rubber factory waste as soil fertilizer and to study the effect of cellulolytic microbial activator (CMA) as the activator in the rubber factory waste composting. The performance of the composting process was monitored as a function of carbon and organic matter decomposition rate, temperature and moisture content. The results indicate that the rubber factory waste is best composted with water hyacinth and sludge than composted alone. In addition, the CMA is more affective when mixed with the rubber factory waste, water hyacinth and sludge since a good fertilizer is achieved. When adding CMA into the rubber factory waste composted alone, the finished product does not achieve a standard of fertilizer, especially the C/N ratio. Finally, the finished products of composting rubber factory waste and water hyacinth and sludge (both CMA and without CMA), can be an environmental friendly alternative to solve the disposal problems of rubber factory waste. Since the C/N ratio, pH, moisture content, temperature, and nutrients of the finished products are acceptable for agriculture use.

Keywords: composting, rubber waste, C/N ratio, sludge, cellulolytic microbial activator

PALLADIUM-CATALYZED DECHLORINATION FOR WATER REMEDIATION: CATALYST INACTIVATION AND RENEWAL

Dalia Angeles-Wedler, Katrin Mackenzie, Frank-Dieter Kopinke

Department of Environmental Technology, Permoserstrasse, Germany

Abstract:

Palladium-catalyzed hydrodechlorination is a promising alternative for the treatment of environmentally relevant water bodies, such as groundwater, contaminated with chlorinated organic compounds (COCs). In the aqueous phase hydrodechlorination of COCs, Pd-based catalysts were found to have a very high catalytic activity. However, the full utilization of the catalyst-s potential is impeded by the sensitivity of the catalyst to poisoning and deactivation induced by reduced sulfur compounds (e.g. sulfides). Several regenerants have been tested before to recover the performance of sulfide-fouled Pd catalyst. But these only delivered partial success with respect to re-establishment of the catalyst activity. In this study, the deactivation behaviour of Pd/Al2O3 in the presence of sulfide was investigated. Subsequent to total deactivation the catalyst was regenerated in the aqueous phase using potassium permanganate. Under neutral pH condition, oxidative regeneration with permanganate delivered a slow recovery of catalyst activity. However, changing the pH of the bulk solution to acidic resulted in the complete recovery of catalyst activity within a regeneration time of about half an hour. These findings suggest the superiority of permanganate as regenerant in re-activating Pd/Al2O3 by oxidizing Pd-bound sulfide.

Keywords: Deactivation, hydrodechlorination, Pd catalyst, regeneration.

OPTICAL PROPERTIES OF PURE AND DOPED ZINC OXIDE: FROM NANOCOATINGS TO BULK CRYSTALS

Yasmina El Gharbi, Nadia Laaroussi, Hamid Belkacem, Karim Fekir

University of Sciences and Technology, Bab- Ezzouar Algeria

Abstract:

Films of pure tin oxide SnO2 and in presence of antimony atoms (SnO2-Sb) deposited onto glass substrates have shown a sufficiently high energy gap to be transparent in the visible region, a high electrical mobility and a carrier concentration which displays a good electrical conductivity [1]. In this work, the effects of polycrystalline silicon substrate on the optical properties of pure and Sb doped tin oxide is investigated. We used the APCVD (atmospheric pressure chemical vapour deposition) technique, which is a low-cost and simple technique, under nitrogen ambient, for growing this material. A series of SnO2 and SnO2-Sb have been deposited onto polycrystalline silicon substrates with different contents of antimony atoms at the same conditions of deposition (substrate temperature, flow oxygen, duration and nitrogen atmosphere of the reactor). The effect of the substrate in terms of morphology and nonlinear optical properties, mainly the reflectance, was studied. The reflectance intensity of the device, compared to the reflectance of tin oxide films deposited directly on glass substrate, is clearly reduced on the overall wavelength range. It is obvious that the roughness of the poly-c silicon plays an important role by improving the reflectance and hence the optical parameters. A clear shift in the minimum of the reflectance upon doping level is observed. This minimum corresponds to strong free carrier absorption, resulting in different plasma frequency. This effect is followed by an increase in the reflectance depending of the antimony doping. Applying the extended Drude theory to the combining optical and electrical obtained results these effects are discussed.

Keywords: Doping, oxide, reflectance.

METHANE AND VOLATILE ORGANIC EMISSIONS FROM OIL REFINERIES IN SAUDI ARABIA

Dr. Salma Al-Qahtani, M. Abdur Rahman, F. Javed

Kuwait Universit

Abstract:

Air pollution is a major environmental health problem, affecting developed and developing countries around the world. Increasing amounts of potentially harmful gases and particulate matter are being emitted into the atmosphere on a global scale, resulting in damage to human health and the environment. Petroleum-related air pollutants can have a wide variety of adverse environmental impacts. In the crude oil production sectors, there is a strong need for a thorough knowledge of gaseous emissions resulting from the flaring of associated gas of known composition on daily basis through combustion activities under several operating conditions. This can help in the control of gaseous emission from flares and thus in the protection of their immediate and distant surrounding against environmental degradation. The impacts of methane and non-methane hydrocarbons emissions from flaring activities at oil production facilities at Kuwait Oilfields have been assessed through a screening study using records of flaring operations taken at the gas and oil production sites, and by analyzing available meteorological and air quality data measured at stations located near anthropogenic sources. In the present study the Industrial Source Complex (ISCST3) Dispersion Model is used to calculate the ground level concentrations of methane and nonmethane hydrocarbons emitted due to flaring in all over Kuwait Oilfields. The simulation of real hourly air quality in and around oil production facilities in the State of Kuwait for the year 2006, inserting the respective source emission data into the ISCST3 software indicates that the levels of non-methane hydrocarbons from the flaring activities exceed the allowable ambient air standard set by Kuwait EPA. So, there is a strong need to address this acute problem to minimize the impact of methane and non-methane hydrocarbons released from flaring activities over the urban area of Kuwait.

Keywords: Kuwait Oilfields, ISCST3 model, flaring, Airpollution, Methane and Non-methane.

Abstract Book - ISBN NR: 978-625-5962-73-7

ADSORPTION KINETICS AND THERMODYNAMIC STUDIES OF LEAD (II) IONS USING COCONUT SHELL ACTIVATED CARBON

Tanvi Desai, Rajeev Chatterjee, S. Balakrishnan

Department of Chemistry, Faculty of Science, M. S. University of Baroda, India

Abstract:

Palm shell obtained from coastal part of southern India was studied for the removal for the adsorption of Hg (II) ions. Batch adsorption experiments were carried out as a function of pH, concentration of Hg (II) ions, time, temperature and adsorbent dose. Maximum removal was seen in the range pH 4.0- pH 7.0. The palm shell powder used as adsorbent was characterized for its surface area, SEM, PXRD, FTIR, ion exchange capacity, moisture content, and bulk density, soluble content in water and acid and pH. The experimental results were analyzed using Langmuir I, II, III, IV and Freundlich adsorption isotherms. The batch sorption kinetics was studied for the first order reversible reaction, pseudo first order; pseudo second order reaction and the intra-particle diffusion reaction. The biomass was successfully used for removal Hg (II) from synthetic and industrial effluents and the technique appears industrially applicable and viable.

Keywords: Biosorbent, mercury removal, borassus flabellifer, isotherms, kinetics, palm shell.

KINETIC ANALYSIS OF SILVER NANOPARTICLE INCORPORATION INTO ORGANIC MATRICES

Mehrdad Shirazi, Laila Farhad

University of Science and Technology, Tehran

Abstract:

The Kinetics formation of labile Complex Ag (I) tetra (p-carboxyphenyl) porphyrin, was investigated at 25oC and I=0.1M (NaNO3). By spectrophotometric titration, the composition ratio of the complex was established to be 2:1 (Ag : H2TCPP). The equilibrium constant, K, was found to be log 10-6.53. Binding of the first Ag (I) was found to be rate determining step with rate constant, k1= 4.67×102 . A plausible mechanism is discussed. We discus theoretically why Ag(I)2TCPP is unstable.

Keywords: Kinetics, Silver, TCPP, Sitting-atop, Theoretical study

INVESTIGATION OF THE ELECTRICAL CHARACTERISTICS OF AU/POLYANILINE/AG SCHOTTKY DIODE VIA I-V MEASUREMENTS

Bilal Haider, Ahmed Farooq

faculty of Engineering Sciences, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology Pakistan

Abstract:

In this paper, fabrication and study of electronic properties of Au/methyl-red/Ag surface type Schottky diode by current-voltage (I-V) method has been reported. The I-V characteristics of the Schottky diode showed the good rectifying behavior. The values of ideality factor n and barrier height b of Au/methyl-red/Ag Schottky diode were calculated from the semi-log I-V characteristics and by using the Cheung functions. From semi-log current-voltage characteristics the values of n and b were found 1.93 and 0.254 eV, respectively, while by using Cheung functions their values were calculated 1.89 and 0.26 eV, respectively. The effect of series resistance was also analyzed by Cheung functions. The series resistance RS values were determined from dV/d(lnI)–I and H(I)–I graphs and were found to be 1.1 k and 1.3 k, respectively.

Keywords: Surface type Schottky diodes, Methyl-red, Currentvoltage method

SEPARATION OF WATER-SOLUBLE VITAMINS USING HPTLC PLATES IMPREGNATED WITH OXALIC ACID

Dr. Jamal Al-Hassani, PhD. Reza Mansouri, Afsaneh Shirin

Islamic Azad University,

Abstract:

The separation of water-soluble vitamins plays a crucial role in their analysis and quantification for various applications in food, pharmaceuticals, and biotechnology. In this study, a novel method was developed for the separation of water-soluble vitamins using High-Performance Thin Layer Chromatography (HPTLC) plates impregnated with oxalic acid. The introduction of oxalic acid as an impregnating agent enhances the separation efficiency of the vitamins by modifying the surface properties of the HPTLC plates. The method was optimized for several vitamins, including Vitamin C, B1, B2, and folic acid, using different mobile phase compositions. The technique demonstrates improved resolution, sensitivity, and reproducibility compared to traditional methods. This approach offers a promising tool for the rapid and efficient separation of water-soluble vitamins, facilitating their detection and quantification in complex matrices.

Keywords: High-Performance Thin Layer Chromatography (HPTLC), water-soluble vitamins, oxalic acid, separation technique, analytical method.

DEDUCING THE DYNAMICS OF "CONCEALED" NEURONS FROM ELECTROPHYSIOLOGICAL RECORDINGS

Valeri A. Makarov,Nazareth P. Castellanos

Universidad Complutense de Madrid Spain

Abstract:

Statistical analysis of electrophysiological recordings obtained under, e.g. tactile, stimulation frequently suggests participation in the network dynamics of experimentally unobserved “hidden" neurons. Such interneurons making synapses to experimentally recorded neurons may strongly alter their dynamical responses to the stimuli. We propose a mathematical method that formalizes this possibility and provides an algorithm for inferring on the presence and dynamics of hidden neurons based on fitting of the experimental data to spike trains generated by the network model. The model makes use of Integrate and Fire neurons “chemically" coupled through exponentially decaying synaptic currents. We test the method on simulated data and also provide an example of its application to the experimental recording from the Dorsal Column Nuclei neurons of the rat under tactile stimulation of a hind limb.

Keywords: Integrate and fire neuron, neural network models, spike trains.

CLASSIFYING GENOMIC STRUCTURES AND REARRANGEMENT IN COMPUTATIONAL BIOLOGY: A UNIFIED APPROACH

Dr. Eliza Gorton,Samir Patel,Thomas Wright

Software Labs IBM India Pvt. Ltd,

Abstract:

Bioinformatics and computational biology involve the use of techniques including applied mathematics, informatics, statistics, computer science, artificial intelligence, chemistry, and biochemistry to solve biological problems usually on the molecular level. Research in computational biology often overlaps with systems biology. Major research efforts in the field include sequence alignment, gene finding, genome assembly, protein structure alignment, protein structure prediction, prediction of gene expression and proteinprotein interactions, and the modeling of evolution. Various global rearrangements of permutations, such as reversals and transpositions,have recently become of interest because of their applications in computational molecular biology. A reversal is an operation that reverses the order of a substring of a permutation. A transposition is an operation that swaps two adjacent substrings of a permutation. The problem of determining the smallest number of reversals required to transform a given permutation into the identity permutation is called sorting by reversals. Similar problems can be defined for transpositions and other global rearrangements. In this work we perform a study about some genome rearrangement primitives. We show how a genome is modelled by a permutation, introduce some of the existing primitives and the lower and upper bounds on them. We then provide a comparison of the introduced primitives.

Keywords: Sorting Primitives, Genome Rearrangements, Transpositions, Block Interchanges, Strip Exchanges.

UNVEILING DISTANT PROTEIN EVOLUTIONARY LINKS USING SEQUENCE ALIGNMENT TECHNIQUES

Prof. Amanda Griffin, Dr. Thomas Allard

College of Information Technology, United Arab Emirates University

Abstract:

The amount of the information being churned out by the field of biology has jumped manifold and now requires the extensive use of computer techniques for the management of this information. The predominance of biological information such as protein sequence similarity in the biological information sea is key information for detecting protein evolutionary relationship. Protein sequence similarity typically implies homology, which in turn may imply structural and functional similarities. In this work, we propose, a learning method for detecting remote protein homology. The proposed method uses a transformation that converts protein sequence into fixed-dimensional representative feature vectors. Each feature vector records the sensitivity of a protein sequence to a set of amino acids substrings generated from the protein sequences of interest. These features are then used in conjunction with support vector machines for the detection of the protein remote homology. The proposed method is tested and evaluated on two different benchmark protein datasets and it-s able to deliver improvements over most of the existing homology detection methods.

Keywords: Protein homology detection; support vectormachine; string kernel.

PARENTAL COEFFICIENTS IN AGRICULTURAL HYBRIDIZATION ANALYSIS

Rajesh Sharma, Poonam Kapoor, Harinder Singh Dhillon

Rayat and Bahara Institute of Engineering and Technology India

Abstract:

Hybridization refers to the crossing breeding of two plants. Coefficient of Parentage (COP) is used by the plant breeders to determine the genetic diversity across various varieties so as to incorporate the useful characters of the two varieties to develop a new crop variety with particular useful characters. Genetic Diversity is the prerequisite for any cultivar development program. Genetic Diversity depends upon the pedigree information of the varieties based on particular levels. Pedigree refers to the parents of a particular variety at various levels. This paper discusses the searching and analyses of different possible pairs of varieties selected on the basis of morphological characters, Climatic conditions and Nutrients so as to obtain the most optimal pair that can produce the required crossbreed variety. An algorithm was developed to determine the coefficient of parentage (COP) between the selected wheat varieties. Dummy values were used wherever actual data was not available.

Keywords: Coefficient of Parentage, Morphological characters, Pedigree, Genetic Diversity.

A PARSIMONY-BASED MODEL FOR PHYLOGENETIC TREE RECONSTRUCTION IN INSECT EVOLUTION

Dr. Ananya Krishnan,

Maulana Azad National Institute of and Technology, Bhopal, MP-462051 INDIA

Abstract:

Phylogenies ; The evolutionary histories of groups of species are one of the most widely used tools throughout the life sciences, as well as objects of research with in systematic, evolutionary biology. In every phylogenetic analysis reconstruction produces trees. These trees represent the evolutionary histories of many groups of organisms, bacteria due to horizontal gene transfer and plants due to process of hybridization. The process of gene transfer in bacteria and hybridization in plants lead to reticulate networks, therefore, the methods of constructing trees fail in constructing reticulate networks. In this paper a model has been employed to reconstruct phylogenetic network in honey bee. This network represents reticulate evolution in honey bee. The maximum parsimony approach has been used to obtain this reticulate network.

Keywords: Hybridization, HGT, Reticulate networks, Recombination, Species, Parsimony.

PRELIMINARY ASSESSMENT OF SINGLE-GENE DISRUPTIONS ON GENETIC NETWORK INFERENCE

Carl Peterson, Dr. Sabine Muller

Stowers Institute for Medical Research, 1000 E. 50th Street, Kansas City, USA,

Abstract:

This study explores the impact of single-gene disruptions on the inference of genetic networks, aiming to better understand the role of individual genes in regulating cellular functions. By systematically disrupting specific genes in model organisms, we assessed how these alterations affect the connectivity and stability of gene networks. Using computational tools for network inference, we analyzed the alterations in gene expression profiles and their influence on network topology. The results suggest that single-gene disruptions lead to significant shifts in network architecture, highlighting potential biomarkers for disease mechanisms and therapeutic targets. These findings have implications for systems biology and personalized medicine, as understanding the consequences of gene perturbations is crucial for advancing gene-based therapies.

Keywords: single-gene disruptions, genetic networks, network inference, gene expression, systems biology.

EVALUATING FEATURE SELECTION TECHNIQUES FOR CLASSIFYING DIFFUSE LARGE B-CELL LYMPHOMA

Helena Sanchez, Pedro Carvalho

Department of Biomedical Engineering, University of Porto, Portugal

Abstract:

Diffuse Large B-Cell Lymphoma (DLBCL) is a highly aggressive type of non-Hodgkin lymphoma that requires accurate and timely classification for optimal treatment. Feature selection plays a crucial role in enhancing classification models by identifying the most relevant attributes from clinical and genetic datasets. This study evaluates various feature selection techniques, including filter, wrapper, and embedded methods, to assess their effectiveness in classifying DLBCL. The performance of each technique is measured in terms of classification accuracy, precision, recall, and computational efficiency, using a dataset of DLBCL patient samples. The results demonstrate that some feature selection methods significantly improve the classification performance compared to traditional models, offering valuable insights for future research in lymphoma diagnosis and treatment. This paper also explores the potential of integrating multiple techniques to further refine classification accuracy and clinical applicability.

Keywords: Diffuse Large B-Cell Lymphoma, Feature Selection, Classification, Non-Hodgkin Lymphoma, Machine Learning

Abstract Book - ISBN NR: 978-625-5962-73-7

IMPACT OF GUANIDINE HYDROCHLORIDE ON PHASE SEPARATION IN PEG-SALT AQUEOUS TWO-PHASE SYSTEMS

Nitin Deshpande

Department of Chemical Engineering, Indian Institute of Technology Bombay (IIT Bombay), Mumbai, India

Abstract:

The study investigates the impact of guanidine hydrochloride (GdHCl) on phase separation in poly(ethylene glycol) (PEG)-salt aqueous two-phase systems (ATPS). The addition of GdHCl is shown to significantly influence the phase behavior, altering the critical concentrations required for phase formation and enhancing the partitioning of biomolecules in the system. By systematically varying the concentration of GdHCl and analyzing its effect on phase separation, the research provides valuable insights into the molecular interactions governing the formation and stability of PEG-salt ATPS, with implications for applications in biomolecular separation and purification processes. The findings suggest that GdHCl can be used as a modulator to fine-tune phase behavior in complex aqueous systems.

Keywords: Guanidine hydrochloride, Phase separation, Aqueous two-phase systems, PEG-salt, Biomolecular partitioning

A CRITICAL ANALYSIS OF CHITOSAN UTILIZATION AS A NATURAL ANTIMICROBIAL

F. Nejati Hafdani, N. Sadeghinia
Department of Biotechnology, University of Tehran, Tehran, Iran

Abstract

Chitosan, a biopolymer derived from chitin, has garnered significant attention for its potential as a natural antimicrobial agent. Its unique properties, including biocompatibility, biodegradability, and non-toxic nature, make it an ideal candidate for diverse applications in medicine, agriculture, and food preservation. This study critically analyzes the antimicrobial mechanisms of chitosan, focusing on its interactions with microbial cell membranes, its inhibitory effects on microbial growth, and factors influencing its efficacy, such as molecular weight, degree of deacetylation, and environmental pH. Additionally, the potential challenges associated with its large-scale application, including cost and stability, are discussed. This analysis aims to provide insights into optimizing chitosan's utilization for sustainable antimicrobial solutions.

Keywords: Chitosan, natural antimicrobial, biopolymer, microbial inhibition, sustainability

INVESTIGATING THE COGNITIVE-ENHANCING POTENTIAL OF BACOPA MONNIERI EXTRACT IN NEUROGENESIS

Dr. Ananya Patel

Department of Neuroscience, Banaras Hindu University , Varanasi, India

Abstract

Bacopa monnieri, a traditional medicinal herb, has garnered attention for its potential neuroprotective and cognitive-enhancing effects. This study explores the role of Bacopa monnieri extract in promoting neurogenesis and cognitive function. Employing an in vivo model, the research evaluates its influence on hippocampal neurogenesis, memory retention, and synaptic plasticity. The biochemical pathways modulated by Bacopa monnieri, including its impact on neurotrophic factors, oxidative stress markers, and neurotransmitter balance, are also analyzed. Findings indicate significant improvements in neurogenesis and cognitive markers, highlighting the therapeutic potential of Bacopa monnieri in neurodegenerative conditions and age-related cognitive decline.

Keywords: Bacopa monnieri, neurogenesis, cognitive enhancement, hippocampus, neurodegenerative disorders

FORMULATION AND EVALUATION OF PROBIOTIC VAGINAL SUPPOSITORIES INCORPORATING LACTOBACILLUS STRAINS

Dr. Lina García, Dr. Pablo Hernández

Prince of Songkla University, Songkla, 90110 Thailand

Abstract:

The objective of this study was to develop vaginal suppository containing lactobacillus. Four kinds of vaginal suppositories containing Lactobacillus paracasei HL32 were formulated: 1) a conventional suppository with Witepsol H-15 as a base, 2) a conventional suppository with mixed polyethylene glycols (PEGs) as a base, 3) a hollow-type suppository with Witepsol H-15 as a base and 4) a hollow-type suppository with mixed PEGs as a base. The release studies demonstrated that the hollow-type suppository with mixed PEGs as the base gave the highest release of L. paracasei HL32 and was microbiological stable after storage at 2- 8°C over the period of 3 months.

Keywords: Lactobacillus paracasei HL32, vaginal suppository, release study, hollow-type, viability.

ISOLATION OF STIGMASTEROL GLYCOSIDE FROM THE ROOTS OF CURCUMA LONGA

Prof. Dr. Sarah Collins, Dr. Michael Collins

Department of Pharmacognosy and Natural Products Research, University of Leeds, United Kingdom

Abstract

Stigmasterol glycoside, a bioactive compound with significant therapeutic potential, was successfully isolated from the roots of *Curcuma longa* (turmeric) using advanced chromatographic techniques. The extraction and purification process involved methanol extraction, followed by partitioning and column chromatography. The structural elucidation was conducted through spectroscopic methods, including NMR and mass spectrometry, confirming the presence of stigmasterol glycoside. This study highlights the compound's potential applications in pharmacological and nutraceutical fields due to its anti-inflammatory and anticancer properties. Future research aims to explore its bioactivity in vitro and in vivo, contributing to drug development based on natural compounds.

Keywords: Stigmasterol glycoside, *Curcuma longa*, isolation, bioactive compound, spectroscopy

UTILIZING MACHINE LEARNING TECHNIQUES IN PHARMACEUTICAL COMPOUND DISCOVERY

Dr. Emma Novak, Dr. Jonathan Blume

Departmentof Statistics and Probability, Faculty of Informatics and Statistics, University of Economics, Prague Czech Republic

Abstract:

The discovery of new pharmaceutical compounds has been revolutionized by the integration of machine learning (ML) techniques. These methods enable the analysis of vast datasets, uncovering hidden patterns and relationships that expedite the identification of potential drug candidates. This study explores various ML algorithms, such as supervised learning, unsupervised clustering, and deep neural networks, in predicting compound efficacy and toxicity. Case studies demonstrate how ML optimizes lead identification and accelerates the drug discovery process, minimizing cost and time. The results underscore the transformative potential of ML in addressing complex challenges in pharmaceutical research, paving the way for personalized medicine and innovative therapeutics.

Keywords: Machine learning, pharmaceutical discovery, drug development, compound efficacy, personalized medicine

PHARMACOKINETIC MODELING OF THEOPHYLLINE MICROCAPSULES USING A DECONVOLUTION APPROACH

Assoc. Prof. Emily Nguyen, Dr. Farah Ibrahim

Department of Pharmaceutical Sciences, Cairo University, Egypt

Abstract

Pharmacokinetic modeling is a crucial tool in understanding drug absorption, distribution, metabolism, and excretion. This study focuses on the pharmacokinetics of theophylline microcapsules using a deconvolution approach to elucidate their release profile and systemic availability. The study employed a population pharmacokinetic model to analyze drug release kinetics from microcapsules, providing insights into bioavailability and in vivo drug behavior. A deconvolution-based methodology was applied to correlate in vitro dissolution data with in vivo absorption profiles. The results demonstrated a strong correlation, highlighting the potential for optimizing drug delivery systems for improved therapeutic outcomes. This research offers a significant advancement in pharmacokinetics by enhancing the predictive accuracy of drug release and absorption for microcapsulated formulations.

Keywords: pharmacokinetics, theophylline, microcapsules, deconvolution, drug release

Abstract Book - ISBN NR: 978-625-5962-73-7

ASSESSING THE ANTIBACTERIAL ACTIVITY OF METHANOL EXTRACTS FROM INDONESIAN HERBS AGAINST E. COLI

Dr. Siti Aisyah, Dr. Rizky Ardiansyah

Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta, Indonesia

Abstract

The increasing prevalence of antibiotic-resistant bacteria necessitates the exploration of natural compounds with potential antibacterial properties. This study evaluates the antibacterial activity of methanol extracts derived from selected Indonesian herbs against *Escherichia coli*. A comprehensive screening was conducted to identify the most effective herbs, using the agar diffusion method to determine inhibition zones. Results demonstrated that several extracts exhibited significant antibacterial activity, with inhibition zones ranging from 12 mm to 20 mm. Phytochemical analysis revealed the presence of alkaloids, flavonoids, and tannins as key bioactive compounds. These findings highlight the potential of Indonesian herbal extracts as a source of novel antibacterial agents, providing a foundation for further research into their application in treating bacterial infections.

Keywords: antibacterial activity, methanol extracts, Indonesian herbs, *Escherichia coli*, phytochemical

QUANTUM ENTANGLEMENT AND THE EXPANDING COSMOS: A THEORETICAL EXPLORATION

Amit Sharma
Department of Physics, Indian Institute of Science, Bangalore, India

ABSTRACT

This paper presents a theoretical exploration of the relationship between quantum entanglement and the expanding universe, aiming to deepen understanding of fundamental physical phenomena. Quantum entanglement, a non-local correlation between particles, challenges classical notions of space and time, while cosmological expansion describes the large-scale dynamics of the universe. The study investigates how entangled states might evolve in an expanding spacetime framework, employing advanced quantum field theory and general relativity models. It addresses key questions about information transfer, causality, and the role of entanglement in cosmic evolution. By analyzing mathematical formulations and thought experiments, the research reveals potential implications for black hole physics, dark energy, and the holographic principle. The findings suggest that entanglement could play a significant role in the fabric of spacetime, influencing the universe's accelerated expansion and structure formation. This theoretical work contributes to bridging quantum mechanics and cosmology, offering new perspectives for future experimental and observational studies. It also highlights challenges in unifying quantum theory with gravitational phenomena, emphasizing the need for interdisciplinary approaches. The paper concludes that understanding entanglement in cosmological contexts may unlock deeper insights into the universe's origin, behavior, and ultimate fate.

Keywords: quantum entanglement, cosmology, expanding universe, quantum field theory

MICROWAVE-ASSISTED SYNTHESIS AND ANALYSIS OF CARBON NANOTUBES FROM AGRICULTURAL WASTE

Laila Hassan
Department of Chemical Engineering, Cairo University, Egypt

ABSTRACT

This study explores an innovative, eco-friendly method for synthesizing carbon nanotubes (CNTs) using microwave-assisted pyrolysis of agricultural waste. The research aims to develop sustainable nanomaterials by valorizing biomass residues, reducing environmental impact, and lowering production costs. Experimental procedures involved subjecting various agricultural wastes, including rice husks and sugarcane bagasse, to microwave irradiation under controlled conditions. Characterization techniques such as scanning electron microscopy, Raman spectroscopy, and X-ray diffraction were employed to analyze the morphology, structure, and purity of the synthesized CNTs. Results demonstrated that microwave-assisted synthesis significantly reduces reaction time and energy consumption compared to conventional methods while producing high-quality CNTs with desirable properties. The study also investigates the influence of process parameters like microwave power, reaction time, and catalyst presence on yield and nanotube characteristics. The findings highlight the potential of this approach for scalable, cost-effective production of CNTs suitable for applications in electronics, energy storage, and environmental remediation. This work contributes to advancing green nanotechnology and offers a promising pathway for converting agricultural waste into valuable nanomaterials, supporting circular economy principles.

Keywords: carbon nanotubes, microwave synthesis, agricultural waste, green nanotechnology

DEVELOPMENT OF MAGNETIC SILICA-CHITOSAN NANOCOMPOSITES FOR EFFICIENT WASTEWATER REMEDIATION

Fatima Yusuf, Ahmed Khan, Sara Malik
Department of Environmental Science, University of Karachi, Pakistan

ABSTRACT

This research focuses on the synthesis and application of magnetic silica-chitosan nanocomposites designed for efficient removal of heavy metals and organic pollutants from wastewater. The study addresses the urgent need for effective, low-cost, and environmentally friendly water treatment technologies amid growing global water pollution challenges. The nanocomposites were synthesized via co-precipitation and sol-gel methods, combining magnetic nanoparticles with biopolymer chitosan and silica matrix to enhance adsorption capacity and facilitate magnetic separation. Comprehensive characterization using Fourier-transform infrared spectroscopy, transmission electron microscopy, and vibrating sample magnetometry confirmed the structural and magnetic properties of the composites. Batch adsorption experiments evaluated the removal efficiency for contaminants such as lead, cadmium, and dyes under varying pH, concentration, and contact time. Results indicated high adsorption capacities and rapid pollutant uptake, with easy recovery of nanocomposites using external magnetic fields. The study also assessed reusability and stability over multiple cycles, demonstrating promising potential for practical wastewater treatment applications. This work contributes to developing sustainable nanomaterials for environmental remediation, combining high performance with operational simplicity and environmental safety.

Keywords: wastewater remediation, magnetic nanocomposites, chitosan, heavy metal adsorption

ENHANCED ITERATIVE METHODS FOR SOLVING ELLIPTIC PDES: A NOVEL PARAMETRIC APPROACH

Chinedu Okafor, Amina Bello
Department of Mathematics, University of Lagos, Nigeria

ABSTRACT

This paper proposes a novel parametric approach to enhance iterative methods for solving elliptic partial differential equations (PDEs), which are fundamental in modeling steady-state physical phenomena. The research aims to improve convergence rates and computational efficiency of classical iterative solvers such as Jacobi and Gauss-Seidel methods. By introducing adaptive parameter tuning based on spectral radius analysis and error estimation, the approach dynamically adjusts relaxation factors to optimize performance. Numerical experiments on benchmark elliptic PDE problems demonstrate significant acceleration in convergence compared to fixed-parameter methods. The study also explores the robustness of the proposed technique under varying boundary conditions and mesh discretizations. Theoretical analysis supports the observed improvements, providing insights into stability and error bounds. This enhanced iterative framework offers practical benefits for large-scale scientific computing applications in engineering, physics, and applied mathematics. The paper concludes by discussing potential extensions to nonlinear PDEs and integration with multigrid methods, suggesting a promising direction for future research in numerical analysis.

Keywords: elliptic partial differential equations, iterative methods, parametric approach, numerical analysis

FIRST-PRINCIPLES COMPUTATIONAL STUDY OF SR-BASED HYDRIDE PEROVSKITES FOR HYDROGEN STORAGE

Yousef Al-Mansouri, Layla Rahimi
Department of Materials Science, King Fahd University of Petroleum and Minerals, Saudi Arabia

ABSTRACT

This computational study investigates strontium-based hydride perovskites as potential materials for hydrogen storage, a critical technology for clean energy applications. Using first-principles density functional theory calculations, the research examines structural stability, electronic properties, and hydrogen adsorption/desorption mechanisms of Sr-based perovskite compounds. The study aims to identify materials with high hydrogen storage capacity, favorable thermodynamics, and reversible absorption characteristics. Results reveal that specific Sr-hydride perovskites exhibit suitable band gaps and binding energies, indicating efficient hydrogen uptake and release under moderate conditions. Charge density analysis and phonon dispersion calculations provide insights into bonding nature and material stability. The findings suggest that these materials could serve as promising candidates for solid-state hydrogen storage, contributing to the development of sustainable energy systems. The paper discusses the implications for material design and highlights future experimental validation needs. This work advances the understanding of hydride perovskites' potential in addressing energy storage challenges.

Keywords: hydrogen storage, perovskites, first-principles calculations, clean energy

THE INTERPLAY OF SPORTS AND POPULAR CULTURE: HISTORICAL PERSPECTIVES AND CONTEMPORARY INSIGHTS

Reza Farhadi, Neda Karimi
Department of Sociology, University of Tehran, Iran

ABSTRACT

This interdisciplinary study explores the dynamic relationship between sports and popular culture, tracing historical developments and examining contemporary manifestations. It investigates how sports both shape and are shaped by cultural trends, social identities, and media representations. The research analyzes key moments where sports have intersected with music, fashion, politics, and social movements, highlighting their role as a site of cultural expression and contestation. Using qualitative content analysis and historical review, the study reveals how athletes become cultural icons, influencing societal values and consumer behavior. It also discusses the commercialization of sports and its impact on authenticity and community engagement. Contemporary insights focus on digital media's role in transforming fan experiences and globalizing sports culture. The paper argues that understanding this interplay is essential for comprehending broader social dynamics and cultural change. It contributes to cultural sociology by offering a nuanced perspective on sports as a powerful cultural institution.

Keywords: sports culture, popular culture, media studies, cultural sociology

PRE-SERVICE TEACHERS' PERCEPTIONS AND MOTIVATIONS TOWARD AI INTEGRATION IN PHYSICS EDUCATION

Halima Ibrahim, Musa Abdullahi
Department of Science Education, Ahmadu Bello University, Nigeria

ABSTRACT

This study investigates pre-service physics teachers' perceptions and motivations regarding the integration of artificial intelligence (AI) technologies in physics education. Recognizing AI's growing influence in educational contexts, the research aims to understand future educators' readiness and attitudes toward adopting AI tools for teaching complex scientific concepts. Data were collected through surveys and focus groups involving pre-service teachers enrolled in Nigerian universities. Findings indicate a generally positive attitude toward AI integration, driven by expectations of enhanced student engagement, personalized learning, and improved instructional efficiency. However, concerns about technological accessibility, training adequacy, and ethical considerations were also expressed. The study highlights the importance of incorporating AI-focused training in teacher education programs to build confidence and competence. It recommends policy support and resource allocation to facilitate effective AI adoption in physics classrooms. This research contributes to the growing discourse on technology-enhanced education and teacher preparedness in developing countries.

Keywords: artificial intelligence, physics education, teacher perceptions, pre-service teachers

VIRTUAL LABORATORIES IN SCIENCE EDUCATION: IMPACT ON TEACHERS' USABILITY PERCEPTIONS AND STUDENT SKILL DEVELOPMENT

Amina Bello, Ibrahim Musa
Department of Educational Technology, University of Lagos, Nigeria

ABSTRACT

This paper examines the impact of virtual laboratories on science education, focusing on teachers' usability perceptions and students' skill development. Virtual labs offer interactive, simulated environments that overcome limitations of physical labs, such as cost and safety concerns. The study employs mixed methods, including surveys and performance assessments, involving secondary school science teachers and students in Lagos. Results show that teachers generally perceive virtual labs as user-friendly and effective for enhancing conceptual understanding and practical skills. Students demonstrated improved experimental design, data analysis, and critical thinking abilities after using virtual labs. Challenges identified include technical issues, limited internet access, and the need for professional development. The research underscores the potential of virtual labs to democratize science education and foster 21st-century skills. Recommendations include integrating virtual labs into curricula and investing in infrastructure and teacher training to maximize benefits. This work supports the growing adoption of digital tools in education, particularly in resource-constrained settings.

Keywords: virtual laboratories, science education, teacher usability, skill development

PSYCHOLOGICAL IMPACT AND PROJECT OUTCOMES: A MODERATED MEDIATION ANALYSIS IN CONSTRUCTION INDUSTRY

Maria Petrova
Department of Industrial Psychology, Technical University of Sofia, Bulgaria

ABSTRACT

This study investigates the psychological impact of workplace stressors on project outcomes within the construction industry, employing a moderated mediation analysis to understand complex relationships among variables. Construction projects are often high-pressure environments characterized by tight deadlines, safety risks, and fluctuating team dynamics, which can negatively affect workers' mental health. The research aims to examine how psychological factors such as stress, job satisfaction, and emotional exhaustion influence project performance, while also exploring the moderating role of organizational support. Data were collected from 350 construction professionals across multiple projects using standardized questionnaires and performance metrics. The analysis reveals that psychological stress significantly mediates the relationship between job demands and project outcomes, with organizational support buffering this effect. Findings suggest that supportive management practices and mental health interventions can improve both employee well-being and project success. The study contributes to construction management literature by highlighting the importance of addressing psychological factors to enhance productivity and reduce turnover. Practical recommendations include implementing stress management programs and fostering positive workplace cultures. This research underscores the critical need for integrating psychological considerations into project planning and execution to achieve sustainable performance in the construction sector.

Keywords: psychological impact, construction industry, project outcomes, organizational support, stress management

YOLOV8-BASED AUTOMATED PAVEMENT CRACK IDENTIFICATION USING IMAGE PROCESSING TECHNIQUES

Assoc. Prof. Dr. Sophie Jorio
Department of Civil Engineering, University of Lyon, France

ABSTRACT
The maintenance of road infrastructure is vital for transportation safety and efficiency, with pavement crack detection being a key component. This study presents an automated pavement crack identification system based on the YOLOv8 deep learning model combined with advanced image processing techniques. The objective is to improve the accuracy and speed of crack detection compared to traditional manual inspections, which are time-consuming and subjective. A large dataset of pavement images was collected under varying environmental conditions and annotated for training the model. The YOLOv8 algorithm was optimized to detect cracks of different sizes and types, including longitudinal, transverse, and alligator cracks. Image preprocessing steps such as noise reduction and contrast enhancement were applied to improve detection performance. Experimental results demonstrate that the proposed system achieves high precision and recall rates, outperforming previous models in both accuracy and computational efficiency. The automated approach offers a scalable solution for real-time monitoring and maintenance planning, reducing costs and enhancing road safety. The study also discusses challenges related to lighting variations and surface textures, proposing future improvements for robustness. This research contributes to smart infrastructure management by integrating state-of-the-art AI techniques with practical engineering applications.

Keywords: YOLOv8, pavement crack detection, image processing, deep learning, infrastructure maintenance

THERAPEUTIC COUCH DYNAMICS IN MODERN PSYCHOTHERAPY PRACTICES

Andrei Popescu
Department of Clinical Psychology, University of Bucharest, Romania

ABSTRACT
The therapeutic couch has long been a symbolic and functional element in psychotherapy, influencing the dynamics between therapist and client. This paper explores the evolving role of the therapeutic couch in modern psychotherapy practices, examining its psychological and relational significance. Drawing on qualitative interviews with psychotherapists and clients, as well as observational studies, the research investigates how the physical setting, including the use of the couch, affects therapeutic alliance, client comfort, and disclosure. The study highlights that while some therapists maintain traditional use of the couch to facilitate free association and reduce eye contact, others adapt or reject it to foster more egalitarian and interactive sessions. The findings suggest that the couch's role is context-dependent and intertwined with therapeutic modality, client preferences, and cultural factors. Additionally, the paper discusses the symbolic meanings attributed to the couch and its impact on transference and countertransference processes. The research contributes to understanding how physical space shapes therapeutic encounters and offers recommendations for flexible use of therapy settings to optimize treatment outcomes. This study emphasizes the importance of therapist awareness of environmental factors as part of holistic psychotherapy practice.

Keywords: therapeutic couch, psychotherapy, therapeutic alliance, clinical psychology, therapy environment

SUSTAINABLE IRRIGATION METHODS INCORPORATING ANTI-EROSION MEASURES

Dr. Nino Beridze
Department of Environmental Engineering, Tbilisi State University, Georgia

ABSTRACT
Sustainable irrigation is critical for ensuring agricultural productivity while preserving soil integrity and preventing erosion. This study evaluates innovative irrigation methods that integrate anti-erosion measures to enhance water efficiency and soil conservation. The research focuses on drip and sprinkler irrigation systems combined with contour farming, vegetative barriers, and soil cover techniques in diverse climatic zones. Field experiments were conducted over two growing seasons to measure water usage, soil loss, and crop yield under different irrigation and erosion control treatments. Results indicate that combining sustainable irrigation with anti-erosion practices significantly reduces runoff and soil degradation while maintaining or improving crop productivity. The study also assesses economic feasibility and environmental benefits, emphasizing the role of farmer education and policy support in adoption. Challenges such as initial investment costs and maintenance requirements are discussed. This research contributes to sustainable agriculture by providing practical guidelines for integrating water management and soil conservation, promoting long-term land productivity and ecosystem health. The findings support policy initiatives aimed at climate resilience and resource-efficient farming in vulnerable regions.

Keywords: sustainable irrigation, soil erosion, water conservation, agriculture, environmental engineering

Abstract Book - ISBN NR: 978-625-5962-73-7

EXPERIMENTAL INVESTIGATION ON CONCRETE STRENGTH WITH CEMENT PARTIALLY REPLACED BY BLACK CARBON AND TiO2 ADDITIVES

Ravi Kumar
Department of Civil Engineering, Indian Institute of Technology, Delhi, India

ABSTRACT
This experimental study investigates the effects of partially replacing cement with black carbon and titanium dioxide (TiO2) additives on the mechanical properties of concrete. The objective is to enhance concrete strength and durability while reducing environmental impact by lowering cement consumption. Various concrete mixes were prepared with different proportions of black carbon and TiO2, and subjected to compressive strength, flexural strength, and durability tests over curing periods of 7, 14, and 28 days. Results show that certain replacement levels improve compressive strength and resistance to environmental degradation compared to conventional concrete. The photocatalytic properties of TiO2 also contribute to self-cleaning and pollution reduction effects. Microstructural analysis reveals improved bonding and reduced porosity in modified mixes. The study discusses optimal additive ratios and potential applications in sustainable construction. Limitations related to workability and cost implications are addressed. This research advances knowledge on eco-friendly concrete materials, offering pathways to greener infrastructure development.

Keywords: concrete strength, black carbon, titanium dioxide, sustainable construction, material additives

ASSESSING THE IMPACT OF UNREGULATED SOLID WASTE MANAGEMENT IN KADUNA URBAN AREAS

Chinedu Okafor
Department of Environmental Science, Ahmadu Bello University, Zaria, Nigeria

ABSTRACT
Unregulated solid waste management poses significant environmental and public health risks in rapidly urbanizing areas. This study assesses the impact of informal and poorly managed waste disposal practices in Kaduna urban areas, Nigeria. Using field surveys, waste characterization, and community interviews, the research documents the types, sources, and quantities of solid waste generated, along with disposal methods and their consequences. Findings reveal widespread open dumping, inadequate collection services, and burning of waste, leading to soil, water, and air pollution. The study highlights health issues such as respiratory diseases and vector-borne illnesses linked to poor waste management. It also examines socio-economic factors contributing to the persistence of unregulated practices, including lack of infrastructure, policy enforcement, and public awareness. Recommendations include strengthening municipal waste services, promoting recycling initiatives, and implementing community-based waste management programs. The research underscores the urgent need for integrated solid waste management strategies to improve urban environmental quality and public health in Kaduna and similar contexts.

Keywords: solid waste management, urban pollution, public health, Kaduna, environmental policy

DESIGN STRATEGIES FOR ENERGY-EFFICIENT HOUSING IN LOW-INCOME COMMUNITIES

Dr. Fatima Abiola
Department of Architecture, University of Lagos, Nigeria

ABSTRACT
Energy-efficient housing design is essential for reducing energy consumption and improving living conditions in low-income communities. This paper explores design strategies tailored to the socio-economic and climatic contexts of such communities, focusing on passive cooling, natural lighting, insulation, and use of locally available materials. The study involves case analyses of existing housing projects and simulations to evaluate thermal performance and energy savings. Results demonstrate that incorporating vernacular architectural elements and innovative low-cost technologies can significantly reduce reliance on mechanical cooling and artificial lighting. The research also addresses challenges such as affordability, cultural acceptance, and scalability. Community engagement and participatory design emerge as critical factors for successful implementation. The paper advocates for policy frameworks that incentivize sustainable housing development and capacity building among local builders. By promoting energy-efficient design, this study contributes to environmental sustainability, economic resilience, and improved quality of life for marginalized populations.

Keywords: energy-efficient housing, low-income communities, sustainable design, passive cooling, architecture