

# ABSTRACT BOOK



ÜSKÜP  
4 - 7 Nisan 2024

## BALKAN 11. ULUSLARARASI UYGULAMALI BİLİMLER KONGRESİ



BALKAN 11th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES  
APRIL 4 - 7, 2024  
SKOPJE

Published by Academy Global Publishing House



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*BALKAN 11TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCES  
APRIL 4 - 7, 2024  
SKOPJE*

*Edited By  
PROF. DR. NAİLE BİLGİLİ*

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*Issued: 15.05.2024  
ISBN: 978-625-6830-99-8*

## *CONFERENCE ID*

### **BALKAN 11TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCES**

#### **DATE – PLACE**

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#### **EVALUATION PROCESS**

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

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**Oral presentation**

#### **ASSOCIATION & ACADEMIC INCENTIVES :**

**In the conference 76 papers have been presented by Turkish participants and 105 papers  
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#### **LANGUAGES**

**Turkish, English, Russian, Persian, Arabic**

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Sayı : E-16710634-03-903.07.02-2300384284  
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KÜLEKÇİ'nin Görevlendirilmesi

01.12.2023

MİMARLIK VE TASARIM FAKÜLTESİ DEKANLIĞINA

İlgi : 29.11.2023 tarihli ve E-53120705-000-2300381989 sayılı belge.

Fakülteniz Peyzaj Mimarlığı Bölümü öğretim üyelerinden Doç.Dr.Elif AKPINAR KÜLEKÇİ'nin, Yükseköğretim Genel Kurulunun 15.06.2023 tarihli, 10 sayılı oturumunda alınan 2023.10.183 sayılı kararı gereğince Doçentlik Başvuru Şartlarında bulunan ve doçent olacak adaylardan istenen "Diğer uluslararası/ ulusal bilimsel toplantının düzenleme komitesinde resmi olarak görevlendirilmiş üniversite akademisyen temsilcisi bulunması zorunludur." maddesi gereğince, Academy Global Conference & Journals tarafından yapılan kongrelerin düzenleme kurullarında yolluksuz ve gündeliksiz olarak görevlendirilmesi Rektörlüğümüzce uygun görülmüştür.

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Sayı: 1

Tarih: 02/10/2023

Mövzu: Təşkilat Komitəsi üzvü olmaq haqqında

### Məktub

"Təşkilat komitəsi üzvlüyü" mövzusunda məktub

Bildirirəm ki, prof. Dr. Həcər Hüseynovanın "Akademi Global Conference & Journals "Dərnəyi tərəfindən təşkil edilən konfranslarda təşkilat komitəsi üzvü olaraq təyin edilmişdir.

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BALKAN 11<sup>TH</sup> INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES  
BALKAN 11<sup>TH</sup> INTERNATIONAL CONFERENCE ON APPLIED  
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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 1	Dr. Öğretim Üyesi Ülkü Çoban	1	Investigation of Exercise Addiction Levels of Individuals Going to Gyms: Yalova Province Case	Dr. Öğretim Üyesi Ülkü Çoban
		2	Examination of the Attitudes of Students Studying in the Department of Property Protection and Private Security towards Physical Education and Sports	Dr. Öğretim Üyesi Ülkü Çoban
		3	EXAMINATION OF PHYSICAL EDUCATION TEACHER CANDIDATES' EXPECTATIONS FROM CLASSROOM MANAGEMENT COURSE	Dr. Öğr. Üyesi Ahmet YIKILMAZ Prof. Dr. Fikret ALINCAK
		4	AN INVESTIGATION OF THE VIEWS OF PHYSICAL EDUCATION TEACHER CANDIDATES TAKING PEDAGOGICAL FORMATION EDUCATION ON TEACHING PRACTICE COURSE	Dr. Öğr. Üyesi Ahmet YIKILMAZ Prof. Dr. Fikret ALINCAK
		5	EXAMİNİNG THE POSİTİVE PERCEPTİON STATUS OF İNDİVİDUALS ACCORDİNG TO THEİR DOİNG SPORTS	Deniz ÇETİN Dr. Fuat Orkun TAPŞIN Prof. Dr. Elif KARAGÜN
		6	EXAMİNİNG OF PSYCHOLOGİCAL WELL-BEİNG OF PARENTS OF CHİLDREN PLAYİNG SPORTS	Dr. Fuat Orkun TAPŞIN Prof. Dr. Elif KARAGÜN Deniz ÇETİN

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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 2	Prof. Dr. Kelime Erdal	1	HAYVANLARI MASALLARLA TANIMAK: HER GÜNE BİR MASAL ÖRNEĞİ	Prof. Dr. Kelime Erdal
		2	MASALLARDA DEĞER AKTARIMI	Prof. Dr. Kelime Erdal
		3	TÜRKİYE'DE İLKOKULDA MÜZİK İLE İLGİLİ YAPILAN LİSANSÜSTÜ TEZLERİN EĞİLİMLERİ: 1996-2023 YILLARI ÖRNEĞİ	Doç. Dr. AYŞEGÜL OĞUZ NAMDAR Öğr. Gör. MUSTAFA SARIKAYA
		4	SINIF ÖĞRETMENLERİNİN İLKOKUL MÜZİK DERSLERİNDE KARŞILAŞTIKLARI GÜÇLÜKLER VE ÇÖZÜM ÖNERİLERİ	Doç. Dr. AYŞEGÜL OĞUZ NAMDAR Öğr. Gör. MUSTAFA SARIKAYA
		5	ORTAOKUL 8.SINIF ÖĞRENCİLERİNİN MATEMATİK DERSİNE YÖNELİK BAKIŞ AÇILARININ İNCELENMESİ	Dr., ALİ ŞAHİN EKREM İLDEĞİN ÖMER ÇİFTÇİ
		6	4MAT ÖĞRETİM MODELİ KULLANILAN LİSANSÜSTÜ ÇALIŞMALARIN BETİMSSEL İÇERİK ANALİZİNİN SONUCUNUN İNCELENMESİ	Dr., ALİ ŞAHİN
		7	Examination of Teachers' Professional Ethics Opinions and Perceived Teaching Professional Ethical Principles According to Various Variables	Doç. Dr. Birsal AYBEK Osman OĞUZ
		8	GAMIFICATION AS A MEANS TO PROMOTE STUDENT MOTIVATION AND ENGAGEMENT: A THEORETICAL FRAMEWORK	Asst. Prof. Dr. İsmail GÜRLER Shouk Zaytoun, MA Student
		9	EXPLORING REFLECTIVE EXPERIENCES OF CAMBRIDGE CELTA TRAINEES	Asst. Prof. Dr. Özlem ZABİTGİL GÜLSEREN Ahmad Zaytoun, MA Student
		10	İSLAMDAN ƏNVƏLKİ DÖNƏMDƏ UŞAQLARIN TƏLİM-TƏDRİS MƏSƏLƏLƏRİNİN QOYULUŞU	Fidan NASİROVA

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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 3	Öğr. Gör. Gültekin ERDAL	1	COLOR LANGUAGE IN PACKAGING AND ITS PSYCHOLOGICAL EFFECT	Öğr. Gör. Gültekin ERDAL
		2	TYPOGRAPHICAL COMMUNICATION AND FORM AND MEANING RELATIONSHIP IN TYPOGRAPHY	Öğr. Gör. Gültekin ERDAL
		3	MUSIC-IDENTITY FOCUSED ANALYSIS OF EDİRNELİ BENLİ HASAN AĞA'S WORK NAMED RAST PEŞREVİ	Assoc. Prof. Dr. , GÜNSU YILMA ŞAKALAR MA Student, MEHMET KARACA
		4	ORTA ÇAĞ AVRUPASINDA GÖRÜLEN GİYSİ SEMBOLİZMİ ÜZERİNE GENEL BİR BAKIŞ	Doç. Dr. SAFİYE SARİ Arş. Gör. Alara Nur KESKİN
		5	“VICTORIA AND ALBERT” MÜZESİNDE SERGİLENEN 3 ADET VICTORIA DÖNEMİ GEPIYERİNİN MODEL ÖZELLİKLERİ AÇISINDAN İNCELENMESİ	Doç. Dr. SAFİYE SARİ Arş. Gör. Alara Nur KESKİN
		6	SMART CITY FURNITURE WITH AESTHETIC AND DESIGN VALUE	Dr. Bengi POLAT
		7	CERAMIC WALL APPLICATIONS IN THE CONTEXT OF DESIGN-FUNCTION RELATIONSHIP	Lisansüstü Öğrencisi, ZÜMRÜT YEŞİL Doç. OYA AŞAN YÜKSEL
		8	BALKAN ARCHITECTURE IN GEOGRAPHICAL LİTERATURE AND TRAVELOGUES	Arş. Gör. Meral YILMAZ
		9	BASKİRESİM SANATINDA ÇUKUR BASKI TEKNİĞİ	EBRU ALKIŞLIOĞLU Dr. Öğr. Üyesi SERDAR DARTAR

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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 4	Associate Professor, Faik Gökçalp	1	A STUDY ON INVESTIGATION OF THE INHIBITION EFFECTS OF SOME IMPORTANT COMPOUNDS IN GREEN TEA ON CD36 AND LDL IN ATHEROSCLEROSIS USING CHEMICAL COMPUTATION METHOD	Associate Professor, Faik Gökçalp
		2	A STUDY ON INVESTIGATION OF THE INHIBITION EFFECTS OF THE MAIN EFFECTIVE COMPOUNDS IN ARONIA (ARONIA MELANOCARPA) FOR HMG-COA REDUCTASE IN ATHEROSCLEROSIS	Assoc. Prof. Dr. Faik Gökçalp
		3	SYNTHESIZING HYDROCHAR FROM SOLID FOOD WASTE IN SUBCRITICAL WATER AND ASSESSING ITS EFFICIENCY IN SYNTHETIC DYE REMOVAL FROM WATER	Samer KHALAF Assoc. Prof. Dr. Erdal YABALAK
		4	OPTIMIZING PHENOLIC COMPOUNDS REMOVAL FROM PISTACHIO PLANT WASTEWATER USING PERSULFATE OXIDATION: A RESPONSE SURFACE METHODOLOGY APPROACH	Samer KHALAF Assoc. Prof. Dr. Erdal YABALAK
		5	Synthesis of Ce doped Nanostructured ZnO Films and Photocatalytic Activity	Assoc. Prof. Dr. Seniye Karakaya Leyla Kaba
		6	ZN BENZERİ KRİPTON İÇİN ENERJİ SEVİYELERİNİN ATOMİK YAPI HESABI	HURİSEL BASMACI Dr. Öğretim Üyesi SELDA ESER

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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 5	Doç. Dr. Nilgün Nurhan KARA	1	CUMHURİYET DÖNEMİ LİSE DERS KİTAPLARINDA BALKAN PAKTI	Prof.Dr.Bayram Akça
		2	CUMHURİYET DÖNEMİ LİSE TARİH DERS KİTAPLARINDA SADABAT PAKTI	Prof. Dr. Bayram Akça
		3	OSMANLI TARİHİ DEMOGRAFİ ÇALIŞMALARINDA KATSAYI SORUNU	Dr. Öğr. Üyesi YAHYA AYYILDIZ
		4	ALBANIAN MIGRATION FROM RUMELIA TO ISTANBUL IN THE FIRST HALF OF THE EIGHTEENTH CENTURY	Dr. Nihal Metin
		5	BİZANS SANATINDA ÜZÜM YİYEN TAVŞAN FİĞÜRÜ	Melek AKER
		6	TÜRK KÜLTÜRÜNDE LAKAP VERME GELENEĞİNİN İŞLEVİ ÜZERİNE BİR İNCELEME: MUĞLA KENT MERKEZİ ÖRNEĞİ	Kübra EROĞLU Doç. Dr. Metin MENEKŞE
		7	OSMANLI'DAN CUMHURİYET'E DİPLOMATİK İLİŞKİLERDE SPOR ORGANİZASYONLARININ ROLÜ: OLİMPİYAT ÖRNEKLERİ ÜZERİNDEN BİR İNCELEME	İrem MENEKŞE Doç. Dr. Metin MENEKŞE
		8	BOSNALI İBRAHİM VEHBİ'NİN RUZNÂME'SİNDE İSTANBUL	Doktora Öğrencisi, MUSTAFA YILMAZ
		9	ANADOLU'DA YENİGÜN GAZETESİ ÖRNEĞİNDE PROPAGANDA KONUSUNA BAKIŞ	Doç. Dr. Nilgün Nurhan KARA

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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 6	Asst. Prof. Philip T. Roundy	1	A COMPUTATIONAL MODEL OF MINIMAL CONSCIOUSNESS FUNCTIONS	Nabila Charkaoui
		2	EXPLORING LIFE MEANINGFULNESS AND ITS PSYCHOSOCIAL CORRELATES AMONG RECOVERING SUBSTANCE USERS – AN INDIAN PERSPECTIVE	Fouzia Alsabah Shaikh, Anjali Ghosh
		3	DEVELOPMENT OF ORGANIZATIONAL JUSTICE IN INCENTIVE ALLOCATION OF THE THAI PUBLIC SECTOR	Kalayanee Koonmee
		4	AUTOBIOGRAPHICAL MEMORY AND FLEXIBLE REMEMBERING: GENDER DIFFERENCES	A. Aizpurua, W. Koutstaal
		5	CULTURAL ANXIETY AND ITS IMPACT ON STUDENTS-LIFE: A CASE STUDY OF INTERNATIONAL STUDENTS IN WUHAN UNIVERSITY	Nadeem Akhtar Shan Bo
		6	TREATMENT OR RE-VICTIMIZING THE VICTIMS	Juliana Panova
		7	THE STORY OF MERGERS AND ACQUISITIONS: USING NARRATIVE THEORY TO UNDERSTAND THE UNCERTAINTY OF ORGANIZATIONAL CHANGE	Philip T. Roundy
		8	A NEW MEASURE OF HERDING BEHAVIOR: DERIVATION AND IMPLICATIONS	Amina Amirat Abdelfettah Bouri

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SALON 7	Saula Mussabekova	1	ANALYSIS OF DRIVING CONDITIONS AND PREFERRED MEDIA ON DIVERSION	Yoon-Hyuk Choi
		2	AN ANALYTICAL STUDY ON THE POLITICS OF DEFECTION IN INDIA	Diya Sarkar, Prafulla C. Mishra
		3	POSITION OF THE CONSTITUTIONAL COURT OF THE RUSSIAN FEDERATION ON THE MATTER OF RESTRICTING CONSTITUTIONAL RIGHTS OF CITIZENS CONCERNING BANKING SECRECY	A. V. Shashkova
		4	RECOGNITION AND PROTECTION OF INDIGENOUS SOCIETY IN INDONESIA	Triyanto, Rima Vien Permata Hartanto
		5	NEED OF NATIONAL SPACE LEGISLATION FOR SPACE FARING NATIONS	Muhammad Naveed Yang Caixia
		6	HUMAN RIGHTS IN ARMED CONFLICTS AND CONSTITUTIONAL LAW	Antonios Maniatis
		7	FORENSIC MEDICAL CAPACITIES OF RESEARCH OF SALIVA STAINS ON PHYSICAL EVIDENCE AFTER WASHING	Saula Mussabekova
		8	TOWARDS A PROOF ACCEPTANCE BY OVERCOMING CHALLENGES IN COLLECTING DIGITAL EVIDENCE	Lilian Noronha Nassif



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SALON 8	Assis. Prof. Dr. Aleksandra Chinaieva	1	PROMOTING GENDER EQUALITY WITHIN ISLAMIC TRADITION VIA CONTEXTUALIST APPROACH	Ali Akbar
		2	BA'ALBAKĪ'S INFLUENCE ON 1950S AND 1960S LEBANESE WOMEN WRITERS	Khaled Igbaria
		3	THE INTERACTION BETWEEN HUMAN AND ENVIRONMENT ON THE PERSPECTIVE OF ENVIRONMENTAL ETHICS	Mella Ismelina Farma Rahayu
		4	PROTECTION OF HUMAN RIGHTS IN EUROPE: THE PARLIAMENTARY DIMENSION	Assis. Prof. Dr. Aleksandra Chinaieva
		5	EISENHOWER'S FAREWELL SPEECH: INITIAL AND CONTINUING COMMUNICATION EFFECTS	B. Kuiper
		6	HUMAN SECURITY PROVIDERS IN FRAGILE STATE UNDER ASYMMETRIC WAR CONDITIONS	Luna Shamieh
		7	DEVELOPING NEW MEDIA CREDIBILITY SCALE: A MULTIDIMENSIONAL PERSPECTIVE	Dr/ Hanaa Farouk Saleh
		8	GENDER DIFFERENCES IN RESEARCH OUTPUT, FUNDING AND COLLABORATION	Ashkan Ebadi Andrea Schiffauerova
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SALON 9	Assoc. Prof. Dr. Aishath Shakeela	1	NARRATING IRISH IDENTITY: RETRIEVING 'IRISHNESS' IN THE WORKS OF WILLIAM BUTLER YEATS AND SEAMUS HEANEY	Rafik Massoudi
		2	NATURAL DISASTER TOURISM AS A TYPE OF DARK TOURISM	Dorota Rucińska
		3	DEMOCRATIZATION, MARKET LIBERALIZATION AND THE RAISE OF VESTED INTERESTS AND ITS IMPACTS ON ANTI-CORRUPTION REFORM IN INDONESIA	Lec.Ahmad Khoirul Umam
		4	ART AND CULTURE IN THE DEVELOPMENT PERIOD TO MODERNIZATION IN THE REIGN OF KING RAMA VI	Weena Eiamprapai
		5	DESIGNING CREATIVE EVENTS WITH DECONSTRUCTIVISM APPROACH	Maryam Memarian, Mahmood Naghizadeh
		6	DE-SECURITIZING IDENTITY: NARRATIVE (IN)CONSISTENCY IN PERIODS OF TRANSITION	Dr. Katerina Antoniou
		7	EFFECT OF ORGANIZATIONAL RESOURCES ON IMPROVING INDEPENDENCY OF PEOPLE WITH SEVERE DISABILITIES: VOCATIONAL REHABILITATION FACILITIES IN SOUTH KOREA	Dr.Soungwan Kim
		8	CAPITAL ACCUMULATION AND UNEMPLOYMENT IN NAMIBIA, NIGERIA, AND SOUTH AFRICA	Abubakar Dikko
		9	WATER CRISIS MANAGEMENT IN A TOURISM DEPENDENT COMMUNITY	Assoc. Prof. Dr. Aishath Shakeela
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<b>SALON 10</b>	<b>Assis. Prof. Dr. Sarah Barrere</b>	1	IMPACT OF REPRODUCTIVE TECHNOLOGIES ON WOMEN'S LIVES IN NEW DELHI: A STUDY FROM FEMINIST PERSPECTIVE	Zairunisha Abadech
		2	CURBING ABUSES OF LEGAL POWER IN THE SOCIETY	Tajudeen Ojo Ibraheem
		3	SOCIAL STRUCTURE, INVOLUNTARY RELATIONS, AND URBAN POVERTY	Dr. Mahmood Niroobakhsh
		4	KNOWLEDGE TRANSFER AND THE TRANSLATION OF TECHNICAL TEXTS	Ahmed Alaoui
		5	THE INFLUENCE OF ISLAMIC ARTS ON OMANI WEAVING MOTIFS	Dr. Zahra Ahmed Al-Zadjali
		6	HANDLING COMPLEXITY OF A COMPLEX SYSTEM DESIGN: PARADIGM, FORMALISM AND TRANSFORMATIONS	Hycham Aboutaleb Bruno Monsuez
		7	UNDERSTANDING EUROPE'S ROLE IN THE AREA OF LIBERTY, SECURITY AND JUSTICE AS AN INTERNATIONAL ACTOR	Assis. Prof. Dr. Sarah Barrere
		8	THE METHODOLOGY OF OUT-MIGRATION IN GEORGIA	Shorena Tsiklauri

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SALON 11	Assist. Prof. Dr Na Xiao	1	HARNESSING THE POWER OF HUMAN INGENUITY: EXPLORING THE NATURAL MOVEMENT OF THE MIND IN PROBLEM SOLVING	Raghavi Janaswamy, Saraswathi K. Vasudev
		2	STREAMLINING THE PRODUCTION OF SCREEN-RECORDED VIDEOS: IMPLEMENTING AN E-CONTENT PRODUCING ALGORITHM	Shahad Hederman Lucy Nagoor,
		3	HARNESSING THE POWER OF ONTOLOGIES FOR SMART LEARNING IN MUSIC EDUCATION: A ROBUST FRAMEWORK FOR KNOWLEDGE ORGANIZATION AND APPLICATION	Prof. Dr. Kevin Caputo Annalina Koidl,
		4	EMPOWERING AUTONOMOUS AGENTS WITH CONSTRUCTIVIST LEARNING: A BOTTOM-UP SEQUENTIAL LEARNING ALGORITHM AND TOOLKIT	Assist. Prof. Dr Na Xiao
		5	HARNESSING THE POWER OF DEEP LEARNING FOR AUTOMATED PRODUCT IDENTIFICATION ON ASSEMBLY LINES	Dr. Paulina Pietrzyk- Kowalec
		6	EMPOWERING INDUSTRY 4.0 WITH DEEP LEARNING: ENHANCING ASSEMBLY LINE EFFICIENCY THROUGH AI-POWERED PRODUCT IDENTIFICATION	Danielle Folajimi Yetunde Shackley,
		7	ANALYZING THE PRIVATE MONETARY RETURNS OF HUMANITIES AND EDUCATION DEGREES IN OSUN STATE, NIGERIA	Dr. Azizeh Chalak, Firouzeh Baktash
		8	UNVEILING THE IMPACT OF E-LEARNING TOOLS ON STUDENT LEARNING: AN EXPLORATORY STUDY OF DIVERSE TECHNOLOGICAL APPLICATIONS	Delgadillo Josiel Johnson Mutigwe
		9	DYSLEXIA AND ANXIETY: A QUANTITATIVE INVESTIGATION OF THEIR INTERPLAY IN THE HIGHER EDUCATION SETTING	Charles Kinyua,
		10	DEMYSTIFYING THE ANXIETY EXPERIENCE OF DYSLEXIC COLLEGE STUDENTS: A QUANTITATIVE ANALYSIS	Yasmeen Allen Bassas, Sandra Riddell Kuebler,

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SALON 12	Prof. Dr. Hiroki Yoshikai,	1	CULTIVATING GRATITUDE FOR STRONGER RELATIONSHIPS: UNDERSTANDING THE ROLE OF PERCEIVED SUPERIORITY	Behzad Mohammadi Zirkuhi
		2	EMOTIONAL INTELLIGENCE: A CRITICAL COMPONENT FOR CIVIC ENGAGEMENT AND SCIENTIFIC DISCOVERY	Sara Moeini Avandi, Abbas Moradi Sam,
		3	UNDERSTANDING CHINESE CONSUMERS IN EUROPE: A CROSS-CULTURAL EXAMINATION OF DECISION-MAKING PROCESSES	Assoc. Prof. Dr. Ricardo Mestre
		4	NURTURING EFFECTIVE COMMUNICATION IN HEARING FAMILIES WITH DEAF CHILDREN: A COMPREHENSIVE GUIDE TO STRATEGIES AND RESOURCES	Shin'ichi Arakawa, Lecture. Dr. Tetsuya Takine, Dr. Masayuki Murata
		5	OVERCOMING CHALLENGES, UNLEASHING POTENTIAL: EMPOWERING CHILDREN WITH LEARNING DIFFICULTIE	I. Isenhardt Nariman O. Kandil, Ehab K. Abou-Elkheir,
		6	NAVIGATING THE DYNAMICS OF CONFORMITY IN HEALTHCARE: FOSTERING INDEPENDENT THINKING AND CRITICAL JUDGMENT	Prof. Dr. Hiroki Yoshikai,
		7	THE ROLE OF EYEWITNESS ACCOUNTS IN FIRE AND EXPLOSION INVESTIGATIONS: NAVIGATING THE CHALLENGES OF MEMORY AND PERCEPTION	D. Kreutzer, S. Müller-Abdelrazeq,
		8	HUMAN-AI COLLABORATION: EXPLORING THE FACTORS INFLUENCING EMPLOYEE DECISION-MAKING IN AN AI-DRIVEN ENVIRONMENT	Han-Mei Zhou, Rongxin Chen,
		9	THE EVOLVING LANDSCAPE OF WORK: HOW AI IS TRANSFORMING EMPLOYEE DECISION-MAKING AND THE NEED FOR ADAPTIVE SKILLS	Dr. Taige Wang
		10	INVISIBLE STRUGGLES: UNVEILING THE PSYCHOLOGICAL TOLL OF COVID-19 ON NON-HEALTHCARE MIGRANT WORKERS IN SAUDI ARABIA'S CONSTRUCTION INDUSTRY	Amr M. Kotb Aneta Oblouková, Eva Vítková

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SALON 1	ESRA KOÇAK	1	THEME: THE STATISTICAL ANALYSIS OF RETAIL TRADE TURNOVER (BY REGIONS) IN UZBEKISTAN	Oripova Gulira`no Nodirovna Sharipova Munojot Murodullayevna Tojiyeva Muhayyo Valievna Ruziyeva Shakhlo Raupovna
		2	THE IMPACT OF DIGITAL CURRENCIES ON ENVIRONMENTAL POLLUTION: PANEL DATA ANALYSIS	ESRA KOÇAK Prof. Dr. OKYAY UÇAN
		3	SOCIO-ECONOMIC DIMENSIONS OF HUMAN DEVELOPMENT IN CENTRAL ASIAN COUNTRIES	Assoc. Prof. Dr. Shirinov Anvar Qanoatovich,
		4	THE RELATIONSHIP BETWEEN ECONOMIC GROWTH, FINANCIAL DEVELOPMENT, FOREIGN DIRECT INVESTMENT, HUMAN DEVELOPMENT AND RENEWABLE ENERGY IN EMERGING ECONOMIES	Doç. Dr. Yusuf TEPELİ Yüksek Lisans Öğrencisi Cem SEHİL
		5	FISCAL POLICY AND ITS IMPACT ON THE ECONOMY	Elvin RUINTAN

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SALON 2	Prof. Dr. A. BERİL TUĞRUL	1	THE FOUNDATIONAL ROLE OF THE NEW CONSTITUTION OF THE REPUBLIC OF UZBEKISTAN IN RNEWING IDIOSPHERE OF THE SOCIETY	Turdiyev Bexruz Sobirovich
		2	EVALUATION OF ENERGY SECURITY WITH PEST ANALYSIS	Prof. Dr. A. BERİL TUĞRUL
		3	ENERJİ JEOPOLİTİĞİNDEKİ DEĞİŞİMLERİN BALKANLAR'DAKİ ÇATIŞMA DİNAMİKLERİNE ETKİSİ: BÖLGESEL VE KÜRESEL PERSPEKTİF	İhsan ALPARGIN
		4	THE UK'S RELATIONS WITH THE EUROPEAN UNION AFTER BREXIT	Prof. Dr. Ali AYATA Said Abdulrasul SADAT
		5	ARAP BAHARINDAN SONRA MISIR VE TUNUSUN DEMOKRATİKLEŞME SÜREÇLERİNİN DEĞERLENDİRİLMESİ	Furkan ÇAPOĞLU
		6	NAZİM HİKMETİN KİŞİLİĞİNİN SİYASET VE TOPLUM ÜZERİNE YANSIMALARI	Furkan ÇAPOĞLU
		7	ŞUFA DAVASI	Ebru Nur TURAN

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SALON 3	Prof. Dr. Sezen BOZYİĞİT	1	WEB OF SCIENCE VERİ TABANINDA MESLEKİ TÜKENMİŞLİK KAVRAMI İLE İLGİLİ YAPILAN ÇALIŞMALARIN BİBLİYOMETRİK ANALİZ	Dr. Öğr. Üyesi Hatice UZUN
		2	A QUALITATIVE STUDY ON MUSHROOM MANAGEMENT PERCEPTION	Assistant Prof. Nihan Yavuz AKSAKAL Merve TARIM PhD.
		3	Artificial Intelligence, Media and Privacy: The Next Steps of Technology and the Future of Individual Rights	Doç. Dr. Abdülhakim Bahadır DARI Dr. Ahmet KOÇYİĞİT
		4	İŞ KAYNAKLI GERİLİMİN HEDONİK TÜKETİM ÜZERİNDEKİ ETKİSİNİN MEDENİ DURUM BAĞLAMINDA İNCELENMESİ	Prof. Dr. Sezen BOZYİĞİT
		5	ÜNİVERSİTEYE YENİ BAŞLAYAN ULUSLARARASI TİCARET VE LOJİSTİK ÖĞRENCİLERİNİN ORYANTASYON EĞİTİMİ HAKKINDAKİ GÖRÜŞLERİ	Prof. Dr. Sezen BOZYİĞİT
		6	AN INTEGRATED NEUTROSOPHIC MARCOS APPROACH DEVELOPED FOR THE PURPOSE OF SELECTING SUPPLIERS OF CHARGING STATIONS FOR ELECTRIC VEHICLES	Asst. Prof. Gökhan ÖZKAYA
		7	THE DIGITAL TRANSFORMATION OF THE CUSTOMS SERVICE	Dr Funda MERMERTAŞ
			AN INNOVATIVE STEP TOWARDS SUSTAINABILITY: GREEN LOGISTICS	Dr Funda MERMERTAŞ
			MEDYA VE ÇOCUK: FIRSATLAR VE RİSKLER EKSENİNDE DİJİTAL ETKİLEŞİMLİ MEDYA DÖNEMİNDE ÇOCUK TÜKETİCİLER	Prof. Dr. Oya ŞAKI AYDIN Prof. Dr. Zeliha HEPKON
			A Semiotic Advertisement Analysis: Eti Browni Intense 'A Demet Özdemir Happy as She Feels'	Arş.Gör.Canan GEÇEN Doç. Dr.,Murat SEYFİ



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SALON 4	Dr. Öğr. Üyesi, Birsen GEÇİOĞLU ERİNCİK	1	HİDDEN DANGER IN AGRİCULTURAL PRODUCTS; MYCOTOXİNS	Dr. Öğr. Üyesi, Birsen GEÇİOĞLU ERİNCİK
		2	THE EFFECT OF DROUGHT STRESS ON PHYSIOLOGICAL AND BIOCHEMICAL PROPERTIES OF MEDICINAL SAGE (Salvia officinalis L.)	YL. Öğrencisi SEDA ŞAHİN Doç. Dr. HÜLYA TORUN
		3	BENEFICIAL MICROBES IN SUSTAINABLE PLANT NUTRITION	MUZAFFER İPEK MERVE KARAKOYUN ŞEYMA ARIKAN
		4	ÇANAKKALE BOĞAZI'NDAN TOPLANAN ULVA RIGIDA'NIN ELEMENT DÜZEYLERİNİN ARAŞTIRILMASI	Seren KASAP Prof. Dr. İlknur AK
		5	RATLARDA KARIN FITIKLARININ TEDAVİSİNDE SENTETİK EMİLEN VE EMİLMİYEN MESH VE PRP İLE KAPLI FORMLARIN KARŞILAŞTIRILMASI	Doktora Öğrencisi, ALPEREN YILDIRIM Profesör Dr., CİHAN GÜNAY Profesör Dr., AYDIN SAĞLAYAN Doçent Dr., EMRE KAYA Doktora Öğrencisi, ALİ SEFA MENDİL
		6	COMPARISON OF PLATELET-RICH PLASMA AND HYALURONIC ACID ON TENDON HEALING IN RAT- BIOMECHANICAL FINDINGS	Veteriner Hekim, Sinem ÇOŞKUN Prof. Dr., Mustafa KÖM Arş. Gör. Dr., Eren POLAT Doç. Dr., Oktay YİĞİT
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SALON 5	Dr. Öğretim Üyesi, AYŞE ÇUVADAR	1	RISK MANAGEMENT IN SOCIETY PHARMACIES	Pharm. AYKUT DEDE Prof. GÜLBİN ÖZÇELİKAY
		2	THE IMPORTANCE OF EVIDENCE-BASED NURSING PRACTICES IN INTENSIVE CARE	HİLAL NUR AYPEK DOÇ. DR. BAHAR İNKAYA
		3	GENETİK ARAŞTIRMALARIN IŞIĞINDA ŞİZOFRENİ: TANI, TEDAVİ VE TOPLUMSAL UYUM	Prof Dr. EMEL HÜLYA YÜKSELOĞLU Öğr. Gör. Dr. ÖMER KARATAŞ, Uzm. NAZLI HÖLÜMEN, Dr. Öğr. Üyesi DİLEK SALKIM İŞLEK
		4	HUKUKUN DNA'SI: GENETİK HASTALIKLARIN ETİK PERSPEKTİFİ	Prof Dr. EMEL HÜLYA YÜKSELOĞLU Öğr. Gör. Dr. ÖMER KARATAŞ, Uzm. NAZLI HÖLÜMEN, Dr. Öğr. Üyesi DİLEK SALKIM İŞLEK
		5	THE RELATIONSHIP BETWEEN INTERCULTURAL SENSITIVITY IN MIDWIFERY STUDENTS AND SCALE OF INTEREST OF THE PROBLEMS OF FOREIGN STUDENTS: A CROSS-SECTIONAL STUDY	Dr. Öğretim Üyesi, AYŞE ÇUVADAR Dr. Öğr. Üyesi, ELNAZ KARAMELİKLİ
		6	OSTEOPOROSIS IN POST-MENOPAUS WOMEN: A PUBLIC HEALTH PROBLEM	Dr. Öğr. Üyesi, ELNAZ KARAMELİKLİ Dr. Öğretim Üyesi, AYŞE ÇUVADAR
		7	RESPONSIBILITIES OF THE PEDIATRIC NURSE IN TRADITIONAL AND COMPLEMENTARY MEDICINE	Dr Öğr. Üyesi Mehmet BULDUK Yükseklisans Öğrencisi Fetih TAN Dr. Öğr. Üyesi Veysel CAN
		8	THE USE OF DIFFERENT TYPES OF TOOTHBRUSHES IN INDIVIDUALS UNDERGOING ORTHODONTIC TREATMENT	Arş. Gör. Arda Sarıbaş Dr. Öğr. Üyesi Dr. Berşan Karadede

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SALON 6	Prof. Dr. Rishabh Garg	1	LEVERAGING ACCELERATION DATA FOR ACCURATE MOTION ESTIMATION IN VISUAL SLAM	Pauliasi Tony Fakahau Gert Van Schalkwyk,
		2	ENGAGING ONLINE ENGLISH WORD MEMORY: EXPLORING THE IMPACT OF A DIGITAL WORD WALL	Laura A. Jones Frederick Wedzerai Nyakudya
		3	UNVEILING GENDERED PERCEPTIONS: EXPLORING TIGER METAPHORS IN CHINESE CULTURE THROUGH A CORPUS-BASED APPROACH	Chris Cloete Tori R. Dodla,
		4	IMPROVING COVID-19 ICU PROGNOSIS: UTILIZING A FINETUNED LANGUAGE MODEL ON CLINICAL NOTES	Dr. Anwar Kashgari
		5	IMPROVING COVID-19 ICU PROGNOSIS: UTILIZING A FINETUNED LANGUAGE MODEL ON CLINICAL NOTES	Evisa Mitrou, Nicholas Tsitsianis, Supriya Zhang Lei Shinde,
		6	LEVERAGING NAIVE BAYES FOR SENTIMENT ANALYSIS: IDENTIFYING FAKE HEALTH NEWS	Assoc. Prod. Dr. Tingting Xu, Dr. Zhenyu Yan,
		7	BEYOND UNIFORM CONVERGENCE: EXPLORING LEARNABLE PROBLEMS WITH DIVERSE DISTRIBUTIONS	Jun Brooks Roger He,
		8	LEVERAGING BERT FOR SENTIMENT ANALYSIS IN FINANCIAL SOCIAL MEDIA	Dr. Andreas Ahrens, Ojaras Assis. Prof. Dr. Purvinis Jelena Zāšcerinska
		9	ISOCIAL MEDIA AS A MULTILINGUAL PLAYGROUND: CROSS-CORPUS NATIVE LANGUAGE IDENTIFICATION WITH 'REDDIT'	Prof. Dr. Rishabh Garg
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SALON 7	Dr. Rita Moutinho	1	PUHR(I)PUHR: UNCOVERING THE MEANING OF 'SON'S SON' AT THE SHAHPUHR INSCRIPTION AT HAJI-ABAD	Helena Costa Oliveira, Carmem Oliveira,
		2	SONIC IMPRESSIONS: EXPLORING ART, PERCEPTION, AND COMPOSITION IN SOUNDSCAPES	Ienda Minguito, Jenith Banluta R. Berglund,
		3	BUILDING A THEORETICAL FOUNDATION FOR ASSESSING LANGUAGE LEARNING APPS	T. Backström, M. Bellgran Ayman El-Garem, Riham Adel
		4	MULTI-CHANNEL GRAPH CONVOLUTIONAL NETWORKS FOR ENHANCED ASPECT-LEVEL SENTIMENT ANALYSIS	Mohammed Sani Abdulai Micheli Anna Paola,
		5	ENHANCING SENTIMENT CLASSIFICATION OF ARABIC TWEETS WITH DIALECT-AWARE SUPPORT VECTOR MACHINES	Dr. Intrisano Maria Assis. Prof. Dr. Calce Anna Carmelo,
		6	MOTIVATING THE JOURNEY: UNVEILING THE DRIVES AND CONTEXT OF LANGUAGE LEARNING	Dr. Rita Moutinho
		7	UNLOCKING THE SCIENCE OF IMPROVISATION: A DEEP DIVE INTO MANODHARMAM IN CARNATIC MUSIC	Dr. Daniella Kucsma
		8	CONTRASTING AFFRICATION: A COMPARATIVE ANALYSIS OF INITIAL CONSONANTS IN CHINESE AND SLOVAK	Arkaprabha Bhattacharyya, Makarand Hastak

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SALON 8	Assist. Prof. Dr Timothy Graziano	1	IMAGE RANKING FOR EFFICIENT OBJECT LABELING IN DETECTION MODEL TRAINING	Khashayar Jafari Kaliji
		2	DELVING INTO THE DIGITAL MIND: DECIPHERING POLITICAL PSYCHOLOGY THROUGH MICROBLOGS	Tarek Abdel Azim Ahmed,
		3	A SURREALIST LANDSCAPE: DECONSTRUCTING NEOLIBERALISM THROUGH CRITICAL PEDAGOGY AND SURREALISM IN SECONDARY ENGLISH LANGUAGE ARTS	Assist. Prof. Dr Timothy Graziano, Jay Fisher
		4	HARNESSING MACHINE LEARNING FOR AUTOMATED ARABIC SYNTAX CORRECTION: INTRODUCING TIBYAN	Haruka Yamashita Mary Jane B. Suarez Ethan Shafer,
		5	VISUAL PROGRAMMING TO CODE: DEEP LEARNING FOR PROGRAM SYNTHESIS FROM FLOWCHART IMAGES	Prof. Dr. Talat Sharafat Rehmani, Phd. Safia Mirza Dr. Hironori Karachi,
		6	DEEP LEARNING FOR MALAY SPEECH RECOGNITION: A NEURAL NETWORK APPROACH	Assis. Prof. Dr. Asif Mansoor,
		7	EXPLORING THE CHALLENGES FACED BY IRAQI EFL UNDERGRADUATES IN FORMING ENGLISH NUMBER WORDS: A DESCRIPTIVE STUDY	Dr: Eman Sarhan Shaker Dr. Elda Maria Ali Shah,
		8	EXPLORING THE PRODUCTION OF GRAMMATICAL COLLOCATIONS BY IRAQI EFL UNIVERSITY STUDENTS	PHD. Hironori Karachi,

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SALON 9	Dr. Osiris Valdez Banda,	1	SHAPING THE FUTURE OF HEALTHCARE: FOSTERING A NEW GENERATION OF BILINGUAL PHYSICIANS	Assoc. Prof. Dr. Mariann Veresne Somosi,
		2	COMPUTATIONAL LINGUISTICS IN DETECTING DECEPTION: ANALYZING DECEPTIVE AND TRUTHFUL SPEECH	David W. Farler, Pery Haan
		3	ASSESSING TEXTUAL SEMANTIC SIMILARITY THROUGH WORDNET	Krisztina Varga
		4	QUANTIFYING GROUP EMOTIONAL INTELLIGENCE: A WEIGHTED APPROACH INTEGRATING ROLE INFORMATION	Dr. Zoltan Nagy, PHD: Candidate Edlira Donefski,
		5	EXPLORING UVULAR VARIATION IN HASAWI ARABIC: A HARMONIC SERIALISM ANALYSIS	Tina Donefski Wan-I Lee, Nelio Mendoza Figueredo
		6	STRATEGIC ANALYSIS FOR SOLAR ENERGY IN EGYPT BY 2035 USING DYNAMIC BAYESIAN NETWORK	Sabina Akter, Dr. Osiris Valdez Banda, Dr. Pentti Kujala, Jani Romanoff
		7	UNVEILING ARCHITECTURAL TYPOLOGIES THROUGH THE LENS OF AFFORDANCE	Dr. Pentti Kujala, Jani Romanoff
		8	END-TO-END LEARNING FOR PROGRAM GENERATION: A GRAPH RECOGNITION-BASED APPROACH FOR FLOWCHARTS	Anod H. Alhazmi, Hanaa A. Yamani

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SALON 10	Prof. Dr. Yaritza Sugunathevan	1	NAVIGATING THE LABYRINTH: CHALLENGES AND OBSTACLES IN TRANSFERRING LOW-COST HOUSING IN SOUTH AFRICA	Christiana Gauci-Sciberras Ashwag O. Maghraby, Nida N. Khan,
		2	UNLEASHING THE POWER OF INFORMATION: STRATEGIES FOR OPTIMIZING KNOWLEDGE MANAGEMENT SYSTEMS	Jawaher S. Melibari Lin Cheng, Zijiang Yang
		3	BRIDGING THE GAP: GENDER, RESOURCES, AND ENTREPRENEURIAL SUCCESS	Hosnia N. Brohi, Ghufran A. Ahmed, Hind F. Assouli,
		4	UNVEILING THE ROI OF BIG DATA: A COMPARATIVE ANALYSIS OF FINANCIAL PERFORMANCE FOR USERS AND PROVIDERS	Meaghan Bowman
		5	TAILORED FOR ENGAGEMENT: OPTIMIZING EMAIL MARKETING WITH REINFORCEMENT LEARNING	Dr. Adnan Z. Mkhelif
		6	UNPACKING THE CUSTOMER-SERVER DANCE: A BREAKDOWN OF GROCERY SHOP INTERACTIONS	Ms. Student Siyu Ward PHD. levtureAnthony Wang,
		7	UNPACKING THE CUSTOMER-SERVER DANCE: A BREAKDOWN OF GROCERY SHOP INTERACTIONS	Ahmed Al Taisan Huda
		8	UNLEASHING THE POWER OF TRADE FINANCE: EXPLORING ETHEREUM-BASED SMART CONTRACT SOLUTIONS	Edith M. Matos, Ángel Esparza-Young,
		9	OPTIMIZING RELIEF OPERATIONS: LOCATION SELECTION AND RESOURCE ESTIMATION FOR RELIEF GOODS ASSEMBLY	Prof. Dr. Yaritza Sugunathevan Kirthana Gonzalez,
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SALON 11	Dr. Maria Istvanova	1	MITIGATING PSYCHOSOCIAL RISKS FOR ENGINEERS AND TECHNICIANS: EFFECTIVE STRATEGIES FOR A HEALTHY WORKPLACE	Mathew Mitchell, Matthew Wakefield,
		2	PRODUCT INVOLVEMENT'S INFLUENCE ON CONSUMER ONLINE REVIEW USAGE: A COMPREHENSIVE ANALYSIS	Lisa McCarthy Christopher Wise,
		3	UNVEILING DIGITAL TRANSFORMATION KEY SUCCESS FACTORS: A SYSTEMATIC LITERATURE REVIEW AND DELPHI APPROACH	Raghavi K. Vasudev
		4	UNDERSTANDING THE GHANAIAN BUDGET: FUNCTIONS, SCOPE, CATEGORIZATION, AND ALIGNMENT WITH THE CHART OF ACCOUNTS	Assis. Prof. Saraswathi Janaswamy,
		5	CROSS-NATIONAL ANALYSIS: HEALTH TOURISM'S INFLUENCE ON CORPORATE PERFORMANCE	Dr. Maria Istvanova
		6	LEVERAGING THE BALANCED SCORECARD FOR EFFECTIVE ACUTE PAIN MANAGEMENT	Falntina Abu Obeid Natheer Ahmad Alata,
		7	GAUGING KNOWLEDGE ASSETS: A REVIEW OF INTELLECTUAL CAPITAL MEASUREMENT IN THE PROPERTY DEVELOPMENT AND INVESTMENT SECTOR	Tonislav Ivanov, Oleksii Nedashkivskyi,
		8	THE BEDROCK OF PUBLIC SERVICE PERFORMANCE: MASTERING THE FUNDAMENTALS OF PERFORMANCE MANAGEMENT	Assis. Prof. Dr. Denis Putman Lecture Vadim Pinskiy, Matthew Babeshko,



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SALON 12	Prof. Dr. Saowapa Phaithayawat	1	STAGNANT GDP PREDICTION: A BINARY CHOICE MODEL FOR 40 GLOBAL ECONOMIES	Dr. Laila Yasir Al-Harthy Ali H. Al-Badi
		2	ENSURING SOLID STATE DRIVE RELIABILITY: FROM PREDICTION TO CONTROL	Nazira B. Boldurukova
		3	BUILDING THE FUTURE: STRATEGIC INFRASTRUCTURE INVESTMENT FOR A THRIVING U.S. ECONOMY	Narong Kulnides
		4	LEADING THE CHARGE: EFFECTIVE LEADERSHIP STRATEGIES FOR THE ENGINEERING, TECHNOLOGY, AND CONSTRUCTION INDUSTRY	Dr. Chalermpol Tapsai
		5	UNPACKING THE TOOLBOX: A SYSTEMATIC EXAMINATION OF METHODS FOR FOSTERING SOCIAL INNOVATION	Prof. Dr. Saowapa Phaithayawat
		6	INVESTIGATING THE PROFITABILITY OF COSMETICS PRODUCTS: A BOOTSTRAP EDGEWORTH APPROXIMATION APPROACH	Aber Salem Aboalgasm, Rupert Ward
		7	UNVEILING THE IMPACT OF COVID-19 ON USER PERCEPTIONS OF MHEALTH SERVICE QUALITY	Marut Pichetvit
		8	NAVIGATING THE JOURNEY: EXPLORING CRUISE PASSENGERS' ON-BOARD EXPERIENCES	Dr. Assis . Prof. Tereza Dolečková

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6 Nisan / April 6, 2024 / 11:00 – 13:00 Time zone in Skopje				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 1	Prof. Dr. Ali Bilgili	1	DESIGN AND IMPLEMENTATION OF CONTROLLER INTERFACE FOR ROTARY WING UAVs	Prof. Dr. Tuğrul OKTAY Assoc. Prof. Dr. Fırat ŞAL Assist. Prof. Dr. Oğuz KÖSE Dr. Enes ÖZEN
		2	THE USE OF PLASMA ACTUATORS TO INCREASE THE AERODYNAMIC PERFORMANCE OF AN AIRCRAFT	Tuğrul OKTAY Nesij ÜNAL
		3	Investigation of the Viscosity of a Skin Repair Cream with Enhanced Natural Content	AYŞEGÜL TOZAL SEYFULLAH KEYF
		4	5G TECHNOLOGY, PRODUCT LIFECYCLE MANAGEMENT INTEGRATION, FAST IMAGE PROCESSING AND DATA SHARING	PhD Student Ömer ÖZTÜRK

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SALON 1	Prof Dr. Ali Bilgili	1	DEVLET YÖNETİMİNDE YÖNETİŞİM İLKELERİNİN ÖNEMİ	Prof. Dr. Ali Acar
		2	FROM WOMEN'S FILMS TOWARDS FEMINIST FILM PRACTICE: THE PAST, PRESENT AND FUTURE OF FEMINIST CINEMA IN TURKEY	Arş. Gör. Asena YILDIRIM
		3	ORTAĞIN VEYA TACİRİN ÖLÜMÜ HALİNDE TİCARET UNVANININ DEVAMI	Dr. Öğr. Üyesi HAKAN YILDIRIM

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Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 1	Prof. Dr. Naile BİLGİLİ	1	HEALTHY LIFESTYLE BELIEFS OF ADOLESCENTS IN A PUBLIC HIGH SCHOOL: A DESCRIPTIVE STUDY	Arş. Gör. Edanur ÇAK ÜÇLER Prof. Dr. Naile BİLGİLİ
		2	THE IMPROVING EFFECT OF HEALTH LITERACY ON ADOLESCENTS' HEALTHY LIFESTYLE BELIEFS: FROM THE PERSPECTIVE OF SCHOOL HEALTH NURSING	Arş. Gör. Edanur ÇAK ÜÇLER Prof. Dr. Naile BİLGİLİ
		3	ADÖLESANLARIN FİZİKSEL AKTİVİTE DÜZEYİ VE FİZİKSEL AKTİVİTE İÇİN ÖZ YETERLİK, PERSONEL VE EBEVEYN ETKİLERİNİN BELİRLEYİCİLERİ: KESİTSEL VE İLİŞKİ ARAYICI BİR ARAŞTIRMA	Arş. Gör. SÜMEYRA YILMAZ Arş. Gör. ŞEYMA NUR HEPOKUR YILDIRIM Prof. Dr. YETER KİTİŞ
		4	HEMŞİRELERİN TELE-SAĞLIK KULLANIMINA YÖNELİK TUTUM ÖLÇEĞİ'NİN GELİŞTİRİLMESİ VE PSİKOMETRİK DOĞRULANMASI	Arş. Gör. SÜMEYRA YILMAZ Arş. Gör. ŞEYMA NUR HEPOKUR YILDIRIM Prof. Dr. YETER KİTİŞ Prof. Dr. ADNAN KAN
		5	ARTERIA PANCREATICA INFERIOR ACCESSORIA VE ATİPİK ARTERIA COLICA SINISTRA: BİR VAKA SUNUMU	Profesör Doktor, Okan BİLGE Araştırma Görevlisi, Melisa Gülcan Doktora Öğrencisi İbrahim Demirçubuk Doktor, Melek Köseoğlu
		6	INVESTIGATION OF THE CHARACTERIZATION OF C60R STEEL AFTER QUENCHING AND TEMPERING HEAT TREATMENT	NURŞAH BİLGİÇ Prof. Dr. GÜL YILMAZ ATAY
		7	TREATMENT CHOICES IN PANCREATITIS OF CATS AND DOGS	Prof. Dr. BAŞAK HANEDAN Prof. Dr. ALİ BİLGİLİ
		8	TREATMENT CHOICES IN MYOCARDITIS AND ENDOCARDITIS IN CATS	Prof. Dr. ALİ BİLGİLİ Prof. Dr. BAŞAK HANEDAN
		9	EXAMINATION OF DOMESTIC VIOLENCE AND AFFECTING FACTORS DURING PREGNANCY	Assoc. Prof. Dr. AYTEN DİNÇ RM, PhD. REMZİYE GÜLTEPE
		10	HASTALARIN ERKEK HEMŞİRELERE YÖNELİK TUTUM ÖLÇEĞİ'NİN GELİŞTİRİLMESİ: GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI	Arş. Gör. Şeyma Nur HEPOKUR-YILDIRIM Arş. Gör. Sümeyra YILMAZ Prof. Dr. Yeter KİTİŞ Prof. Dr. Adnan KAN
		11	ÖĞRETMENLERİN FİZİKSEL AKTİVİTE DAVRANIŞLARI VE EGZERSİZ DAVRANIŞ DEĞİŞİMLERİ: TANIMLAYICI VE İLİŞKİ ARAYICI ÇALIŞMA	Arş. Gör. Şeyma Nur HEPOKUR-YILDIRIM Arş. Gör. Sümeyra YILMAZ Prof. Dr. Yeter KİTİŞ
		12	MODİFİYE SİHLER TEKNİĞİ ve ANATOMİ	Araştırma Görevlisi, MELİSA GÜLCAN Profesör Doktor, SERVET ÇELİK

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SALON 1	Prof. Dr. Ramazan BİÇER	1	EŞREFOĞLU RUMİ'DE AKIL, KALP VE NİTELİKLERİ	Prof. Dr. Ramazan BİÇER
		2	YAZICIOĞLU MEHMED'İN AKIL-KALP YOLCULUĞU: MUHAMMEDİYE	Prof. Dr. Ramazan BİÇER
		3	ON THE RELATIONSHIP BETWEEN MOUNTAINS AND SHAKING AN ANALYTICAL EVALUATION	Assoc. Prof. Dr. Maşallah TURAN
		4	XX ƏSRİN 20-Cİ İLLƏRİNİN NƏSRİNDƏ DİNƏ TƏNQİDİ MÜNASİBƏT MEYLİ VƏ ONUN İDEOLOJİ ƏSASLARI	Filologiya üzrə fəlsəfə doktoru MAHRUX DÖVLƏTZADƏ
		5	TEFEKKÜR ETME EĞİLİMİ ÖLÇƏĞİ: GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI	Yüksek Lisans Öğrencisi, MUSTAFA TAHA ŞEN Doç. Dr. KAMİL ARİF KIRKİÇ
		6	HOLIDAYS AND CELEBRATIONS IN PRE-ISLAMIC ARABIC SOCIETY	PhD Student, Züleyha GÜNDOĞDU
		7	FESTIVALS AND CELEBRATIONS DURING THE PROPHET'S ERA	PhD Student, Züleyha GÜNDOĞDU
		8	Bilinç ve İrade Açısından İnsanda ve Hayvanda Ruhun İmkânı	Dr. Lecturer Samet Yahya BAL
		9	'RESURRECTION OF THE HUMAN' IN THE CONTEXT OF AZERBAIJANI AND WORLD LITERATURE	Doctor of philological sciences, professor TAYYAR SALAMOGLU

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SALON 2	Prof. Dr. Ali Osman Öztürk	1	The role of Yücel Feyzioglu in the upbringing of Turkish immigrant children in Germany in line with national-spiritual values	Doç. Dr. Seriyve Gündoğdu
		2	THE POLITE USAGE OF LANGUAGE IN UZBEK PROVERBS AND SAYINGS	Associate Professor, Mavlonova Ugiyoy Khamdamovna
		3	Theoretical Bases of Contemporary Feminist Protest Movements in Iran	Assoc. Prof. Dr. Ebrahim Salimikouchi
		4	SOCIAL TRANSFORMATION AND ORIENTALIST FORMS OF EXPRESSION IN THE BRIDGE ON DRINA	Dr. Öğr. Üyesi Özlem Ulucan
		5	TERATOLOGY AND ART: THE FRAEK OF TEH PHYSICAL BODY, “ELEPHANT MAN” JOHN MERRICK	Doç. Dr. Serap SARIBAŞ
		6	POTRAYAL OF THE TRAGEDY OF THE AMERICAN DREAM IN THE CONTEXT OF INDIVIDUAL AND OBJECT, IN TEH FILM “REQUIEM FOR A DREAM”	Doç. Dr. Serap SARIBAŞ
		7	GROTESQUE ELEMENTS IN “THE CASK OF AMONTILLADO” AND THE BALLAD OF THE SAD CAFÉ	Şükran Sena BAKIR Assoc. Prof. Dr. F.Gül KOÇSOY
		8	ÇANAKKALE IMPRESSIONS IN ELSE GÜNTHER’S NOVEL “SONJA’S FUNNY TURKISH JOURNEY”	Prof. Dr. Ali Osman Öztürk
		9	THE PERCEPTION OF THE BALKAN WARS OF 1912 IN THE GERMAN (NEURUPPİN) BİLDERBOGEN	Prof. Dr. Ali Osman Öztürk

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SALON 3	Doç.Dr. Yusuf TEMÜR	1	ANALYZING THE INFLUENCE OF PUSH AND PULL MOTORS ON THE DIGITAL NOMAD TYPE OF FREELANCER IN CAN THO CITY	Yen-Xuan Thi NGUYEN Nam-Khang Tri NGUYEN Que-Nhu DUONG
		2	FINANCIAL FAILURE PREDICTION WITH THE SPRINGATE S SCORE MODEL: A STUDY ON PAINT MANUFACTURING SECTOR IN STOCK EXCHANGE İSTANBUL	TUNAY ASLAN
		3	OTOMOTİV SEKTÖRÜNDE BULUNAN ŞİRKETLERİN ÇOK KRİTERLİ KARAR VERME YÖNTEMLERİ KULLANILARAK FİNANSAL PERFORMANSLARININ ÖLÇÜLENMESİ	Bilim Uzmanı Mehmet ANBARCI Yüksek Lisans Öğrencisi Yusuf Ziya AKALIN Prof. Dr. Feriştah SÖNMEZ
		4	BEING A WOMAN ACCOUNTING PROFESSIONAL IN TURKIYE	Dr. Öğr. Üyesi, ASLI KESKİN
		5	TAXABILITY OF VIRTUAL DIGITAL ASSETS	Doç.Dr. Yusuf TEMÜR
		6	İNSAN KAYNAKLARI UZMANLARI GÖZÜNDEN ENDÜSTRİ 4.0	Dr. Öğr. Üyesi, ALPEREN M. YİĞİT
		7	PERFORMANCE EVALUATION SYSTEM TRIAL IN SOFTWARE INDUSTRY - CASE STUDY: CIMT BV -	Specialist, AYYÜCE MALKOÇ AKCURA Assoc. Prof. Dr., CEMİLE ÇETİN

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SALON 4	Arş. Gör. MUSTAFA EMİN AKÇİN	1	STORY STUDY ACCORDING TO PSYCHODYNAMIC FAMILY COUNSELING THEORY: "THE DEVIL WITHIN US"	BEYZA GÜLSOY PROF.DR.SEVDA ASLAN MUCUR
		2	SONG REVIEW ACCORDING TO PSYCHODYNAMIC FAMILY COUNSELING THEORY: "STONE WALLS"	BEYZA GÜLSOY PROF.DR.SEVDA ASLAN MUCUR
		3	TWO SONGS STUDY ACCORDING TO STRUCTURAL FAMILY COUNSELING THEORY: 'BU SON OLSUN' AND 'TEK BAŞINA'	MİRAÇ İLİKLİ PROF. DR. SEVDA ASLAN MUCUR
		4	A STORY STUDY ACCORDING TO STRUCTURAL FAMILY COUNSELING THEORY: 'ESKİCİ AND SONS'	MİRAÇ İLİKLİ PROF. DR. SEVDA ASLAN MUCUR
		5	STRATEGIC FAMILY COUNSELING THEORY ANALYSIS OF A NOVEL: "FRANZ KAFKA'S METAMORPHOSIS"	HALİL ERKAY BALCI PROF. DR. SEVDA ASLAN MUCUR
		6	ACCORDING TO STRATEGIC FAMILY COUNSELING THEORY: ANALYSIS OF TWO SONGS: "DİLEK TAŞI" AND "UZUN İNCE BİR YOLDAYIM"	HALİL ERKAY BALCI PROF. DR. SEVDA ASLAN MUCUR
		7	A STORY STUDY ACCORDING TO EXPERIENTIAL/HUMANITARY FAMILY COUNSELING THEORY: "LONG STORY"	BAŞAK TOYRAN PROF. DR. SEVDA ASLAN MUCUR
		8	A STUDY OF TWO SONGS ACCORDING TO EXPERIENTIAL/HUMANITARY FAMILY COUNSELING THEORY: "UNZİLE" AND "ANNEM"	BAŞAK TOYRAN PROF. DR. SEVDA ASLAN MUCUR
		9	ANNELERİN ZİHİN YÖNELİMLİLİĞİNİN ÇOCUKLARININ ZİHİN YÖNELİMLİLİĞİ ÜZERİNDEKİ ETKİSİ	Aslı GÜRTUNCA HANİF
		10	SOSYAL FOBİYE YÖNELİK MÜDAHALE ARAŞTIRMALARI: TÜRKİYE'DE YAZILAN LİSANSÜSTÜ TEZLER ÜZERİNE BİR İNCELEME	Arş. Gör. MUSTAFA EMİN AKÇİN Prof. Dr. OĞUZHAN ZENGİN
		11	TÜRKİYE'DE ÇÖZÜM ODAKLI KISA TERAPİ ÜZERİNE YAZILAN LİSANSÜSTÜ TEZLER ÜZERİNE BİR ARAŞTIRMA	Prof. Dr. OĞUZHAN ZENGİN Arş. Gör. MUSTAFA EMİN AKÇİN



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SALON 5	Prof.Dr. Ebru BARDAŞ ÖZKAN	1	PROKSİMAL ULNA MORFOMETRİ'Sİ VE KLİNİK ÖNEMİ	Doç. Dr. Gamze Taşkın ŞENOL Prof. Dr. İbrahim KÜRTÜL Yüksek Lisans Öğrencisi Neslihan AYDEDE Yüksek Lisans Öğrencisi Melih Can KURT
		2	ZUCKERKANDL TÜBERKÜLÜ ANATOMİSİNİN KADAVRALAR ÜZERİNDE DEĞERLENDİRİLMESİ	Uzm. Dr. Betül GÜLEÇ BÜYÜKÖZMEN
		3	OS NASALE, APERTURA PİRİFORMİS VE CHOANAE'NİN MORFOMETRİK OLARAK İNCELENMESİ	Doç. Dr. Gamze Taşkın ŞENOL Prof. Dr. İbrahim KÜRTÜL Yüksek Lisans Öğrencisi Melih Can KURT Yüksek Lisans Öğrencisi Neslihan AYDEDE
		4	A OVERVIEW OF HOW HIGH-DOSE GLUCOCORTICOIDS AFFECT THE EQUILIBRIUM BETWEEN ANTIOXIDANTS AND OXIDANTS	Prof.Dr. Ebru BARDAŞ ÖZKAN
		5	GÖĞÜS ÖN DUVARINDA ANATOMİK VARYASYON BİR VAKA SUNUMU	Profesör Doktor, Okan BİLGE Araştırma Görevlisi, Eda Nur DÖNMEZ
		6	EVDE BAKIMDA KLİNİK BAKIM SINIFLAMA SİSTEMİ'NİN KULLANIMI	Arş. Gör. SEMANUR ÇELİK DEMİRYÜREK Prof. Dr. NAİLE BİLGİLİ
		7	YAŞLI HASTALARDA OSTEOPOROZ VE OSTEOMALAZİ	MEHMET DOĞAN Prof.Dr. MUKADDER MOLLAOĞLU
		8	DEMİR EKSİKLİĞİ ANEMİSİ VE ÖNLENMESİNE İLİŞKİN YAKLAŞIMLAR	MEHMET DOĞAN Prof.Dr. MUKADDER MOLLAOĞLU

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SALON 6	Prof. Dr. İsmühan POTOĞLU ERKARA	1	Modulation of dental Pain Behavior by Naringenin as a natural flavonoid compound	Mojdeh Hashemi Fatemeh Hosseini Raouf Saeed Esmaceli Mahani
		2	THE ROLE OF GUT MICROBIOTA IN INFANCY: AN EXAMINATION OF DEVELOPMENT, HEALTH, AND DISEASE	Dr. Safaa ALTVES
		3	Hibiscus esculentus L. (Okra): AN ETHNOBOTANICAL TALE WANDERING AMONG CULTURES	Prof. Dr. İsmühan POTOĞLU ERKARA
		4	TRADITIONAL USAGE AREAS OF Tilia tomentosa Moench (Malvaceae) SPECIES GROWN IN ESKİŞEHİR	Prof. Dr. İsmühan POTOĞLU ERKARA
		5	POLLEN MORPHOLOGY IN Abelia × grandiflora (Ravelli ex André) Rehder (Caprifoliaceae) SAMPLE ACCORDING TO WODEHOUSE METHOD	Assoc. Prof. Dr. Okan SEZER Prof. Dr. İsmühan POTOĞLU ERKARA
		6	DETERMINATION OF POLLEN MORPHOLOGY IN Symphoricarpos albus (L.) S.F.Blake (Snowberry) (Caprifoliaceae) USING THE ERDTMAN METHOD	Assoc. Prof. Dr. Okan SEZER Prof. Dr. İsmühan POTOĞLU ERKARA

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SALON 7	Assoc. Prof. Dr. Djamila Bennaceur-Doumaz	1	EXPLORING EMOTIONAL RESPONSES ELICITED BY IMAGES IN CHILDREN’S LITERATURE	Arafa A. Alholaisi, Jamal H. Madani, M. A. Alvi
		2	ANALYZING ONLINE SPEECH ANXIETY AND EVALUATION DISPARITIES AMONG STUDENTS	Assis. Prof. Dr. Takeshi Mano
		3	EXAMINING THE INFLUENCE OF INTRODUCTORY TECHNOLOGY COURSES ON STEM PATHWAY CHOICES	Tadashi Watanabe, Jinya Katsuyama, Akihiro Takeda
		4	EXPLORING THE MINDS OF ETHAN SHAFER, TIMOTHY GRAZIANO, AND JAY FISHER	Dr. Elham Zamiri
		5	EXPLORING GENDER-BASED JAPANESE LANGUAGE LEARNING STRATEGIES AMONG LEARNERS IN NORTH SULAWESI, INDONESIA	Djemai Bara Mahboub,, Mohamed Faouzi
		6	EXPLORING THE INFLUENCE OF AUGMENTED AND VIRTUAL REALITY ON EDUCATIONAL OUTCOMES IN A MULTIVARIABLE CALCULUS SETTING"	Assoc. Prof. Dr. Djamila Bennaceur-Doumaz
		7	ENHANCING COMPETENCIES: THE DYNAMIC LEARNING APPROACH AT A LEADING FRENCH COMPUTER SCIENCE INSTITUTE	Kazunori Nomura, Hiromichi Nakahar Masaumi Ogi
		8	EXPLORING KNOWLEDGE ACQUISITION IN CLIENT ORGANIZATIONS: A CASE STUDY OF STUDENT ENGAGEMENT AS PRODUCERS"	Sou Shibata Atsuhiro Watanabe,

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SALON 8	Prof. Dr. Phusit Hashim	1	FOSTERING COLLABORATIVE CONVERSATIONS IN ONLINE LEARNING: ESTABLISHING AND NURTURING COMMUNITIES OF PRACTICE	lectureNatalia Polkanova, Dr. Sergey Kazakov
		2	BUILDING EDUCATIONAL FOUNDATIONS: CONSTRUCTING INFORMATION IN HIGHER EDUCATION TEACHING	Dr. Nada Armstrong
		3	REVOLUTIONIZING LEARNING OUTCOMES: ADVANCED MODELING TECHNIQUES FOR EMPOWERING STUDENTS IN EDUCATION	Phd. Karen Azhar
		4	NAVIGATING THE ACADEMIC LANDSCAPE: BALANCING 'THE CAN DO' AND 'THE HAVE TO DO' IN BATNA UNIVERSITY, ALGERIA	Sheng-Min Na Cheng
		5	INCORPORATING COOPERATIVE EDUCATION: A STRATEGIC FRAMEWORK FOR ENGINEERING CURRICULUM ENHANCEMENT	Sivamurugan Pandian
		6	ENHANCING FINANCIAL LITERACY AMONG YOUNG WOMEN: INSIGHTS FROM A CASE STUDY IN AUSTRALIAN SCHOOLS	Premvadee Nakornpanom
		7	EXPLORING E-CONTENT PRODUCTION ALGORITHMS FOR SCREEN-CAPTURED VIDEOS: AN INTRODUCTORY GUIDE	Prof. Dr. Phusit Hashim
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SALON 9	Prof. Levan Alonso López	1	EXPLORING THE EDUCATIONAL AND SEMIOTIC POTENTIAL OF GEOGEBRA IN FOSTERING MATHEMATICAL DIALOGUE	Lovorka Galetic, Zeljko Ruiz,
		2	AN INTEGRATED 1088 ENSEMBLE METHODOLOGY FOR ANTICIPATING STUDENTS' ACADEMIC ACHIEVEMENT	Sofia Aboulaich Rachid Ellaia, Rajae Ayouche
		3	ENGAGEMENT OF STUDENTS IN GOVERNANCE WITHIN MAINLAND CHINA'S HIGHER EDUCATION SYSTEM	Osamah A. Alsayegh
		4	ENHANCING CYBERSECURITY AWARENESS WITHIN THE APPLIED SCIENCES STUDENT COMMUNITY	Erika Vukelic Nestor Ortiz
		5	ENHANCING LANGUAGE LEARNING THROUGH A COLLABORATIVE 3D MULTI-USER VIRTUAL ENVIRONMENT	Dr. Bhim Sabauri
		6	PERSISTENT INEQUALITY: EXAMINING GENDER DISCRIMINATION IN CROATIAN EDUCATION	Assis. Prof. Dr. Wardoyo Humairoh,
		7	HARNESSING DATA FOR SUCCESS: PREDICTING STUDENT PERFORMANCE IN EDUCATION	Prof. Levan Alonso López
		8	SCRUM IN THE SMART CLASSROOM: A CASE STUDY FOR ENHANCED ONLINE LEARNING AND ENGAGEMENT	Mikel Singh
		9	REVOLUTIONIZING CHEMISTRY TEACHING: THE IMPACT OF ONLINE TESTS	Lovorka Galetic, Zeljko Vukelic
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<b>SALON 10</b>	<b>Dr. Haya Y Alobaid</b>	1	BOOSTING CHEMISTRY EDUCATION: ONLINE TESTING AS A POWERFUL TOOL	Mandakini Thakur, Sheena Pall
		2	REVOLUTIONIZING HIGHER EDUCATION: AI'S TRANSFORMATION OF LEARNING IN THE 21ST CENTURY	Wanda Luen-Wun Siu, Xiaowen Zhang
		3	FOSTERING ACTIVE ENGAGEMENT: ENHANCING EXPERIENTIAL LEARNING IN A SMART FLIPPED CLASSROOM - A CASE STUDY	Wun Siu, Xiaowen Zhang
		4	UNLOCKING MATHEMATICAL MINDS: STRATEGIES FOR TEACHING PRESCHOOLERS WITH AUTISM	Wanda Luen-
		5	NAVIGATING UNCERTAINTY: EXPERIENCES OF FOREIGN STUDENTS IN HUNGARY DURING THE COVID-19 PANDEMIC	Bitu Mashayekhi, Zeynab Lotfi Aghel
		6	REVOLUTIONIZING HIGHER EDUCATION IN SAUDI ARABIA: A COMPREHENSIVE E-COACHING APPROACH	Dr. Haya Y Alobaid
		7	A FRAMEWORK FOR INTELLIGENT LEARNING ENVIRONMENTS IN MUSIC EDUCATION: AN ONTOLOGICAL APPROACH	Ghanima Al-Sharrah, Haitham M. Lababidi, Yusuf I. Ali
		8	BUILDING DEEP UNDERSTANDING: INTEGRATING EXPERIENTIAL LEARNING INTO A SMART FLIPPED CLASSROOM MODEL - A CASE STUDY	Assis. Prof. Venugopal Kummamuru

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SALON 11	Assis. Prof. Dr. Chris Schrödl	1	DEVELOPMENT OF MOLECULAR IMPRINTED POLYMERS (MIPS) FOR THE SELECTIVE REMOVAL OF CARBAMAZEPINE FROM AQUEOUS SOLUTION	Bianca Schweiger, Lucile Bahnweg, Barbara Palm, Ute Steinfeld
		2	PENTACHLOROPHENOL REMOVAL VIA ADSORPTION AND BIODEGRADATION	Assis. Prof. Dr. Rakmi Abd.-Rahman Assis. Prof. Dr. Nurina Anuar
		3	FORMULATION AND EVALUATION OF VAGINAL SUPPOSITORIES CONTAINING LACTOBACILLUS	Sanae Kaewnopparat Nattha Kaewnopparat
		4	ASAD ULLAH MADNI, MAHMOOD AHMAD, NAVEED AKHTAR, MUHAMMAD USMAN	Asad Ullah Madni Mahmood Ahmad, Naveed Akhtar, Muhammad Usman
		5	SERICIN FILM: INFLUENCE OF CONCENTRATION ON ITS PHYSICAL PROPERTIES	N. Namviriyachote N. Bang, P. Aramwit
		6	VALIDATION AND APPLICATION OF A NEW OPTIMIZED RP-HPLC-FLUORESCENT DETECTION METHOD FOR NORFLOXACIN	Mahmood Ahmad Ghulam Murtaza Sonia Khiljee Muhammad Asadullah Madni
		7	ANTIBACTERIAL CAPACITY OF PLUMERIA ALBA PETALS	Assis. Prof. Dr. M. H. Syakira Dr. L. Brenda
		8	PROACTIVE IDENTIFICATION OF FALSE ALERT FOR DRUG-DRUG INTERACTION	Hsuan-Chia Yang, Yan-Jhih Haung, Yu-Chuan Li
		9	COMPARISON BETWEEN ANTIBACTERIAL EFFECTS OF ETHANOLIC AND ISOPROPYL: HEXAN (7:3) EXTRACTS OF ZINGIBER OFFICINALE ROSE	Tahereh Naji Mahsa Jassemi
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SALON 12	Prof. Dr. Bouiamrine Nassiri	1	LOCAL DAYAK PERSPECTIVES ON WILDLIFE IMPACT FROM OIL PALM DEVELOPMENT	Sunkar Saraswati, Santosa
		2	MAPPING THE SPATIAL VARIABILITY OF BTEX CONCENTRATIONS AT A SOUTH AFRICAN INTERNATIONAL AIRPORT	Raeesa Johnson, Ryan S. Moolla
		3	DETERMINING SOIL LOSS BY EROSION ACROSS VARIOUS LAND COVER CATEGORIES AND SLOPE CLASSES IN BOVILLA WATERSHED, TIRANA, ALBANIA	Valmir Fran, Baloshi Gjoka, Nehat Toromani, Çollaku Elvin
		4	POULTRY MANURE-DERIVED BIOCHAR AS SOIL AMENDMENT FOR RECLAIMED SANDY SOILS IN ARID AND SEMI-ARID REGIONS	Dr. Mohamed Hammam
		5	COMPARATIVE ANALYSIS OF THIRD-GENERATION RESEARCH DATA FOR ASSESSING SOLAR ENERGY POTENTIAL	Claudinea Teresa, Elison Jardim, Luciane Rafael, Brazil Salvi, Bierhals Haag
		6	UTILIZING BITUMINARIA BITUMINOSA (L.) STIRTON AND MICROBIAL BIOTECHNOLOGIES FOR REVITALIZING DEGRADED PASTORAL LANDS: A CASE STUDY IN THE MIDDLE ATLAS OF MOROCCO	O. Zennouhi, Mderssa Ibjbjjen, Prof. Dr. Bouiamrine Nassiri
		7	EXPLORING FACTORS INFLUENCING THE SUCCESS OF HIGH CONSERVATION VALUE AREAS IN OIL PALM PLANTATIONS: A PRELIMINARY STUDY	Yanto Kwatrina, Assis. Prof. Dr. Santosa Rozza Tri
		8	DECLINE IN BIODIVERSITY OF HYRCANIAN FOREST DUE TO COAL MINING ACTIVITIES	Mahsa Kooch, Seyed Hojjati, Tavakoli Yahya
		9	Impact of Injection Conditions on Flame Structures within Gas-CENTERED SWIRL COAXIAL INJECTOR	Park Song, Wooseok Sunjung, Jaye Lee, Jongkwon Koo
		10	DYNAMIC RESPONSE OF SHIPS TO COMPLEX AND SUDDEN EXTERNAL FORCES	Bo Qasim, Gao Liangtian, Idrees Liu



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SALON 13	Prof. Dr. A. Taheri	1	ENHANCING CESSNA CITATION X PERFORMANCE DURING CRUISE FLIGHT WITH ADAPTIVE WINGLETS	Botez Segui, Bezin Simon , Mihaela Marine
		2	DESIGNING AN EXPERIMENTAL SETUP TO VALIDATE OUT-OF-THE-LOOP MITIGATION IN AIR TRAFFIC CONTROL MONITORING HIGH LEVELS OF AUTOMATION	Oliver Di Flumeri , Francesca De Kraemer, Gianluca Ohneiser, Jan Crescenzo ,
		3	IMPLEMENTATION OF STATE-SPACE AND SUPER-ELEMENT TECHNIQUES FOR MODELING AND CONTROLLING SMART STRUCTURES WITH DAMPING FEATURES	Schmidt Ghareeb, Nade Rüdiger
		4	MODELING COMPRESSIBLE FLOW IN PIPES AND POROUS MEDIA DURING BLOWDOWN EXPERIMENT	Assis. Prof. Dr. Thomas Namy , Bruyere Vincent , Paris Patrick
		5	DYNAMIC 3D POST-STALL AERODYNAMICS CONSIDERING CAMBER LOSS FROM FLOW SEPARATION	Aritras Mukherjee , Dr. Roy Rinku
		6	UTILIZING CELLULOSE NANOCRYSTAL SUSPENSIONS AS WATER-BASED LUBRICANTS FOR SLURRY PUMP GLAND SEALS	Grecov Mohammad Shariatzadeh, Dana Javad
		7	ENHANCING FATIGUE LIFE: OPTIMIZING TOLERANCE GRADES FOR BEARING AND SHAFT ASSEMBLY IN WASHING MACHINES	DolarCangi, Aydogdu Ersoy, Mugan Aydeniz,
		8	A META-MODEL FOR WING PLANFORM TUBERCLE DESIGN INSPIRED BY HUMPBACK WHALE FLIPPER	Prof. Dr. A. Taheri
		9	INTEGRATING HYBRID AI WITH TWO-DIMENSIONAL DEPTH-AVERAGED NUMERICAL MODEL: SIMULTANEOUS SOLUTION FOR SHALLOW WATER AND EXNER EQUATIONS	S. Mehrab Amiri, Nasser Talebbeydokhti
		10	SIMULATION OF GAS SWEETENING PROCESS: EXPLORING WASTE HYDRAULIC ENERGY RECOVERY	Meisam Farhani, Hassan Ali Ozgoli, Foad Moghadasi
		11	EXPLORING THE COMPRESSION-TENSION BEHAVIOR OF AZ31B ROLLED SHEET IN THE ROLLING DIRECTION UNDER LARGE STRAIN	Assoc. Prof. Dr. Yazdanmehr Jahed
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SALON 14	Prof. Dr. Tarantino Libutti	1	EMPLOYING SNAILS AND FISH AS POLLUTION BIOMARKERS: A STUDY IN LAKE MANZALA AND LABORATORY C, WITH LABORATORY-EXPOSED SNAILS TO CHEMICAL MIXTURES	Hanaa Khayat, Hoda Hamid, Kadria. Mahmoud,
		2	EFFECTIVENESS OF THREE HERBICIDES ON CONTROLLING WILD BARLEY (HORDEUM SPONTANEUM C. KOCH) ACROSS VARIOUS GROWTH STAGES WITH NITROGEN FERTILIZER ADDITIVE	Assoc. Prof. Edrisi Moeeni, A. Farahbakhsh
		3	EXPLORING SALVIA SCLAREA L. POTENTIAL FOR PHYTOREMEDIATION OF HEAVY METAL-CONTAMINATED SOILS	Violina Todorov, Radka Ivanova, Angelova Givko ,
		4	IMPACT OF COMPOST APPLICATION ON HEAVY METAL UPTAKE, NUTRIENT ALLOCATION, AND QUALITY OF ORIENTAL TOBACCO KRUMOVGRAD 90	Violina Popova , Venelina Angelova , Radka Ivanova, Krasimir Givko, Ivan Ivanov,
		5	INITIAL FINDINGS: AFLATOXIN DETECTION IN PADDY AND MILLED RICE FRACTIONS IN GUYANA	M. Morrison, Lambert Chester, Samuels Ledoux
		6	STRATEGIES FOR MANAGING RICE-FIELD CONVERSION IN PANGKEP REGENCY, SOUTH SULAWESI, INDONESIA	Assis. Prof. Dr. Ida Rosada Nurliani,
		7	LONG-TERM IMPACT OF RECLAIMED AGRO-INDUSTRIAL WASTEWATER ON SOIL CHEMICAL PROPERTIES IN HERBACEOUS CROP IRRIGATION	DisciglioTarantino, , Gatta Frabboni,
		8	ASSESSING WATER USE EFFICIENCY IN CITRUS FARMING OF THE SOUSS REGION (MOROCCO) UNDER CHANGING CLIMATE: IMPACT OF IRRIGATION METHODS	H. Elomari, Fallah Elmousadik
		9	ASSESSMENT OF AGRICULTURAL TRAITS OF SMOOTH BROMEGRASS (BROMUS INERMIS LEYSS) LINES IN KONYA REGIONAL CONDITIONS	Prof. Dr. Tarantino Libutti,
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		2	BİLİMSEL ARAŞTIRMALARDA BİLİMSELLİK KRİTERİ OLARAK ETİK	Prof.Dr., FATMA EBRU İKİZ ALPER ASLAN
		3	BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ	Prof.Dr., FATMA EBRU İKİZ Benan EROL
		4	REVIEW OF PSYCHOEDUCATIONAL STUDIES ON THE PSYCHOLOGICAL WELL-BEING OF PSYCHOLOGICAL COUNSELORS, FAMILY COUNSELORS, AND TRAINEES	Prof. Dr., FATMA EBRU İKİZ Yüksek Lisans Öğrencisi, SELİN AYDIN
		5	RUH SAĞLIĞI UZMANLARINDA YARATICILIK VE YAPAY ZEKA TEKNOLOJİLERİNİN KULLANIMI: SİSTEMATİK GÖZDEN GEÇİRME	Prof. Dr, Fatma Ebru İKİZ Yüksek Lisan Öğrencisi, Berna ÇALIŞKAN
		6	CHANGES IN THE NEEDS AND EXPECTATIONS OF EFFECTIVE HELPING CHARACTERISTICS IN MENTAL HEALTH: AN EVALUATION FROM THE PERSPECTIVE OF FAMILY COUNSELING BEFORE AND AFTER THE PANDEMIC	Psikolojik Danışman, Naile Öykü MUSLU Prof. Dr., Fatma Ebru İKİZ
		7	EXAMİNİNG THE VIEWS OF MİGRANT UNİVERSİTY STUDENTS İN TURKEY REGARDİNG CAREER ADAPTATION	Psikolojik Danışman, Naile Öykü MUSLU Lisans Öğrencisi, Yeşim Nur CAN Psikolojik Danışman, Tuğba ÇAVDAR Prof. Dr., Diğdem Müge SİYEZ
		8	ERKEN ÇOCUKLUK DÖNEMİNDEKİ ÇOCUKLARDA GÖRÜLEN DAVRANIŞ VE UYUM PROBLEMLERİNDE OYUN TERAPİSİ ÇALIŞMALARININ İNCELENMESİ	Doktora Öğrencisi, SONGÜL YASEMİN ÖZGÜN Prof. Dr., FATMA EBRU İKİZ
		9	Systematic Review of Psychoeducational Interventions Aimed at Developing Forgiveness in Family Counseling	Prof. Dr., FATMA EBRU İKİZ ZEYNEP KORKMAZ SİMAY SEVİLDİK AYBÜKE ÜSTÜN
		10	A SYSTEMATIC REVIEW OF STUDIES ON TRAUMA IN ADOLESCENTS SUBJECTED TO PEER BULLYING	Prof., Dr., FATMA EBRU İKİZ AYSEL TAŞKIN

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SALON 2	FATMA TANER	1	AUXILARY VERBS IN ENGLISH LANGUAGE SENTENCES	Sashka Jovanovska, PhD Natka Jankova Alagjozovska, PhD Ana Koceva, PhD Simona Serafimovska, MA
		2	PRESERVATION OF CULTURAL VALUES IN URBAN SPACES DURING THE GLOBALIZATION PROCESS: NEVŞEHİR EXAMPLE	Graduate Student, Göknur Kürk
		3	SEKİZİNCİ SINIF ÖĞRENCİLERİNİN KAREKÖKLÜ SAYILAR KONUSUNDAKİ KAVRAM YANILGILARININ İNCELENMESİ	Yüksek Lisans Öğrencisi, FATMA TANER Prof. Dr., KÜRŞAT YENİLMEZ
		4	ORTAOKUL ÖĞRENCİLERİNİN AKADEMİK BENLİK VE MATEMATİK KAYGILARININ BAZI DEĞİŞKENLER AÇISINDAN İNCELENMESİ	Yüksek Lisans Öğrencisi, FATMA TANER Prof. Dr., KÜRŞAT YENİLMEZ
		5	Examining the Effect of the Prevalence of Netlessphobia on Smartphone Addiction Among University Students	Doç.Dr. Deniz Mertkan GEZGİN Doç.Dr. Tuğba TÜRK KURTÇA
		6	Chatbot Use in Education: A Study on Deep and Surface Learning Approaches of University Students	Doç.Dr. Deniz Mertkan GEZGİN
		7	OKUL ÖNCESİ ÖĞRETMENLİĞİ LİSANS ÖĞRENCİLERİNİN DUYGUSAL ZEKA DÜZEYLERİ İLE DEMOGRAFİK ÖZELLİKLERİ ARASINDAKİ İLİŞKİLERİN İNCELENMESİ	Dr. Öğr. Üyesi AHMET SAKİN GÜLGEZ BAŞMANAV SÜLEYMAN GÜL

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SALON 3	Dr. TULİN YANIKDAĞ	1	WILHELM DILTHEY'DE TİN BAĞLAMINDA TEKİLLEŞME	Yüksek Lisans Öğrencisi, Necdet ERTİK
		2	AUGUSTINUS'UN DÜŞÜNCELERİNDE PLATONCU İZLER	Arş. Gör. GÖKÇE SARI
		3	EVALUATION of ANTI-MİGRANT OPPOSITION through HATE SPEECH on SOCIAL MEDIA	Doktor Öğretim Üyesi, MAKBULE EZGİ ERTEN BAHRİYE GİZEM KILIÇASLAN
		4	TÜRKİYE'DE ROMAN OLMAK: ROMAN KİMLİĞİ VE DİLSEL FARKLILIKLAR ÜZERİNE BİR DEĞERLENDİRME	Dr. TULİN YANIKDAĞ
		5	SHARING POST-TRAUMA THROUGH SOCIAL MEDIA AND ITS IMPACTS: QUINN SHEPHARD'S NOT OKAY	Rabia Reyhan Kısa Burak Kısa

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SALON 4	Doç. Dr. Levent SEMİZ	1	OPTIMIZATION OF THE TUNED MASS DAMPER FOR VIBRATION SUPPRESSION OF A CUTTING TOOL HOLDER USING THE BEES ALGORITHM	Mehmet ERYILMAZ Ömer KARAKUŞ Prof. Dr. Mete KALYONCU
		2	YÜKSEK BASINÇLI DÖKÜM PROSESİ İLE ÜRETİLEN ALÜMİNYUM AYDINLATMA PARÇALARINDA KALIP TASARIMI DEĞİŞİKLİKLERİNİN PARÇA DÖKÜM KALİTESİ ÜZERİNE ETKİLERİNİN ARAŞTIRILMASI	Robot ve Otomasyon Mühendisi, Umut COŞGUN Doç. Dr., Ahmet FEYZİOĞLU
		3	Comparison of Tensile Properties and Hardness of Polyester Composites Filled With Silicon Dioxide and Glass Powder Fillers	Şevval YILMAZ Prof. Dr. Hüseyin ÜNAL, Mert SELMANOĞLU Prof. Dr. Fehim FINDIK Ferdî ÖZYER
		4	MINI REVIEW ON SMART PACKAGING TECHNOLOGY AND APPLICATIONS	MSc, Gülşah YILDIZ Assoc. Prof. Dr. Şeyda TAŞAR Assoc. Prof. Dr. Melek YILGIN
		5	LIBRARY SERVICES INTEGRATION WITH INNOVATIVE ARTIFICIAL INTELLIGENCE METHODS	Doç. Dr. Nihat PAMUK Hüseyin KIZIL İlke EREN Baran GÜNAY
		6	RPA INTEGRATED DIGITAL LIBRARY AUTOMATION	Doç. Dr. Nihat PAMUK Hüseyin KIZIL İlke EREN Baran GÜNAY
		7	BOYA ATIKLARININ ADSORPSİYON YÖNTEMİ İLE UZAKLAŞTIRILMASI	Doç. Dr. Levent SEMİZ

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SALON 5	Assoc.Prof. Dr. Nazife Erarslan	1	ELBISTAN REGION DAMAGE ASSESSMENT STUDY IN K. MARAS EARTHQUAKES	Berna MERT Mustafa EKEN Burhan CENGİZLER
		2	KENT KİMLİĞİNİN SÜRDÜRÜLMESİNDE İŞARET ÖGELERİNİN YERİ	Ceyda DÖNMEZ Prof. Dr. Nilgün ÇOLPAN ERKAN
		3	SOIL IMPROVEMENT WITH A SUSTAINABLE CEMENT	Assoc.Prof. Dr. Nazife Erarslan
		4	COHESIVE FRACTURING PROPERTIES IN CEMENT-REINFORCED COARSE AND FINE SOILS	Assoc.Prof. Dr. Nazife Erarslan
		5	YERALTI BARAJ TASARIMI İÇİN IRGAT BÖLGESİNİN GEOTEKNİK VE ZEMİN GEÇİRİMLİLİK ÖZELLİKLERİNİN İNCELENMESİ	Dr. Öğr. Üyesi, Pınar SARI ÇAVDAR
		6	SLURRY TRENCH TİPİ GÖVDELİ IRGAT BARAJI VE İLETİM HATLARININ TASARIMI	Dr. Öğr. Üyesi, Pınar SARI ÇAVDAR
		7	COMPARISON OF SPECTRAL BEHAVIOR UNDER DISTINCT LEVELS OF APPROXIMATIONS	Doç.Dr. ELIF CAGDA KANDEMİR
		8	COMPARISON OF STRUCTURAL RESPONSES OF A BASE-ISOLATED BUILDING WITH DISTINCT ISOLATION PARAMETERS	Doç.Dr. ELIF CAGDA KANDEMİR
		9	EXPERIMENTAL DETERMINATION OF THE EFFECT OF HARDNESS ON THE SHEARING BEHAVIOR OF MAGNETO-RHEOLOGICAL ELASTOMERS UNDER HARMONIC LOADING	Öğretim Görevlisi, Uğur MAZLUM, Profesör Doktor, İlhan ÇELİK,
		10	HIZLI KENTLEŞME HAREKETİNİN ÖNLENMESİ AMACIYLA TARIMSAL ÜRETİMİ ARTIRACAK ÇEŞİTLİ DESTEKLEME POLİTİKALARI	Öğretim Görevlisi, Abdurrahman OLGUN, Öğretim Görevlisi, Uğur MAZLUM,
		11	HEALTH AND SAFETY OF HEALTHCARE PERSONNEL WORKING IN FIELD HOSPITALS DURING DISASTERS: RISKS AND PROTECTIVE SOLUTIONS	Doktor Öğretim Üyesi Ayşin AŞKIN Doktor Öğretim Üyesi Seçkin ÖZCAN Cenk GÖKÇE
		12	INNOVATIVE APPROACHES IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY IN OFFICE WORKS	Doktor Öğretim Üyesi Ayşin AŞKIN Doktor Öğretim Üyesi Seçkin ÖZCAN Yunus ÖZCAN

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SALON 6	Dr. Yasemin ASLAN TOPÇUOĞLU	1	DİJİTAL BASKININ ESTETİK DOKUNUŞU: DERİ TASARIMINDA MODERN SÜSLEME SANATI	Dr. Öğretim Üyesi Hatice ER Öğretim Görevlisi Serap Yıldırım GEREN Öğretim Görevlisi Ertan EROL
		2	KALİGRAFİ SANATININ DERİ YÜZEYLER ÜZERİNDE KULLANIMI	Dr. Öğretim Üyesi HATİCE ER Öğretim Görevlisi ERTAN EROL Öğretim Görevlisi SERAP YILDIRIM GEREN
		3	YAPAY ZEKA İLE OTOMASYONUN DÖNÜŞÜMÜ	Kıdemli Uzman, FATİH KAZOVA Teknik Mimar, İLKNUR COŞKUNER Kıdemli Uzman, MUHAMMED AHMET ALKAN Uzman Yardımcısı, MUHAMMET KASIM YÜKSEL
		4	THE EXISTENCE OF SOLUTIONS FOR THE SINGULAR FRACTIONAL BOUNDARY VALUE PROBLEM WITH P-LAPLACIAN	Assoc. Prof. Dr. NUKET AYKUT HAMAL FURKAN ERKAN
		5	UNITY İLE YÜKSEKLİK KORKUSUNU AŞMA: ÖZEL ORTAM VE AŞAMALI YAKLAŞIM	AYŞE NUR SAYLAM DR.ÖĞR. ÜYESİ CEM ÖZKURT
		6	THE EFFECT OF BASALT FIBER REINFORCEMENT ON THE LIQUID LIMIT VALUE OF THE SOIL	Dr. Yasemin ASLAN TOPÇUOĞLU Prof. Dr. Zülfü GÜROCAK
		7	EXAMINING THE EFFECT OF CURING ON THE COHESION VALUES OF ADDITIVE CLAY SAMPLES	Dr. Yasemin ASLAN TOPÇUOĞLU Prof. Dr. Zülfü GÜROCAK



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SALON 7	Dr. Bhat Mulla	1	OPTIMAL TIMING FOR NEWBORN CALF CAMELS TO ABSORB COLOSTRUM IMMUNOGLOBULIN (IGG) IN RELATION TO CORTISOL AND THYROXIN LEVELS	Amina M. Magdub , Ahmed B. Bishr , Abdul-Baset R. Abuzweda
		2	DEVELOPMENTAL ALTERATIONS IN RABBIT DUODENAL MUCOSAL-SUBMUCOSAL COMPOSITION	Elnasharty Abou-Ghanema., Sayed-Ahmed Abo Elnour
		3	UTILIZATION OF TUBERCULIN, TETANUS IMMUNOGLOBULIN, AND DPT VACCINE AS AVIAN IN VIVO T-LYMPHOCYTE MITOGENS	Assis. Prof. Dr. Ibrahim Mohammed Saeed Shnawa
		4	ASSESSING POTATO CULTIVAR SUITABILITY FOR CHIP AND STICK PRODUCTION WITH MICROWAVE-VACUUM DRYING	Solvita Siljanis , Kristaps Kampuse, Murniece Rakcejeva, Tatjana Irisa
		5	EXAMINING SALT-TOLERANCE IN TISSUE-CULTURED DATE PALM VARIETIES WITHIN CONTROLLED ENVIRONMENTS	Dr. Bhat Mulla, M. Khalil
		6	EFFECTS OF COPPER AND ZINC DEFICIENCY ON MILK PRODUCTION IN INTENSIVELY GRAZED DAIRY COWS: CASE STUDY FROM NORTH-EAST ROMANIA	Alina Anton, Gheorghe Solcan, Carmen Solcan
		7	EFFECTS OF OVERFEEDING ON PRODUCTIVE PERFORMANCE, FOIE GRAS PRODUCTION, BLOOD PARAMETERS, AND MORTALITY RATES IN TWO DUCK BREEDS	Dr. Mona Sayed, Lecture E. Mahrous
		8	ULTRASONIC EVALUATION OF CORPORA LUTEA AND PLASMA PROGESTERONE LEVELS IN EARLY PREGNANT AND NON-PREGNANT COWS	Abdurraouf Kubota , Salah Al- Raju , Solmon Guru Dahash , Gaja Chikara
		9	INTERTIDAL FIXED STAKE NET TRAPS (HADRAH) FISHERY IN KUWAIT: DISTRIBUTION, CATCH RATES, AND SPECIES COMPOSITION	Dr. Ali Baz, Mohsen Husaini, James Bishop
		10	COMPARING REPRODUCTIVE HORMONE LEVELS IN INFERTILE AND FERTILE DAIRY COWS	Ali M. Mutlag, Yang Zhiqiang, Meng Jiaren, Zhang Jingyan, Li Jianxi
			DEVELOPING ESSENTIAL OIL COMPOSITION AS ANTIBACTERIAL FEED ADDITIVE FOR POULTRY: FORMULATION AND TECHNOLOGY	Goderdzishvili Barbaqadze, LomtadzeMosidze, MshvildadzeBakuridze, A. Bakuridze

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SALON 8	Assoc. Prof. Dr. Kung-Jen Tu	1	YANBU, SAUDI ARABIA: BRIDGING TRADITION IN A MODERNIZING CITYSCAPE	Hisham Mortada
		2	ANALYZING REPLACEABLE LINKS WITH REDUCED WEB SECTION FOR LINK-TO-COLUMN CONNECTIONS IN ECCENTRICALLY BRACED FRAMES	Daniel Y. Abebe, Sijeong Jeong, Jaehyouk Choi
		3	IMPLEMENTING RETROFITTING SOLUTIONS FOR KAZAKHSTAN'S EXISTING HOUSING STOCK	S. Yessengabulov, A. Uyzbayeva
		4	SKY FARMING: EMBRACING VERTICAL LANDSCAPE MODELS IN URBAN AREAS FOR SUSTAINABLE DEVELOPMENT THROUGH GREEN BUILDING CONCEPTS	Nadiyah Yola Putri, Nesia Putri Sharfina, Traviata Prakarti
		5	APPROACHING SUSTAINABLE PUBLIC HOUSING: PERSPECTIVES ON PROPERTY MANAGEMENT AND FINANCIAL FEASIBILITY	Assoc. Prof. Dr. Kung-Jen Tu
		6	ADAPTIVE DESIGN FOR COLLECTIVE HOUSING USING LARGE PREFABRICATED CONCRETE PANELS	Ungureanu Daniel , Viorel M. Muntean
		7	CREATING ENERGY BENCHMARKS FROM MANDATORY ENERGY AND EMISSIONS REPORTING DATA: ONTARIO'S POST-SECONDARY RESIDENCES	C. Xavier Mendieta, J. J McArthur
		8	PRESERVING SOCIAL MEMORY: A CASE STUDY OF UCH DUKKAN NEIGHBORHOOD IN ARDABIL CITY, AZERBAIJAN REGION, IRAN	Yousef Daneshvar Rouyandozagh,
		9	EXPLORING BIOMIMETIC STRUCTURAL FORMS: ACHIEVING VITAL SUSTAINABILITY IN TALL ARCHITECTURE	Dr. Osama Al-Sehail
		10	ASSESSING ENERGY DEMAND IN A HISTORIC BUDAPEST DISTRICT: EXPLORING ENERGY INTENSITY	Lec. Talamon Viktória , Attila Sugár , Horkai Kita, Michihiro András

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SALON 9	Assis. Prof. Konstantinos Bawa	1	ENHANCING UPPER-ARM REHABILITATION: FINDING THE OPTIMAL REST INTERVAL BETWEEN SETS IN ROBOT-ASSISTED THERAPY	Virgil Yihun, Gissele Pablo, Mosqueda Delgado, Yimesker Miranda
		2	ARGINASE ENZYME ACTIVITY IN HUMAN SERUM: A MARKER OF COGNITIVE FUNCTION AND THE IMPACT OF INOSITOL WITH ARGININE SILICATE	Katie Perez-Ojalvo , Sara Emerson , Jim Danielle , Komorowski Greenberg
		3	EXPLORING MAMMOGRAPHIC IMAGE MAGNIFICATION SYSTEM WITH EYE DETECTION AND EEG SCANNER: A PRELIMINARY INVESTIGATION	Prof. Dr. A Ogura. Nakazawa
		4	ANALYZING RESTING-STATE FUNCTIONAL CONNECTIVITY WITH AN INDEPENDENT COMPONENT APPROACH	Shuaishuai Hu, Lanbo Wang, Han Li, Shouliang Qi
		5	ENHANCED SEGMENTATION OF HEART SOUNDS USING PHONOCARDIOGRAM CURVE LENGTH VARIATION	Mecheri Zeid Ahfir , Maamar Belmecheri , Kale Izzet
		6	ENHANCED RESOLUTION OF 3D CT SCANS VIA HETEROGENEOUS DIMENSIONAL TRANSFORMERS	Dr. Helen Zhang
		7	ADVANCEMENT OF AN AFFORDABLE IOT-BASED MINIATURE DEVICE FOR REMOTE HEALTH MONITORING	Mojtaba Mohammadzaheri , Morteza Ghodsi,
		8	EMPLOYING SPEECH EMOTION RECOGNITION AS A LONGITUDINAL BIOMARKER FOR ALZHEIMER'S DISEAS	Jianyu Zhengyu , C Zhang hen, Sihong Zhang, Xusheng He , Zhang Wei
		9	EVALUATING HIP MUSCULAR IMBALANCE IN RHEUMATISM PATIENTS: AN ASSESSMENT	Dr. Anthony Banitsas , Assis. Prof. Konstantinos Bawa
		10	ENHANCED CORONARY HEART DISEASE PREDICTION USING ECG ANALYSIS WITH RESNET AND BI-LSTM	Yang Zhang, Jian He
		11	UTILIZING CONVOLUTIONAL NEURAL NETWORKS FOR HEARTBEAT CLASSIFICATION FROM ECG SIGNALS	Hezerul AlDahoul , Nouar Abdul Karim

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SALON 10	Prof. Dr. Rebecca Bolia,	1	BIOMECHANICAL MODELING AND SIMULATION: COMPARING HUMAN ARM MOTION TO ENHANCE ASTRONAUT TASKS DURING EXTRA VEHICULAR ACTIVITY	Yash Gupta Vardhan
		2	ASSESSMENT OF DATA MINING TECHNIQUES IN PREDICTING SOFTWARE RELIABILITY PERFORMANCE	Pradeep Wahid , Abdul Kumar
		3	ENHANCING VOWEL SPEECH VIA PITCH AND FORMANT FREQUENCY ANALYSIS	M. Vanitha Lakshmi
		4	LONG-TERM ANALYSIS OF PROFITABILITY ESTIMATION WITH A FOCUS ON BENEFITS	Stephan Lahl , Printz Kristina , René Jeschke , Vossen Sabina
		5	ADVANCEMENT: AUTOMATIC CALIBRATION FRAMEWORK FOR HYDROLOGIC MODELING VIA APPROXIMATE BAYESIAN COMPUTATION	J. M. Goonetilleke , B McGree
		6	EXPLORING AN INNOVATIVE CLOUD MODEL: BRIDGING THE GAP BETWEEN PHYSICAL AND VIRTUALIZED BUSINESS ENVIRONMENTS FROM THE CUSTOMER'S PERSPECTIVE	Asim Majeed, Mak Rehan Bhana, Prof. Dr. Rebecca Bolia, Nizam Goode , Mike illiams
		7	ENHANCEMENTS TO THE DIFFRACTIVE DETECTOR CONTROL SYSTEM OF ALICE FOR RUN-II AT THE LARGE HADRON COLLIDER	Monzó Hernández, M. León Martínez
		8	ASSESSMENT OF SHEAR STRENGTH FOR COLD-FORMED STEEL SHEAR WALL PANELS: A NUMERICAL ANALYSIS	Bourahla Idriss, Nour-Eddine Rouaz, Kahlouche Sid Ali , Farah Rafa
		9	UTILIZING ACCOUNTING METHODS FOR INHERITED OBJECT-ORIENTED CLASS MEMBERS	Assis. Prof. Dr. Al Dallal Jehad
		10	DEVELOPING A WEB 2.0-BASED PRACTICAL WORKS MANAGEMENT SYSTEM: A CASE STUDY OF SULTAN MOULAY SLIMANE UNIVERSITY	Khalid Bouikhalene, Ghoulam Belaid , Zakaria Mouncif , Hicham Harmouch
		11	SPIRAL GEOMETRIC APPROACH FOR AIRCRAFT AUTOMATIC COLLISION AVOIDANCE	M. Orefice, V. Di Vito
		12	FOSTERING STUDENT SUCCESS: PROMOTING CYBERSECURITY AWARENESS IN EDUCATION THROUGH LABS AND COMPETITIONS	Dr. Teymourlouei Haydar

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SALON 11	Assoc. Prof. Dr. Ora Geiger	1	Examining Learners' Reactions to Adjusted Rorschach Comprehensive System: A Critical Psychological Analysis	Mokgadi Mukuna, Robert Moletsane, Kananga Kekae
		2	Motivations and Barriers to Recycling in Kota Kinabalu, Malaysia	Jasmine Wider, Rosnah Ismail, Chua Das, Ferlis Bahari, Adela Mutang Madlan, Lailawati Walton , Rickless Bee Seok
		3	Assessing the Impact of Metaphor Therapy on Depression among Female Students	Dr. Shoushtari Marzieh
		4	Examining SL Writing and Sensitivity in Writing Tasks: Proficiency Levels in a Second Language Other than English	Simões Silva,
		5	Modeling Cognitive and Behavioral Challenges in an Underrepresented Group with a Hierarchical Approach	Zhang Zhang, Zhi-Chao Zhidong
		6	Comparing Musical Notation Reading to Alphabet Reading: Implications for Teaching Music to Dyslexic Students	Assoc. Prof. Dr. Ora Geiger
		7	Comparative Analysis: Fatigue and Drowsiness in Japan's Night-time Passenger Transportation Industry	Hiroshi Ikeda
		8	Exploring the Relationship between Job Satisfaction, Motivation, and Organizational Citizenship Behavior Factors	K. Umar Mushtaq
		9	Utilizing Online Games for Educational Support: Addressing Learning Difficulties	Dr. Margoudi Z. Smyrniou,
		10	Enhancing Social Engagement for Blind Students: The Efficacy of Cognitive Behavioral Interventions"	Assis. Prof. Mohamed M. Elsherbiny
		11	Comparing Spatial Abilities, Memory, and Intellect Among Drivers with Varying Levels of Professional Experience	N. Khon, Kim Mukhitdinova,

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SALON 12	Dr. Jenzer Farshideh	1	ASSESSING THE QUALITY STANDARDS OF HOSPITAL PHARMACIES IN THERAPEUTIC CENTERS ASSOCIATED WITH KERMANSHAH UNIVERSITY OF MEDICAL SCIENCES, IRAN	Dr. Gharehbagh V.Hamishhekar , H.Aghababa
		2	OPTIMIZING VISIBLE LIGHT COMMUNICATION SYSTEMS THROUGH NATURAL LIGHT INTEGRATION	Mahmoud H. Aly, Ivan Andonovic, Moustafa Beshr
		3	INTEGRATING WIRELESS BODY AREA NETWORKS WITH WEB SERVICES: REVOLUTIONIZING UBIQUITOUS HEALTHCARE PROVISIONING THROUGH ARCHITECTURE	Ogunduyile O. Oluwgbenga
		4	DYNAMIC BRAIN WAVE ACQUISITION AND PSYCHOACOUSTIC ANALYSIS IN REAL TIME	Dipali SShweta , ingh Mahajan , Bansal Rashima
		5	ENHANCING COMBAT EFFECTIVENESS IN NEW GENERATION FIGHTER PLANES THROUGH HUMAN FACTORS CONSIDERATIONS	Binoy Bhargavan
		6	CONSTRUCTING AN INTEGRATED RELATIONAL DATABASE UTILIZING SWISS NUTRITION NATIONAL SURVEY AND HEALTH DATASETS FOR DATA MINING OBJECTIVES	Helena Einsele , Dr. Jenzer Farshideh
		7	CAN EEG TESTING AID IN BRAIN TUMOR IDENTIFICATION?	M. Sharanreddy, P. K. Kulkarni
		8	EXAMINING THE HAZARDS OF INADEQUATE MEDICAL WASTE MANAGEMENT PRACTICES ON HUMAN HEALTH AND THE ENVIRONMENT: A REVIEW OF LITERATURE	Babanyara Ibrahim, Garba Bogoro., M. Y.Abubakar,
		9	EXAMINING MAINTENANCE STRATEGIES AND RELIABILITY OF VITAL MEDICAL EQUIPMENT IN HOSPITALS: IMPACT ON PATIENT OUTCOMES	Flanagan Peter , Gibson John
		10	SELECTIVE DYNAMIC FEATURES FOR HEART DISEASE CLASSIFICATION	<u>Assoc. Prof. Dr. Walid Khelood</u>

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	2		Kadın - III	Kainat ÖZPOLAT
	3		Küçürek 4	Şevval Nur Şen
	4		“ÖYLE Mİ? , BÖYLEMİ?”	Öğr. Gör. Gülşin ORAL
	5		“ÖYLE Mİ? , BÖYLEMİ?”	Öğr. Gör. Gülşin ORAL
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## **A STUDY ON INVESTIGATION OF THE INHIBITION EFFECTS OF SOME IMPORTANT COMPOUNDS IN GREEN TEA ON CD36 AND LDL IN ATHEROSCLEROSIS USING CHEMICAL COMPUTATION METHOD**

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Green tea is the most recommended beverage to consume. One of the most important active polyphenols of this plant is (-)-Epicatechin gallate (ECG) and its effects on cardiovascular diseases are being investigated. Structures formed by partial oxidation of low-density lipoproteins (LDL) in the arterial wall are thought to contribute to the formation of atherosclerotic lesions, and CD36 has an important role in the binding of these oxidized lipoproteins. The interaction of these receptors identified in this study and some active ligands in tea was determined by docking, a chemical calculation method, and the interaction points were determined

**Keywords:** Green tea, LDL, CD36, docking

## THE INVESTIGATION OF THE INHIBITION EFFECTS OF THE MAIN EFFECTIVE COMPOUNDS IN ARONIA (ARONIA MELANOCARPA) FOR HMG-COA REDUCTASE IN ATHEROSCLEROSIS

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### ABSTRACT

Aronia is a plant that contains many bioactive compounds, especially polyphenol compounds in its leaves and fruits, and its cultivation has been given importance recently. This plant has become widely used due to its many effects such as antioxidant, antiviral, antidiabetes, anticancer and antiatherosclerotic. The natural active ingredients it contains, the polyphenols (hydroxycinnamic acid, flavanols, and anthocyanin) in this plant, which are effective against atherosclerosis, which causes heart attacks on the rise today, are important compounds that need to be investigated. In this study, the interactions of these active compounds as ligands with HMG-CoA reductase, an important receptor in lowering cholesterol, which is one of the causes of atherosclerosis in cardiovascular diseases, were investigated using docking, a computational chemistry method. In addition, its interactions with these receptors were examined by comparing them with Atorvastatin, which is used effectively in lowering cholesterol. The results obtained here are of great importance in terms of preventing waste of time and material by guiding experimental and clinical studies.

**Keywords:** Aronia, atorvastatin hydroxycinnamic acid, flavanols, anthocyanin, docking



## **SYNTHESIZING HYDROCHAR FROM SOLID FOOD WASTE IN SUBCRITICAL WATER AND ASSESSING ITS EFFICIENCY IN SYNTHETIC DYE REMOVAL FROM WATER**

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### **ABSTRACT**

Water serves vital roles in human life, including drinking, agriculture, industrial processes, electricity generation, and public sanitation. However, the escalating decline in water quality, exacerbated by urbanization and industrial growth, poses significant challenges, adversely impacting ecosystems and human health worldwide. Annually, approximately 10,000 different dyes and pigments are manufactured globally, primarily featuring aromatic ring structures, and find extensive applications in industries such as paints, textiles, leather processing, and medicine. These dyes are known for their non-biodegradability, chemical resistance, and carcinogenic properties. Industrial discharge of synthetic dyes poses a significant threat to wastewater systems. The presence of industrial dye waste results in water acquiring an undesirable, enduring hue and containing substantial levels of COD, both of which pose severe environmental risks.

Employing a combination of a photocatalyst with magnetic properties enables the implementation of magnetic separation, a simple and effective technique for removing suspended particles from wastewater without additional separation processes. Photocatalytic oxidation of various organic compounds during this process can lead to the mineralization of CO<sub>2</sub>, H<sub>2</sub>O, and other harmless byproducts.

In this study, we examined the effect of adding raw magnetite or sphalerite to hydrochar prepared from parsley stems on the color removal of Crystal Violet (CV), a model synthetic dye pollutant, from water in the presence of UV (254 nm) radiation. A fixed-bed high-pressure reactor was used to synthesize hydrochar. Hydrochar was synthesized from waste parsley stalks, a solid food waste, as a result of a 1-hour reaction under subcritical water conditions, at a temperature of 513 K and at a pressure sufficient to keep water in liquid form at this temperature. Certain amounts of sphalerite and magnetite were mixed into the synthesized hydrochar, and the effect of the resulting sphalerite-doped hydrochar (SDHC) and magnetite-doped hydrochar (MDHC) final products on the photocatalytic color removal of CV was examined. In the aforementioned photocatalytic degradation, it is aimed to convert the resulting product into hydroxyl radicals by catalyzing hydrogen peroxide and the radical species formed to decompose the target pollutant. In the applied method, the experimental variables such as oxidant amount, concentration of sphalerite or magnetite, concentration of hydrochar, concentration of H<sub>2</sub>O<sub>2</sub>, and treatment time were evaluated with the CCD model, which is an effective method of the response surface method, and optimum conditions were determined for the best removal. In the SDHC and MDHC methods, 69.40% and 81% of color removal were obtained, respectively.



**Keywords:** Subcritical Water, Solid Waste, Food Waste, Hydrochar, Dye Removal

**Acknowledgements:** This study was supported by a research grant of Mersin University BAP (Grant no: BAP- 2022-2-TP2-4742). We would like to thank Assoc. Prof. Dr. Mehmet Ali KURT for providing the magnetite and sphalerite ores.

## OPTIMIZING PHENOLIC COMPOUNDS REMOVAL FROM PISTACHIO PLANT WASTEWATER USING PERSULFATE OXIDATION: A RESPONSE SURFACE METHODOLOGY APPROACH

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### Abstract

The efficient removal of phenolic compounds from wastewater generated by pistachio processing industries poses a significant environmental challenge. In this study, we investigated the optimization of phenolic compound removal (dephenolisation) using persulfate oxidation, employing a Response Surface Methodology (RSM) approach. Persulfate oxidation was chosen due to its high reactivity and potential for degrading hazardous organic pollutants. Through systematic variations of persulfate dosage, temperature, and treatment time, we aimed to determine the optimal conditions for maximizing dephenolisation efficiency. The results were analyzed using RSM to develop a predictive model for the persulfate oxidation process. The highest dephenolisation, achieving 98.6%, was attained under optimal conditions: 85 mM of persulfate at 363 K for 55 minutes, with a predicted response value of 100.56%. ANOVA analysis underscored the reliability and precision of the CCD model, revealing significant F and p values of 65.36 and  $<0.0001$ , respectively. Additionally, the  $R^2$  and adjusted  $R^2$  values, calculated as 0.9833 and 0.9682, respectively, affirm the robustness and accuracy of the CCD model in predicting and optimizing the dephenolisation process. Our findings not only provide insights into the factors influencing persulfate oxidation performance in complex industrial effluents but also contribute to the development of effective treatment strategies for pistachio plant wastewater. This research represents a step towards sustainable management practices in the pistachio processing industry and offers implications for similar agro-industrial sectors facing wastewater treatment challenges.

**Keywords:** Phenolic compounds, pistachio wastewater, advanced oxidation process, RSM.

## CE KATKILI NANOYAPILI ZNO FILMLERİNİN SENTEZİ VE FOTOKATALİTİK AKTİVİTESİ

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### ÖZET

Ce katkılı ZnO (ZnO:Ce) filmleri, ultrasonik spreylendirme (USP) tekniği kullanılarak  $300 \pm 5^\circ\text{C}$ 'de cam altlıklar üzerine biriktirilmiştir. Ce katkısının filmlerin optik, yapısal, yüzey ve fotokatalitik özellikleri üzerindeki etkisi, UV-Görünür spektrofotometri, X-ışını kırınımı (XRD), atomik kuvvet mikroskobu (AFM) ve fotoluminesans spektrometrisi (PL) kullanılarak incelenmiştir. Optik çalışmalar Ce katkılı ZnO filmlerin UV-vis bölgesinde %70'in üzerinde yüksek geçirgenliğe sahip olduğunu göstermiştir. XRD modeline göre, (002) yönelim tüm filmlerde tercih edilen yönelimdi ve ZnO'nun hekzagonal wurtzite yapısına sahip olduğunu doğruladı. AFM görüntülerinde Ce katkısının artmasıyla birlikte filmlerin yüzey kusurlarında da artış olduğu gözlemlendi. Fotoluminesans ölçümlerinde dört emisyon piki açıkça görülmüştür. Tüm filmlerde yoğun pik 600 nm dalga boyundadır ve bu dalga boyuna karşılık gelen emisyon turuncu emisyondur. ZnO:Ce filmlerinin fotokatalitik ölçümleri için organik boya olarak metilen mavisi (MB) seçilmiştir.

**Anahtar Kelimeler:** ZnO:Ce, Ultrasonik Spreylendirme Tekniği, Fotokatalitik.

### Synthesis of Ce doped Nanostructured ZnO Films and Photocatalytic Activity

### ABSTRACT

Ce doped ZnO (ZnO:Ce) films were deposited on glass substrates at  $300 \pm 5^\circ\text{C}$  using ultrasonic spray pyrolysis (USP) technique. The effect of Ce doping on the optical, structural, surface and photocatalytic properties of the films was investigated using UV-Visible spectrophotometry, X-ray diffraction (XRD), atomic force microscopy (AFM) and photoluminescence spectrometry (PL). Optical studies have shown that Ce-doped ZnO films have a high transmittance of over 70% in the UV-vis region. According to the XRD model (002), the

orientation was the preferred orientation in all films, confirming that ZnO has a hexagonal wurtzite structure. There was an increase in the surface defects of the films with the increasing Ce contribution in the AFM images. Four emission peaks were clearly visible in the photoluminescence measurements. In all films, the intense peak is at 600 nm wavelength, and the emission corresponding to this wavelength is the orange emission. For the photocatalytic measurements of ZnO:Ce films, methylene blue (MB) was chosen as the organic dye.

**Keywords:** ZnO:Ce, Spray pyrolysis Technique, Photocatalytic.

## ZN BENZERİ KRİPTON İÇİN ENERJİ SEVİYELERİNİN ATOMİK YAPI HESABI

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### ÖZET

Bu çalışmada, asal gazlardan biri olan kripton ( $Z=36$ ) atomunun altı kez iyonlaşmış halinin (Kr VII-Zn benzeri) atomik yapı hesaplamaları incelendi. Yapılan hesaplamalarda enerji seviyelerinin değerlerini belirlemek için, çok konfigürasyonlu Hartree-Fock (MCHF) yöntemi ve tamamen relativistik çok konfigürasyonlu Dirac-Fock (MCDF) yöntemini temel alan genel amaçlı relativistik atomik yapı paketi (GRASP) kullanıldı. MCDF hesabı sonucunda elde edilen enerjiye, kuantum elektrodinamik etkileri (QED- öz enerjisi ve vakum polarizasyonu) ve Breit düzeltmelerinin (elektronlar arasındaki manyetik etkileşim ve elektron-elektron etkileşiminin geciktirme etkileri) bir katkı olarak nasıl etki ettiği incelendi. Çünkü bu katkılar, çok elektronlu sistemlerin spektroskopik özelliklerini ve elektronik yapılarını içeren araştırmalarda büyük öneme sahiptir. Bu hesaplamalar sonucunda elde edilen veriler, daha önce yayınlanmış mevcut literatürde var olan deneysel ve teorik diğer çalışma sonuçları ile karşılaştırılarak tablo ve grafiklerde verildi. Dolayısıyla bu çalışmada mevcut literatürde sınırlı sayıda bulunan verileri, yapılan hesaplamalardan elde edilen yeni veriler ile genişletmek ve bazı parametrelerin literatüre ilk kez kazandırılması amaçlanmaktadır.

**Anahtar Kelimeler :** Enerji seviyeleri, MCDF metodu, Breit etkileri, QED katkıları

## TARIM ÜRÜNLERİNDE GİZLİ TEHLİKE; MİKOTOKSİNLER HIDDEN DANGER IN AGRICULTURAL PRODUCTS; MYCOTOXINS

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### ÖZET

Hasada yakın ve hasat sonrası bitkisel ürünlere saldıran fungal patojenler neden oldukları bozulmalar nedeniyle ürünlerin elden çıkmasına, kalite değerlerinde azalmalara ve tohumların çimlenme kabiliyetinde düşüslere neden olmaktadır. Buna ek olarak gıda ve yemlerde gelişen bazı fungusların üzerinde buldukları ürüne salgıladıkları toksik metabolitler, insan ve hayvan sağlığını tehdit eden bir faktör olmasından dolayı, fungusla bulaşık olma durumu ekonomik boyutun ötesinde önem taşımaktadır. Mikotoksin denilen bu metabolitler meyvede, meyve sularında, tahıl ve baklagil danelerinde, kurutulmuş gıdalarda yaygın olarak karşımıza çıkmaktadır. Günümüzde bilinen yaklaşık 350 fungus türü mikotoksin sentezlemektedir. Bu fungus türlerinden *Alternaria*, *Fusarium*, *Penicillium* ve *Aspergillus* cinslerine dahil olanlar en önemli mikotoksin üreticileri olarak bilinmektedir. Mikotoksinler arasında aflatoksin, okratoksin, patulin, trikotesen ve zearalenon çok az miktarlarda dahi insan ve hayvan sağlığına zarar vermektedir. Bu sorunun gerek tarlada üretim sırasında ve hasatta gerekse hasat sonrasında alınacak bitki koruma yöntemleriyle önüne geçilebilmektedir. Çalışmada mikotoksinlere neden fungal patojenlerin gelişiminin önlenmesine yönelik çalışmalar aktarılmıştır.

**Anahtar Kelimeler :** Mikotoksin, Fungal Patojen, Ürün

### ABSTRACT

Fungal pathogens that attack plant products near and after harvest cause yield losses due to deterioration of the crops, reduce product quality and decrease in the germination ability of seeds. On the other hand, the toxic metabolites secreted by certain fungi growing in food and feed into the product they are on are factor that threatens human and animal health; therefore, fungal contamination of the crop is of importance beyond the economical aspect. These

metabolites, called mycotoxins, are commonly encountered in fruits, fruit juices, grains and legumes, and dried foods. Approximately 350 fungal species known today synthesize mycotoxins. Among these fungal species, those belonging to the *Alternaria*, *Fusarium*, *Penicillium* and *Aspergillus* genera are known as the most important mycotoxin producers. Among mycotoxins, aflatoxin, ochratoxin, patulin, trichothecene and zearalenone are harmful to human and animal health even in very small amounts. This problem can be prevented by using plant protection methods both during field production, at harvest and after harvest. In the study, studies on preventing the development of fungal pathogens that cause mycotoxins are presented.

**Keywords:** Mycotoxins, Fungal Pathogen, Product



## KURAKLIK STRESİNİN TIBBİ ADAÇAYI (*Salvia officinalis* L.) BİTKİSİNDE FİZYOLOJİK VE BİYOKİMYASAL ÖZELLİKLER ÜZERİNE ETKİSİ

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### ÖZET

Bitkiler yaşadıkları ortamda çeşitli olumsuz çevre şartları ile karşı karşıya kalmaktadır. Tarımsal alanlarda ciddi kısıtlamalara neden olan kuraklık ise olumsuz şartların en başında gelmektedir. Bu çalışma, Türkiye’de doğal olarak yetişmeyen ancak konvansiyonel ve organik tarım sistemlerinde üretiminin giderek artmasından dolayı ekonomik değeri yüksek olan ve ayrıca süs bitkisi olarak değerlendirilen tıbbi adaçayının (*Salvia officinalis* L.; Lamiaceae) kuraklık stresi altında meydana gelen fizyolojik ve biyokimyasal değişimlerini ortaya koymak amaçlanmıştır. Kontrollü serada tohumdan itibaren 3 ay boyunca torf:perlit:kum (1:1:1) ortamında yetiştirilen bitkiler sonrasında 21 gün sulama yapılmadan kuraklığa maruz bırakılmıştır. Kontrol ve kuraklık bitkilerinin yaprak boyu, nisbi büyüme oranı (RGR), yaprak nisbi su içeriği (RWC), klorofil floresansı (Fv/Fm), osmotik potansiyel, lipid peroksidasyonu seviyesi ve hidrojen peroksit (H<sub>2</sub>O<sub>2</sub>) miktarı ölçülmüştür. Kuraklık stresi altında *S. officinalis* stres altında olmayan bitkilerle kıyaslandığında, RWC ve Fv/Fm değerlerinde istatistiksel olarak önemli fark belirlenmemiştir. Kuraklık stresi tıbbi adaçayı yapraklarında su içeriğini %79 ve Fv/Fm oranını ise 0,840 seviyelerinde korumaktadır. Bununla birlikte, kuraklık stresi, RGR, osmotik potansiyel ve yaprak uzunluğunu kontrol bitkilerine göre sırasıyla %75, %18,2 ve %23,3 azaltmıştır. Diğer taraftan, lipid peroksidasyonu kuraklık stresi etkisiyle %38,4 artarken H<sub>2</sub>O<sub>2</sub> miktarı da %55 oranında artmıştır. Sonuç olarak, kuraklık stresi tıbbi adaçayı bitkisinde büyüme ve osmotik potansiyeli azaltırken yüksek miktarda H<sub>2</sub>O<sub>2</sub> ve lipid peroksidasyonuna neden olmaktadır.

**Anahtar Kelimeler:** Büyüme, kuraklık, *Salvia officinalis*, stres, tıbbi adaçayı,

## THE EFFECT OF DROUGHT STRESS ON PHYSIOLOGICAL AND BIOCHEMICAL PROPERTIES OF MEDICINAL SAGE (*Salvia officinalis* L.)

### ABSTRACT

Plants are faced with various unfavourable environmental conditions in the environment in which they live in. Drought, which causes serious restrictions in agricultural areas, is one of the most unfavourable conditions. The aim of this study was to determine the physiological and biochemical changes of medicinal sage (*Salvia officinalis* L; Lamiaceae), which does not grow naturally in Turkey but has a high economic value due to the increasing production in conventional and organic farming systems and is also considered as an ornamental plant, under drought stress. The plants were grown in peat:perlite:sand (1:1:1) for 3 months from seed in a controlled greenhouse and then exposed to drought for 21 days without irrigation. Leaf height, relative growth rate (RGR), leaf relative water content (RWC), chlorophyll fluorescence (Fv/Fm), osmotic potential, lipid peroxidation and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) levels of control and drought plants were measured. Under drought stress, *S. officinalis* did not display statistically significant difference in RWC and Fv/Fm values compared to non-stressed plants. Drought stress maintained the water content of medicinal sage leaves at 79% and the Fv/Fm ratio at 0.840. However, drought stress reduced RGR, osmotic potential and leaf length by 75%, 18.2% and 23.3%, respectively, compared to control plants. On the other hand, while lipid peroxidation increased by 38.4%, H<sub>2</sub>O<sub>2</sub> content also increased by 55% under drought stress. In conclusion, drought stress decreases growth and osmotic potential in medicinal sage plants and causes high amounts of H<sub>2</sub>O<sub>2</sub> and lipid peroxidation.

**Keywords:** Drought, growth, medicinal sage, *Salvia officinalis*, stress

## **BENEFICIAL MICROBES IN SUSTAINABLE PLANT NUTRITION**

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### **Abstract**

Higher plants require sixteen minerals throughout their entire life cycle. Plants require higher amounts of some essential nutrients known as macro-elements during this cycle. These include nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), and sulfur (S). However, they require fewer micro-elements such as manganese (Mn), iron (Fe), zinc (Zn), copper (Cu), molybdenum (Mo), boron (B), and chlorine (Cl). Plants extract thirteen essential nutrients from the soil via their roots, while carbon (C), hydrogen (H), and oxygen (O) are obtained from the environment and water. Imbalances in the levels of these components, whether too little or too much, can lead to issues in the growth and productivity of plants. Synthetic chemical fertilizers are often used to alleviate the lack of plant nutrient elements in the soil. In the present era, most of our agricultural output relies on extensive fertilization. However, the rising costs of fertilizers have prompted farmers to adopt more cost-effective, sustainable, and ecologically sound methods. Studies have primarily concentrated on soil-dwelling microorganisms like mycorrhiza and plant growth-promoting rhizobacteria (PGPR). These microbes enhance the availability of plant nutrients in the soil and improve the efficiency of applied fertilizers. Mycorrhizae confer advantages to plants through the establishment of a mutually advantageous symbiotic relationship within the plant roots. In this symbiotic relationship, the host plant provides the mycorrhiza with carbohydrates needed for its metabolic processes, while the mycorrhiza reciprocates by supplying the plant with vital nutrients (such as K, S, Mg, Ca, P, Cu and Zn) and water. PGPRs decrease soil pH by the secretion of organic acids or the synthesis of siderophores, which enhance the absorption of iron from the soil. PGPR possesses features of nitrogen fixation, as well as the ability to solubilize P, K, and Zn.

**Keywords:** PGPR, Mycorrhiza, Plant Nutrition

## ÇANAKKALE BOĞAZI'NDAN TOPLANAN *ULVA RIGIDA*'NIN ELEMENT DÜZEYLERİNİN ARAŞTIRILMASI

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### ÖZET

Makro algler içerdikleri değerli metabolitleri nedeniyle başta gıda sanayi olmak üzere birçok endüstriyel alanda hammadde kaynağı olarak değerlendirilmektedir. Bu çalışma, Çanakkale Boğazı'ndan dağılım gösteren *Ulva rigida*'nın Al, Ba, Ca, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, P, Sr, Ti, Zn içeriklerinde aylık olarak meydana gelen değişimleri incelenmiştir. 2020 yılı boyunca aylık (Ocak – Aralık) olarak toplanan alg talluslarının element analizleri ICP-OES cihazında EPA 3051 A ön işleminden sonra EPA 200.7 metoduna göre yapılmıştır. Yapılan analizler sonucunda *U. rigida*'nın element içerikleri Na>Mg>K>Ca>P>Fe>Al>Sr>Mn>Zn>Ba>Ti>Ni>Cr>Cu şeklinde belirlenmiştir. Ocak ayında Al (2,959 mg/kg ka), Ba (0,098 mg/kg ka) ve Mg (116,328 mg/kg ka) en yüksek düzeyde bulunurken, şubat ayında K (110,419 mg/kg ka), mart ayında Ti (0,084 mg/kg ka), nisan ayında Sr (0,322 mg/kg ka) ve Na (122,127 ka), mayıs ayında Fe (5,662 mg/kg ka) ve Mn (0,166 mg/kg ka), haziran ayında Cu (0,036 mg/kg ka), Ni (0,059 mg/kg ka) ve Zn (0,150 mg/kg ka), kasım ayında Cr (0,050 mg/kg ka) ve P (9,095 mg/kg ka), ve aralık ayında ise Ca (28,772 mg/kg ka) elementinin en yüksek düzeye ulaştığı saptanmıştır. Çalışmada Pb ve Cd elementleri ise tespit edilmemiştir.

**Anahtar Kelimeler:** Çanakkale, *Ulva rigida*, element analizi

## RATLARDA KARIN FITIKLARININ TEDAVİSİNDE SENTETİK EMİLEN VE EMİLMEYEN MESH VE PRP İLE KAPLI FORMLARIN KARŞILAŞTIRILMASI

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## ÖZET

Fıtık, tarih boyunca hem insan hekimliğinde hem de veteriner hekimlikte en çok görülen ve tedavisi üzerinde bilim insanlarının sürekli düşündüğü cerrahi bir lezyondur. Veteriner hekimlikte karın fıtıkları defekt çapının boyutuna bağlı olarak basit cerrahi sütürle kapatılabileceği gibi daha büyük boyuttaki defektlerin kapatılması için organik yada sentetik greftlerden yararlanılmaktadır. Sentetik greftler kolay elde edilmesi ve kolay uygulanabilirliği açısından sık kullanılan materyallerdir. Sentetik materyallerin en büyük sorunu nüks ve karın içi adezyonlardır. Bu komplikasyonların önüne geçebilmek için değişik bariyer yöntemleri denenmiş ancak sonuç olumsuz olmuştur. PRP'nin de bu komplikasyonları önlemede etkili olabileceği ileri sürülmüş ancak yara iyileşmesi dışında bir katkısı görülmemiştir. Bu çalışma karın fıtıklarının tedavisinde emilen ve emilmeyen meshlerin prp ile kaplandığında adhezyonu engelleme ve defekt bölgesindeki yara iyileşmesi üzerine yararlı olup olmadığını değerlendirmek amacıyla yapılmıştır.

Çalışmada 250-300 gr ağırlığında 42 adet sprague dawley dişi ratlar kullanıldı. Ratlar rastgele eşit sayıda; 6 gruba ayrıldı grup I; emilen mesh, grup II; emilen mesh+PRP, grup III; emilmeyen mesh, grup IV; emilmeyen mesh+PRP, grup V; kontrol olarak ayrıldı ve bu grupta defekt bölgesi basit ayrı dikişlerle kapatıldı. Grup VI; bu gruptaki hayvanlar PRP elde etmek için kullanıldı.

Ratlar rompun–ketalar anestezisine alındıktan sonra karın boşluğuna girildi. Defekt alanı 1x2 cm boyutunda genişletildi. Birinci gruptaki ratların defekt alanı inlay olarak emilen mesh ile kapatıldı, ikinci gruptaki ratlar emilmeyen mesh ve bunun PRP kaplı formu ile kapatıldı, üçüncü gruptaki ratlar emilmeyen mesh ve dördüncü gruptaki ratlar da emilmeyen mesh ve bunun PRP ile kaplı formu ile kapatıldı. Kontrol grubu için beşinci gruptaki ratlar kullanıldı ve

bu gruptaki ratların defekt bölgesi basit ayrı dikişler ile kapatıldı. Tüm dikişler ve derinin kapatılmasında emilmeyen ip kullanıldı.

20 günlük bir takip süresi içinde herhangi bir komplikasyon gelişmedi. Yirminci günün sonunda tüm ratlar ötenazi edildi. Karın boşluğundaki gerilimi ölçmek için patlatma deneyi yapıldı. Bu deneyin sonucuna göre gerilim kuvveti en yüksek dördüncü grupta olarak tespit edildi. Daha sonra karın bölgesi açılarak adhezyon yönünden değerlendirmeler yapıldı. Bu gözlem sonucunda kontrol grubunda daha az olmak üzere mesh kullanılan tüm gruplarda orta ve ileri düzeyde yapışmalar gözlemlendi. Çekme koparma deneyi, histopatolojik ve biyokimyasal muayeneler yapmak için doku örnekleri alındı. Çekme koparma deney sonucuna göre gruplar arasındaki istatistiksel olarak anlamlı bir fark bulunmadı. Histopatolojik ve biyokimyasal bulgular açısından en iyi sonuçlar dördüncü grupta gözlemlendi.

Sonuç olarak emilmeyen meşin PRP ile kaplanarak kullanılmasının adezyonu engellemediği ancak neovaskülarizasyonu artırarak yara iyileşmesini hızlandırdığı görüldü. Bu nedenle karın defektlerinin erken dönemde kapanması istendiğinde emilmeyen meşin PRP ile kaplanarak kullanılmasının uygun olacağı kanısına varıldı.

**Anahtar Kelimeler:** Fıtık, Mesh, PRP

## **RATLARDA TENDON İYİLEŞMESİ ÜZERİNE TROMBOSİTTEN ZENGİN PLAZMA İLE HYALURONİK ASİT'İN KARŞILAŞTIRILMASI: BİYOMEKANİK BULGULAR**

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### **ÖZET**

Tendon hasarları veya rupturları güncelliğini koruyan ciddi sağlık problemlerinden biridir. Bu konuda geniş çaplı tedavi seçenekleri devam etmektedir. Son yıllarda tendon tedavisinde PRP (Platelet Rich Plasma) ve Hylaluronik asit (HA) uygulamaları yapılmaktadır. Bu çalışmada tendon iyileşmesi üzerine PRP ve HA uygulamalarının biyomekanik yönden karşılaştırılması amaçlandı.

Çalışmada 36 adet Spraque Dawley ırkı erkek rat kullanıldı. Bu ratların 30 tanesi çalışma gruplarında 6 tanesi ise PRP elde etmek için kullanıldı. Genel anestezi altında aşıl tendonlarında tam kesi sonrası modifiye kessler dikişi ile primer tendon onarımı yapıldı. Ratlar rastgele 10'arlı 3 gruba ayrıldı. 1. grup ratlar kontrol grubu olarak değerlendirildi ve herhangi bir medikal tedavi yapılmadı. İkinci gruptaki ratlara aşıl tendon hasarı onarıldıktan sonra 0.5 ml tek doz olarak PRP uygulandı. Üçüncü gruptaki ratlara yine tek doz şeklinde 0.5 ml hyaluronik asit verildi. Postoperatif 42. günde ötenazi yapıldı. Elde edilen veriler biyomekanik olarak değerlendirildi.

Çalışmadaki ratların aşıl tendonlarının biyomekanik incelemesinde, tendonların kopmasına sebep olan maksimum kuvvet yönünden HA ve PRP gruplarının kontrol grubuna göre daha yüksek olduğu fakat her üç grup arasında istatistiksel yönden anlamlı bir farklılığın olmadığı belirlendi ( $p>0.05$ ). Tendon sertliği açısından ise kontrol grubundaki ratların diğer gruplara göre istatistiksel yönden anlamlı düzeyde fazla olduğu tespit edildi ( $p<0.05$ ).

Sonuç olarak tendon kopmalarının onarımında PRP ve Hyaluronik Asit uygulamaları tendonun maksimum kopma kuvvetini olumlu yönde etkilediğinden etkin bir tedavi seçeneği olduğu PRP ve HA uygulamaları üzerine daha detaylı çalışmalar yapılmasının gerekli olduğu kanısına varıldı.

**Anahtar Kelimeler:** Biyomekanik, hyaluronik asit, PRP, rat

## **COMPARISON OF PLATELET-RICH PLASMA AND HYALURONIC ACID ON TENDON HEALING IN RAT-BIOMECHANICAL FINDINGS**

Tendon injuries or ruptures are one of the serious health problems that remain current. A wide range of treatment options continue in this regard. In recent years, PRP (Platelet Rich Plasma) and Hyaluronic acid (HA) applications have been used in tendon treatment. This study aimed to compare biomechanically PRP and HA applications on tendon healing.

36 Sprague Dawley male rats were used in the study. 30 of these rats were used in the study groups and 6 of them were used to obtain PRP. Under general anesthesia, primary tendon repair was performed with modified Kessler sutures after complete incision in the Achilles tendons. Rats were randomly divided into 3 groups of 10 each. The first group of rats was considered as the control group and no medical procedures were performed. In the second group of rats, after the Achilles tendon damage was repaired, PRP was applied as a single dose of 0.5 ml. Rats in the 3rd group were again administered 0.5 ml hyaluronic acid as a single dose. Euthanasia was performed on the 42nd postoperative day. The obtained data were evaluated biomechanically.

In the biomechanical examination of the Achilles tendons of the rats in the study, it was determined that the HA and PRP groups were higher than the control group in terms of the maximum force that caused the tendons to rupture, but there was no statistically significant difference between all three groups ( $p>0.05$ ). In terms of tendon stiffness, it was determined that the rats in the control group were statistically significantly higher than the other groups ( $p<0.05$ ).

As a result, it was concluded that PRP and Hyaluronic Acid applications are an effective treatment option in the repair of tendon ruptures, as they positively affect the maximum breaking force of the tendon, and that more detailed studies on PRP and HA applications are necessary.

**Keywords:** Biomechanics, hyaluronic acid, PRP, rat



## TOPLUM ECZANELERİNDE RİSK YÖNETİMİ

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### ÖZET

Her insanın faaliyetinde birçok risk unsuru vardır. Eve giderken kaza yapabilir, yemek yerken gıda zehirlenmesinden hastalanabilirsiniz. Toplum eczanelerinde de bir görevi yerine getirmenin doğasında belli oranda risk vardır. Bir hastanın reçetesini hazırlayıp eksiksiz bir şekilde sunmak gibi. Tarihsel olarak eczacılar için maruz kalınan birincil risk, geleneksel iş riskleriyle ilgiliydi. Örneğin; yangın, hırsızlık, vb. Modern eczacılık uygulamalarındaysa bu riskler; reçete doldurma hataları, ilaç saklama koşulları, teknoloji ve elektronik veri iletimi, hasta danışmanlık ve ilaç kullanımının gözden geçirilmesi gereklilikleri ve korunan özel sağlık bilgileri gibi birçok başlıkta çoğalmaktadır. Eczacılık uygulamaları gelişmeye devam ettikçe, riskler de olağan şekilde artmaktadır. Bu çalışmada toplum eczanelerinde risk faktörleri başlıklar halinde incelenmiş olup, risk kavramına ait tanımlamaları ve bu süreçlerin amaçlarını ortaya koymuştur. Konu ile ilgili literatürler taranmış olup, güncel eczane pratiklerinde karşılaşılan durumlarla birlikte gözlemsel bir çalışma yapılmıştır. Eczacılık uygulamalarında riskler şu başlıklar halinde incelenmiştir. Çalışma alanlarında risk yönetimi, depolama ve mal kabul alanlarında risk yönetimi, iş sağlığı ve güvenliği açısından risk yönetimi, finansal risklerin yönetimi, hukuksal risklerin yönetimi, akıllı ilaç kullanımı açısından risk yönetimi, farmakovijilans ve risk yönetimi. Çalışmada bu risklerin nasıl yönetilmesi gerektiği ve olası sonuçlara dikkat çekilmiş olup, bir farkındalık oluşturmak amaçlanmıştır.

**Anahtar Kelimeler:** Eczane, Farmakovijilans, Finans, Risk,

### RISK MANAGEMENT IN SOCIETY PHARMACIES

#### ABSTRACT

There are numerous risk elements in every action of human being. You might have an accident on your way back home or get poisoned while eating. In society pharmacies, there is a natural

chance of risk to implement an action like, preparing a prescription and passing it in to the patient. Historically, the primary risk element that the pharmacists exposed to was related to traditional risk factors, for example fire, robbery. etc. However risk elements in modern pharmaceutical applications can be listed as, errors while filling the prescription, conditions of storage of the medicine, transmitting of technological and electronically datas, necessities of reviewing of patient consultancy, usage of medicine, and protection of private medical information. As pharmaceutical applications evolve, risk factors are evenly going to increase. In this study, the risk factors in society pharmacies were analyzed by titles, and in addition to it, descriptions in relation with risk element and the purpose of these processes were revealed. The relevant literature was scanned, and observational study was conducted for the circumstances that occur in current pharmaceutical practice. The risks of pharmaceutical practice were investigated by the titles listed below; risk management in working place, risk management storage and receiving items, risk management of occupational health safety, management of financial risks, management of legal risks, management of use of smart drugs, pharmacovigilance and risk management. In this study, the procedure of how to manage these risks and possible consequences were pointed out and creating an awareness about management of risks was targeted.

**Key Words:** Pharmacy, Pharmacovigilance, Finance, Risk

# YOĞUN BAKIMLARDA KANITA DAYALI HEMŞİRELİK UYGULAMALARININ ÖNEMİ

## THE IMPORTANCE OF EVIDENCE-BASED NURSING PRACTICES IN INTENSIVE CARE

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### ÖZET

Son yıllarda toplumlarda yaşlı nüfusun ve kronik hastalığa sahip bireylerin artması tedavi ve bakım maliyetlerinin artmasına sebep olmuştur. Eldeki imkanları daha iyi kullanarak, düşük maliyetli ve nitelikli tedavi ve bakımın en önemli yolu kanıta dayalı uygulamaları kullanmaktır. Hemşirelerin uygulamalarını kanıta dayalı gerçekleştirmeleri mesleki sorumluluklarıdır. Yoğun bakımlar hemşirelik mesleğinin görev yetki ve sorumluluklarını en etkin yaptıkları birimlerdir. Hemşirelerin uygulamalarında mevcut en iyi kanıtları kullanmaları; uygulama hatalarının azalmasına, mesleğin profesyonelleşmesine, farklı bakış açılarına ve bakımın standartlaşmasına yardımcı olur.

**Anahtar Kelimeler:** Kanıt, Kanıta Dayalı Tıp, Kanıta Dayalı Hemşirelik Uygulamaları, Yoğun Bakım Hemşireliği

### ABSTRACT

In recent years, the increase in the elderly population and individuals with chronic diseases in societies has led to an increase in treatment and care costs. The most important way to provide low-cost and qualified treatment and care by making better use of the available resources is to use evidence-based practices. It is the professional responsibility of nurses to carry out their practices based on evidence. Intensive care units are the units where the nursing profession carries out its duties and responsibilities most effectively. Nurses use the best



available evidence in their practice; It helps to reduce application errors, professionalize the profession, provide different perspectives and standardize care.

**Key Words:** Evidence, Evidence-Based Medicine, Evidence-Based Nursing Practices, Intensive Care Nursing

## HUKUKUN DNA'SI GENETİK HASTALIKLARIN ETİK PERSPEKTİFİ

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### ÖZET

Genetik çalışmaların temel amacı insan genomunun tamamını çözümleyerek çalışma prensiplerini anlamak üzerinedir. Bu amaçla yapılan en geniş kapsamlı çalışmalardan biri insan genom projesidir. İnsan DNA'sında oluşan bazı hasarlar veya zaman içinde meydana gelen dizi değişimleri nedeniyle ortaya çıkan durumlara genetik hastalıklar adını vermekteyiz. Bu genetik hasar ve bozulmalar, DNA'daki bir veya daha fazla genin çalışmasını etki ederek, bahsedilen gen bölgelerinin olağan işlevini yerine getirememesine veya değişmesine neden olurlar. hastalığın türü ve şiddeti tedavinin nasıl yapılacağına karar vermede önemlidir. Bazı durumlarda semptomları hafifletmek veya yönetmek için ilaçlar veya cerrahi müdahaleler kullanılabilirken, diğer durumlarda genetik danışmanlık, genetik testler, destekleyici tedaviler veya yaşam tarzı değişiklikleri gerekebilir. Etik, bu yapılan/yapılmakta olan projelerle genetik hastalıkların erken tanı ve tedavisinin yapılması noktasında ortaya çıkabilecek olumsuzluklar için uyarıcı rolünü üstlenmiştir. İnsan sağlığına katkı sağlama amacı olan bu çalışmalarda oluşabilecek, gücün amacı dışında kötüye kullanımı ya da ilke ihlalleri hususunda ise görev etik alanına ve bu alandaki uzman kişilere düşmektedir. Özetle, yanlış teşhisler, hastaların ve ailelerinin yaşam kalitesini düşürebilir, uygun tedaviyi geciktirebilir veya engelleyebilir ve tıbbi kaynakların israfına neden olabilir. Bu nedenle, doğru teşhis koymak için dikkatli bir klinik değerlendirme ve uygun genetik testlerin kullanılması son derece önemlidir. Bu çalışmada tanı ve tedavi sürecindeki etik koşullar değerlendirilecektir.

Anahtar Kelimeler : Etik, genetik hastalıklar, adli bilimler

## GENETİK ARAŞTIRMALARIN IŞIĞINDA ŞİZOFRENİ: TANI, TEDAVİ VE TOPLUMSAL UYUM

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### ÖZET

Şizofreni, bireylerin düşüncelerini ve davranışlarını etkileyen bir psikolojik rahatsızlıktır. Şizofreni belirtileri bireyler arasında farklılık gösterse de genellikle psikotik negatif ve bilişsel olmak üzere üç ana kategoride incelenir. Kişinin dünyayı deneyimleme şeklindeki değişiklikler psikotik belirtileri (halüsinasyonlar, sanrılar, hareket ve düşünce bozukluğu) kapsarken negatif belirtiler (sosyal etkileşimde problemler, günlük aktivitelerde zorluk yaşama vb.) ise kişinin sosyal yaşamında normal işlevsellikte zorluk yaşamasıdır. Bireyin konsantrasyon ve hafıza sorunları ise bilişsel semptomlardandır. Şizofreni multifaktoriyel bir hastalık olup genetik, beyin yapısı ve çevresel etmenlerden etkilenerek oluştuğu düşünülmektedir. Uygun tedavi yöntemleri ile şizofreni hastaları günlük hayatlarına sağlıklı bir şekilde devam edecek duruma gelebilirler. Bu çalışmada şizofreninin ortaya çıkış sebepleri ve özellikle genetik faktörlerin bu hastalık üzerindeki etkileri anlatılacaktır.

**Anahtar Kelimeler:** Şizofreni, genetik hastalıklar, adli bilimler, adli genetik

## EBELİK ÖĞRENCİLERİNDE KÜLTÜRLERARASI DUYARLILIK İLE YABANCI UYUKLU ÖĞRENCİLERİN SORUNLARINA İLĞİ ARASINDAKİ İLİŞKİ: KESİTSEL BİR ARAŞTIRMA

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### ÖZET

**Amaç:** Bu çalışma, ebelik öğrencilerinin kültürlerarası duyarlılık düzeyleri ile yabancı uyruklu öğrencilerin yaşadığı sorunlara ilgi arasındaki ilişkiyi belirlemek amacıyla planlanmıştır.

**Yöntem:** Kesitsel nitelikteki bu çalışmanın örneklemini Karabük Üniversitesi ebelik bölümünde öğrenim gören Türk Uyruklu 144 öğrenci oluşturmuştur. Araştırma verileri, “Kişisel Bilgi Formu”, “Kültürlerarası Duyarlılık Ölçeği” ve “Yabancı Uyruklu Öğrenci Sorunlarına İlgi Ölçeği” kullanılarak toplanmıştır. İstatistiksel analizler, SPSS 27.0 paket programı kullanılarak yapıldı. Ortalamaların karşılaştırılmasında normal dağılımlar için t-testi ve ANOVA, normal olmayan dağılımlar için Mann-Whitney-U ve Kruskal Wallis testleri kullanıldı. P değeri <0,05 ise istatistiksel olarak anlamlı kabul edildi.

**Bulgular:** Öğrencilerin kültürlerarası duyarlılık düzeyi ve yabancı uyruklu öğrencileri sorunlarına ilgi düzeyinin iyi düzeyde olduğu belirlendi ve öğrencilerin kültürlerarası duyarlılık düzeyi arttıkça, yabancı uyruklu öğrencilerin sorunlarına ilgi düzeyi de artmaktaydı. Ayrıca, dördüncü sınıf düzeyinde öğrenim gören öğrencilerin, özellikle "Bilme" alt boyutunda, daha yüksek puanlar elde ettiği görüldü.

**Sonuç:** Eğitim sürecinin ilerlemesiyle birlikte öğrencilerin kültürel farkındalık ve bilgi düzeylerinin arttığını söyleyebiliriz. Ebelik eğitimi programlarına kültürel farkındalık eğitimleri eklenerek öğrencilerin farklı kültürlere ve değerlere duyarlılığını artırabilir.

**Anahtar Kelimeler:** Ebelik, kültürlerarası, öğrenci, yabancı.

## THE RELATIONSHIP BETWEEN INTERCULTURAL SENSITIVITY IN MIDWIFERY STUDENTS AND SCALE OF INTEREST OF THE PROBLEMS OF FOREIGN STUDENTS: A CROSS-SECTIONAL STUDY

### ABSTRACT

**Aim:** This study aimed to determine the relationship between midwifery students' levels of intercultural sensitivity and their interest in the issues experienced by foreign students.

**Method:** The sample of this cross-sectional study comprised 144 Turkish students enrolled in the midwifery department of Karabük University. Research data were collected using the "Personal Information Form," "Intercultural Sensitivity Scale," and "Scale of Interest of The Problems of Foreign Students" Statistical analyses were conducted using the SPSS 27.0 software package. For comparisons of means, t-tests and ANOVA were utilized for normally distributed data, while the Mann-Whitney-U and Kruskal Wallis tests were employed for non-normally distributed data. A p-value of  $<0.05$  was considered statistically significant.

**Results:** It was found that the students' level of intercultural sensitivity and their interest in the problems of foreign students were at a good level. Moreover, as the students' level of intercultural sensitivity increased, so did their level of interest in the problems of foreign students. Additionally, it was observed that students at the fourth-grade level achieved higher scores, particularly in the "Knowing" sub-dimension.

**Conclusion:** We can conclude that as the educational process progresses, students' cultural awareness and knowledge levels increase. Cultural awareness training can be incorporated into midwifery education programs to enhance students' sensitivity to cultural differences cultures and values.

**Keywords:** Midwifery, intercultural, student, foreign.



## HALK SAĞLIĞI PERSPEKTİFİNDEN MENOPOZ SONRASI KADINLARDA OSTEOPOROZ

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### ÖZET

Osteoporoz, kemiklerin yoğunluğunun azalması ve kemiklerin kırılabilir hale gelmesiyle karakterize edilen sistemik ve metabolik bir kemik hastalığıdır. Menopoz sonrası kadınlar ve yaşlı yetişkinler, osteoporozun etkilerinden en fazla etkilenen gruplar arasındadır. Çünkü kemik yoğunluğundaki kaybın daha belirgin olduğu yaşam dönemlerindedirler. Osteoporoz, dünya genelinde her üç saniyede bir kırığa neden olarak yılda 8,9 milyondan fazla kırığa neden olup ve yaklaşık 200 milyon kadını etkilemektedir. Hastalığın başlıca nedeni, menopoza bağlı olarak ikincil östrojen eksikliğidir. Osteoporoz tanısı, kırık riskinin değerlendirilmesi ve yönetimi için kemik mineral yoğunluğu (KMY) ölçümü, kırık riski değerlendirme araçları ve klinik kırık riski değerlendirmesi kullanılarak yapılır. Vitamin D ve kalsiyum takviyeleri, osteoporozun önlenmesi ve tedavisinde önemli bir rol oynamaktadır. Alkol tüketiminin azaltılması ve sigara içmenin bırakılması da osteoporozun önlenmesine katkı sağlar. Egzersiz düşme riskini azaltmak için önerilen diğer bir stratejidir.

Osteoporozun etkili yönetimi ve önlenmesi için multidisipliner bir yaklaşım gerekmektedir. Bu yaklaşım, kemik mineral yoğunluğunun izlenmesini, kırık riskinin değerlendirilmesini ve uygun tedavi ve önlemlerin alınmasını içermelidir. Yaşam tarzı değişiklikleri, düzenli egzersiz, dengeli beslenme ve düşme riskini azaltmaya yönelik önlemler osteoporozun etkili yönetiminde kritik bir role sahiptir. Menopoz sonrası kadınlar ve yaşlı yetişkinler, osteoporozun etkilerinden korunmak için düzenli doktor kontrolüne gitmeli ve kemik sağlığını korumak için gerekli önlemleri almalıdır.

**Anahtar Kelimeler:** Osteoporoz, menopoz, kemik kırığı, düşme, kemik mineral yoğunluğu.

## ABSTRACT

Osteoporosis is a systemic and metabolic bone disease characterized by a decrease in bone density and the fragility of bones. Postmenopausal women and elderly adults are among the most affected groups by the effects of osteoporosis, as they are in life stages where the loss of bone density is more pronounced. Osteoporosis causes more than 8.9 million fractures annually worldwide, occurring every three seconds, and affects approximately 200 million women. The primary cause of the disease is secondary estrogen deficiency due to menopause. Diagnosis of osteoporosis is made using bone mineral density (BMD) measurement, fracture risk assessment tools, and clinical fracture risk assessment for evaluating fracture risk and management. Vitamin D and calcium supplements play a significant role in the prevention and treatment of osteoporosis. Reducing alcohol consumption and quitting smoking also contribute to preventing osteoporosis. Exercise is another recommended strategy to reduce the risk of falls.

An effective multidisciplinary approach is necessary for the management and prevention of osteoporosis. This approach should include monitoring bone mineral density, assessing fracture risk, and implementing appropriate treatment and measures. Lifestyle changes, regular exercise, balanced nutrition, and measures to reduce the risk of falls play a critical role in the effective management of osteoporosis. Postmenopausal women and elderly adults should attend regular doctor check-ups and take necessary measures to preserve bone health to protect themselves from the effects of osteoporosis.

**Keywords:** Osteoporosis, menopause, bone fracture, fall, bone mineral density.

## RESPONSIBILITIES OF THE PEDIATRIC NURSE IN TRADITIONAL AND COMPLEMENTARY MEDICINE

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### ABSTRACT

The aim of this study was to determine the roles of nurses working in pediatric clinics on traditional, alternative and complementary medicine. With the increasing interest in complementary and alternative medicine methods, which is a growing trend in health care today, the role of health care professionals in this field is becoming more important. Nurses should understand patients' interest in such treatments, develop effective communication strategies, and consider the interaction of complementary therapies with medical treatment. Especially pediatric nurses should question these methods that directly affect the health status of children and provide information and support to parents. Increasing the knowledge level of nurses and including complementary health practices in communication can improve the quality of health services. This study may be an important step to understand the role of nurses in pediatric clinics in complementary medicine and to provide a more effective healthcare service.

**Key words:** Pediatric nursing, traditional medicine, complementary medicine

## ORTODONTİK TEDAVİ GÖREN BİREYLERDE FARKLI DIŞ FIRÇASI TIPLERİNİN KULLANIMI

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Diş hekimliğinde Çürük ve periodontal hastalıkların ana nedeni, bir mikroorganizma topluluğunun varlığı ve bunun organik mukopolisakkarit matriks içinde dental biyofilm olarak adlandırılan dental plak oluşumudur. Diş sağlığının korunabilmesi için mikroorganizma topluluğunun ağız ortamından uzaklaştırılması gerekmektedir. Diş fırçalama, bireysel plak kontrolünde en yaygın kullanılan mekanik yöntem olmakla beraber, uzun dönem periodontal sağlığın korunmasında da kritik bir faktör olmaktadır. Bu derlemenin amacı, ortodontik tedavi gören bireylerde kullanılan farklı tiplerdeki diş fırçalarının değerlendirilmesidir.

Günümüzde dental plağın daha etkili bir şekilde temizlenebilmesi için çok farklı tipte dizayn edilmiş manuel, elektrikle çalışan ve ultrasonik diş fırçaları kullanılmaktadır. Bu tip fırçalara ilaveten arayüz fırçası ve diş ipi kullanımı da önerilmektedir. Diş fırçalarının temel amacı, tüm yüzeylerden dental plağı güvenli ve etkili bir şekilde uzaklaştırmaktır. Bu nedenle fırça kıllarının esnekliği, sertliği, çapı, dayanıklılığı ve sapının ağırlığı gibi özellikleri fonksiyonel olmalı ve fırça kıllarının uç kısımlarının tasarımı yapılırken hijyen koşulları göz önünde bulundurulmalıdır.

Ortodontik tedavi gören insanlar, diğer bireylere kıyasla oral hijyen yöntemlerini uygulamakta daha fazla zorluk yaşamaktadırlar. Sabit mekanikleri oluşturan bantlar, braketler ve teller gibi ortodontik malzemeler, daha fazla plak birikmesine ve diş eti sağlığının bozulmasına yol açar. Bu apareylerle ilişkilendirilen mikrobiyolojik değişiklikler bulunmaktadır. Sabit apareyle ortodontik tedavi gören hastaların diş eti dokusunda en sık görülen değişiklikler dişeti enflamasyonu, şişme, kanama ve artmış bir sondlama derinliğidir.

**Anahtar Kelimeler:** Diş fırçalama, Ortodontik, Oral Hijyen

## THE USE OF DIFFERENT TYPES OF TOOTHBRUSHES IN INDIVIDUALS UNDERGOING ORTHODONTIC TREATMENT

The main cause of caries and periodontal diseases in dentistry is the presence of a community of microorganisms and its formation within the organic mukopolysaccharide matrix known as dental biofilm or dental plaque. To maintain dental health, it is necessary to remove the community of microorganisms from the oral environment. Tooth brushing is the most commonly used mechanical method for individual plaque control and also plays a critical role in preserving long-term periodontal health. The purpose of this review is to

evaluate different types of toothbrushes used by individuals undergoing orthodontic treatment.

Various types of manual, electric, and ultrasonic toothbrushes have been designed to clean dental plaque more effectively. In addition to these brushes, interdental brushes and dental floss are also recommended. The primary aim of toothbrushes is to safely and effectively remove dental plaque from all surfaces. Therefore, features such as the flexibility, hardness, diameter, durability, and weight of the brush handle should be functional, and hygiene conditions should be considered when designing the bristle tips.

Individuals undergoing orthodontic treatment face more challenges in practicing oral hygiene methods compared to others. Orthodontic appliances such as bands, brackets, and wires contribute to increased plaque accumulation and compromised gingival health. Microbiological changes are associated with these appliances. The most common changes observed in the gingival tissue of patients undergoing orthodontic treatment with fixed appliances include gingival inflammation, swelling, bleeding, and increased probing depth.

**Key Words:** Tooth Brushing, Orthodontics, Oral Hygiene

## THE USE OF PLASMA ACTUATORS TO INCREASE THE AERODYNAMIC PERFORMANCE OF AN AIRCRAFT

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### ABSTRACT

In today's aviation sector, the predominant concern revolves around the substantial cost attributed to fuel consumption, prompting the adoption of diverse methodologies to curtail expenses. Enhancing engine efficiency, incorporating aerodynamic advancements, and minimizing structural weight stand out as primary strategies.

Innovative approaches, exemplified by advanced aircraft designs like blended wing bodies, more proficient thrust technologies, and a spectrum of active or passive flow control techniques, are harnessed to elevate the aerodynamic performance of aircraft. Passive flow control achieves performance enhancements without reliance on external energy, while active flow control manipulates the flow around the object utilizing energy within the system, all without altering the fundamental body structure. This includes an array of methods, such as deforming surfaces, zero net mass flux actuators, non-zero net mass flux actuators, moving object/surface actuators, as well as flexible and displacement blades. Notably, recent strides have led to the amalgamation of both active and passive control methods, resulting in innovative hybrid control strategies.

This paper delves into an extensive examination of plasma actuators, classified as a form of active flow control. The scope of the study encompasses the selection of plasma type, airfoil type, design, and production of an experimental wing, integration of plasma onto the wing, experimental investigations to pinpoint flow separation points, formulation of the experimental design, and comprehensive analysis of initial outcomes. The findings from these studies will not only guide future aerodynamic performance assessments and variations in coefficients resulting from wind tunnel tests (CL, CD, and L/D) but also enable the computational validation of the experimental data obtained from wind tunnel tests and the creation of an MHD (Magneto hydrodynamics) simulation environment.

**Keywords:** Plasma, plasma aerodynamics, wind tunnel tests, surface dielectric barrier discharge, surface oil visulation, L/D change

## **DESIGN AND IMPLEMENTATION OF CONTROLLER INTERFACE FOR ROTARY WING UAVS**

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### **ABSTRACT**

A UAV is an aircraft without a pilot and cabin crew. In another definition, a UAV is an aerial vehicle that does not carry a cabin crew, can operate autonomously, can change its dimensions and can be reused. UAVs can be controlled by autonomous control systems or remotely by a pilot. In this proposal, the interface design and real-time implementation of a controller kit to maximize the autonomous performance of a rotary wing UAV with four wings will be discussed. The controller and interface design code will be written in MATLAB environment and simulations will be performed in Simulink environment. After the user enters the aircraft type data into the programme interface, SPSA (Simultaneous Perturbation Random Approximation) will be used to estimate the arm length or wing metamorphosis rate according to the aircraft type. In addition, PID (proportional integral derivative) coefficients will also be estimated by SPSA and applied to the controller. Thus, autonomous flight performance for a four-wing rotary wing UAV will be maximized through a controller kit.

**Keywords:** PID, UAV, SPSA, Quadrotor, Hexarotor, Octorotor.

## CİLT İÇİN DOĞAL İÇERİĞİ ARTTIRILMIŞ ONARICI KREMİN VİSKOZİTESİNİN İNCELENMESİ

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### ÖZET

Kozmetik sanayide kullanılan sentetik kimyasalların azaltılması son zamanlarda önemi artarak devam etmektedir. Sentetik kimyasalların cilt yüzeyine yaptığı toksik yan etkilerinin ve bu etkiler ölçülmesi için dermatolojik testler yapılması maliyetinin azaltılmasına destek olacağı düşünülmüştür. Var olan olumsuzları gidermek ve sağlıklı güvenilir ürünle tüketicileri memnun etmek suretiyle sektörün kalitesinin artırılması suretiyle ekonomiye katkı sağlayacaktır. Bu hedefe uygun doğal içerikli nemlendiren, onarıcı ve rahatlatan yüz kremi geliştirilmesi amaçlanmaktadır. Doğal krem için doğal kimyasalların yüzde oranı diğer doğal ürünlere göre de artırılarak krem elde edilmiştir. Doğal krem karışımının içeriğinde viskozite ajanı Xanthan gum, cilt yenileyici B5 vitamini, cildi esnetmesi nemlendirici Hyaluranik asit ve nemlendirici Gliserin , beslenmesi için Üzüm çekirdeği yağı , Sari kantaron yağı , bakteri önleyici ve doğal emülgatör ilave edilmiştir. Biyobazlı kimyasalların farklı oranlarıyla elde edilen viskozite değerleri deneysel tasarım metodu merkezi bileşik tasarım metodu yardımıyla doğal kremin viskozite değişimleri incelenmiştir. Viskozite değeri ürün akışkanlığının kremdeki etkisinin gösteren cilde sürümü , yayıcılığı ve kalıcılığının en önemli parametrelerin biridir. Elde edilen doğal kremler kullanıcıların istediği akışkanlık değerinin belirlenmesi ve kontrol edilebilmesi sağlanacaktır .

Bu çalışma, doğal içerikli kozmetik ürünlerin geliştirilmesine yönelik yapılan araştırmalar için önemli katkı sağlaması öngörülmektedir. Yeni bir ürünün geliştirilmesiyle beraber, bu alanda yapılan araştırmalar için deneysel tasarım metodunun öneminin kavranmasında ayrıca hedeflenmektedir. Elde edilen sonuçlar incelenerek, doğal bileşime bağlı olarak değişen sonuçlara uygun matematiksel model geliştirilmiştir. Matematiksel model yardımıyla ilgili değişkenler ve sonuçlar arasında optimizasyonların gerçekleştirilmesi mümkün olacaktır. Doğal krem çalışmalarının devamında diğer önemli sonuçların doğal bileşimle değişimi incelenecektir.

Anahtar Kelimeler—Kozmetik; Doğal İçerikli; Nemlendiren; Rahatlatan; Cilt Kremi



## **Investigation of the Viscosity of a Skin Repair Cream with Enhanced Natural Content**

### **ABSTRACT**

The reduction of synthetic chemicals in the cosmetic industry has been increasingly crucial. It is believed that minimizing the toxic side effects of synthetic chemicals on the skin and reducing the cost of dermatological tests for measuring these effects will be supportive. Overcoming existing drawbacks and boosting the industry's quality by developing a moisturizing, repairing, and soothing facial cream with natural ingredients will contribute to the economy by satisfying consumers with a healthy and reliable product. To achieve this goal, the percentage of natural chemicals in the cream has been increased compared to other natural products. The natural cream mixture includes viscosity agent Xanthan gum, skin-renewing B5 vitamin, skin-firming moisturizer Hyaluronic acid, moisturizer Glycerin, nourishing Grape seed oil, Hypericum Perforatum L. oil for skin health, and a bacteria-preventing natural emulsifier. Viscosity values obtained from different ratios of biobased chemicals were examined using the experimental design method, specifically the central composite design method, to analyze the viscosity changes in the natural cream. Viscosity is a critical parameter, indicating the cream's impact on skin application, spreadability, and longevity. The obtained natural creams will facilitate determining and controlling the desired fluidity value according to user preferences.

This study is expected to make a significant contribution to research on the development of natural cosmetic products. Alongside the development of a new product, the aim is to highlight the importance of the experimental design method in understanding research in this field. Examining the results, a mathematical model based on the varying outcomes depending on the natural composition has been developed. With the help of the mathematical model, optimizations between variables and results can be achieved. Further research on natural creams will explore how other important outcomes change with variations in natural composition.

**Keywords**—Cosmetic; Natural Ingredients; Moisturizing; Comforting ; Skin Cream

## 5G TEKNOLOJİSİ, ÜRÜN YAŞAM DÖNGÜSÜ YÖNETİMİ ENTEGRASYONU, HIZLI GÖRÜNTÜ İŞLEME VE VERİ PAYLAŞIMI

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### ÖZET

Endüstri 4.0 çağında, teknolojik yenilikler iş dünyasını dönüştürmekte ve şirketlerin rekabet avantajı elde etmelerini sağlamaktadır. Bu makalede, 5G teknolojisi, Ürün Yaşam Döngüsü Yönetimi (PLM) entegrasyonu, hızlı görüntü işleme ve veri paylaşımı gibi önemli konular ele alınacak ve bu teknolojilerin iş dünyasına etkileri incelenecektir. 5G Teknolojisi ve İş Dünyasına Etkileri, 5G, daha hızlı veri iletimi, düşük gecikme süresi ve daha yüksek bağlantı yoğunluğu gibi özellikler sunarak iş dünyasında çeşitli fırsatlar sunmaktadır. Bu teknoloji, akıllı fabrikaların ve nesnelerin internetinin (IoT) daha etkin bir şekilde kullanılmasına olanak tanırken, uzaktan çalışma ve uzaktan erişim gibi uygulamaları da geliştirir. PLM Entegrasyonunun Rolü, PLM entegrasyonu, ürün geliştirme süreçlerini optimize etmek ve yönetmek için önemli bir araçtır. 5G ile birleştirildiğinde, farklı departmanlar arasında hızlı ve etkili bir bilgi akışı sağlar. Bu da ürün yaşam döngüsünün her aşamasında daha verimli süreçler ve daha yüksek kaliteli ürünlerin ortaya çıkmasını sağlar. Hızlı Görüntü İşleme ve Endüstriyel Uygulamaları, Hızlı görüntü işleme teknolojisi, endüstriyel uygulamalarda önemli bir rol oynamaktadır. Üretim hatlarında kalite kontrolü, nesne tanıma ve otomatik montaj gibi birçok süreçte kullanılan bu teknoloji, işletmelerin verimliliğini artırırken hata oranlarını azaltır. Veri Paylaşımının Önemi ve Güvenlik İhtiyacı, Veri paylaşımı, farklı cihazlar ve sistemler arasında bilgi akışını sağlayarak iş süreçlerini optimize eder. Ancak, bu verilerin güvenliği ve gizliliği büyük önem taşır. Endüstriyel sistemlerde veri güvenliği sağlanmadığı takdirde, ciddi risklerle karşılaşılabilir. Sanal gerçeklik (VR) teknolojisi, son yıllarda hızla gelişerek birçok sektörde önemli bir yer edinmiştir. VR gözlükleri, kullanıcıları farklı bir gerçeklik deneyimine götürerek eğitimden eğlenceye, sağlık hizmetlerinden iş süreçlerine kadar geniş bir uygulama yelpazesine sahiptir. Bu makalede, VR gözlükleri ile hızlı veri paylaşımının iş dünyasındaki potansiyeli ve getirdiği avantajlar ele alınacaktır. 5G teknolojisi, PLM entegrasyonu, hızlı görüntü işleme ve veri paylaşımı gibi yenilikler, iş dünyasında önemli değişimlere yol açmaktadır. Bu teknolojilerin etkili bir şekilde kullanılması, şirketlerin rekabet avantajı elde etmelerini ve daha verimli iş süreçleri oluşturmalarını sağlar. Ancak, bu teknolojilerin güvenliği ve gizliliği de göz önünde bulundurulmalıdır. Endüstri 4.0 çağında başarılı olmak isteyen şirketler, bu teknolojileri dikkatli bir şekilde değerlendirmeli ve uygun güvenlik önlemlerini almalıdır.

**Anahtar Kelime:** VR gözlük, PLM Entegrasyonu, IoT Teknolojisi, Endüstriyel Uygulama, Endüstri 4.0

## 5G TECHNOLOGY, PRODUCT LIFECYCLE MANAGEMENT INTEGRATION, FAST IMAGE PROCESSING AND DATA SHARING

### Abstract

In the era of Industry 4.0, technological innovations are transforming the business world and enabling companies to gain competitive advantages. This article examines important topics such as 5G technology, Product Lifecycle Management (PLM) integration, rapid image processing, and data sharing, and their impacts on the business world. 5G Technology and Its Business Implications, 5G technology offers various opportunities in the business world with features such as faster data transmission, low latency, and higher connectivity density. It facilitates the more effective use of smart factories and the Internet of Things (IoT), as well as the development of applications like remote work and access. The Role of PLM Integration, PLM integration serves as a crucial tool to optimize and manage product development processes. When combined with 5G, it enables fast and efficient information flow between different departments, leading to more efficient processes and higher quality products throughout the product lifecycle. Rapid Image Processing and Industrial Applications, Rapid image processing technology plays a significant role in industrial applications, enhancing productivity and reducing error rates in processes such as quality control, object recognition, and automated assembly. The Importance of Data Sharing and Security Needs, Data sharing optimizes business processes by facilitating information flow between different devices and systems. However, ensuring the security and privacy of this data is crucial. Without adequate data security measures, industrial systems face significant risks. VR Headsets and Fast Data Sharing in the Business World, Virtual reality (VR) technology has rapidly evolved and found applications across various sectors. VR headsets offer a wide range of applications, from education to entertainment, healthcare to business processes. This article explores the potential and advantages of fast data sharing with VR headsets in the business world. In conclusion, innovations such as 5G technology, PLM integration, rapid image processing, and data sharing are driving significant changes in the business world. Effective utilization of these technologies enables companies to gain competitive advantages and establish more efficient business processes. However, it is essential for companies to carefully evaluate and implement appropriate security measures to ensure the safety and confidentiality of data.

**Keyword:** VR glasses, PLM Integration, IoT Technology, Industrial Application, Industry 4.0

## BİR DEVLET LİSESİNDE ÖĞRENİM GÖREN ADÖLESANLARIN SAĞLIKLI YAŞAM TARZI İNANÇLARI: TANIMLAYICI BİR ÇALIŞMA

### HEALTHY LIFESTYLE BELIEFS OF ADOLESCENTS IN A PUBLIC HIGH SCHOOL: A DESCRIPTIVE STUDY

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#### ÖZET

**Amaç:** Bu araştırmanın amacı adölesanların sağlıklı yaşam tarzlarına ilişkin inançlarını belirlemek ve inançlarının bazı sosyo-demografik değişkenlerle ilişkisini incelemek amacıyla yapılmıştır.

**Materyal ve Metot:** Tanımlayıcı-ilişkisel türdeki çalışma için Ankara kent merkezinde bir lisede öğrenim gören 740 öğrenci araştırma kapsamına alınmıştır. Araştırmada veriler, araştırmacılar tarafından oluşturulan anket formu ve Adölesanlar için Sağlıklı Yaşam Tarzı İnanç Ölçeği ile sınıf ortamında toplanmıştır. Verilerin değerlendirilmesinde bağımsız iki grubun karşılaştırmasında t-testi (Independent sample t-testi), ikiden fazla grubun karşılaştırmasında tek yönlü varyans analizi (ANOVA) kullanılmış ve varyansların homojenlik varsayımının sağlanmadığı durumlarda Welch istatistiği kullanılmıştır. Çoklu karşılaştırma testi olarak Tamhane ve Bonferroni testleri kullanılmıştır. Tüm analizlerde, istatistiksel anlamlılık değeri olarak  $p < 0,05$  kabul edilmiştir.

**Bulgular:** Öğrencilerin yaş ortalaması  $15,76 \pm 1,17$ 'dir. Adölesanlar için Sağlıklı Yaşam Tarzı İnanç Ölçeğinden aldıkları puan  $56,47 \pm 11,93$ 'tür. Öğrencilerin cinsiyeti, ekonomik durumu, fiziksel aktivite yapma durumu, fiziksel aktivite yapma sıklığı, haftada yapılan fiziksel aktivite süresi, günde tüketilen öğün sayısı, öğün atlama durumu, günlük beslenme şekli, haftada tüketilen fast food sıklığı, uyku süresi ve uyku problemi durumunun istatistiki açıdan anlamlı farklılıkların olduğu tespit edilmiştir ( $p < 0,05$ ). Cinsiyet ve fiziksel aktivite yapma durumu değişkenleri ölçek puanını olumlu olarak etkilerken, ekonomik durum, fiziksel aktivite yapma sıklığı, haftada yapılan fiziksel aktivite süresi, günde tüketilen öğün sayısı, öğün atlama durumu, günlük beslenme şekli, haftada tüketilen fast food sıklığı, uyku süresi ve uyku problemi değişkenleri ise ölçek puanını olumsuz etkilemektedir.

**Sonuç:** Bu çalışmada adölesanların sağlıklı yaşam tarzına ilişkin inançlarının orta düzeyin biraz üzerinde olduğu saptanmıştır. Öğrencilerin cinsiyeti, ekonomik durumu, fiziksel aktivite yapma durumu, fiziksel aktivite yapma sıklığı, günde tüketilen öğün sayısı, öğün atlama durumu, günlük beslenme şekli, haftada tüketilen fast food sıklığı, uyku süresi ve uyku



probleminin varlığı gibi sosyo demografik özelliklerinin sağlıklı yaşam tarzı inançlarını etkilediği bulunmuştur.

**Anahtar Kelimeler:** Adölesanlar, sağlıklı yaşam tarzı, inanç

## SAĞLIK OKURYAZARLIĞININ ADÖLESANLARIN SAĞLIKLI YAŞAM TARZI İNANÇLARINI GELİŞTİRİCİ ETKİSİ: OKUL SAĞLIĞI HEMŞİRELİĞİ BAKIŞ AÇISIYLA

THE IMPROVING EFFECT OF HEALTH LITERACY ON ADOLESCENTS' HEALTHY LIFESTYLE BELIEFS: FROM THE PERSPECTIVE OF SCHOOL HEALTH NURSING

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### ÖZET

Sağlıklı yaşam tarzı davranışlarının oluşmasında çocukluk ve adölesan dönemleri önemli bir yere sahiptir. Çocukluk ve adölesan dönemde temeli atılan olumlu sağlık davranışlarının yetişkinlikte de devam ettiği bilinmektedir. Adölesanların çoğu bu dönemde sağlıklı yaşam tarzı davranışları ile ilgili kararları alırken bağımsızdır. Ancak adölesanların bu kararları alırken fiziksel, ruhsal, sosyal, çevresel ve ailesel faktörlerden etkilenmesi olasıdır. Bu faktörlerin yanı sıra inanç, motivasyon gibi bireysel faktörler de adölesanların sağlıklı yaşam tarzı davranış seçimlerini yakından etkilemektedir. Özellikle adölesanların sağlıklı yaşam tarzı davranışlarına olan inançları olumlu-olumsuz sağlık davranışları ile yakından ilişkili olup, olumlu inançlara sahip olan adölesanların sağlıklı tutum ve yaşam tarzı seçimleri yaptığı bilinmektedir. Sağlıklı yaşam tarzı davranışlarını sürdürmeye ilişkin olumsuz inançlara sahip olan adölesanlarda ise sağlıksız seçimler ve davranışlar ortaya çıkabilmektedir. Sağlıklı yaşam tarzını benimsemeye sağlık okuryazarlığının belirleyici olduğu, sağlık okuryazarlık becerilerinin adölesanların sağlıklı yaşam tarzı davranışlarını geliştirdiği ve sağlık bilgilerini artırdığı bilinmektedir. Zamanlarının büyük bir kısmını okulda geçiren adölesanların sağlık okuryazarlık düzeylerini artırma ve olumlu sağlık davranışları kazanmalarında eğitim ortamlarının önemi büyüktür. Bu noktada adölesanlara okul çağı döneminde sağlık okuryazarlığı becerilerinin kazandırılmasında okul sağlığı hemşirelerine önemli sorumluluklar düşmektedir. Okul sağlığı hemşirelerinin adölesanların sağlık okuryazarlık düzeylerinin belirlenmesi, sağlık okuryazarlığını artırmaya yönelik planlamalar yapılması ve doğru bilgiye ulaşmaları konusunda rehberlik yapmaları sorumlulukları arasında yer almaktadır. Böylece hemşireler adölesanların sağlık okuryazarlık düzeylerini artırarak, bilinçli, sağlık okuryazarı olan bir



neslin yetişmesine katkı sağlar. Bu derlemede okul sağlığı hemşireliği özelinde adölesanların sağlıklı yaşam tarzı inançları ve sağlık okuryazarlığının etkisini tartışmak amaçlanmıştır.

**Anahtar Kelimeler:** Sağlık okuryazarlığı, sağlıklı yaşam tarzı inançları, adölesan, hemşirelik

## ADÖLESANLARIN FİZİKSEL AKTİVİTE DÜZEYİ VE FİZİKSEL AKTİVİTE İÇİN ÖZ YETERLİK, PERSONEL VE EBEVEYN ETKİLERİNİN BELİRLEYİCİLERİ: KESİTSEL VE İLİŞKİ ARAYICI BİR ARAŞTIRMA

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### ÖZET

#### Amaç

Bu araştırma ortaokul öğrencilerinin fiziksel aktivite düzeylerini, fiziksel aktivitelerde algıladıkları öz-yeterliklerini, personel ve ebeveyn etkisini belirlemek ve bu parametrelerle ilişkili faktörleri tahmin etmek amacıyla yapılmıştır.

#### Gereç ve Yöntem

Araştırma, Türkiye'nin bir şehrindeki üç ortaokulda öğrenim gören öğrenciler ile kesitsel ve ilişki arayıcı tasarımla yürütülmüştür. Örneklem 1648 katılımcıdan oluşmaktadır. Araştırmanın verileri tanımlayıcı bilgi formu, Çocuklara Yönelik Türkiye Fiziksel Aktivite Anketi (PAQ-C) ve Okul Sonrası Fiziksel Aktivite için Çocuklarda Öz-Yeterlik, Personel ve Ebeveyn Etkisi Anketi kullanılarak toplanmıştır.

#### Bulgular

Bu çalışmada adölesanların orta düzey ( $2.98 \pm 0.86$ ) fiziksel aktiviteye sahip olduğu belirlenmiştir. Erkek, düşük beden kütle indeksine sahip, 6. ve 7. Sınıf, yüksek gelire sahip, günlük ekran süresi 2 saatten az olanlarda fiziksel aktivite düzeyinin daha yüksek olduğu saptanmıştır. Ayrıca fiziksel aktivite öz yeterlik düzeyi ile personel ve ebeveyn etkisi fazla olan adölesanlarda fiziksel aktivite düzeyi daha yüksektir ( $p < 0,05$ ).

#### Sonuç

Bu çalışmanın sonuçları adölesanların fiziksel aktivite düzeyinin orta düzeyde olduğunu göstermiştir. Fiziksel aktivite, fiziksel aktivite için öz yeterlik, personel ve ebeveyn etkisi ve çeşitli sosyodemografik özellikle ilişkilendirilmiştir.

**Anahtar Kelimeler:** adölesan, fiziksel aktivite, fiziksel öz yeterlik, ebeveyn etkisi, okul personeli



## HEMŞİRELERİN TELE-SAĞLIK KULLANIMINA YÖNELİK TUTUM ÖLÇEĞİ'NİN GELİŞTİRİLMESİ VE PSİKOMETRİK DOĞRULANMASI

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### ÖZET

#### Amaç

Bu çalışmanın amacı Hemşirelerin Tele-sağlık Kullanımına Yönelik Tutum Ölçeği'ni geliştirmek ve psikometrik özelliklerini değerlendirmektir.

#### Gereç ve Yöntem

Ölçeğin geliştirilmesi sürecinde öncelikle literatür ve uzman görüşleri doğrultusunda ölçek taslağının maddeleri oluşturuldu. Taslak ölçek Türkiye'deki bir hastanenin ayaktan ve yataklı birimlerinde çalışan hemşirelere uygulandı. Öz bildirim şeklinde yanıtlanan ölçek verisine kapsam geçerliği, yapı geçerliliği ve güvenilirlik analizleri uygulandı. Çalışmaya katılan toplam 630 hemşireden toplanan veriler rastgele olarak ikiye bölündü. Bu veri grubundan birine (330 kişi) açıklayıcı faktör analizi, diğer veri grubuna (300 kişi) doğrulayıcı faktör analizi yapıldı.

#### Bulgular

Analizler sonucunda, 19 maddeli, üç faktörlü (Memnuniyet, Reddetme, Geliştirme) bir ölçek elde edildi. Faktör yüklerinin 0,52-0,88 arasında değiştiği belirlendi. Ölçek, toplam varyansın %64,4'ünü açıkladı. Ölçek ve alt faktörlerinin tamamında Cronbach  $\alpha$  değeri 0,85'in üzerindeydi. Ölçeğin zamana karşı duyarlılığını test etmek için test-tekrar test güvenilirliği analizi yapıldı. Ölçek test-tekrar test korelasyon katsayısı 0,77 bulundu.

#### Sonuç

Geliştirilen ölçeğin, hemşirelerin tele-sağlık kullanımına yönelik tutumlarını değerlendirmek için geçerli ve güvenilir bir araç olduğu belirlenmiştir.

**Anahtar Kelimeler:** telesaglık, hemşirelik, tutum, geçerlik ve güvenilirlik, ölçek geliştirme

**ARTERIA PANCREATICA INFERIOR ACCESSORIA VE ATIPIK ARTERIA  
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## **GİRİŞ**

Klasik anatomik tanımlamaya göre, a. gastroduodenalis'ten çıkan a. pancreaticoduodenalis superior anterior ve a. pancreaticoduodenalis superior posterior ile a. mesenterica superior (SMA)'dan çıkan a. pancreaticoduodenalis inferior posterior pankreas başının kanlanması sağlar. Arteria colica sinistra (LCA), a. sigmoidea (SA), aa. rectales aorta abdominalis'ten çıkan a. mesenterica inferior (IMA)'un üç ana dalıdır. Arteria mesenterica inferior'un ilk dalı olan a. colica sinistra'nın tipik olarak çıkan (AB) ve inen (DB) iki dalı bulunmaktadır. Çıkan dalı, colon transversum'un distal üçte birlik kısmına ve proksimal colon descendens'e, inen dalı ise distal colon descendens'e kan akımı sağlar. Vasküler anatomideki varyasyonlar, ameliyat sırasında majör kanama ve iskemi veya anastomoz yetersizliği gibi postoperatif komplikasyonlar açısından önemli bir risk faktörüne yol açmakla kalmaz, aynı zamanda damar tıkanıklığıyla ilişkili semptomlar üzerinde de etkiye sahip olabilir (3). Bu vaka sunumu, a. pancreatica inferior accesoria (AIPA) ve anormal bir ortak gövdeden (CT) kaynaklanan anormal LCA'yı (abLCA) tanımlamaktadır.

## **OLGU**

Rutin abdominal diseksiyon sırasında pankreas ve kolonun arteriyel beslenmesinde dikkate değer iki değişiklik gözlemlendi. Ege Üniversitesi Tıp Fakültesi Anatomi Anabilim Dalı

envanterine kayıtlı, %10 formalinle fikse edilmiş 50-55 yaşlarındaki erkek kadavrada iki varyasyon tespit edildi. Etik onay, Ege Üniversitesi Tıbbi Araştırmalar Etik Kurulu'ndan alındı (onay numarası 23-9T/5, tarih 07 Eylül 2023). Ölüm nedeni, aile öyküsü ve klinik kayıtlar mevcut değildi. Geçmişte geçirilmiş cerrahi müdahalelere veya karın bölgesini etkileyen patolojilere dair bir belirti yoktu. SMA'nın dallarının kökeni, seyri ve bitişi kapsamlı bir şekilde incelendi. SMA'dan köken alan ve CT görevi gören anormal bir dal olduğu fark edildi. CT çapını değerlendirmek için metrik ölçüm kullandı ve çap 4,1 mm olarak ölçüldü. CT kısa bir mesafe boyunca devam ettikten sonra doğrudan pankreas başının arkasına giden AIPA'yı verdiği izlendi. Daha sonra CT, abLCA dalına ayrılıp sonlandı. abLCA, v. mesenterica inferior'un (IMV) arkasından aşağıya doğru ilerledi. IMV'nin altından kıvrılarak önünden geçip AB ve DB dallarına ayrıldı. Üst tarafa doğru ilerleyen AB, a. colica media (MCA) ile anastomoz yapıp colon transversum'un distal üçte birine dallar verdi. Dışa ve aşağıya doğru ilerleyen DB ise colon descendens'e dallar verdi. Aa. jejunales ve aa. ileales beklendiği gibi SMA'dan çıkmakta olup, seyrinde herhangi bir anormallik izlenmedi.

## SONUÇ

Bu vaka raporunda, SMA'dan dallanan ve şu iki dalı sağlayan anormal bir CT'yi tanımladık: AIPA ve abLCA. Pankreas ve kolonun atipik arteriyel paterni hakkındaki bu bilginin, klinisyenler için cerrahi prosedürlerin uygulanabilirliğini belirlemede dikkate değer olduğunu düşünüyoruz. Üstelik bu olguda bildirilen varyasyonlar, abdominal cerrahi öncesinde hassas vasküler görüntüleme elde etmenin ne kadar önemli olduğunu vurgulamaktadır.

**Anahtar Kelimeler:** anatomi, kadavra, arteria colica sinistra, pankreas, arteria mesenterica superior

## INVESTIGATION OF THE CHARACTERIZATION OF C60R STEEL AFTER QUENCHING AND TEMPERING HEAT TREATMENT

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### **ABSTRACT:**

In this study, the changing mechanical properties, tensile strength, hardness values, fracture properties and material microstructures of C60R steel after heat treatment were examined. C60R is a medium carbon low alloy steel that is a widely preferred material in the automotive industry due to its machinability and favorable mechanical properties. In the study, heat treatments were applied to C60R steel by changing the quenching and tempering temperature parameters, and then the change in mechanical properties was observed. First of all, the material shaped by the hot forging method was subjected to quenching and annealing at different temperatures. Quenching process was applied to the part shaped by hot forging. After quenching was applied to four samples, the remaining 3 samples were tempered at different temperatures. The changing mechanical properties of each sample as a result of tempering at different temperatures were examined. Accordingly, as the annealing temperatures increased, properties such as hardness values, ductility and brittleness of the part subjected to quenching heat treatment were investigated and a contribution to the literature was made.

**Keywords:** C60R steel; Heat Treatment; Quenching; Tempering; Mechanical properties

## KEDI VE KÖPEKLERDE PANKREAS YANGISINDA SAĞALTIM SEÇENEKLERİ

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### ÖZET

Kedi ve köpeklerde akut pankreas yangısı tripsin ve diğer pankreas proteazlarının etkinleşmesinden kaynaklanır. Kronik pankreas yangısı ise tekrar eden akut pankreas yangısından kaynaklanabilir. Kronik pankreas yangısı akut pankreas yangısına göre daha yaygın şekilde gelişmektedir. Hastalık ilerleyici karakterdedir. Köpeklerde pankreas yangısına neden olan risk faktörleri diyet faktörleri, ilaçlar/toksinler, hormon bozuklukları, kalıtsal/ırk predispozisyonları, lipit bozuklukları, babesiozis, köpeklerde monositik erlişiyozis, şistozomiyazis (*Heterobilharzia americana*), bal arısı zehirlenmesi, organik asidemiler, immünglobulin G4'le ilgili hastalık, yaşın ilerlemesi, kilo artışı/obezite, kısırlaştırma, önceden cerrahi bir operasyon geçirilmesi, karaciğer yangısı/safra kanalı yangısını kapsar. Pankreas yangısı kan dolaşımında bulunan bakterilerin pankreasa geçmesiyle de meydana gelebilir. Sistemik enfeksiyonun sonucu olarak pankreas yangısına neden olan mikroorganizmalar *Leptospira* spp., *Toxoplasma gondii*, mantarlar örneğin *Cryptococcus neoformans*'dır. Kedilerde *Eurytrema procyonis*, *Amphimerus pseudofelineus* da pankreas yangısına neden olabilir. Bu bildiri kapsamında kedi ve köpeklerde pankreas yangısına neden olan etkenler sıralandı. Son yıllara ait bilimsel kaynaklar taranıp, irdelenerek hangi durumlarda hangi ilaçların etkili olduğuna yönelik bilgiler geniş şekilde verildi.

**Anahtar kelimeler:** Kedi, köpek, pankreas yangısı, sağaltım.

## TREATMENT CHOICES IN PANCREATITIS OF CATS AND DOGS

### ABSTRACT

In cats and dogs, acute pancreatitis are caused by activation of trypsin and other pancreas proteases. Chronic pancreatitis may result from recurrent acute pancreatitis. Chronic pancreatitis occur more frequently than acute pancreatitis. Disease is progressive character. Risk factors causing pancreatitis in dogs include diet factors, drugs/toxins, hormonal disorders, congenital/breed predispositions, lipid disorders, babesiosis, monocytic ehrlichiosis, schistosomiasis (*Heterobilharzia americana*), honey bee envenomation, organic acidemias, immunoglobulin G4 related disease, increasing age, increase in body weight/obesity, neutering, exposing to surgical operation before, hepatitis/cholangitis. Pancreatitis may also occur by that bacteria in blood circulation pass to pancreas. As a result of systemic infection, *Leptospira* spp., *Toxoplasma gondii* as microorganisms and *Cryptococcus neoformans* as fungi cause pancreatitis. *Eurytrema procyonis*, *Amphimerus pseudofelineus* can cause pancreatitis in cats. In the context of this report, the agents causing pancreatitis are compiled. Comprehensive knowledge was given for which drugs are effective in which conditions by widely searching recent scientific sources.

**Keywords:** Cat, dog, pancreatitis, treatment.

## KEDİLERDE KALP KASI VE ENDOKARDİYUMUN YANGISINDA SAĞALTIM SEÇENEKLERİ

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### ÖZET

Kedilerde enfeksiyöz endokardiyum yangısı çeşitli patojen ve fırsatçı patojenler nedeniyle kalp kapağı ve endotelin lezyonlarıyla birlikte endokardiyumun vejetatif çoğalma biçiminde ülserli yangısıdır. Başlıca mitral ve aorta kapakları ve daha az olarak triküspit kapaklar etkilenir. Kedilerde enfektif endokardiyum yangısı gelişmesinde predispoze faktörler doğuştan kapak hastalıkları, ven içi katater uygulama, bağışıklığın baskılanması ve virüent mikroorganizmalardır. Kedilerde enfeksiyöz endokarditisin hemolitik *Escherichia coli*, *Staphylococcus aureus*, *Streptococcus sp.*, *Proteus mirabilis*, *Bartonella henselae*, *Salmonella typhimurium*, *Bartonella spp.*, *Hepatozoon felis* ve *Hepatozoon silvestris* gibi etkenlerle geliştiği bildirilmiştir. *Bartonella* türleri arthropotlarla bulaşan, kan hücrelerine bağlanma eğilimi gösteren, evcil hayvanlar ve insanlar için patojen mikroorganizmalardır. *Bartonella* türleri kalp kapaklarına bağlanma eğilimi gösterir ve evcil hayvanlarda endokardiyum yangısına neden olur. Endokardiyum yangısı gelişen çoğu kedide klinik bulgular solunum güçlüğü ve damar içi pıhtı şekillenmesinden dolayı topallık ve yarı felçtir. Bu sunum kapsamında kedilerde yaşamı tehdit eden hastalıklardan biri olan kalp kası ve endokardiyumun yangısına neden olan başlıca etkenler sıralandı. Son yıllara ait bilimsel kaynaklar geniş şekilde irdelenerek sağaltımda en çok kullanılan ilaçlar ve ilaç kombinasyonlarına yönelik olarak sağaltım seçenekleri hakkında geniş şekilde bilgiler verildi.

**Anahtar Kelimeler:** Kalp kası, endokardiyum, yangı, kedi, sağaltım.

## TREATMENT CHOICES IN MYOCARDITIS AND ENDOCARDITIS IN CATS

### ABSTRACT

Infective endocarditis in cats is ulcerative inflammation in the shape of vegetative growth of endocardium together heart valves and endothelial lesions due to various pathogens and opportunistic pathogens. Mainly mitral and aortic valves and rare tricuspid valves are affected. Predisposition factors in occurrence of infective endocarditis in cats are congenital valve disorders, intravenous catheterization, immunosuppression, and virulent microorganisms. Infective endocarditis in cats is reported to occur due to the agents such as hemolytic *Escherichia coli*, *Staphylococcus aureus*, *Streptococcus* sp., *Proteus mirabilis*, *Bartonella henselae*, *Salmonella typhimurium*, *Bartonella* spp., *Hepatozoon felis* and *Hepatozoon silvestris*. *Bartonella* spp. is a pathogen organism in domestic animals and humans, transmitted by arthropod, having affinity to blood cells. *Bartonella* spp. have affinity to heart valves and causes endocarditis in domestic animals. Clinical signs in the most cats with endocarditis are dyspnea, and paralysis and lameness due to thrombosis. In this report context, mainly agents causing myocarditis and endocarditis, a life threatening disease in cats, are compiled. Comprehensive knowledge was given about treatment choices for the most used drugs and drug combinations in the treatment by widely searching recent scientific sources.

**Keywords:** Myocardium, endocardium, inflammation, cat, treatment.



## EXAMINATION OF DOMESTIC VIOLENCE AND AFFECTING FACTORS DURING PREGNANCY

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### ABSTRACT

**Purpose:** The research was planned to determine the frequency of domestic violence during pregnancy and to examine the factors affecting violence.

**Material method:** This study is a descriptive and cross-sectional research. The sample of the study consisted of 350 pregnant women who applied to the antenatal outpatient clinic at a State Hospital in Çanakkale between August-December 2023. Data were collected using the face-to-face interview technique with a survey form developed by the researcher. Official permission was obtained from the ethics committee and the relevant institution to conduct the research.<sup>1</sup>

**Results:** This study, 56% of the pregnant women is detected as housewife, 41.4% is university graduates, and average of age is  $29.04 \pm 6.08$ . The rate of women who experienced domestic violence during pregnancy was 14.9% (52 women), and the rate of women who experienced violence before pregnancy was 4.5% (12 women). Types of violence that women are exposed to; 14.6% was emotional, 3.7% was economic, 2% was physical, and 0.9% was sexual violence. As related factors affecting violence during pregnancy, it was found to be; unwanted pregnancy ( $p=0.48$ ), having a psychological disorder ( $p=0.020$ ), not receiving social support from one's own or one's spouse's family ( $p=0.003$ ), marriage duration between 2-5 years ( $p=0.010$ ), using medication during pregnancy ( $p=0.037$ ).

**Conclusion:** Domestic violence continues as a women's health problem during pregnancy. Identifying risky groups during antenatal controls is important in preventing violence and protecting mother-child health.

**Key Words:** Pregnancy, violence, domestic violence.

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<sup>1</sup> This work was supported Canakkale Onsekiz Mart University The Scientific Research Coordination Unit (Project number TSA-2023-4457)

## HASTALARIN ERKEK HEMŞİRELERE YÖNELİK TUTUM ÖLÇEĞİ'NİN GELİŞTİRİLMESİ: GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI

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### ÖZET

**Amaç:** Bu çalışma, hastaların erkek hemşirelere yönelik tutumlarını ölçmek için geçerli ve güvenilir bir ölçek geliştirmek amacıyla metodolojik olarak planlanmıştır.

**Yöntem:** Ölçeğin geliştirilme sürecinde sırasıyla kavramsal çerçevenin oluşturulması, madde havuzunun oluşturulması ve psikometrik değerlendirme aşamaları gerçekleştirilmiştir. Veriler, Eylül-Aralık 2023 tarihleri arasında Ankara'da bir üniversite hastanesinde yatan 620 hastadan yüz yüze toplanmıştır. Elde edilen veri seti rastgele ikiye ayrılmış, birinci veri setinde açımlayıcı faktör analizi, ikinci veri setinde doğrulayıcı faktör analizi yapılmıştır.

**Bulgular:** Açımlayıcı faktör analizi sonucunda ölçülen değişkendeki toplam varyansın %64,97'sini açıklayan üç faktörlü bir yapı ortaya çıkmıştır. Karşılık gelen yapı, doğrulayıcı faktör analizi ile doğrulanmıştır. Tüm faktörler için Cronbach Alpha katsayıları 0,70'in üzerinde bulunmuştur. Ölçeğin ve tüm faktörlerin test-tekrar test korelasyon katsayısı 0,80'in üzerindedir.

**Sonuç:** Geliştirilen ölçek, hastaların erkek hemşirelere yönelik tutumlarını belirlemeye yönelik geçerli ve güvenilir bir araçtır.

**Anahtar Kelimeler:** Erkek Hemşireler, Geçerlik-Güvenirlilik, Hasta, Ölçek Geliştirme, Tutum

## ÖĞRETMENLERİN FİZİKSEL AKTİVİTE DAVRANIŞLARI VE EGZERSİZ DAVRANIŞ DEĞİŞİMLERİ: TANIMLAYICI VE İLİŞKİ ARAYICI ÇALIŞMA

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### ÖZET

**Amaç:** Öğretmenlerin fiziksel aktivite davranışlarını, egzersiz davranış değişimlerini ve aralarındaki ilişkiyi belirlemek amacıyla gerçekleştirilmiştir.

**Yöntem:** Bu çalışma, tanımlayıcı ve ilişki arayıcı olarak yapılmıştır. Çalışmaya 320 öğretmen katılmıştır. Veriler yüz yüze Kişisel Bilgi Formu, Uluslararası Fiziksel Aktivite Anketi Kısa Form, Egzersiz Değişim Aşamaları Ölçeği, Egzersiz Karar Alma Ölçeği ve Egzersiz Öz Etkililik Ölçeği kullanılarak toplanmıştır. Tanımlayıcı istatistiklerde yüzde dağılımı, ortalama ve standart sapma, değişkenler arasındaki ilişkilerde Pearson korelasyon katsayısı kullanılmıştır.

**Bulgular:** Öğretmenlerin %40,8'inin fiziksel olarak aktif olmadığı ve %27,3'ünün önümüzdeki altı ay içinde egzersize başlama niyetinde olmadığı belirlenmiştir. Katılımcıların Egzersiz Karar Alma Ölçeği toplam puan ortalaması orta düzeyde ( $51,82 \pm 8,65$ ), Egzersiz Öz Etkililik Ölçeği puan ortalamasının ise düşük düzeyde ( $10,91 \pm 4,45$ ) olduğu bulunmuştur. Öğretmenlerin Uluslararası Fiziksel Aktivite puanı ile Egzersiz Öz Etkililik puanı arasında düşük düzeyde istatistiksel olarak anlamlı pozitif bir ilişki vardır.

**Sonuç:** Öğretmenlerin fiziksel aktivite düzeyleri arttıkça egzersiz öz etkililikleri de artmaktadır. Öğretmenlerin fiziksel olarak aktif olmaları için uygun zamanın sağlanması, motivasyonlarının artırılması için eğitimlerin ve aktivitelerin düzenlenmesi, çeşitli sosyal faaliyetler ile desteklenmeleri önerilir. Yapılacak olan müdahalelerin belirlenmesi konusunda ise bireylerin içinde buldukları egzersiz değişim aşamasının göz önünde bulundurulması önemlidir.

**Anahtar Kelimeler:** Değişim Aşamaları, Egzersiz, Fiziksel aktivite, Öğretmen

## MODİFİYE SİHLER TEKNİĞİ VE ANATOMİ

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### ÖZET

Modifiye Sihler tekniği (MST); kas dokusunu şeffaf hale getirip sinir liflerini boyayan bir tekniktir. 7 farklı aşamadan oluşan bu teknik kas dokusu yanında bağ dokusunda da kullanılabilir. Kadavralardan alınan dokular MST'nin 7 aşaması sonucunda transparan hale gelip doku içerisindeki sinir liflerinin seyri gözlemlenebilir. MST, Ege Üniversitesi Anatomi Anabilim Dalı'nda boyun kaslarına uygulanmıştır. Gerekli izinler alındıktan sonra anabilim dalındaki kadavraların çalışma için belirlenen boyun kasları diseksiyonlar ile alınmıştır. MST sonrasında kas lifleri içerisindeki sinir lifleri bir ışık kaynağı altında mor renkte görünür olmuştur. Sinir sonlanmalarının yoğun olduğu alanlar belirlenmiştir.

Kas içine uygulanan botulinum toksin (BTx) enjeksiyonlarının sinir sonlanmalarının yoğun olduğu alanlara yapıldığında daha efektif olduğu yapılan çalışmalar ile belirlenmiştir. Yaptığımız çalışma ile seçilen boyun kaslarına uygulanacak BTx enjeksiyonları için optimal enjeksiyon alanları anatomik landmarklar ile tarif edilmiştir. MST sonucu elde edilen sonuçların elektromiyografi ve lidokain/steroidler gibi ağrı giderici enjeksiyonlar için de kullanılabileceğini gösteren çalışmalar literatürde mevcuttur.

Anatomi eğitiminin önemli bir parçası olan kadavra ile yapılan çalışmalar klinik bilgiler için önem teşkil etmektedir. Canlı üzerinde denenmesi mümkün olmayan veya etik olarak sorun teşkil edebilecek uygulamaların ilk olarak kadavra üzerinde yapılması günümüzde sıklıkla kullanılan bir yöntemdir. Çalışmamızdaki BTx örneği gibi canlıya yapılacak girişimsel uygulamalarda ilk hedef minimum zarar ve maksimum fayda sağlamaktır. Bu nedenle optimal enjeksiyon yerlerinin bilinmesi ve bu alanların çalışmamızdaki gibi anatomik landmarklar ile tarif edilmesinin klinisyenlere uygulama kolaylığı sağlayacağını düşünmekteyiz.

**Anahtar Kelimeler:** modifiye Sihler tekniği, anatomi, kadavra, kas içi sinir dağılımı, botulinum toksin

## OS NASALE, APERTURA PİRİFORMİS VE CHOANAE’NİN MORFOMETRİK OLARAK İNCELENMESİ

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### ÖZET

**Amaç:** Bu çalışmanın amacı os nasale, apertura piriformis ve choanae'nin morfolometrik olarak incelenmesini değerlendirmektir.

**Materyal Metod:** Bu çalışmada Bolu Abant İzzet Baysal Üniversitesi Tıp Fakültesi Anatomi Anabilim Dalı'na ait kemik koleksiyonundan yaşı ve cinsiyeti bilinmeyen 12 adet kafa kemiği kullanılarak belirlenen parametreler ölçüldü. Belirlenen parametreler; apertura piriformis'e ait genişlik (APG) ve yükseklik (APY), choanae'ya ait genişlik (CG) ve yükseklik (CY), nasion ve spina nasalis anterior arasındaki uzaklık, üst ön yüz yüksekliği (N-SNA), os nasale'ye ait; üst kenar genişliği (ÜKG), alt kenar genişliği (AKG), medial kenar genişliği (MKG), lateral kenar genişliği (LKG)). Ölçümler dijital ortamda Image-J programında yapıldı. Verilerin analizinde SPSS 20.0 programı ve tanımlayıcı istatistiksel yöntemler kullanıldı.

**Bulgular:** Belirlenen parametrelere ait ort.±ss. değerleri cm cinsinden, APG;3.506±443,96, APY; 4.497±616,84, CG; 1.725±215,94, CY; 2.643±575,66, N-SNA; 6.283±573,32, ÜKG; 1.714±296,02, AKG ;1.786±452,06, MKG; 1.962±609,90, LKG; 2.269±646,87 olarak hesaplanmıştır.

**Sonuç:** Çalışmadan elde edilen verilerin os nasale, apertura piriformis ve choanae'nin morfolometrik olarak incelenmesi ile cerrahi yaklaşımlara klinik açıdan derinlik katacağı ve literatüre katkı sağlayacağı düşünülmektedir.

**Anahtar kelimeler:** Os nasale, apertura piriformis , choanae, morfolometri

### Abstract

**Aim:** The aim of this study is to evaluate the morphometric examination of os nasale, apertura piriformis and choanae.

**Material Method:** In this study, the parameters determined were measured using 12 cranial bones of unknown age and gender from the bone collection of Bolu Abant İzzet Baysal University Faculty of Medicine, Department of Anatomy. Determined parameters; width (APG) and height (APY) of apertura piriformis, width (CG) and height (CY) of choanae, distance between nasion and spina nasalis anterior, upper anterior face height (N-SNA), os nasale' upper border width (UCG), lower border width (AKG), medial border width (MKG), lateral border width (LKG)). Measurements were made digitally in the Image-J program. SPSS 20.0 program and descriptive statistical methods were used to analyze the data.

Measurements were made digitally in the Image-J program. SPSS 20.0 program and descriptive statistical methods were used to analyze the data.

**Results:** The mean±sd values of the determined parameters are , APG;3.506±443,96, APY; 4.497±616,84, CG; 1.725±215,94, CY; 2.643±575,66, N-SNA; 6.283±573,32, UCG;1.714 ±296,02, AKG; 1.786±452,06, MKG;1.962±609,90, LKG; It was calculated as 1.962±646,87.

**Conclusion:** It is thought that the data obtained from the study will add clinical depth to surgical approaches and contribute to the literature by morphometric examination of os nasale, apertura piriformis and choanae.

**Keywords:** Os nasale, apertura piriformis, choanae, morphometry

## ZUCKERKANDL TÜBERKÜLÜ ANATOMİSİNİN KADAVRALAR ÜZERİNDE DEĞERLENDİRİLMESİ

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### ÖZET

**GİRİŞ:** Zuckerkandl tüberküli (ZT) gl. thyroidea'nın lateral loblarından arkaya doğru olan bir kalınlaşmasıdır ve bu özelliği ile gl. thyroidea'nın posterolateral lobu olarak da adlandırılmaktadır. Bu tüberkül tiroid cerrahisinde n. laryngeus recurrens'i (NLR) tanımlamak ve korumak için oldukça önemli bir kılavuz noktadır. Tiroidektomilerin % 63-77'sinde ZT saptanmış olup n. laryngeus recurrens'in %93 oranında tüberkülün posteromedial'inde, %7 oranında ise lateral'inde seyrettiği saptanmıştır. Çalışmamızda kadavralar üzerinde Zuckerkandl tüberküli'nün varlığını araştırarak, tespit ettiğimiz olgularda ZT'nin kalınlığını ve n. laryngeus recurrens ile ilişkisini ortaya koymayı amaçladık. Böylece çok sık yapılan ve n. laryngeus recurrens hasarına bağlı morbiditenin yüksek olduğu tiroid cerrahilerinde komplikasyonların azaltılmasına katkıda bulunmayı hedefliyoruz.

**GEREÇ-YÖNTEM:** Çalışmamızda Ege Üniversitesi Tıp Fakültesi Anatomi Anabilim Dalı kadavra arşivinde bulunan % 10 formalin ile fikse edilmiş, boyun bölgesinde herhangi deformite ya da operasyon skarı bulunmayan 20 adet insan kadavrası kullanılmıştır. Tüm örneklerde ZT'nin varlığı, kalınlığı ve n. laryngeus recurrens ile ilişkisi incelenmiş; diseksiyonlar sırasında metrikle birlikte aşamalı olarak yüksek çözünürlüklü fotoğraflar çekilerek Image J programı üzerinden ölçümler gerçekleştirilmiştir.

**BULGULAR:** Çalışmamızda 40 adet Zuckerkandl tüberküli tespit edilmiş olup, %72,5 oranında grade-2 ZT (<1cm), %27,5 oranında grade-1 ZT (hafif kalınlaşma) tespit edilmekte olup Grade-3 ZT'ye (>1cm) rastlanmamıştır. ZT sınıflama açısından değerlendirildiğinde vücut yarımaları arasında istatistiksel olarak anlamlı fark olmadığı görülmüştür. NLR ile ZT ilişkisine baktığımızda, %75,0 oranında sinirin ZT'nin posteromedial'inde, %25,0 oranında sinirin ZT'nin anteromedial'inde bulunduğu tespit edilmiştir. NLR ile ZT ilişkisi açısından değerlendirildiğinde vücut yarımaları arasında istatistiksel olarak anlamlı fark olmadığı görülmüştür.

**SONUÇ:** Zuckerkandl tüberküli tiroid cerrahisinde n. laryngeus recurrens'i tespit etmek ve korumak için oldukça önemli kılavuz noktalardan biridir. Çalışmamızda elde ettiğimiz Zuckerkandl tüberküli boyutu ve n. laryngeus recurrens ile ilişkisi literatür ile uyumlu olarak bulunmuştur. Ayrıca, tüm olgularda ZT ve gl. throidea arka sınırının orta noktasını

karşılaştırdığımızda, iki anatomik bölge tüm taraflarda eş değer bulunmuş ve n. laryngeus recurrens ile ilişkisi aynı sonuçları vermiştir. Yaptığımız çalışma ve literatürdeki veriler ışığında bölgedeki topografik anatomik ilişkilerin değişkenlik gösterdiği ve bu çeşitliliğin yapılan farklı araştırmalarla ortaya konabileceği sonucuna vardık.

Anahtar kelimeler: glandula thyroidea, tiroid cerrahisi, nervus laryngeus recurrens, anatomi.



## PROKSİMAL ULNA MORFOMETRİ'Sİ VE KLİNİK ÖNEMİ

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### ÖZET

**Amaç:** Bu çalışmanın amacı proksimal ulna morfometrisi ve klinik önemini değerlendirmektir.

**Materyal Metod:** Bu çalışmada Bolu Abant İzzet Baysal Üniversitesi Tıp Fakültesi Anatomi Anabilim Dalı'na ait kemik koleksiyonundan yaşı ve cinsiyeti bilinmeyen 28 adet ulna kemiği kullanılarak belirlenen parametreler ölçüldü. Belirlenen parametreler; ulna uzunluğu (UL), incisura trochlearis hariç ulna uzunluğu (UL-İT), incisura radialis yüksekliği (İRY), incisura radialis genişliği (İRG), incisura trochlearis derinliği (İTD) ve proksimal ulna dorsal açılanması (PUDA). Ölçümler dijital ortamda Image-J programında yapıldı. Verilerin analizinde SPSS 20.0 programı ve tanımlayıcı istatistiksel yöntemler kullanıldı.

**Bulgular:** Belirlenen parametrelere ait ort.±ss. değerleri cm cinsinden, UL;24.16±2.56, UL-İT; 21,56±2.69, İRY; 1.64±33, İRG; 1.2±16, İTD; 1.24±15, PUDA; 4,56±1,83 olarak hesaplanmıştır.

**Sonuç:** Çalışmadan elde edilen verilerin dirsek eklemi ve ulna ile ilgili cerrahi yaklaşımlara klinik açıdan derinlik katacağı ve literatüre katkı sağlayacağı düşünülmektedir.

**Anahtar kelimeler:** Proksimal, ulna, morfometri.

### Abstract

**Aim:** The aim of this study is to evaluate proximal ulna morphometry and its clinical significance.

**Material Method:** In this study, the parameters determined were measured using 28 ulna bones of unknown age and gender from the bone collection of Bolu Abant İzzet Baysal University Faculty of Medicine, Department of Anatomy. Determined parameters; ulna length

(UL), ulna length excluding incisura trochlearis (UL-IT), incisura radialis height (IRY), incisura radialis width (IRG), incisura trochlearis depth (ITD) and proximal ulna dorsal angulation (PUDA). Measurements were made digitally in the Image-J program. SPSS 20.0 program and descriptive statistical methods were used to analyze the data.

**Results:** The mean $\pm$ sd values of the determined parameters are UL;24.16 $\pm$ 2.56, UL-IT; 21.56 $\pm$ 2.69, IRY; 1.64 $\pm$ 33, IRG; 1.2 $\pm$ 16, ITD; 1.24 $\pm$ 15, PUDA; 4.56 $\pm$ 1.83 cm.

**Conclusion:** It is thought that the data obtained from the study will add clinical depth to surgical approaches related to the elbow joint and ulna and contribute to the literature.

**Keywords:** Proximal, ulna, morphometry,

## A OVERVIEW OF HOW HIGH-DOSE GLUCOCORTICOIDS AFFECT THE EQUILIBRIUM BETWEEN ANTIOXIDANTS AND OXIDANTS

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### ABSTRACT

Stress is the disturbance or compromise of an organism's internal balance and integrity. It can arise from various sources, such as wounds, infectious illnesses, surgeries, labour, and burns. In such situations, the organism requires a significant amount of hydrocortisone to shield itself from stress.

Antioxidant enzyme concentrations decrease and free radical generation in plasma increases following high-dose cortisol injections and/or higher cortisol hormone levels in the body. This lowers the body's resilience to illness.

Free radicals primarily induce lipid peroxidation in unsaturated fatty acids in the membrane. This alters the permeability and electrical charge balance of the cell membrane, putting the cell in danger. Free radical production increases in cells whose homeostasis cannot be maintained. Any part of the cell can be harmed by free radicals, but particularly the phospholipids in the membranes.

Given this knowledge, it is acknowledged that the body may produce more free radicals when cortisol levels are elevated or when high cortisol doses are administered for medical purposes. Antioxidants may counteract this increased production of free radicals.

Therefore, the aim of our study is to:

- Analyse the impact of high cortisol dosages on the oxidant and antioxidant system, including levels of antioxidant enzymes and lipid peroxidation.
- Evaluate the potential of antioxidants in mitigating the negative effects of free radicals caused by high cortisol levels.

**Key words:** Oxidant/Antioxidant Status, High Dose of Glucocorticoid, Oxidative Stress, Endogen Antioxidants.

### YÜKSEK DOZ GLUKOKORTIKOİDLERİN ANTIOKSIDANLAR VE OKSİDANLAR ARASINDAKİ DENGİYİ NASIL ETKİLEDİĞİNE GENEL BİR BAKIŞ

### ÖZET

Stres, bir organizmanın iç dengesinin ve bütünlüğünün bozulması veya tehlikeye girmesidir. Yaralar, bulaşıcı hastalıklar, ameliyatlara, doğum ve yanıklar gibi çeşitli kaynaklardan

kaynaklanabilir. Bu gibi durumlarda, organizma kendini stresten korumak için önemli miktarda hidrokortizona ihtiyaç duyar.

Yüksek doz kortizol enjeksiyonları ve/veya vücuttaki yüksek kortizol hormonu seviyelerinin ardından antioksidan enzim konsantrasyonları azalır ve plazmadaki serbest radikal üretimi artar. Bu da vücudun hastalıklara karşı direncini düşürür.

Serbest radikaller öncelikle membrandaki doymamış yağ asitlerinde lipid peroksidasyonunu indükler. Bu da hücre zarının geçirgenliğini ve elektrik yükü dengesini değiştirerek hücreyi tehlikeye sokar. Homeostazisi korunamayan hücrelerde serbest radikal üretimi artar. Hücrenin herhangi bir kısmı serbest radikallerden zarar görebilir, ancak özellikle zarlardaki fosfolipidler zarar görür.

Bu bilgi göz önüne alındığında, kortizol seviyeleri yükseldiğinde veya tıbbi amaçlarla yüksek kortizol dozları uygulandığında vücudun daha fazla serbest radikal üretebileceği kabul edilmektedir. Antioksidanlar bu artan serbest radikal üretimine karşı koyabilir.

Bu nedenle, çalışmamızın amacı

- Yüksek kortizol dozlarının antioksidan enzim seviyeleri ve lipid peroksidasyonu da dahil olmak üzere oksidan ve antioksidan sistem üzerindeki etkisini analiz etmek.
- Yüksek kortizol seviyelerinin neden olduğu serbest radikallerin olumsuz etkilerini azaltmada antioksidanların potansiyelini değerlendirmek.

**Anahtar kelimeler:** Oksidan/Antioksidan Durum, Yüksek Doz Glukokortikoid, Oksidatif Stres, Endojen Antioksidanlar.

## GÖĞÜS ÖN DUVARINDA ANATOMİK VARYASYON BİR VAKA SUNUMU

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### GİRİŞ

Göğüs duvarında pek çok kas bulunmasına rağmen göğüs duvarındaki yapısal kaslar; mm. intercostales, m. subcostalis ve m. transversus thoracis'tir. Yapılan literatür taramaları sonucunda bu bölgedeki kaslara ait çeşitli varyasyonların olabileceği saptanmıştır.

### OLGU

Ege Üniversitesi Tıp Fakültesi Anatomi Anabilim Dalı'nda yapılan rutin diseksiyonlar esnasında bir erkek kadavranın göğüs ön duvarında tek taraflı varyatif bir kas ve kasın medial kenarı boyunca uzanan varyatif arter ve ven tespit edilmiştir. Sol tarafta bulunan kas birinci kaburga ile üçüncü ve dördüncü kaburgalar arasında, iki parça şeklinde uzanmaktadır. Kasın lateral kısmı medial kısmına göre daha uzundu. Kasın genişliği, uzunluğu, sternum dış kenarına ve kostokondral birleşim noktalarına uzaklıkları ölçüldü. Kasın altında m. intercostalis externi'ye ait kas liflerinin de devam ettiği gözlemlendi.

### SONUÇ

Bu vaka raporunda, göğüs ön duvarında varyatif bir kas ve kasın medial kenarı boyunca uzanan varyatif arter ve ven tanımladık. Bunun ilgili bölgede cerrahi işlem yapacak olan klinisyenler için önem taşıdığını düşünüyoruz.

**Anahtar Kelimeler:** Anatomi, göğüs ön duvarı, kadavra, varyasyon

## EVDE BAKIMDA KLİNİK BAKIM SINIFLAMA SİSTEMİ'NİN KULLANIMI

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### ÖZET

Hızla yaşlanan nüfusla birlikte artan bakım ve destek ihtiyacının karşılanması, dünya genelindeki hükümetler için önemli mali ve sosyal zorluklar ortaya koymaktadır. Evde sağlanan bakım hizmetlerinin etkin bir şekilde uygulanması, sağlık harcamalarını azaltma, zaman ve kaynakların verimli kullanımını sağlama, bireylerin iyileşme sürelerini kısaltma ve sağlık hizmetlerine erişimi kolaylaştırma gibi faydalar sağlamaktadır. Evde bakım hizmetleri sunumunda birtakım sorunlarla karşılaşabilmektedir. Evde bakım sürecinde, bireyin öncelikli ihtiyaçlarının belirlenmesinde yaşanan fikir ayrılıkları, sağlık personeli ile bakım alan birey ve yakınları arasındaki rol karmaşası ve iletişim sorunları gibi zorluklar yaşanan sorunlardan bazılarıdır. Bunlara ek olarak, hasta ve ailesinin uygulanması gereken tedavi ve bakım planına karşı gösterdiği direnç ile sağlık personelleri arasında ortak bir bakım kalitesi anlayışına ulaşılamaması da sorunlar arasındadır. Bu kapsamda evde bakımda hastanın gereksinimlerini tanımlayabilmek için standardize edilmiş tanılama araçlarının kullanılması önerilmektedir. NANDA, NIC, NOC, Omaha ve Oasis başta olmak üzere evde bakımda kullanılan birçok hemşirelik sınıflama sistemi bulunmaktadır. Klinik Bakım Sınıflama Sistemi (CCC)' de evde bakımı daha iyi hale getirmek amacıyla geliştirilmiş bu sınıflama sistemlerinden biridir. Klinik Bakım Sınıflama Sistemi 1991 yılında Virginia Saba ve arkadaşları tarafından geliştirilmiştir. Günümüzde ise birçok dilde çevirisi olup devamlılığını sürdürmektedir. Klinik Bakım Sınıflama Sistemi evde bakım hizmetinde görev alan hemşireler için hemşirelik sürecini izleyen, kodlanmış ve standartlaştırılmış bir çerçeve sağlamaktadır. Ayrıca bakım alan bireylerin bakım planı sisteminin oluşturulmasında sağlık çalışanları arasında ortak bir bakış açısı sağlamakta ve verilerin kayıt altına alınmasını daha sistematik hale getirmektedir. Bu sistemin kullanımı hemşirelik uygulamalarında, hemşirelik yönetimi ve idari alanlarda, hemşirelik eğitiminde ve hemşirelik araştırmalarında da fayda sağlamaktadır. Sonuç olarak, hemşirelik bakımının güçlü yanlarının ortaya çıkarılabilmesi ve evde bakımda yaşanan sorunların çözümünde fayda sağlayabilmesi için Klinik Bakım Sınıflama Sistemi'nin evde bakım hizmetlerinde kullanımının artırılmasının gerektiği düşünülmektedir. Bu konuyla ilgili hemşirelik araştırmalarının artırılması ve farklı örneklem grupları ile çalışılması önerilmektedir.

**Anahtar Kelimeler:** Klinik Bakım Sınıflama Sistemi, Evde Bakım, Hemşirelik

## DEMİR EKSİKLİĞİ ANEMİSİ VE ÖNLENMESİNE İLİŞKİN YAKLAŞIMLAR

MEHMET DOĞAN

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### ABSTRACT

Iron deficiency anemia is the most common type of anemia in the world. It is especially prevalent in underdeveloped and developing countries. The prevalence of iron deficiency anemia in these countries is related to the culture, economic opportunities, social structure and development of the country. Iron deficiency anemia, a health problem that can be seen in people of all age groups, may be associated with inadequate intake of iron in the diet, inadequate absorption of iron due to gastrointestinal system diseases or excessive iron loss due to bleeding. Iron is a necessary element for the production of erythrocytes in our body and thus for adequate oxygenation of tissues. Due to the deficiency of this element, hemoglobin cannot be produced and hemoglobin levels fall below the limit determined according to gender and age, symptoms such as palpitations, fatigue, exertional dyspnea, pallor of the skin and mucous membranes may occur in the body of these individuals and may lead to important diseases such as heart failure over time. Children, the elderly, mothers with a high number of pregnancies and births, those with low socio-economic status, women with excessive menstrual bleeding, and individuals with chronic health problems are at risk for iron deficiency anemia. In order to protect individuals at risk from iron deficiency anemia, approaches such as adequate dietary iron intake, controlling absorption disorders or bleeding that cause iron loss, regulating nutrition, and controlling chronic diseases are important. In the management of iron deficiency anemia; education and counseling, therapeutic and care-giving roles of healthcare professionals come to the forefront. In this context, this study aims to examine iron deficiency anemia and current approaches to its prevention through literature review method.

**Key words:** Iron deficiency anemia, Risk factors for iron deficiency anemia, Prevention of iron deficiency anemia.

### ÖZET

Demir eksikliği anemisi, dünyada en yaygın görülen anemi türüdür. Özellikle gelişmemiş ve gelişmekte olan ülkelerde yaygın olarak görülen bir hastalıktır. Bu ülkelerde demir eksikliği anemisinin görülmesi; ülkenin kültürü, ekonomik imkânları, sosyal yapısı ve gelişmişliğiyle ilişkili olarak değerlendirilmektedir. Her yaş grubundan insanda görülebilen bir sağlık sorunu olan demir eksikliği anemisi, diyetle demirin yetersiz alınması, gastrointestinal sistem hastalıklarına bağlı demirin yetersiz emilimi veya kanamalara bağlı fazla miktarda demir kaybı ile ilişkili olabilmektedir. Demir, vücudumuzda eritrositlerin üretilebilmesi ve bu sayede dokuların yeterli düzeyde oksijenlenebilmesi için gerekli bir elementtir. Bu elementin

eksikliğine bağlı olarak hemoglobinin üretilmemesi ve hemoglobin seviyesinin cinsiyete, yaşa göre belirlenmiş sınırın altına inmesi sebebiyle bu bireylerin vücudunda çarpıntı, yorgunluk, efor dispnesi, deri ve mukozada solukluk gibi belirti-bulgular ortaya çıkabilmekte ve zamanla kalp yetmezliği gibi önemli hastalıklara zemin oluşturabilmektedir. Çocuk, yaşlı, gebelik sayısı, doğum sayısı çok olan anneler, sosyo-ekonomik düzeyi düşük olanlar, aşırı menstürel kanaması olan kadınlar, kronik sağlık sorunu olan bireyler demir eksikliği anemisi yönünden riskli gruplardır. Risk altında olan bireylerin demir eksikliği anemisinden korunmaları için besinle yeterli demir alınması, emilim bozuklukları ya da demir kaybına neden olan kanamaların kontrol altında tutulması, beslenmenin düzenlenmesi, kronik hastalıkların kontrolü gibi yaklaşımlar önemlidir. Demir eksikliği anemisinin yönetiminde; sağlık çalışanlarının eğitim ve danışmanlık, tedavi edici ve bakım verici rolü ön plana çıkmaktadır. Bu bağlamda çalışma, demir eksikliğine bağlı anemi ve önlenmesine ilişkin güncel yaklaşımları literatür tarama yöntemiyle incelemeyi amaçlamaktadır.

**Anahtar kelimeler:** Demir eksikliği anemisi, Demir eksikliği anemisi risk faktörleri, Demir eksikliği anemisinden korunma.



## YAŞLI HASTALARDA OSTEOPOROZ VE OSTEOMALAZİ

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### ABSTRACT

With the increasing elderly population in the world and in Turkey, the interest in the treatment and care of important health problems in the elderly is also increasing. The main aim of treatment and care in the elderly is to improve the quality of life. For this reason, studies to improve the quality of life of elderly people aged 65 years and over are gaining importance. Many of these studies aim to ensure a high level of self-care competence in elderly individuals, to ensure that the elderly are as independent as possible in maintaining their own needs, to maintain their activities of daily living at an optimal level and not to reduce their quality of life. These studies also aim to ensure that the elderly have sufficient information about chronic diseases that may develop with age, to increase their awareness and thus to continue their lives by knowing what to do to prevent the effects of these diseases. Osteoporosis and osteomalacia, which are among the health problems that occur especially with age, are common in the elderly. It is known that osteoporosis, which causes low bone mineral density, decreased bone formation, increased bone destruction, deterioration of the structure of bone tissue and increased risk of fractures in the bones, and osteomalacia, characterized by impaired mineralization of bone, significantly reduce the quality of life in the elderly. Factors such as hormonal changes, cytokines, vitamin D deficiency, sarcopenia, nutritional changes and immobilization are among the factors affecting the musculoskeletal system in the elderly. In the treatment of osteoporosis and osteomalacia, which is an important public health problem that can result in bone fractures, pain, functional loss and death, it is aimed to prevent fractures and maintain current prevention methods. Because of fractures due to osteoporosis and osteomalacia, elderly patients may need care at many stages of their lives and face the risk of death. For this reason, it has become important to be informed about the disease, who is at risk, what symptoms it shows, especially in old age, what should be done to prevent the disease and what measures should be taken. It is known that knowledge about these diseases will reduce the increase in morbidity and mortality rates. Especially in elderly individuals, it is important to take necessary interventions with the support of health professionals and the family in order to take precautions and protection (vitamin D and calcium intake, regular and individualized exercise, etc.) before fracture development. In this context, this study aims to evaluate osteoporosis and osteomalacia in the elderly based on current literature.

**Keywords:** Osteoporosis, Osteomalacia, Old Age

## ÖZET

Dünyada ve Türkiye’de yaşlı popülasyonun giderek artmasıyla birlikte yaşlılarda ortaya çıkan önemli sağlık sorunlarının tedavi ve bakımına ilişkin ilgi de artmaktadır. Yaşlılarda tedavi ve bakımın temel amacı yaşam kalitesinin arttırmaya yöneliktir. Bu nedenle 65 yaş ve üzeri yaşlı insanların yaşam kalitelerini arttırmak için yapılan çalışmalar önem kazanmaktadır. Bu çalışmaların birçoğu yaşlı bireylerde yüksek düzeyde öz bakım yeterliliğini sağlamalarını, olabildiğince yaşlıların kendi gereksinimlerini sürdürmelerinde bağımsız olmalarını, optimal düzeyde günlük yaşam aktivitelerini sürdürmelerini ve yaşam kalitelerini düşürmemelerini sağlamayı amaçlamaktadır. Bu çalışmalarda ayrıca yaşlıların yaşla birlikte gelişebilecek kronik hastalıklar hakkında yeterli bilgi sahibi olmaları, farkındalıklarının artırılması ve böylece, bu hastalıkların etkilerinden korunmada yapılması gerekenleri bilerek yaşamlarını devam ettirmeleri amaçlanmaktadır. Özellikle yaşla birlikte ortaya çıkan sağlık sorunları arasında osteoporoz ve osteomalazi yaşlılarda yaygın görülmektedir. Yaşlılarda düşük kemik mineral yoğunluğu, kemik yapımının azalması, kemik yıkımının artması, kemik dokusunun yapısının bozulması ve kemiklerdeki kırık riskinde artışa neden olan osteoporoz ve kemiğin mineralizasyonunda bozuklukla karakterize osteomalazinin yaşlılarda yaşam kalitesini önemli oranda düşürdüğü bilinmektedir. Yaşlılarda hormonal değişiklikler, sitokinler, D vitamini düşüklüğü, sarkopeni, beslenme değişiklikleri ve immobilizasyon gibi faktörler kas-iskelet sistemi üzerinde etkili faktörler arasındadır. Kemik kırıkları, ağrı, fonksiyonel kayıp ve ölümlerle sonuçlanabilen önemli bir toplum sağlığı problemi olan osteoporoz ve osteomalazi tedavisinde kırıkların önlenmesi ve mevcut korunma yöntemlerinin sürdürülmesi hedeflenmektedir. Çünkü osteoporoz ve osteomalaziye bağlı gelişen kırıklardan dolayı yaşlı hastalar hayatlarının birçok evresinde bakıma muhtaç hale gelebilmekte ve ölüm riskiyle karşı karşıya kalabilmektedir. Bu sebeple hastalık hakkında bilgi sahibi olunması, kimlerin risk altında olduğu, özellikle yaşlılıkla birlikte ne gibi belirtiler gösterdiği, hastalıktan korunmak için neler yapılması gerektiği ve alınması gereken önlemleri öne çıkarmak önem kazanmıştır. Bu hastalıklar hakkında bilgi sahibi olunmasının morbidite ve mortalite oranlarındaki artışı azaltacağı bilinmektedir. Özellikle yaşlı bireylerde kırık gelişmeden önce önlem almak ve korunmak için (D vitamini ve kalsiyum alımı, düzenli ve bireye uygun şekilde egzersiz yapılması vs.) sağlık profesyonellerinin ve ailenin de desteğiyle gerekli girişimlerin yapılması önemlidir. Bu bağlamda çalışma, güncel literatür bilgisine dayalı yaşlılarda osteoporoz ve osteomalaziyi değerlendirmeyi amaçlamaktadır.

**Anahtar Kelimeler:** Osteoporoz, Osteomalazi, Yaşlılık

## **MODULATION OF DENTAL PAIN BEHAVIOR BY NARINGENIN AS A NATURAL FLAVONOID COMPOUND**

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### **ABSTRACT**

Dental pain stands as a prevalent and multifaceted orofacial health concern, encompassing a diverse array of painful conditions affecting both the oral and facial areas, frequently intertwined with inflammatory pathways and processes. Given its pivotal involvement in the regulation of pain responses, naringenin emerges as a compelling candidate for targeted interventions in clinical pain management strategies. This study aimed to investigate the potential of naringenin, a flavonoid natural compound, in modulating dental pain behavior in a rat model of capsaicin-induced pain. Forty-two adult male Wistar rats (weight: 230 - 250 grams) were divided randomly into 6 experimental groups ( $n = 7$  per group). The rats were individually housed in specialized cages and were meticulously maintained under tightly controlled environmental parameters ( $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ; 12-hour light-dark cycle and lights on at 7:00 a.m.) with ad libitum access to both feed and water throughout the study. In adherence to rigorous ethical standards and scientific protocols, all procedures involving animal subjects were conducted in strict accordance with the guidelines outlined by the World Medical Association Animal Ethics Guidelines. The animals underwent stereotaxic surgery and after one week recovery, they were received naringenin at doses of 5, 10, and 15  $\mu\text{g}$  per rat via central administration. Pain induction was achieved through intrapulpal injection of 100  $\mu\text{g}$  capsaicin, following which orofacial pain behavior was assessed using a scoring system. Our findings reveal the analgesic effects of naringenin in mitigating capsaicin-induced pain, suggesting its therapeutic potential in managing dental pain.

**Keywords :** Dental pain, naringenin, capsaicin, rat.

## **THE ROLE OF GUT MICROBIOTA IN INFANCY: AN EXAMINATION OF DEVELOPMENT, HEALTH, AND DISEASE**

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### **ABSTRACT**

The human body contains trillions of microbial cells, which are believed to play a vital role in the coordinated movements of human life. These microbial cell populations are most concentrated in the gut, where they form a complex community known as the gut microbiota. This microbiota develops during infancy and matures into its adult form over time. The composition of the gastrointestinal microbiota can be influenced by various factors such as prenatal factors, birth mode, diet and antibiotic usage. These factors allow different microbial populations to interact with their surroundings and perform various functions. The microbiota can have significant effects on host health by affecting physiological systems such as host genes, lifestyle, diet, medication use, immune system development, hormone production, metabolism, and genetic modifications. The microbiota acquired in early life can influence the development of the immune system and the risk of health problems later in life. Herein, we summarize the studies that have shown that imbalances in the infant gut microbiota can contribute to autoimmune diseases, such as lung diseases, asthma, food allergies, and arthritis in infants and later life. Additionally, dysbiosis in their gut microbiota has been linked to inflammatory bowel disease, obesity, diabetes, atherosclerosis, and other chronic conditions, including metabolic and cardiovascular diseases.

**Keywords:** Gut microbiota, newborn, autoimmune diseases

## TRADITIONAL USAGE AREAS OF *Tilia tomentosa* MOENCH (MALVACEAE) SPECIES GROWN IN ESKİŞEHİR

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### ABSTRACT

*Tilia tomentosa*, commonly known as linden, is a plant of significant cultural and medicinal value in various communities worldwide. Its usage transcends geographical boundaries, symbolizing love, productivity, and longevity in ceremonies and traditions. Linden is predominantly consumed as tea within the borders of Eskişehir province. The use of linden as tea is also a common theme in Eastern European and Turkish cultures, providing relaxation and tranquility when consumed. The medicinal properties of *T. tomentosa* have been recognized for centuries, being utilized in various forms to alleviate respiratory and digestive ailments and to strengthen the immune system. In culinary culture, its flowers enhance the flavor of teas, infusions, and desserts, while linden honey adds a subtle sweetness to various dishes. In conclusion, it has been determined that the ethnobotanical use of linden within the boundaries of Eskişehir province parallels its usage in many different societies.

**Keywords:** Malvaceae, *Tilia tomentosa*, Ethnobotany.

**DETERMINATION OF POLLEN MORPHOLOGY IN *Symphoricarpos albus* (L.)  
S.F.Blake (Snowberry) (Caprifoliaceae) USING THE ERDTMAN METHOD**

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**ABSTRACT**

In this study, the pollen morphology of *Symphoricarpos albus* (Snowberry) (Caprifoliaceae), used for landscaping purposes in Eskişehir province, has been examined. Pollen samples of the plants were obtained from the flowers of trees in parks and gardens. The pollen samples of the examined taxa were taken from dried plants available at the Osmangazi University Faculty of Science Herbarium (OUFE). The palynological morphological characteristics of the taxon were examined under a light microscope. Asetolized pollen grains were prepared according to the Erdtman method for light microscope examinations. Pollen grains of *S. albus* are tricolporate type and sphaeroide in shape. The exine exhibits tectate-granulate ornamentation. Taxon differentiations were statistically established as a result of microscopic examinations. Comparisons among the studied taxa will contribute to the taxonomy of *S. albus* for its classification.

**Keywords:** Caprifoliaceae, *Symphoricarpos albus*, Pollen, Erdtman.

**POLLEN MORPHOLOGY IN *Abelia* × *grandiflora* (Ravelli ex André) Rehder  
(Caprifoliaceae) SAMPLE ACCORDING TO WODEHOUSE METHOD**

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**ABSTRACT**

In this study, pollen morphology of *Abelia grandiflora* (Caprifoliaceae), which is used for landscaping purposes in Eskişehir province, has been investigated. Pollen samples of the studied species were obtained from the flowers of trees in parks and gardens. The palynological morphological characteristics of the taxon were examined under a light microscope. Non-acetylated pollen grains were prepared according to the Wodehouse method for light microscope examinations, and measurements were conducted to reveal variational characters to an extent sufficient for characterization. The examined *A. grandiflora* pollen grains are tricolporate type and subprolate in shape. The exine ornamentation was observed to be tectate-echinulate. As a result of microscopic examinations, the differentiation of the taxon was statistically established. The obtained data will contribute to the taxonomy of *A. grandiflora* for its classification.

**Keywords:** Caprifoliaceae, *Abelia grandiflora*, Pollen, Wodehouse.

## ***HIBISCUS ESCULENTUS* L. (OKRA): AN ETHNOBOTANICAL TALE WANDERING AMONG CULTURES**

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### **ABSTRACT**

*Hibiscus esculentus* (*Hibiscus*) is a plant known for its vibrant and captivating flowers, used in traditional medicine and culinary practices worldwide. In this study, the traditional uses of the plant, primarily in medicine and food, are examined in the province of Eskişehir. *Hibiscus* is utilized in traditional medicine for purposes such as strengthening the immune system, supporting digestive health, and regulating blood pressure. Additionally, it is known to be used in cooking to add flavor and color to dishes. This study explores the cultural significance of the *Hibiscus* plant and how it is valued by different communities.

**Keywords:** Malvaceae, *Hibiscus esculentus*, Ethnobotany.



## **DEVELOPMENT OF MOLECULAR IMPRINTED POLYMERS (MIPS) FOR THE SELECTIVE REMOVAL OF CARBAMAZEPINE FROM AQUEOUS SOLUTION**

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### **Abstract:**

The occurrence and removal of trace organic contaminants in the aquatic environment has become a focus of environmental concern. For the selective removal of carbamazepine from loaded waters molecularly imprinted polymers (MIPs) were synthesized with carbamazepine as template. Parameters varied were the type of monomer, crosslinker, and porogen, the ratio of starting materials, and the synthesis temperature. Best results were obtained with a template to crosslinker ratio of 1:20, toluene as porogen, and methacrylic acid (MAA) as monomer. MIPs were then capable to recover carbamazepine by 93% from a 10<sup>-5</sup> M landfill leachate solution containing also caffeine and salicylic acid. By comparison, carbamazepine recoveries of 75% were achieved using a nonimprinted polymer (NIP) synthesized under the same conditions, but without template. In landfill leachate containing solutions carbamazepine was adsorbed by 93-96% compared with an uptake of 73% by activated carbon. The best solvent for desorption was acetonitrile, with which the amount of solvent necessary and dilution with water was tested. Selected MIPs were tested for their reusability and showed good results for at least five cycles. Adsorption isotherms were prepared with carbamazepine solutions in the concentration range of 0.01 M to 5\*10<sup>-6</sup> M. The heterogeneity index showed a more homogenous binding site distribution.

**Keywords:** Carbamazepine, landfill leachate, removal, reuse

## VALIDATION AND APPLICATION OF A NEW OPTIMIZED RP-HPLC- FLUORESCENT DETECTION METHOD FOR NORFLOXACIN

Mahmood Ahmad, Ghulam Murtaza, Sonia Khiljee, Muhammad Asadullah Madni

### Abstract:

A new reverse phase-high performance liquid chromatography (RP-HPLC) method with fluorescent detector (FLD) was developed and optimized for Norfloxacin determination in human plasma. Mobile phase specifications, extraction method and excitation and emission wavelengths were varied for optimization. HPLC system contained a reverse phase C18 (5  $\mu$ m, 4.6 mm $\times$ 150 mm) column with FLD operated at excitation 330 nm and emission 440 nm. The optimized mobile phase consisted of 14% acetonitrile in buffer solution. The aqueous phase was prepared by mixing 2g of citric acid, 2g sodium acetate and 1 ml of triethylamine in 1 L of Milli-Q water was run at a flow rate of 1.2 mL/min. The standard curve was linear for the range tested (0.156–20  $\mu$ g/mL) and the coefficient of determination was 0.9978. Aceclofenac sodium was used as internal standard. A detection limit of 0.078  $\mu$ g/mL was achieved. Run time was set at 10 minutes because retention time of norfloxacin was 0.99 min. which shows the rapidness of this method of analysis. The present assay showed good accuracy, precision and sensitivity for Norfloxacin determination in human plasma with a new internal standard and can be applied pharmacokinetic evaluation of Norfloxacin tablets after oral administration in human.

**Keywords:** Norfloxacin, Aceclofenac sodium, Methodoptimization, RP-HPLC method, Fluorescent detection, Calibrationcurve.

## ANTIBACTERIAL CAPACITY OF PLUMERIA ALBA PETALS

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### **Abstract:**

Antibacterial activity of *Plumeria alba* (Frangipani) petals methanolic extracts were evaluated against *Escherichia coli*, *Proteus vulgaris*, *Staphylococcus aureus*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Staphylococcus saprophyticus*, *Enterococcus faecalis* and *Serratia marcescens* by using disk diffusion method. Concentration extracts (80 %) showed the highest inhibition zone towards *Escherichia coli* (14.3 mm). Frangipani extract also showed high antibacterial activity against *Staphylococcus saprophyticus*, *Proteus vulgaris* and *Serratia marcescens*, but not more than the zones of the positive control used. Comparison between two broad spectrum antibiotics to frangipani extracts showed that the 80 % concentration extracts produce the same zone of inhibition as Streptomycin. Frangipani extracts showed no bacterial activity towards *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Enterococcus faecalis*. There are differences in the sensitivity of different bacteria to frangipani extracts, suggesting that frangipani-s potency varies between these bacteria. The present results indicate that frangipani showed significant antibacterial activity especially to *Escherichia coli*.

**Keywords:** Frangipani, *Plumeria alba*, anti microbial, *Escherichia coli*

## PROACTIVE IDENTIFICATION OF FALSE ALERT FOR DRUG-DRUG INTERACTION

**Hsuan-Chia Yang, Yan-Jhih Haung, Yu-Chuan Li**

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### **Abstract:**

Researchers of drug-drug interaction alert systems have often suggested that there were high overridden rate for alerts and also too false alerts. However, research about decreasing false alerts is scant. Therefore, the aim of this article attempts to proactive identification of false alert for drug-drug interaction and provide solution to decrease false alerts. This research involved retrospective analysis prescribing database and calculated false alert rate by using MYSQL and JAVA. Results of this study showed 17% of false alerts and the false alert rate in the hospitals (37%) was more than in the clinics. To conclude, this study described the importance that drug-drug interaction alert system should not only detect drug name but also detect frequency or route, as well as in providing solution to decrease false alerts.

**Keywords:** drug-drug interaction, proactive identification, false alert

## LOCAL DAYAK PERSPECTIVES ON WILDLIFE IMPACT FROM OIL PALM DEVELOPMENT

**Sunkar Saraswati, Santosa**

Mohammed V University of Rabat, Rabat- Morocco

### **Abstract:**

Controversies surrounding the impacts of oil palm plantations have resulted in some heated debates, especially concerning biodiversity loss and indigenous people well-being. The indigenous people of Dayak generally used wildlife to fulfill their daily needs thus were assumed to have experienced negative impacts due to oil palm developments within and surrounding their settlement areas. This study was conducted to identify the characteristics of the Dayak community settled around an oil palm plantation, to determine their perceptions of wildlife loss or gain as the results of the development of oil palm plantations, and to identify the determinant characteristic of the perceptions. The research was conducted on March 2018 in Nanga Tayap and Tajok Kayong Villages, which were located around the oil palm plantation of NTYE of Ketapang, West Kalimantan-Indonesia. Data were collected through in depth-structured interview, using closed and semi-open questionnaires and three-scale Likert statements. Interviews were conducted with 74 respondents using accidental sampling, and categorized into respondents who were dependent on oil palm for their livelihoods and those who were not. Data were analyzed using quantitative statistics method, Likert Scale, Chi-Square Test, Spearman Test, and Mann-Whitney Test. The research found that the indigenous Dayak people were aware of wildlife species loss and gain since the establishment of the plantation. Nevertheless, wildlife loss did not affect their social, economic, and cultural needs since they could find substitutions. It was found that prior to the plantation's development, the local Dayak communities were already slowly experiencing some livelihood transitions through local village development. The only determinant characteristic of the community that influenced their perceptions of wildlife loss/gain was level of education.

**Keywords:** Wildlife, oil palm plantations, indigenous Dayak, biodiversity loss and gain.

## **ADDRESSING THE WATER RESOURCES CRISIS IN SAUDI ARABIA: CHALLENGES AND POTENTIAL MANAGEMENT STRATEGIES - AN ANALYTICAL REVIEW**

**A. A. Ghanim**

Masinde Muliro University of Science and Technology- Kenya

### **Abstract:**

The Kingdom of Saudi Arabia (KSA) is heading towards a severe and rapidly expanding water crisis, which can have negative impacts on the country's environment and economy. Of the total water consumption in KSA, the agricultural sector accounts for nearly 87% of the total water use and, therefore, any attempt that overlooks this sector will not help in improving the sustainability of the country's water resources. KSA Vision 2030 gives priority of water use in the agriculture sector for the regions that have natural renewable water resources. It means that there is little concern for making reuse of municipal wastewater for irrigation purposes in any region in general and in water-scarce regions in particular. The use of treated wastewater is very limited in Saudi Arabia, but it has very considerable potential for future expansion due its numerous beneficial uses. This study reviews the current situation of water resources in Saudi Arabia, providing more highlights on agriculture and wastewater reuse. The reviewed study is proposing some corrective measures for development and better management of water resources in the Kingdom. Suggestions also include consideration of treated water as an alternative source for irrigation in some regions of the country. The study concluded that a sustainable solution for the water crisis in KSA requires implementation of multiple measures in an integrated manner. The integrated solution plan should focus on two main directions: first, improving the current management practices of the existing water resources; second, developing new water supplies from both conventional and non-conventional sources.

**Keywords:** Saudi Arabia, water resources, water crisis, treated wastewater.

## **EXPLORING FLOW EFFECTS OF SOLID PARTICLE SIZE IN POROUS MEDIA: AN EXPERIMENTAL STUDY**

**Akridiss Tabach, Chetehouna Gascoin, M. S. Kadiri**

College of Marine Sciences and Technology

Massawa- Eritrea.

### **Abstract:**

Transpiration cooling combined to regenerative cooling is a technique that could be used to cool the porous walls of the future ramjet combustion chambers; it consists of using fuel that will flow through the pores of the porous material consisting of the chamber walls, as coolant. However, at high temperature, the fuel is pyrolysed and generates solid coke particles inside the porous materials. This phenomenon can lead to a significant decrease of the material permeability and can affect the efficiency of the cooling system. In order to better understand this phenomenon, an experimental laboratory study was undertaken to determine the transport and deposition of particles in a sintered porous material subjected to steady state flow. The test bench composed of a high-pressure autoclave is used to study the transport of different particle size (35

**Keywords:** Experimental study, permeability, porous material, suspended particles.

## EXPLORING THE COMPRESSION-TENSION BEHAVIOR OF AZ31B ROLLED SHEET IN THE ROLLING DIRECTION UNDER LARGE STRAIN

**Yazdanmehr Jahed**

Comprehensive University of Technology, Tehran – Iran

### **Abstract:**

Being made with the lightest commercially available industrial metal, Magnesium (Mg) alloys are of interest for light-weighting. Expanding their application to different material processing methods requires Mg properties at large strains. Several room-temperature processes such as shot and laser peening and hole cold expansion need compressive large strain data. Two methods have been proposed in the literature to obtain the stress-strain curve at high strains: 1) anti-buckling guides and 2) small cubic samples. In this paper, an anti-buckling fixture is used with the help of digital image correlation (DIC) to obtain the compression-tension (C-T) of AZ31B-H24 rolled sheet at large strain values of up to 10.5%. The effect of the anti-buckling fixture on stress-strain curves is evaluated experimentally by comparing the results with those of the compression tests of cubic samples. For testing cubic samples, a new fixture has been designed to increase the accuracy of testing cubic samples with DIC strain measurements. Results show a negligible effect of anti-buckling on stress-strain curves, specifically at high strain values.

**Keywords:** Large strain, compression-tension, loading-unloading, Mg alloys.



## IMPACT OF INJECTION CONDITIONS ON FLAME STRUCTURES WITHIN GAS-CENTERED SWIRL COAXIAL INJECTOR

**Park Song, Wooseok Sunjung , Jaye Lee, Jongkwon Koo**

Aichi University of Technology- Japan

### **Abstract:**

The objective of this paper is to observe the effects of injection conditions on flame structures in gas-centered swirl coaxial injector. Gaseous oxygen and liquid kerosene were used as propellants. For different injection conditions, two types of injector, which only differ in the diameter of the tangential inlet, were used in this study. In addition, oxidizer injection pressure was varied to control the combustion chamber pressure in different types of injector. In order to analyze the combustion instability intensity, the dynamic pressure was measured in both the combustion chamber and propellants lines. With the increase in differential pressure between the propellant injection pressure and the combustion chamber pressure, the combustion instability intensity increased. In addition, the flame structure was recorded using a high-speed camera to detect CH\* chemiluminescence intensity. With the change in the injection conditions in the gas-centered swirl coaxial injector, the flame structure changed.

**Keywords:** Liquid rocket engine, flame structure, combustion instability, dynamic pressure.

## **SIMULATION OF GAS SWEETENING PROCESS: EXPLORING WASTE HYDRAULIC ENERGY RECOVERY**

**Meisam Farhani, Hassan Ali Ozgoli, Foad Moghadasi**

Kuwait College of Science and Technology - Kuwait

### **Abstract:**

In this research, firstly, a commercial gas sweetening unit with methyl-di-ethanol-amine (MDEA) solution is simulated and comprised in an integrated model in accordance with Aspen HYSYS software. For evaluation purposes, in the second step, the results of the simulation are compared with operating data gathered from South Pars Gas Complex (SPGC). According to the simulation results, the considerable energy potential contributed to the pressure difference between absorber and regenerator columns causes this energy driving force to be applied in power recovery turbine (PRT). In the last step, the amount of waste hydraulic energy is calculated, and its recovery methods are investigated.

**Keywords:** Gas sweetening unit, simulation, MDEA, power recovery turbine, waste-to-energy.

## **DYNAMIC RESPONSE OF SHIPS TO COMPLEX AND SUDDEN EXTERNAL FORCES**

**Bo Qasim , Gao Liangtian , Idrees Liu**

Académie Libanaise des Beaux-Arts1- Lebanon

### **Abstract:**

The impact of the storm leads to accidents even in the case of vessels that meet the computed safety criteria for stability. That is why, in order to clarify the causes of the accident and shipwreck, it is necessary to study the dynamics of the ship under the complex sudden impact of external forces. The task is to determine the movement and landing of the ship in the complex and sudden impact of external forces, i.e. when the ship's load changes over a relatively short period of time. For the solution, a technique was used to study the ship's dynamics, which is based on the compilation of a system of differential equations of motion. A coordinate system was adopted for the equation of motion of the hull and the determination of external forces. As a numerical method of integration, the 4<sup>th</sup> order Runge-Kutta method was chosen. The results of the calculation show that dynamic deviations were lower for high-altitude vessels. The study of the movement of the hull under a difficult situation is performed: receiving of cargo, impact of a flurry of wind and subsequent displacement of the cargo. The risk of overturning and flooding was assessed.

**Keywords:** Dynamics, statics, roll, trim, dynamic load, tilt, vertical displacement.

## ENHANCING CESSNA CITATION X PERFORMANCE DURING CRUISE FLIGHT WITH ADAPTIVE WINGLETS

**Botez Segui, Bezin Simon , Mihaela Marine**

Rajiv Gandhi University of Science and Technology- Guyana

### **Abstract:**

As part of a ‘Morphing-Wing’ idea, this study consists of measuring how a winglet, which is able to change its shape during the flight, is efficient. Conventionally, winglets are fixed-vertical platforms at the wingtips, optimized for a cruise condition that the airplane should use most of the time. However, during a cruise, an airplane flies through a lot of cruise conditions corresponding to altitudes variations from 30,000 to 45,000 ft. The fixed winglets are not optimized for these variations, and consequently, they are supposed to generate some drag, and thus to deteriorate aircraft fuel consumption. This research assumes that it exists a winglet position that reduces the fuel consumption for each cruise condition. In this way, the methodology aims to find these optimal winglet positions, and to further simulate, and thus estimate the fuel consumption of an aircraft wearing this type of adaptive winglet during several cruise conditions. The adaptive winglet is assumed to have degrees of freedom given by the various changes of following surfaces: the tip chord, the sweep and the dihedral angles. Finally, results obtained during cruise simulations are presented in this paper. These results show that an adaptive winglet can reduce, thus improve up to 2.12% the fuel consumption of an aircraft during a cruise.

**Keywords:** Aerodynamics, Cessna

Citation

X, optimization, winglet, adaptive, morphing, wing, aircraft.

## **INTEGRATING HYBRID AI WITH TWO-DIMENSIONAL DEPTH-AVERAGED NUMERICAL MODEL: SIMULTANEOUS SOLUTION FOR SHALLOW WATER AND EXNER EQUATIONS**

**S. Mehrab Amiri, Nasser Talebbeydokhti**

Lamei Gorgani Institute of Higher Education

### **Abstract:**

Modeling sediment transport processes by means of numerical approach often poses severe challenges. In this way, a number of techniques have been suggested to solve flow and sediment equations in decoupled, semi-coupled or fully coupled forms. Furthermore, in order to capture flow discontinuities, a number of techniques, like artificial viscosity and shock fitting, have been proposed for solving these equations which are mostly required careful calibration processes. In this research, a numerical scheme for solving shallow water and Exner equations in fully coupled form is presented. First-Order Centered scheme is applied for producing required numerical fluxes and the reconstruction process is carried out toward using Monotonic Upstream Scheme for Conservation Laws to achieve a high order scheme. In order to satisfy C-property of the scheme in presence of bed topography, Surface Gradient Method is proposed. Combining the presented scheme with fourth order Runge-Kutta algorithm for time integration yields a competent numerical scheme. In addition, to handle non-prismatic channels problems, Cartesian Cut Cell Method is employed. A trained Multi-Layer Perceptron Artificial Neural Network which is of Feed Forward Back Propagation (FFBP) type estimates sediment flow discharge in the model rather than usual empirical formulas. Hydrodynamic part of the model is tested for showing its capability in simulation of flow discontinuities, transcritical flows, wetting/drying conditions and non-prismatic channel flows. In this end, dam-break flow onto a locally non-prismatic converging-diverging channel with initially dry bed conditions is modeled. The morphodynamic part of the model is verified simulating dam break on a dry movable bed and bed level variations in an alluvial junction. The results show that the model is capable in capturing the flow discontinuities, solving wetting/drying problems even in non-prismatic channels and presenting proper results for movable bed situations. It can also be deduced that applying Artificial Neural Network, instead of common empirical formulas for estimating sediment flow discharge, leads to more accurate results.

**Keywords:** Artificial neural network, morphodynamic model, sediment continuity equation, shallow water equations.

## **A META-MODEL FOR WING PLANFORM TUBERCLE DESIGN INSPIRED BY HUMPBACK WHALE FLIPPER**

**A. Taheri**

Fatemiye University of Medical Sciences, Qom – Iran

### **Abstract:**

Inspired by topology of humpback whale flippers, a meta-model is designed for wing planform design. The net is trained based on experimental data using cascade-forward artificial neural network (ANN) to investigate effects of the amplitude and wavelength of sinusoidal leading edge configurations on the wing performance. Afterwards, the trained ANN is coupled with a genetic algorithm method towards an optimum design strategy. Finally, flow physics of the problem for an optimized rectangular planform and also a real flipper geometry planform is simulated using Lam-Bremhorst low Reynolds number turbulence model with damping wall-functions resolving to the wall. Lift and drag coefficients and also details of flow are presented along with comparisons to available experimental data. Results show that the proposed strategy can be adopted with success as a fast-estimation tool for performance prediction of wing planforms with wavy leading edge at preliminary design phase.

**Keywords:** Humpback whale flipper, cascade-forward ANN, GA, CFD, Bionics.

## **ENHANCING FATIGUE LIFE: OPTIMIZING TOLERANCE GRADES FOR BEARING AND SHAFT ASSEMBLY IN WASHING MACHINES**

**Dolar Cangi,**

Al Rafidain University College - Baghdad- Iraq

### **Abstract:**

The drum is one of the critical parts in a washing machine in which the clothes are washed and spin by the rotational movement. It is activated by the drum shaft which is attached to an electric motor and subjected to dynamic loading. Being one of the critical components, failures of the drum require costly repairs of dynamic components. In this study, tolerance bands between the drum shaft and its two bearings were examined to develop a relationship between the fatigue life of the shaft and the interaction tolerances. Optimization of tolerance bands was completed in consideration of the fatigue life of the shaft as the cost function. The following methodology is followed: multibody dynamic model of a washing machine was constructed and used to calculate dynamic loading on the components. Then, these forces were used in finite element analyses to calculate the stress field in critical components which was used for fatigue life predictions. The factors affecting the fatigue life were examined to find optimum tolerance grade for a given test condition. Numerical results were verified by experimental observations.

**Keywords:** Fatigue life, finite element analysis, tolerance analysis, optimization.

## UTILIZING CELLULOSE NANOCRYSTAL SUSPENSIONS AS WATER-BASED LUBRICANTS FOR SLURRY PUMP GLAND SEALS

**Grecov Mohammad Shariatzadeh, Dana Javad**

Al Mansour University College - Baghdad- Iraq

### **Abstract:**

The tribological tests were performed on a new tribometer, in order to measure the coefficient of friction of a gland seal packing material on stainless steel shafts in presence of Cellulose Nanocrystal (CNC) suspension as a sustainable, environmentally friendly, water-based lubricant. To simulate the real situation from the slurry pumps, silica sands were used as slurry particles. The surface profiles after tests were measured by interferometer microscope to characterize the surface wear. Moreover, the coefficient of friction and surface wear were measured between stainless steel shaft and chrome steel ball to investigate the tribological effects of CNC in boundary lubrication region. Alignment of nanoparticles in the CNC suspensions are the main reason for friction and wear reduction. The homogeneous concentrated suspensions showed fingerprint patterns of a chiral nematic liquid crystal. These properties made CNC a very good lubricant additive in water.

**Keywords:** Gland seal, lubricant additives, nanocrystalline cellulose, water-based lubricants.



## **DYNAMIC 3D POST-STALL AERODYNAMICS CONSIDERING CAMBER LOSS FROM FLOW SEPARATION**

**Aritras Mukherjee , Roy Rinku**

University of Science and Technology of China- China

### **Abstract:**

The current study couples a quasi-steady Vortex Lattice Method and a camber correcting technique, ‘Decambering’ for unsteady post-stall flow prediction. The wake is force-free and discrete such that the wake lattices move with the free-stream once shed from the wing. It is observed that the time-averaged unsteady coefficient of lift sees a relative drop at post-stall angles of attack in comparison to its steady counterpart for some angles of attack. Multiple solutions occur at post-stall and three different algorithms to choose solutions in these regimes show both unsteadiness and non-convergence of the iterations. The distribution of coefficient of lift on the wing span also shows sawtooth. Distribution of vorticity changes both along span and in the direction of the free-stream as the wake develops over time with distinct roll-up, which increases with time.

**Keywords:** Post-stall, unsteady, wing, aerodynamics.

## **MODELING COMPRESSIBLE FLOW IN PIPES AND POROUS MEDIA DURING BLOWDOWN EXPERIMENT**

**Thomas Namy , Bruyere Vincent , Paris Patrick**

General Coordination of Technological and Polytechnic Universities (CGUT) - Mexico

### **Abstract:**

A numerical model is developed to simulate gas blowdowns through a thin tube and a filter (porous media), separating a high pressure gas filled reservoir to low pressure ones. Based on a previous work, a one-dimensional approach is developed by using the finite element method to solve the transient compressible flow and to predict the pressure and temperature evolution in space and time. Mass, momentum, and energy conservation equations are solved in a fully coupled way in the reservoirs, the pipes and the porous media. Numerical results, such as pressure and temperature evolutions, are firstly compared with experimental data to validate the model for different configurations. Couplings between porous media and pipe flow are then validated by checking mass balance. The influence of the porous media and the nature of the gas is then studied for different initial high pressure values.

**Keywords:** Fluid mechanics, compressible flow, heat transfer, porous media.

## IMPLEMENTATION OF STATE-SPACE AND SUPER-ELEMENT TECHNIQUES FOR MODELING AND CONTROLLING SMART STRUCTURES WITH DAMPING FEATURES

Schmidt Ghareeb, Nade Rüdiger

University of the Commonwealth Caribbean (UCC) -Jamaica

### Abstract:

Minimizing the weight in flexible structures means reducing material and costs as well. However, these structures could become prone to vibrations. Attenuating these vibrations has become a pivotal engineering problem that shifted the focus of many research endeavors. One technique to do that is to design and implement an active control system. This system is mainly composed of a vibrating structure, a sensor to perceive the vibrations, an actuator to counteract the influence of disturbances, and finally a controller to generate the appropriate control signals. In this work, two different techniques are explored to create two different mathematical models of an active control system. The first model is a finite element model with a reduced number of nodes and it is called a super-element. The second model is in the form of state-space representation, i.e. a set of partial differential equations. The damping coefficients are calculated and incorporated into both models. The effectiveness of these models is demonstrated when the system is excited by its first natural frequency and an active control strategy is developed and implemented to attenuate the resulting vibrations. Results from both modeling techniques are presented and compared.

**Keywords:** Finite element analysis, super-element, state-space model.

## DESIGNING AN EXPERIMENTAL SETUP TO VALIDATE OUT-OF-THE-LOOP MITIGATION IN AIR TRAFFIC CONTROL MONITORING HIGH LEVELS OF AUTOMATION

**Oliver Di Flumeri , Francesca De Kraemer, Gianluca Ohneiser, Jan Crescenzo ,**

Universidad Nacional Abierta y a Distancia de México- Mexico

### **Abstract:**

An increasing degree of automation in air traffic will also change the role of the air traffic controller (ATCO). ATCOs will fulfill significantly more monitoring tasks compared to today. However, this rather passive role may lead to Out-Of-The-Loop (OOTL) effects comprising vigilance decrement and less situation awareness. The project MINIMA (Mitigating Negative Impacts of Monitoring high levels of Automation) has conceived a system to control and mitigate such OOTL phenomena. In order to demonstrate the MINIMA concept, an experimental simulation set-up has been designed. This set-up consists of two parts: 1) a Task Environment (TE) comprising a Terminal Maneuvering Area (TMA) simulator as well as 2) a Vigilance and Attention Controller (VAC) based on neurophysiological data recording such as electroencephalography (EEG) and eye-tracking devices. The current vigilance level and the attention focus of the controller are measured during the ATCO's active work in front of the human machine interface (HMI). The derived vigilance level and attention trigger adaptive automation functionalities in the TE to avoid OOTL effects. This paper describes the full-scale experimental set-up and the component development work towards it. Hence, it encompasses a pre-test whose results influenced the development of the VAC as well as the functionalities of the final TE and the two VAC's sub-components.

**Keywords:** Automation, human factors, air traffic controller, MINIMA, OOTL, Out-Of-The-Loop, EEG, electroencephalography, HMI, human machine interface.

## **SIMULATION OF GAS SWEETENING PROCESS: EXPLORING WASTE HYDRAULIC ENERGY RECOVERY**

**Meisam Farhani, Hassan Ali Ozgoli, Foad Moghadasi**

Kuwait College of Science and Technology - Kuwait

### **Abstract:**

In this research, firstly, a commercial gas sweetening unit with methyl-di-ethanol-amine (MDEA) solution is simulated and comprised in an integrated model in accordance with Aspen HYSYS software. For evaluation purposes, in the second step, the results of the simulation are compared with operating data gathered from South Pars Gas Complex (SPGC). According to the simulation results, the considerable energy potential contributed to the pressure difference between absorber and regenerator columns causes this energy driving force to be applied in power recovery turbine (PRT). In the last step, the amount of waste hydraulic energy is calculated, and its recovery methods are investigated.

**Keywords:** Gas sweetening unit, simulation, MDEA, power recovery turbine, waste-to-energy.

## EXPLORING THE COMPRESSION-TENSION BEHAVIOR OF AZ31B ROLLED SHEET IN THE ROLLING DIRECTION UNDER LARGE STRAIN

**Yazdanmehr Jahed**

Comprehensive University of Technology, Tehran - Iran

### **Abstract:**

Being made with the lightest commercially available industrial metal, Magnesium (Mg) alloys are of interest for light-weighting. Expanding their application to different material processing methods requires Mg properties at large strains. Several room-temperature processes such as shot and laser peening and hole cold expansion need compressive large strain data. Two methods have been proposed in the literature to obtain the stress-strain curve at high strains: 1) anti-buckling guides and 2) small cubic samples. In this paper, an anti-buckling fixture is used with the help of digital image correlation (DIC) to obtain the compression-tension (C-T) of AZ31B-H24 rolled sheet at large strain values of up to 10.5%. The effect of the anti-buckling fixture on stress-strain curves is evaluated experimentally by comparing the results with those of the compression tests of cubic samples. For testing cubic samples, a new fixture has been designed to increase the accuracy of testing cubic samples with DIC strain measurements. Results show a negligible effect of anti-buckling on stress-strain curves, specifically at high strain values.

**Keywords:** Large strain, compression-tension, loading-unloading, Mg alloys.

## EMPLOYING SNAILS AND FISH AS POLLUTION BIOMARKERS: A STUDY IN LAKE MANZALA AND LABORATORY C, WITH LABORATORY-EXPOSED SNAILS TO CHEMICAL MIXTURES

**Hanaa Khayat, Hoda Hamid, Kadria. Mahmoud,**

Central University of Las Villas, Santa Clara - Cuba

### **Abstract:**

Snails are considered as suitable diagnostic organisms for heavy metal-contaminated sites. *Biomphalaria alexandrina* snails are used in this work as pollution bioindicators after exposure to chemical mixtures consisted of heavy metals (HM); zinc (Zn), copper (Cu) and lead (Pb); and persistent organic pollutants; Decabromodiphenyl ether 98% (D) and Aroclor 1254 (A). The impacts of these tested chemicals, individual and mixtures, on liver and kidney functions, antioxidant enzymes, complete blood picture, and tissue histology were studied. Results showed that Cu was proved to be the highly toxic against snails than Zn and Pb where LC<sub>50</sub> values were 1.362, 213.198 and 277.396 ppm, respectively. Also, *B. alexandrina* snails exposed to the mixture of HM ( $\frac{1}{4}$  LC<sub>5</sub> Cu, Pb and Zn) showed the highest bioaccumulation of Cu and Zn in their whole tissue, the most significant increase in AST, ALT & ALP activities and the highest significant levels of total protein, albumin and globulin. Results showed significant alterations in CAT activity in snail tissue extracts while snail samples exposed to most experimental tests showed significant increase in GST activity. Snail samples that exposed to HM mixtures showed a significant decrease in total hemocytes count while snail samples that exposed to mixtures containing A & D showed a significant increase in total hemocytes and Hyalinocytes. Histopathological alterations in snail samples exposed to individual HM and their mixtures for 4 weeks showed degeneration, edema, hyper trophy and vaculation in head-foot muscle, degeneration and necrotic changes in the digestive gland and accumulation in most tested organs. Also, the hermaphrodite gland showed mature ova with irregular shape and reduction in sperm number. In conclusion, the resulted damage and alterations in *B. alexandrina* studied parameters can be used as bioindicators to the presence of pollutants in its habitats.

**Keywords:** *Biomphalaria*, Zn, Cu, Pb, AST, ALT, ALP, total protein albumin, globulin, CAT and Histopathology.

## **EFFECTIVENESS OF THREE HERBICIDES ON CONTROLLING WILD BARLEY (HORDEUM SPONTANEUM C. KOCH) ACROSS VARIOUS GROWTH STAGES WITH NITROGEN FERTILIZER ADDITIVE**

**Edrisi Moeeni, A. Farahbakhsh**

Islamic Azad University, Central Tehran Branch - Iran

### **Abstract:**

To study the effect of nitrogenous additive spray solution on the efficacy of three herbicides i.e. pinoxaden (Trade name: Axial), sulfosulfuron+metsulfuron-methyl (Trade name: Total) and sulfosulfuron (Trade name: Apirus) in controlling wild barley (*Hordeum spontaneum* C. Koch), in different growth stages, a greenhouse experiment as a split plot in a completely randomized design in three replications was conducted. One month after treatments, all plants were harvested and growth parameters were determined. The data were analyzed with computer. The results showed that the herbicide applications with and without nitrogen additive caused significant reductions in growth parameters of wild barley at 2-4 leaf stage. However, the plants were not killed by this herbicide. Plants were killed completely due to applications of the two other herbicides i.e. Apirus and Total at 2-4 leaf. There was no significant difference between the effect of these two herbicides. There was no significant difference between the highest rate of each herbicide used alone and that of the lowest rate with nitrogenous additive.

**Keywords:** Growth stage, herbicide, nitrogenous additive, wild barley.



## EXPLORING *SALVIA SCLAREA* L. POTENTIAL FOR PHYTOREMEDIATION OF HEAVY METAL-CONTAMINATED SOILS

**Violina Todorov, Radka Ivanova, Angelova Givko ,**

University of Science and Technology of China- China

### **Abstract:**

A field study was conducted to evaluate the efficacy of *Salvia sclarea* L. for phytoremediation of contaminated soils. The experiment was performed on an agricultural fields contaminated by the Non-Ferrous-Metal Works near Plovdiv, Bulgaria. The content of heavy metals in different parts of *Salvia sclarea* L. (roots, stems, leaves and inflorescences) was determined by ICP. The essential oil of the *Salvia sclarea* L. was obtained by steam distillation in laboratory conditions and was analyzed for heavy metals and its chemical composition was determined. *Salvia sclarea* L. is a plant which is tolerant to heavy metals and can be grown on contaminated soils. Based on the obtained results and using the most common criteria, *Salvia sclarea* L. can be classified as Pb hyperaccumulator and Cd and Zn accumulators, therefore, this plant has suitable potential for the phytoremediation of heavy metal contaminated soils. Favorable is also the fact that heavy metals do not influence the development of the *Salvia sclarea* L., as well as on the quality and quantity of the essential oil. For clary sage oil obtained from the processing of clary sage grown on highly contaminated soils, its key odour-determining ingredients meet the quality requirements of the European Pharmacopoeia and BS ISO 7609 regarding Bulgarian clary sage oil and/or have values that are close to the limits of these standards. The possibility of further industrial processing will make *Salvia sclarea* L. an economically interesting crop for farmers of phytoextraction technology.

**Keywords:** Clary sage, heavy metals, phytoremediation, polluted soils.

## **IMPACT OF COMPOST APPLICATION ON HEAVY METAL UPTAKE, NUTRIENT ALLOCATION, AND QUALITY OF ORIENTAL TOBACCO KRUMOVGRAD 90**

**Violina Popova , Venelina Angelova , Radka Ivanova, Krasimir Givko, Ivan Ivanov,**

Eastern University named after Mahmud Kashgari Barskani- Kyrgyzstan

### **Abstract:**

A comparative research on the impact of compost on uptake and allocation of nutrients and heavy metals and quality of Oriental tobacco Krumovgrad 90 has been carried out. The experiment was performed on an agricultural field contaminated by the lead zinc smelter near the town of Kardzali, Bulgaria, after closing the lead production. The compost treatments had significant effects on the uptake and allocation of plant nutrients and heavy metals. The incorporation of compost leads to decrease in the amount of heavy metals present in the tobacco leaves, with Cd, Pb and Zn having values of 36%, 12% and 6%, respectively. Application of the compost leads to increased content of potassium, calcium and magnesium in the leaves of tobacco, and therefore, may favorably affect the burning properties of tobacco. The incorporation of compost in the soil has a negative impact on the quality and typicality of the oriental tobacco variety of Krumovgrad 90. The incorporation of compost leads to an increase in the size of the tobacco plant leaves, the leaves become darker in colour, less fleshy and undergo a change in form, becoming (much) broader in the second, third and fourth stalk position. This is accompanied by a decrease in the quality of the tobacco. The incorporation of compost also results in an increase in the mineral substances (pure ash), total nicotine and nitrogen, and a reduction in the amount of reducing sugars, which causes the quality of the tobacco leaves to deteriorate (particularly in the third and fourth harvests).

**Keywords:** Chemical composition, compost, oriental tobacco, quality.

## INITIAL FINDINGS: AFLATOXIN DETECTION IN PADDY AND MILLED RICE FRACTIONS IN GUYANA

**M. Morrison, Lambert Chester, Samuels Ledoux**

Pedagogical and Technological University of Colombia- Colombia

### **Abstract:**

A survey was conducted in the five rice-growing regions in Guyana to determine the presence of aflatoxins in multiple fractions of rice in June/October 2015 growing season. The fractions were paddy, steamed paddy, cargo rice, white rice and parboiled rice. Samples were analyzed by High Performance Liquid Chromatography. A subset of the samples was further analyzed by enzyme-linked immunosorbent assay (ELISA) for concurrence. All analyses were conducted at the University of Missouri, USA. Of the 186 samples tested, 16 had aflatoxin concentrations greater than 20 ppb the recommended limit for aflatoxins in food according to the United States Food and Drug Administration. An additional three samples had aflatoxin B<sub>1</sub> concentrations greater than the European Union Commission maximum levels for aflatoxin B<sub>1</sub> in rice at 5 µg/kg and total aflatoxins (B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub> and G<sub>2</sub>) at 10 µg/kg. The survey indicates that there is no widespread aflatoxin problem in rice in Guyana. The incidence of aflatoxins appears to be localized.

**Keywords:** Aflatoxins, enzyme-linked immunosorbent assay, high-performance liquid chromatography, rice fractions.

## **STRATEGIES FOR MANAGING RICE-FIELD CONVERSION IN PANGKEP REGENCY, SOUTH SULAWESI, INDONESIA**

**Nurliani, Ida Rosada**

Mawlana Jalaludin Muhammad Balkhi Institute of Higher Education- Afghanistan

### **Abstract:**

The national rice consumption keeps increasing along with raising income of the households and the rapid growth of population. However, food availability, particularly rice, is limited. Impacts of rice-field conversion have run cumulatively, as we can see on potential losses of rice and crops production, as well as work opportunity that keeps increasing year-by-year. Therefore, it requires policy recommendation to control rice-field conversion through economic, social, and ecological approaches. The research was a survey method intended to: (1) Identify internal factors; quality and productivity of the land as the cause of land conversion, (2) Identify external factors of land conversion, value of the rice-field and the competitor's land, workforce absorption, and regulation, as well as (3) Formulate strategies in controlling rice-field conversion. Population of the research was farmers who applied land conversion at Pangkep Regency, South Sulawesi. Samples were determined using the incidental sampling method. Data analysis used productivity analysis, land quality analysis, total economic value analysis, and SWOT analysis. Results of the research showed that the quality of rice-field was low as well as productivity of the grains (unhulled-rice). So that, average productivity of the grains and quality of rice-field were low as well. Total economic value of rice-field was lower than the economic value of the embankment. Workforce absorption value on rice-field was higher than on the embankment. Strategies in controlling such rice-field conversion can be done by increasing rice-field productivity, improving land quality, applying cultivation technique of specific location, improving the irrigation lines, and socializing regulation and sanction about the transfer of land use.

**Keywords:** Land conversion, quality of rice-field, land economic value, strategy in controlling.

## LONG-TERM IMPACT OF RECLAIMED AGRO-INDUSTRIAL WASTEWATER ON SOIL CHEMICAL PROPERTIES IN HERBACEOUS CROP IRRIGATION

Disciglio Tarantino, , Gatta Frabboni,

Kingdom University- Bahrain

### Abstract:

Worldwide, about two-thirds of industrial and domestic wastewater effluent is discharged without treatment, which can cause contamination and eutrophication of the water. In particular, for Mediterranean countries, irrigation with treated wastewater would mitigate the water stress and support the agricultural sector. Changing global weather patterns will make the situation worse, due to increased susceptibility to drought, which can cause major environmental, social, and economic problems. The study was carried out in open field in an intensive agricultural area of the Apulian region in Southern Italy where freshwater resources are often scarce. As well as providing a water resource, irrigation with treated wastewater represents a significant source of nutrients for soil–plant systems. However, the use of wastewater might have further effects on soil. This study thus investigated the long-term impact of irrigation with reclaimed agro-industrial wastewater on the chemical characteristics of the soil. Two crops (processing tomato and broccoli) were cultivated in succession in Stornarella (Foggia) over four years from 2012 to 2016 using two types of irrigation water: groundwater and tertiary treated agro-industrial wastewater that had undergone an activated sludge process, sedimentation filtration, and UV radiation. Chemical analyses were performed on the irrigation waters and soil samples. The treated wastewater was characterised by high levels of several chemical parameters including TSS, EC, COD, BOD<sub>5</sub>, Na<sup>+</sup>, Ca<sup>2+</sup>, Mg<sup>2+</sup>, NH<sub>4</sub>-N, PO<sub>4</sub>-P, K<sup>+</sup>, SAR and CaCO<sub>3</sub>, as compared with the groundwater. However, despite these higher levels, the mean content of several chemical parameters in the soil did not show relevant differences between the irrigation treatments, in terms of the chemical features of the soil.

**Keywords:** Agro-industrial wastewater, broccoli, long-term re-use, tomato.

## **ASSESSING WATER USE EFFICIENCY IN CITRUS FARMING OF THE SOUSS REGION (MOROCCO) UNDER CHANGING CLIMATE: IMPACT OF IRRIGATION METHODS**

**H. Elomari, Fallah Elmousadik**

Shahjalal University of Science and Technology- Bangladesh

### **Abstract:**

This work was conducted in the Souss region, known by severe water scarcity and a high agricultural activity dominated by the citrus (representing 40% of the area of Morocco's citrus). The objective of this work is to diagnose the current situation of the water efficiency in citrus irrigation and analyze the impact of various production factors on water productivity and its sustainability in the context of climate change. A field survey was conducted on 65 farms with areas varying from 0.5 to 350 ha. The stratification method was adopted as a sampling frame. Initial result indicates that the use of water shows a huge shortfall, since 31% of farms in the region are still using the surface irrigation system and 67% of farms are still using only the experience of the manager to control and adjust irrigation. The assessment of water productivity showed a value of 1.2 kg/m<sup>3</sup> for surface irrigation and 3.8 kg/m<sup>3</sup> for drip irrigation. The use of tools for control and adjustment of irrigation increases the water productivity of drip irrigation by 25%. The availability of the technical staff (internal or external) allows an increase in productivity of 172.4% compared to farms without technical advice.

**Keywords:** Citrus, irrigation efficiency, water productivity, drip irrigation.

## ASSESSMENT OF AGRICULTURAL TRAITS OF SMOOTH BROMEGRASS (*BROMUS INERMIS LEYSS*) LINES IN KONYA REGIONAL CONDITIONS

**Tarantino Libutti,**

Al-Andalous University- Yemen

### **Abstract:**

The present study was conducted to determine the yield and yield components of smooth brome grass lines under the environmental conditions of the Konya region during the growing seasons between 2011 and 2013. The experiment was performed in the randomized complete block design (RCBD) with four replications. It was found that the selected lines had a statistically significant effect on all the investigated traits, except for the main stem length and the number of nodes in the main stem. According to the two-year average calculated for various parameters checked in the smooth brome grass lines, the main stem length ranged from 71.6 cm to 79.1 cm, the main stem diameter from 2.12 mm to 2.70 mm, the number of nodes in the main stem from 3.2 to 3.7, the internode length from 11.6 cm to 18.9 cm, flag leaf length from 9.7 cm to 12.7 cm, flag leaf width from 3.58 cm to 6.04 mm, herbage yield from 221.3 kg da<sup>-1</sup> to 354.7 kg da<sup>-1</sup> and hay yield from 100.4 kg da<sup>-1</sup> to 190.1 kg da<sup>-1</sup>. The study concluded that the smooth brome grass lines differ in terms of yield and yield components. Therefore, it is very crucial to select suitable varieties of smooth brome grass to obtain optimum yield.

**Keywords:** Semiarid region, smooth brome grass, yield, yield components.

## OPTIMAL TIMING FOR NEWBORN CALF CAMELS TO ABSORB COLOSTRUM IMMUNOGLOBULIN (IGG) IN RELATION TO CORTISOL AND THYROXIN LEVELS

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### Abstract:

A major challenge in camel productivity is the high mortality rate of camel calves in the early stage due to the lack of colostrums. This study investigates the time required for the calves to obtain the optimum amount of the immunoglobulin (IgG). Eleven pregnant female camels (*Camelus Dromedarius*) were selected randomly and variant in age and gestation. After delivery, 7 calves were obtained and used for this investigation. Colostrum samples were collected from mothers immediately after parturition. Blood samples were obtained from the calves as follow: 0 day (before suckling), 24, 48, 72, 96, 120 and 144 hours, 2nd, 3rd, and 4th weeks post suckling. Blood serum and colostrums whey were separated and used to determine IgG concentration, total protein and concentration of Cortisol and Thyroxin. The results showed high levels of IgG in camel colostrums ( $328.8 \pm 4.5$  mg / ml). The IgG concentration in serum of calves was the highest within 1st 24 h after suckling (140.75 mg /ml), and then declined gradually reached lower level at 144 h (41.97 mg / ml). The average turnover rate ( $t_{1/2}$ ) of serum IgG in the all cases was 3.22 days. The turnover of ranged from 2.56 days for calves have values of IgG more than average and 7.7 days for those with values below average. In spite of very high levels of thyroxin in sera of new born the results showed no correlation between cortisol and thyroxin with IgG levels.

**Keywords:** Camel, cortisol, IgG, thyroxin, turn-over rate.



## **DEVELOPING ESSENTIAL OIL COMPOSITION AS ANTIBACTERIAL FEED ADDITIVE FOR POULTRY: FORMULATION AND TECHNOLOGY**

**Goderdzishvili Barbaqadze, LomtadzeMosidze, MshvildadzeBakuridze, A. Bakuridze**

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### **Abstract:**

This paper focuses on the formulation of phytobiotic designated for further implantation in poultry farming. Composition was meant to be water-soluble powder containing antibacterial essential oils. The development process involved Thyme, Monarda and Clary sage essential oils. The antimicrobial activity of essential oils composite was meant to be tested against gram-negative and gram-positive bacterial strains. The results are processed using the statistical program Sigma STAT. To make essential oils composition water soluble surfactants were added to them. At the first stage of the study, nine options for the optimal composition of essential oils and surfactants were developed. The effect of the amount of surfactants on the essential oils composition solubility in water has been investigated. On the basis of biopharmaceutical studies, the formulation of phytobiotic has been determined: Thyme, monarda and clary sage essential oils 2:1:1 - 100 parts; Licorice extract 5.25 parts and inhalation lactose 300 parts. A technology for the preparation of phytobiotic has been developed and a technological scheme for the preparation of phytobiotic has been made up. The research was performed within the framework of the grant project CARYS-19-363 funded by the Shota Rustaveli National Science Foundation of Georgia.

**Keywords:** Clary, essential oils, monarda, phytobiotics, poultry, thyme.

## COMPARING REPRODUCTIVE HORMONE LEVELS IN INFERTILE AND FERTILE DAIRY COWS

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Nagoya Ryujo Women's University- Japan

### **Abstract:**

The object of this study was to investigate several hormones correlated to the reproduction and inhibin A, inhibin B and NO levels in the infertile dairy cows as attempt to illustrate the physiological causes of dairy cows infertility.

40 Holstein cow (21 infertile and 19 fertile) were used at estrous phase of the cycle, Hormones FSH, LH, E2, Testosterone, were measured using ELISA method. inhibin A and B also estimated by ELISA method, Nitric oxide was measured by Greiss reagent method.

The results showed different concentrations of the hormone in which FSH illustrated significantly higher concentration in the infertile cows than fertile cows ( $P < 0.05$ ). LH and E2 showed significant decrease in the infertile cows than the fertile cows ( $P < 0.05$ ), no significant difference appeared in testosterone concentrations in the fertile cows and infertile cows ( $P > 0.05$ ). The both inhibins A and B showed significant  $P < 0.05$  decrease concentrations in the infertile cows also NO showed clearly significant decrease  $P < 0.05$  in the infertile cows.

In conclusion, the present study approved the poorly ovarian activities and reproduction disturbance of infertile cows in spite of trigger estrous signs, the study confirmed a positive correlation between inhibins and NO to regulate the ovarian physiology. These inhibins represent effective markers of dairy cow infertility.

**Keywords:** Cows, Inhibin (A, B), Infertility, Nitric oxide (NO).

## **INTERTIDAL FIXED STAKE NET TRAPS (HADRAH) FISHERY IN KUWAIT: DISTRIBUTION, CATCH RATES, AND SPECIES COMPOSITION**

**Ali Baz, Mohsen Husaini, James Bishop**

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### **Abstract:**

Intertidal fixed stake net trap (Hadrah) is one of the oldest fishing gears used throughout the Arabian Gulf countries since the 1800s and also one of most the efficient methods of capturing fish from the intertidal area. This study describes the hadrah fishery in Kuwait.

From October 2001 to December 2002, more than 37,372 specimens representing 95 species (89 fish, 2 mollusks and 4 crustaceans) were measured from hadrah, located in three different areas along Kuwait's coast. In Kuwait Bay, catch rates averaged 62 kg/sir-day (from 14 kg/sir-day in February to 160 kg/sir-day in October 2002). Commercial species accounted for 41% of the catches. Catches from Failakah Island averaged 96 kg/sir-day from June to September, with 61% of the catch being commercial species. In the southern area, catches averaged only 32 kg/sir-day and only 34% were commercially important.

Forty percent of the hadrah catches were juveniles, which shows that Kuwait's shallow intertidal waters, particularly in Kuwait Bay, served as prime nursery habitat,. To maintain ecosystem biodiversity and recruitment success of the fishes, we recommended that all hadrah should be removed from Kuwait Bay. In the future, removal of hadrah from other locations should be considered.

**Keywords:** Catch and effort, Hadrah, Intertidal Fixed stake net, Kuwait, Species composition.

## ULTRASONIC EVALUATION OF CORPORA LUTEA AND PLASMA PROGESTERONE LEVELS IN EARLY PREGNANT AND NON-PREGNANT COWS

**Abdurraouf Kubota , Salah Al- Raju , Solmon Guru Dahash , Gaja Chikara**

National Institute of Design, Assam Jorhat Autonomous - India

### **Abstract:**

Corpus luteum cross sectional (by ultrasonography) and plasma progesterone (by DELFIA) were estimated in early pregnant and non pregnant cows on days 14<sup>th</sup> and 20<sup>th</sup> to 23<sup>rd</sup> post insemination. On day 14<sup>th</sup>, corpus luteum sectional area was 348.43 mm<sup>2</sup> in pregnant and 387.84mm<sup>2</sup> in non pregnant cows. Within days 20<sup>th</sup> to 23<sup>rd</sup>, corpus luteum sectional area ranged between 342.06 and 367.90 mm<sup>2</sup> in pregnant and between 193.85 and 270.69 mm<sup>2</sup> in non pregnant cows. Plasma progesterone level was 2.43 ng/ml in pregnant and 2.46 ng/ml in non pregnant cows on day 14<sup>th</sup>, while during days 20<sup>th</sup> to 23<sup>rd</sup> the level ranged between 2.47 and 2.84 ng/ml in pregnant and between 0.53 and 1.17 ng/ml in non pregnant cows. Results of both luteal tissue areas as well as plasma progesterone levels were highly significantly deferent ( $P<0.01$ ) between pregnant and non pregnant cows during days 20<sup>th</sup> to 23<sup>rd</sup>, but there were no significant differences on day 14<sup>th</sup>. The correlation between CL cross sectional area and plasma progesterone level was 0.4 in pregnant cows and 0.99 in non pregnant cow. It is clear, from this study, that ultrasonic assessment of corpora lutea is a viable alternative to determine plasma progesterone levels for early pregnancy diagnosis in cows.

**Keywords:** Progesterone, ultrasonography, corpus luteum, pregnancy diagnosis, cow.

## EFFECTS OF OVERFEEDING ON PRODUCTIVE PERFORMANCE, FOIE GRAS PRODUCTION, BLOOD PARAMETERS, AND MORTALITY RATES IN TWO DUCK BREEDS

Mona Sayed, E. Mahrous

Qom University of Medical Sciences, Qom - Iran

### Abstract:

A total of 60 male mule ducks and 60 male Muscovy ducks were allotted into three groups (n = 20) to estimate the effects of overfeeding (two and four meals) versus ad libitum feeding on productive performance traits, foie gras production, internal organs, and blood parameters.

The results show that force-feeding four meals significantly increased ( $P < 0.01$ ) body weight, weight gain, and gain percentage compared to force-feeding two meals. Both force-feeding regimes (two or four meals) induced significantly higher body weight, weight gain, gain percentage, and absolute carcass weight than ad libitum feeding; however, carcass percentage was significantly higher in ad libitum feeding. Mule ducks had significantly higher weight gain and weight gain percentages than Muscovy ducks.

Feed consumption per kilogram of foie gras and per kilogram weight gain was lower for the four-meal than for the two-meal forced feeding regime. Force-feeding four meals induced significantly higher liver weight and percentage ( $488.96 \pm 25.78\text{g}$ ,  $7.82 \pm 0.40\%$ ) than force-feeding two meals ( $381.98 \pm 13.60\text{g}$ ,  $6.42 \pm 0.21\%$ ). Moreover, feed conversion was significantly higher under forced feeding than under ad libitum feeding ( $77.65 \pm 3.41\text{g}$ ,  $1.72 \pm 0.05\%$ ;  $P < 0.01$ ).

Forced feeding (two or four meals) increased all organ weights (intestine, proventriculus, heart, spleen, and pancreas) over ad libitum feeding weights, except for the gizzard; however intestinal and abdominal fat values were higher for four-meal forced feeding than for two-meal forced feeding.

Overfeeding did not change blood parameters significantly compared to ad libitum feeding; however, four-meal forced feeding improved the quality of foie gras since it significantly increased the percentage of grade A foie gras (62.5%) at the expense of grades B (33.33%) and C (4.17%) compared with the two-meal forced feeding.

The mortality percentage among Muscovy ducks during the forced feeding period was 22.5%, compared to 0% in mule ducks. Liver weight was highly significantly correlated with life weight after overfeeding and certain blood plasma traits.

**Keywords:** Foie gras, overfeeding, ducks, productive performance.

## **EFFECTS OF COPPER AND ZINC DEFICIENCY ON MILK PRODUCTION IN INTENSIVELY GRAZED DAIRY COWS: CASE STUDY FROM NORTH-EAST ROMANIA**

**Alina Anton, Gheorghe Solcan, Carmen Solcan**

Bahrain Institute of Banking and Finance- Bahrain

### **Abstract:**

The influence of copper and zinc supplements on milk production performances and health indicators was tested in a 20- week feeding trial, with 40 Holstein-Friesian lactating cows, divided in four groups (copper, zinc, copper-zinc and control). Correlations of the Cu and Zn plasma values with some animal performance criteria of health (body condition score and somatic cell counts) and production (milk yield, peak milk yield, fat and crude protein content) were done. During the 140 days of the experiment, the two added minerals caused a statistically significant increase ( $p < 0.05$ ) of their plasma values after the peak of the cows' lactations. It was also observed that subjects that have received copper and zinc supplements had the lowest number of somatic cell counts in milk. The Pearson correlation test showed a positive correlation ( $p = 0.007$ ,  $r = + 0.851$ ) between the plasma Zn and the milk production. The improvement of the nutritional status improved the milk production performances of the cows as well as their health performances.

**Keywords:** Copper, dairy cows, health, milk production, zinc

## **EXAMINING SALT-TOLERANCE IN TISSUE-CULTURED DATE PALM VARIETIES WITHIN CONTROLLED ENVIRONMENTS**

**Bhat Mulla, M. Khalil**

Royal College of Surgeons in Ireland (RCSI) - Bahrain- Bahrain

### **Abstract:**

A study was conducted in greenhouse environment to determine the response of five tissue-cultured date palm cultivars, Al- Ahamad, Nabusaif, Barhee, Khalas, and Kasab to irrigation water salinity of 1.6, 5, 10, or 20 dS/ m. The salinity level of 1.6dS/m, was used as a control. The effects of high salinity on plant survival were manifested at 360 days after planting (DAP) onwards. Three cultivars, Khalas, Kasab and Barhee were able to tolerate 10 dS/m salinity level at 24 months after the start of study. Khalas tolerated the highest salinity level of 20 dS/ m and 'Nabusaif' was found to be the least tolerant cv. The average heights of palms and the number of fronds were decreased with increasing salinity levels as time progressed.

**Keywords:** Acclimatization, Irrigation water salinity, Kuwait, Land degradation.

## **ASSESSING POTATO CULTIVAR SUITABILITY FOR CHIP AND STICK PRODUCTION WITH MICROWAVE-VACUUM DRYING**

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### **Abstract:**

The aim of present experiment was to evaluate the influence of cultivar to quality parameters of dried potato chips and sticks produced in microwave-vacuum drier. The potatoes before drying were blanched in oil and water at 180°C and at 85°C respectively. The moisture content, crispiness, the colour (CIE L\*a\*b\*), the content of ascorbic acid, total carotenoids and total fat content of dried potato chips and sticks was determined. The highest ascorbic acid content, high content of carotenoids, low total fat content, low acrylamide content and good crispiness (low breaking force) especially for sticks was determined in the samples of Gundega cultivar.

**Keywords:** Potato, chips, sticks, vacuum-microwave, drying, cultivar, blanching.



## UTILIZATION OF TUBERCULIN, TETANUS IMMUNOGLOBULIN, AND DPT VACCINE AS AVIAN IN VIVO T-LYMPHOCYTE MITOGENS

**Ibrahim Mohammed Saeed Shnawa**

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### **Abstract:**

The avian phytohaemagglutinin skin test is being proved as an in vivo system for the evaluation an avian in vivo T cell mitogenicity. The test system was one week old Gallus domesticus broiler Chickens. Five replicates were done for each of the whole, 1:10 dilutions of each of 0.05 IU tuberculin, tetanus immunoglobulin and DPT vaccine as test materials. The evaluation parameters were the skin indurations and lymphoblast percentages in bone marrow lymphocytes. Tuberculin indurations were 2.06 and 1.26mm for 0.05 IU respectively while lymphoblast percent were 0.234 and 0.1 accordingly. The skin indurations of 135mg/ml and 1.35mg/ml tetanus immunoglobulin were 4.86 and 3.96mm while lymphoblast percentages were 0.3 and 0.14 respectively. The whole DPT and 1:10 concentration were with 4.5 and 3.2mm while their lymphoblast percentages were 0.28 and 0.12 accordingly. Thus the mitogenicity of the test materials was of dependant type.

**Keywords:** DPT, Mitogenicity, Tetenus, immunoglobulin, Tubercular.

## DEVELOPMENTAL ALTERATIONS IN RABBIT DUODENAL MUCOSAL-SUBMUCOSAL COMPOSITION

**Elnasharty Abou-Ghanema., Sayed-Ahmed Abo Elnour**

University of Badji Mokhtar Annaba (UBMA) – Algeria

### **Abstract:**

The sequential morphologic changes of rabbit duodenal mucosa-submucosa were studied from primodial stage to birth in 15 fetuses and during the early days of life in 21 rabbit newborns till maturity using light, scanning and transmission electron microscopy. Fetal rabbit duodenum develops from a simple tube of stratified epithelium to a tube containing villus and intervillus regions of simple columnar epithelium. By day 21 of gestation, the first rudimentary villi were appeared and by day 24 the first true villi were appeared. The Crypts of Lieberkuhn did not appear until birth. By the first day of postnatal life the duodenal glands appeared. The histological maturity of the rabbit small intestine occurred one month after birth. In conclusion, at all stages, the sequential morphologic changes of the rabbit small intestine developed to meet the structural and physiological demands during the fetal stage to be prepared to extra uterine life.

**Keywords:** Duodenum, mucosa, submucosa, morphogenesis, rabbit.

## **ASSESSING ENERGY DEMAND IN A HISTORIC BUDAPEST DISTRICT: EXPLORING ENERGY INTENSITY**

**Talamon Viktória , Attila Sugár , Horkai Kita, Michihiro András**

Addis Ababa Commercial College- Ethiopia

### **Abstract:**

The dense urban fabric of the 7<sup>th</sup> district of Budapest -known as the former Jewish Quarter-, contains mainly historical style, multi-story tenement houses with courtyards. The high population density and the unsatisfactory energetic state of the buildings result high energy consumption. As a preliminary survey of a complex rehabilitation plan, the authors aim to determine the energy demand of the area. The energy demand was calculated by analyzing the structure and the energy consumption of each building by using Geographic Information System (GIS) methods. The carbon dioxide emission was also calculated, to assess the potential of reducing the present state value by complex structural and energetic rehabilitation. As a main focus of the survey, an energy intensity map has been created about the area.

**Keywords:** Carbon dioxide, energy intensity map, geographic information system, GIS, Hungary, Jewish quarter, rehabilitation.

## EXPLORING BIOMIMETIC STRUCTURAL FORMS: ACHIEVING VITAL SUSTAINABILITY IN TALL ARCHITECTURE

**Osama Al-Sehail**

British University in Egypt- **Egypt**

### **Abstract:**

This paper argues for sustainability as a necessity in the evolution of tall architecture. It provides a different mode for dealing with sustainability in tall architecture, taking into consideration the speciality of its typology. To this end, the article develops a Biomimetic Structural Form as a paradigm to attain Vital Sustainability. A Biomimetic Structural Form, which is derived from the amalgamation of biomimicry as an approach for sustainability defining nature as source of knowledge and inspiration in solving humans' problems and a Structural Form as a catalyst for evolving tall architecture, is a dynamic paradigm emerging from a conceptualizing and morphological process. A Biomimetic Structural Form is a flow system whose different forces and functions tend to be "better", more "fit", to "survive", and to be efficient. Through geometry and function—the two aspects of knowledge extracted from nature—the attributes of the Biomimetic Structural Form are formulated. Vital Sustainability is the survival level of sustainability in natural systems through which a system enhances the performance of its internal working and its interaction with the external environment. A Biomimetic Structural Form, in this context, is a medium for evolving tall architecture to emulate natural models in their ways of coexistence with the environment. As an integral part of this article, the sustainable super tall building 3Ts is discussed as a case study of applying Biomimetic Structural Form.

**Keywords:** Biomimicry, design in nature, high-rise buildings, sustainability, structural form, tall architecture, vital sustainability.

## **PRESERVING SOCIAL MEMORY: A CASE STUDY OF UCH DUKKAN NEIGHBORHOOD IN ARDABIL CITY, AZERBAIJAN REGION, IRAN**

**Yousef Daneshvar Rouyandozagh**

British University in Egypt- **Egypt**

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### **Abstract:**

Conservation of historical urban patterns in the traditional neighborhoods is a part of creating integrated urban environments that are socially more sustainable. Urbanization reflects on life conditions and social, physical, economical characteristics of the society. In this regard, historical zones and traditional regions are affected by dramatic interventions on these characteristics. This article focuses on the Uch Dukkan neighborhood located in Ardabil City in Azarbaijani region of Iran, which has been up to such interventions that led to its transformation from the past to the present. After introducing a brief inventory of the main elements of the historical zone and the neighborhood; this study explores the changes and transformations in different periods; and their impacts on the quality of the environment and its social sustainability. The survey conducted in the neighborhood as part of this research study revealed that the Uch Dukkan neighborhood and the unique architectural heritage that it possesses have become more inactive physically and functionally in a decade. This condition requires an exploration and comparison of the present and the expected transformations of the meaning of social space from the most private unit to the urban scale. From this token, it is argued that an architectural point of view that is based on space order; use and meaning of space as a social and cultural image, should not be ignored. Based on the interplay between social sustainability, collective memory, and the urban environment, study aims to make the invisible portion of ignorance clear, that ends up with a weakness in defining the collective meaning of the neighborhood as a historic urban district. It reveals that the spatial possessions of the neighborhood are valuable not only for their historical and physical characteristics, but also for their social memory that is to be remembered and constructed further.

**Keywords:** Urban integrity, social sustainability, collective memory, social decay.

## **CREATING ENERGY BENCHMARKS FROM MANDATORY ENERGY AND EMISSIONS REPORTING DATA: ONTARIO'S POST-SECONDARY RESIDENCES**

**A. Xavier Mendieta, J. J McArthur**

University College of Applied Sciences- Palestine

Agriculture and Forestry University - Nepal

### **Abstract:**

Governments are playing an increasingly active role in reducing carbon emissions, and a key strategy has been the introduction of mandatory energy disclosure policies. These policies have resulted in a significant amount of publicly available data, providing researchers with a unique opportunity to develop location-specific energy and carbon emission benchmarks from this data set, which can then be used to develop building archetypes and used to inform urban energy models. This study presents the development of such a benchmark using the public reporting data. The data from Ontario's Ministry of Energy for Post-Secondary Educational Institutions are being used to develop a series of building archetype dynamic building loads and energy benchmarks to fill a gap in the currently available building database. This paper presents the development of a benchmark for college and university residences within ASHRAE climate zone 6 areas in Ontario using the mandatory disclosure energy and greenhouse gas emissions data. The methodology presented includes data cleaning, statistical analysis, and benchmark development, and lessons learned from this investigation are presented and discussed to inform the development of future energy benchmarks from this larger data set. The key findings from this initial benchmarking study are: (1) the importance of careful data screening and outlier identification to develop a valid dataset; (2) the key features used to develop a model of the data are building age, size, and occupancy schedules and these can be used to estimate energy consumption; and (3) policy changes affecting the primary energy generation significantly affected greenhouse gas emissions, and consideration of these factors was critical to evaluate the validity of the reported data.

**Keywords:** Building archetypes, data analysis, energy benchmarks, GHG emissions.

## **ADAPTIVE DESIGN FOR COLLECTIVE HOUSING USING LARGE PREFABRICATED CONCRETE PANELS**

**Ungureanu Daniel , Viorel M. Muntean**

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### **Abstract:**

More than half of the urban population in Romania lives today in residential buildings made out of large prefabricated reinforced concrete panels. Since their initial design was made in the 1960's, these housing units are now being technically and morally outdated, consuming large amounts of energy for heating, cooling, ventilation and lighting, while failing to meet the needs of the contemporary life-style. Due to their widespread use, the design of a system that improves their energy efficiency would have a real impact, not only on the energy consumption of the residential sector, but also on the quality of life that it offers. Furthermore, with the transition of today's existing power grid to a "smart grid", buildings could become an active element for future electricity networks by contributing in micro-generation and energy storage. One of the most addressed issues today is to find locally adapted strategies that can be applied considering the 20-20-20 EU policy criteria and to offer sustainable and innovative solutions for the cost-optimal energy performance of buildings adapted on the existing local market. This paper presents a possible adaptive design scenario towards sustainable retrofitting of these housing units. The apartments are transformed in order to meet the current living requirements and additional extensions are placed on top of the building, replacing the unused roof space, acting not only as housing units, but as active solar energy collection systems. An adaptive building envelope is ensured in order to achieve overall air-tightness and an elevator system is introduced to facilitate access to the upper levels.

**Keywords:** Adaptive building, energy efficiency, retrofitting, residential buildings, smart grid.

## **APPROACHING SUSTAINABLE PUBLIC HOUSING: PERSPECTIVES ON PROPERTY MANAGEMENT AND FINANCIAL FEASIBILITY**

**Kung-Jen Tu**

Nagoya University of Commerce & Business- Japan

### **Abstract:**

Many public housing properties developed by local governments in Taiwan in the 1980s have deteriorated severely as these rental apartment buildings aged. The lack of building maintainability considerations during project design phase as well as insufficient maintenance funds have made it difficult and costly for local governments to maintain and keep public housing properties in good shape. In order to assist the local governments in achieving and delivering sustainable public housing, this paper intends to present a developed design evaluation method to be used to evaluate the presented design schemes from property management and financial feasibility perspectives during project design phase of public housing projects. The design evaluation results, i.e. the property management and financial implications of presented design schemes that could occur later during the building operation and maintenance phase, will be reported to the client (the government) and design schemes revised consequently. It is proposed that the design evaluation be performed from two main perspectives: (1) Operation and property management perspective: Three criteria such as spatial appropriateness, people and vehicle circulation and control, property management working spaces are used to evaluate the 'operation and PM effectiveness' of a design scheme. (2) Financial feasibility perspective: Four types of financial analyses are performed to assess the long term financial feasibility of a presented design scheme, such as operational and rental income analysis, management fund analysis, regular operational and property management service expense analysis, capital expense analysis. The ongoing Chung-Li Public Housing Project developed by the Taoyuan City Government will be used as a case to demonstrate how the presented design evaluation method is implemented. The results of property management assessment as well as the annual operational and capital expenses of a proposed design scheme are presented.

**Keywords:** Design evaluation method, management fund, operational and capital expenses, rental apartment buildings.



## **SKY FARMING: EMBRACING VERTICAL LANDSCAPE MODELS IN URBAN AREAS FOR SUSTAINABLE DEVELOPMENT THROUGH GREEN BUILDING CONCEPTS**

**Nadiyah Yola Putri, Nesia Putri Sharfina, Traviata Prakarti**

National Institute of Pharmaceutical Education and Research, - India

### **Abstract:**

This paper is a literature review presented descriptively to review the concept of green building to face the challenge of sustainable development and food in urban areas. In this paper, researchers initiated the concept of green building with sky farming method. Sky farming use vertical landscape system in order to realizing food self-sufficient green city. Sky farming relying on plantings and irrigation system efficiency in the building which is adopted the principles of green building. Planting system is done by applying hydroponic plants with *Nutrient Film Technique* (NFT) using energy source of solar cell and grey water from the processing of waste treatment plant. The application of sky farming in urban areas can be a recommendation for the design of environmental-friendly construction. In order to keep the land and distance efficiency, this system is a futuristic idea that would be the connector of human civilization in the future.

**Keywords:** Green building, urban area, sky farming, vertical landscape.

## "IMPLEMENTING RETROFITTING SOLUTIONS FOR KAZAKHSTAN'S EXISTING HOUSING STOCK

**S. Yessengabulov, A. Uyzbayeva**

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### **Abstract:**

Residential buildings fund of Kazakhstan was built in the Soviet time about 35-60 years ago without considering energy efficiency measures. Currently, most of these buildings are in a rundown condition and fail to meet the minimum of hygienic, sanitary and comfortable living requirements. The paper aims to examine the reports of recent building energy survey activities in the country and provide a possible solution for retrofitting existing housing stock built before 1989 which could be applicable for building envelope in cold climate. Methodology also includes two-dimensional modeling of possible practical solutions and further recommendations.

**Keywords:** Energy audit, energy efficient buildings in Kazakhstan, retrofit, two-dimensional conduction heat transfer analysis

## **ANALYZING REPLACEABLE LINKS WITH REDUCED WEB SECTION FOR LINK-TO-COLUMN CONNECTIONS IN ECCENTRICALLY BRACED FRAMES**

**Daniel Y. Abebe, Sijeong Jeong, Jaehyouk Choi**

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### **Abstract:**

The use of eccentrically braced frame (EBF) is increasing day by day as EBF possesses high elastic stiffness, stable inelastic response under cyclic lateral loading, and excellent ductility and energy dissipation capacity. The ductility and energy dissipation capacity of EBF depends on the active link beams. Recently, there are two types EBFs; these are conventional EBFs and EBFs with replaceable links. The conventional EBF has a disadvantage during maintenance in post-earthquake. The concept of removable active link beam in EBF is developed to overcome the limitation of the conventional EBF in post-earthquake. In this study, a replaceable link with reduced web section is introduced and design equations are suggested. In addition, nonlinear finite element analysis was conducted in order to evaluate the proposed links.

**Keywords:** EBFs, replaceable link, earthquake disaster, reduced section.

## YANBU, SAUDI ARABIA: BRIDGING TRADITION IN A MODERNIZING CITYSCAPE

**Hisham Mortada**

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### **Abstract:**

Transition in the urban configuration of Arab cities has never been as radical and visible as it has been since the turn of the last century. The emergence of new cities near historical settlements of Arabia has spawned a series of developments in and around the old city precincts. New developments are based on advanced technology and conform to globally prevalent standards of city planning, superseding the vernacular arrangements based on traditional norms that guided so-called ‘city planning’. Evidence to this fact are the extant Arab buildings present at the urban core of modern cities, which inform us about intricate spatial organization. Organization that subscribed to multiple norms such as, satisfying gender segregation and socialization, economic sustainability, and ensuring security and environmental coherence etc., within settlement compounds. Several participating factors achieved harmony in such an inclusive city—an organization that was challenged and apparently replaced by the new planning order in the face of growing needs of globalized, economy-centric and high-tech models of development. Communities found it difficult to acclimatize with the new western planning models that were implemented at a very large scale throughout the Kingdom, which later experienced spatial re-structuring to suit users’ needs. A closer look the ancient city of Yanbu, now flanked with such new developments, allows us to differentiate and track the beginnings of this unprecedented transition in settlement formations. This paper aims to elaborate the Arabian context offered to both the ‘traditional’ and ‘modern’ planning approaches, in order to understand challenges and solutions offered by both at different times. In the process it will also establish the inconsistencies and conflicts that arose with the shift in planning paradigm, from traditional-‘cultural norms’, to modern-‘physical planning’, in the Arabian context. Thus, by distinguishing the two divergent planning philosophies, their impact of the Arabian morphology, relevance to lifestyle and suitability to the biophysical environment, it concludes with a perspective on sustainability particularly for in case of Yanbu.

**Keywords:** Yanbu, traditional architecture, Hijaz, coral building, Saudi Arabia.

## UTILIZING CONVOLUTIONAL NEURAL NETWORKS FOR HEARTBEAT CLASSIFICATION FROM ECG SIGNALS

**Hezerul AlDahoul , Nouar Abdul Karim**

Kuwait College of Science and Technology - Kuwait

### **Abstract:**

Electrocardiogram (ECG) signal analysis and processing are crucial in the diagnosis of cardiovascular diseases which are considered as one of the leading causes of mortality worldwide. However, the traditional rule-based analysis of large volumes of ECG data is time-consuming, labor-intensive, and prone to human errors. With the advancement of the programming paradigm, algorithms such as machine learning have been increasingly used to perform an analysis on the ECG signals. In this paper, various deep learning algorithms were adapted to classify five classes of heart beat types. The dataset used in this work is the synthetic MIT-Beth Israel Hospital (MIT-BIH) Arrhythmia dataset produced from generative adversarial networks (GANs). Various deep learning models such as ResNet-50 convolutional neural network (CNN), 1-D CNN, and long short-term memory (LSTM) were evaluated and compared. ResNet-50 was found to outperform other models in terms of recall and F1 score using a five-fold average score of 98.88% and 98.87%, respectively. 1-D CNN, on the other hand, was found to have the highest average precision of 98.93%.

**Keywords:** Heartbeat classification, convolutional neural network, electrocardiogram signals, ECG signals, generative adversarial networks, long short-term memory, LSTM, ResNet-50.

## EVALUATING HIP MUSCULAR IMBALANCE IN RHEUMATISM PATIENTS: AN ASSESSMENT

**Anthony Banitsas , Konstantinos Bawa**

North China Institute of Science and Technology- China

### **Abstract:**

Rheumatism is a muscular disorder that affects the muscles of the upper and lower limbs. This condition could potentially progress to impair the movement of patients. This study aims to investigate the hip muscular imbalance in patients with chronic rheumatism. A clinical trial involving a total of 15 participants, made up of 10 patients and five control subjects, took place in KATH Hospital between August and September. Participants recruited for the study were of age  $54 \pm 8$  years, weight  $65 \pm 8$  kg, and height  $176 \pm 8$  cm. Muscle signals were recorded from the rectus femoris, and vastus lateralis on the right and left hip of participants. The parameters used in determining the hip muscular imbalances were the maximum voluntary contraction (MVC%), the mean difference, and hip muscle fatigue levels. The mean signals were compared using a t-test, and the metrics for muscle fatigue assessment were based on the root mean square (RMS), mean absolute value (MAV) and mean frequency (MEF), which were computed between the hip muscles of participants. The results indicated that there were significant imbalances in the muscle coactivity between the right and left hip muscles of patients. The patients' MVC values were observed to be above 10% when compared with control subjects. Furthermore, the mean difference was seen to be higher with  $p > 0.002$  among patients, which indicated clear differences in the hip muscle contraction activities. The findings indicate significant hip muscular imbalances for patients with rheumatism compared with control subjects. Information about the imbalances among patients will be useful for clinicians in designing therapeutic muscle-strengthening exercises.

**Keywords:** Muscular, imbalances, rheumatism, hip.

## EMPLOYING SPEECH EMOTION RECOGNITION AS A LONGITUDINAL BIOMARKER FOR ALZHEIMER'S DISEAS

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### Abstract:

Alzheimer's disease (AD) is a progressive neurodegenerative disorder that affects millions of people worldwide and is characterized by cognitive decline and behavioral changes. People living with Alzheimer's disease often find it hard to complete routine tasks. However, there are limited objective assessments that aim to quantify the difficulty of certain tasks for AD patients compared to non-AD people. In this study, we propose to use speech emotion recognition (SER), especially the frustration level as a potential biomarker for quantifying the difficulty patients experience when describing a picture. We build an SER model using data from the IEMOCAP dataset and apply the model to the DementiaBank data to detect the AD/non-AD group difference and perform longitudinal analysis to track the AD disease progression. Our results show that the frustration level detected from the SER model can possibly be used as a cost-effective tool for objective tracking of AD progression in addition to the Mini-Mental State Examination (MMSE) score.

**Keywords:** Alzheimer's disease, Speech Emotion Recognition, longitudinal biomarker, machine learning.

## ADVANCEMENT OF AN AFFORDABLE IOT-BASED MINIATURE DEVICE FOR REMOTE HEALTH MONITORING

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### **Abstract:**

The modern busy world is running behind new embedded technologies based on computers and software meanwhile some people are unable to monitor their health condition and regular medical check-ups. Some of them postpone medical check-ups due to a lack of time and convenience while others skip these regular evaluations and medical examinations due to huge medical bills and hospital expenses. In this research, we present a device in the telemonitoring system capable of monitoring, checking, and evaluating the health status of the human body remotely through the internet for the needs of all kinds of people. The remote health monitoring device is a microcontroller-based embedded unit. The various types of sensors in this device are connected to the human body, and with the help of an Arduino UNO board, the required analogue data are collected from the sensors. The microcontroller on the Arduino board processes the analogue data collected in this way into digital data and transfers that information to the cloud and stores it there; the processed digital data are then instantly displayed through the LCD attached to the machine. By accessing the cloud storage with a username and password, the concerned person's health care teams/doctors, and other health staff can collect these data for the assessment and follow-up of that patient. Besides that, the family members/guardians can use and evaluate these data for awareness of the patient's current health status. Moreover, the system is connected to a GPS module. In emergencies, the concerned team can be positioning the patient or the person with this device. The setup continuously evaluates and transfers the data to the cloud and also the user can prefix a normal value range for the evaluation. For example, the blood pressure normal value is universally prefixed between 80/120 mmHg. Similarly, the Remote Health Monitoring System (RHMS) is also allowed to fix the range of values referred to as normal coefficients. This IoT-based miniature system  $11 \times 10 \times 10$  cm<sup>3</sup> with a low weight of 500 gr only consumes 10 mW. This smart monitoring system is manufactured for 100 GBP (British Pound Sterling), and can facilitate the communication between patients and health systems, but also it can be employed for numerous other uses including communication sectors in the aerospace and transportation systems.

**Keywords:** Embedded Technology, Telemonitoring system, Microcontroller, Arduino UNO, Cloud storage, GPS, RHMS, Remote Health Monitoring System, Alert system.



## ENHANCED RESOLUTION OF 3D CT SCANS VIA HETEROGENEOUS DIMENSIONAL TRANSFORMERS

**Helen Zhang**

North China University of Science and Technology- China

### **Abstract:**

Accurate segmentation of the airways from CT scans is crucial for early diagnosis of lung cancer. However, the existing airway segmentation algorithms often rely on thin-slice CT scans, which can be inconvenient and costly. This paper presents a set of machine learning-based 3D super-resolution algorithms along heterogenous dimensions to improve the resolution of thicker CT scans to reduce the reliance on thin-slice scans. To evaluate the efficacy of the super-resolution algorithms, quantitative assessments using PSNR (Peak Signal to Noise Ratio) and SSIM (Structural SIMilarity index) were performed. The impact of super-resolution on airway segmentation accuracy is also studied. The proposed approach has the potential to make airway segmentation more accessible and affordable, thereby facilitating early diagnosis and treatment of lung cancer.

**Keywords:** 3D super-resolution, airway segmentation, thin-slice CT scans, machine learning.

## ENHANCED SEGMENTATION OF HEART SOUNDS USING PHONOCARDIOGRAM CURVE LENGTH VARIATION

**Mecheri Zeid Ahfir , Maamar Belmecheri, , Kale Izzet**

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### **Abstract:**

Automatic cardiac auscultation is still a subject of research in order to establish an objective diagnosis. Recorded heart sounds as Phonocardiogram (PCG) signals can be used for automatic segmentation into components that have clinical meanings. These are the first sound, S1, the second sound, S2, and the systolic and diastolic components, respectively. In this paper, an automatic method is proposed for the robust segmentation of heart sounds. This method is based on calculating an intermediate sawtooth-shaped signal from the length variation of the recorded PCG signal in the time domain and, using its positive derivative function that is a binary signal in training a Recurrent Neural Network (RNN). Results obtained in the context of a large database of recorded PCGs with their simultaneously recorded Electrocardiograms (ECGs) from different patients in clinical settings, including normal and abnormal subjects, show on average a segmentation testing performance average of 76% sensitivity and 94% specificity.

**Keywords:** Heart sounds, PCG segmentation, event detection, Recurrent Neural Networks, PCG curve length.

## ANALYZING RESTING-STATE FUNCTIONAL CONNECTIVITY WITH AN INDEPENDENT COMPONENT APPROACH

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Gifu College of Nursing- Japan

### Abstract:

Refractory epilepsy is a complicated type of epilepsy that can be difficult to diagnose. Recent technological advancements have made resting-state functional magnetic resonance (rsfMRI) a vital technique for studying brain activity. However, there is still much to learn about rsfMRI. Investigating rsfMRI connectivity may aid in the detection of abnormal activities. In this paper, we propose studying the functional connectivity of rsfMRI candidates to diagnose epilepsy. 45 rsfMRI candidates, comprising 26 with refractory epilepsy and 19 healthy controls, were enrolled in this study. A data-driven approach known as Independent Component Analysis (ICA) was used to achieve our goal. First, rsfMRI data from both patients and healthy controls were analyzed using group ICA. The components that were obtained were then spatially sorted to find and select meaningful ones. A two-sample t-test was also used to identify abnormal networks in patients and healthy controls. Finally, based on the fractional amplitude of low-frequency fluctuations (fALFF), a chi-square statistic test was used to distinguish the network properties of the patient and healthy control groups. The two-sample t-test analysis yielded abnormal in the default mode network, including the left superior temporal lobe and the left supramarginal. The right precuneus was found to be abnormal in the dorsal attention network. In addition, the frontal cortex showed an abnormal cluster in the medial temporal gyrus. In contrast, the temporal cortex showed an abnormal cluster in the right middle temporal gyrus and the right fronto-operculum gyrus. Finally, the chi-square statistic test was significant, producing a p-value of 0.001 for the analysis. This study offers evidence that investigating rsfMRI connectivity provides an excellent diagnosis option for refractory epilepsy.

**Keywords:** Independent Component Analysis, Resting State Network, refractory epilepsy, rsfMRI.

## EXPLORING MAMMOGRAPHIC IMAGE MAGNIFICATION SYSTEM WITH EYE DETECTION AND EEG SCANNER: A PRELIMINARY INVESTIGATION

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### **Abstract:**

Mammography requires the detection of very small calcifications, and physicians search for microcalcifications by magnifying the images as they read them. The mouse is necessary to zoom in on the images, but this can be tiring and distracting when many images are read in a single day. Therefore, an image magnification system combining an eye-detector and a simple electroencephalograph (EEG) scanner was devised, and its operability was evaluated. Two experiments were conducted in this study: the measurement of eye-detection error using an eye-detector and the measurement of the time required for image magnification using a simple EEG scanner. Eye-detector validation showed that the mean distance of eye-detection error ranged from 0.64 cm to 2.17 cm, with an overall mean of  $1.24 \pm 0.81$  cm for the observers. The results showed that the eye detection error was small enough for the magnified area of the mammographic image. The average time required for point magnification in the verification of the simple EEG scanner ranged from 5.85 to 16.73 seconds, and individual differences were observed. The reason for this may be that the size of the simple EEG scanner used was not adjustable, so it did not fit well for some subjects. The use of a simple EEG scanner with size adjustment would solve this problem. Therefore, the image magnification system using the eye-detector and the simple EEG scanner is useful.

**Keywords:** EEG scanner, eye-detector, mammography, observers.

## **ARGINASE ENZYME ACTIVITY IN HUMAN SERUM: A MARKER OF COGNITIVE FUNCTION AND THE IMPACT OF INOSITOL WITH ARGININE SILICATE**

**Katie Perez-Ojalvo , Sara Emerson , Jim Danielle , Komorowski Greenberg**

The University of Kitakyushu- Japan

### **Abstract:**

The purpose of this study was to evaluate arginase activity levels in response to combinations of an inositol-stabilized arginine silicate (ASI; Nitrosigine®), L-arginine, and Inositol. Arginine acts as a vasodilator that promotes increased blood flow resulting in enhanced delivery of oxygen and nutrients to the brain and other tissues. Arginase, found in human serum, catalyzes the conversion of arginine to ornithine and urea, completing the last step in the urea cycle. Decreasing arginase levels maintains arginine and results in increased nitric oxide production. This study aimed to determine the most effective combination of ASI, L-arginine and inositol for minimizing arginase levels and therefore maximize ASI's effect on cognition. Serum was taken from untreated healthy donors by separation from clotted factors. Arginase activity of serum in the presence or absence of test products was determined (QuantiChrom™, DARG-100, Bioassay Systems, Hayward CA). The remaining ultra-filtrated serum units were harvested and used as the source for the arginase enzyme. ASI alone or combined with varied levels of Inositol were tested as follows: ASI + inositol at 0.25 g, 0.5 g, 0.75 g, or 1.00 g. L-arginine was also tested as a positive control. All tests elicited changes in arginase activity demonstrating the efficacy of the method used. Adding L-arginine to serum from untreated subjects, with or without inositol only had a mild effect. Adding inositol at all levels reduced arginase activity. Adding 0.5 g to the standardized amount of ASI led to the lowest amount of arginase activity as compared to the 0.25 g, 0.75 g or 1.00g doses of inositol or to L-arginine alone. The outcome of this study demonstrates an interaction of the pairing of inositol with ASI on the activity of the enzyme arginase. We found that neither the maximum nor minimum amount of inositol tested in this study led to maximal arginase inhibition. Since the inhibition of arginase activity is desirable for product formulations looking to maintain arginine levels, the most effective amount of inositol was deemed preferred. Subsequent studies suggest this moderate level of inositol in combination with ASI leads to cognitive improvements including reaction time, executive function, and concentration.

**Keywords:** Arginine, blood flow, colorimetry, urea cycle.

## **ENHANCING UPPER-ARM REHABILITATION: FINDING THE OPTIMAL REST INTERVAL BETWEEN SETS IN ROBOT-ASSISTED THERAPY**

**Virgil Yihun, Gissele Pablo, Mosqueda Delgado, Yimesker Miranda**

Samarkand State Institute of Foreign Languages- Uzbekistan

### **Abstract:**

Muscular fatigue affects the muscle activation that is needed for producing the desired clinical outcome. Integrating optimal muscle relaxation periods into a variety of health care rehabilitation protocols is important to maximize the efficiency of the therapy. In this study, four muscle relaxation periods (30, 60, 90 and 120 seconds) and their effectiveness in producing consistent muscle activation of the muscle biceps brachii between sets of an elbow flexion and extension task were investigated among a sample of 10 subjects with no disabilities. The same resting periods were then utilized in a controlled exoskeleton-based exercise for a sample size of 5 subjects and have shown similar results. On average, the muscle activity of the biceps brachii decreased by 0.3% when rested for 30 seconds, and it increased by 1.25%, 0.76% and 0.82% when using muscle relaxation periods of 60, 90 and 120 seconds, respectively. The preliminary results suggest that a muscle relaxation period of about 60 seconds is needed for optimal continuous muscle activation within rehabilitation regimens. Robot-based rehabilitation is good to produce repetitive tasks with the right intensity and knowing the optimal resting period will make the automation more effective.

**Keywords:** Rest intervals, muscle biceps brachii, robot rehabilitation, muscle fatigue.

## **FOSTERING STUDENT SUCCESS: PROMOTING CYBERSECURITY AWARENESS IN EDUCATION THROUGH LABS AND COMPETITIONS**

**Teymourlouei Haydar**

American University of Beirut- Lebanon

### **Abstract:**

Cybersecurity is one of the greatest challenges society faces in an age revolving around technological development. With cyber-attacks on the continuous rise, the nation needs to understand and learn ways that can prevent such attacks. A major contribution that can change the education system is to implement laboratories and competitions into academia. This method can improve and educate students with more hands-on exercises in a highly motivating setting. Considering the fact that students are the next generation of the nation's workforce, it is important for students to understand concepts not only through books, but also through actual hands-on experiences in order for them to be prepared for the workforce. An effective cybersecurity education system is critical for creating a strong cyber secure workforce today and for the future. This paper emphasizes the need for awareness and the need for competitions and cybersecurity laboratories to be implemented into the education system.

**Keywords:** Awareness, competition, cybersecurity, laboratories, workforce.

## UTILIZING ACCOUNTING METHODS FOR INHERITED OBJECT-ORIENTED CLASS MEMBERS

**Al Dallal Jihad**

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### **Abstract:**

A class in an Object-Oriented (OO) system is the basic unit of design, and it encapsulates a set of attributes and methods. In OO systems, instead of redefining the attributes and methods that are included in other classes, a class can inherit these attributes and methods and only implement its unique attributes and methods, which results in reducing code redundancy and improving code testability and maintainability. Such mechanism is called Class Inheritance. However, some software engineering applications may require accounting for all the inherited class members (i.e., attributes and methods). This paper explains how to account for inherited class members and discusses the software engineering applications that require such consideration.

**Keywords:** Object-oriented design, inheritance, internal quality attribute, external quality attribute, class flattening.



## ASSESSMENT OF SHEAR STRENGTH FOR COLD-FORMED STEEL SHEAR WALL PANELS: A NUMERICAL ANALYSIS

**Bourahla Idriss, Nour-Eddine Rouaz, Kahlouche Sid Ali , Farah Rafa**

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### **Abstract:**

The stability of structures made of light-gauge steel depends highly on the contribution of Shear Wall Panel (SWP) systems under horizontal forces due to wind or earthquake loads. Steel plate sheathing is often used with these panels made of cold formed steel (CFS) to improve its shear strength. In order to predict the shear strength resistance, two methods are presented in this paper. In the first method, the steel plate sheathing is modeled with plates strip taking into account only the tension and compression force due to the horizontal load, where both track and stud are modeled according to the geometrical and mechanical characteristics of the specimen used in the experiments. The theoretical background and empirical formulations of this method are presented in this paper. However, the second method is based on a micro modeling of the cold formed steel Shear Wall Panel “CFS-SWP” using Abaqus software. A nonlinear analysis was carried out with an in-plan monotonic load. Finally, the comparison between these two methods shows that the micro modeling with Abaqus gives better prediction of shear resistance of SWP than strips method. However, the latter is easier and less time consuming than the micro modeling method.

**Keywords:** Cold Formed Steel Shear Wall Panel, CFS-SWP, micro modeling, nonlinear analysis, strip method.

## ENHANCEMENTS TO THE DIFFRACTIVE DETECTOR CONTROL SYSTEM OF ALICE FOR RUN-II AT THE LARGE HADRON COLLIDER

**Monzó Hernández, M. León Martínez**

Universidad Tecnológica Metropolitana- Chile

### **Abstract:**

The selection of diffractive events in the ALICE experiment during the first data taking period (RUN-I) of the Large Hadron Collider (LHC) was limited by the range over which rapidity gaps occur. It would be possible to achieve better measurements by expanding the range in which the production of particles can be detected. For this purpose, the ALICE Diffractive (AD0) detector has been installed and commissioned for the second phase (RUN-II). Any new detector should be able to take the data synchronously with all other detectors and be operated through the ALICE central systems. One of the key elements that must be developed for the AD0 detector is the Detector Control System (DCS). The DCS must be designed to operate safely and correctly this detector. Furthermore, the DCS must also provide optimum operating conditions for the acquisition and storage of physics data and ensure these are of the highest quality. The operation of AD0 implies the configuration of about 200 parameters, from electronics settings and power supply levels to the archiving of operating conditions data and the generation of safety alerts. It also includes the automation of procedures to get the AD0 detector ready for taking data in the appropriate conditions for the different run types in ALICE. The performance of AD0 detector depends on a certain number of parameters such as the nominal voltages for each photomultiplier tube (PMT), their threshold levels to accept or reject the incoming pulses, the definition of triggers, etc. All these parameters define the efficiency of AD0 and they have to be monitored and controlled through AD0 DCS. Finally, AD0 DCS provides the operator with multiple interfaces to execute these tasks. They are realized as operating panels and scripts running in the background. These features are implemented on a SCADA software platform as a distributed control system which integrates to the global control system of the ALICE experiment.

**Keywords:** AD0, ALICE, DCS, LHC.

## **EXPLORING AN INNOVATIVE CLOUD MODEL: BRIDGING THE GAP BETWEEN PHYSICAL AND VIRTUALIZED BUSINESS ENVIRONMENTS FROM THE CUSTOMER'S PERSPECTIVE**

**Asim Majeed, Mak Rehan Bhana, Rebecca Bolia, Nizam Goode , Mike illiams,**

University of KwaZulu-Natal- South Africa

### **Abstract:**

This study aims to investigate and explore the underlying causes of security concerns of customers emerged when WHSmith transformed its physical system to virtualized business model through NetSuite. NetSuite is essentially fully integrated software which helps transforming the physical system to virtualized business model. Modern organisations are moving away from traditional business models to cloud based models and consequently it is expected to have a better, secure and innovative environment for customers. The vital issue of the modern age race is the security when transforming virtualized through cloud based models and designers of interactive systems often misunderstand privacy and even often ignore it, thus causing concerns for users. The content analysis approach is being used to collect the qualitative data from 120 online bloggers including TRUSTPILOT. The results and finding provide useful new insights into the nature and form of security concerns of online users after they have used the WHSmith services offered online through their website. Findings have theoretical as well as practical implications for the successful adoption of cloud computing Business-to-Business model and similar systems.

**Keywords:** Innovation, virtualization, cloud computing, organizational flexibility

## ADVANCEMENT: AUTOMATIC CALIBRATION FRAMEWORK FOR HYDROLOGIC MODELING VIA APPROXIMATE BAYESIAN COMPUTATION

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South Mediterranean University, -Tunis

### Abstract:

Hydrologic models are increasingly used as tools to predict stormwater quantity and quality from urban catchments. However, due to a range of practical issues, most models produce gross errors in simulating complex hydraulic and hydrologic systems. Difficulty in finding a robust approach for model calibration is one of the main issues. Though automatic calibration techniques are available, they are rarely used in common commercial hydraulic and hydrologic modelling software e.g. MIKE URBAN. This is partly due to the need for a large number of parameters and large datasets in the calibration process. To overcome this practical issue, a framework for automatic calibration of a hydrologic model was developed in R platform and presented in this paper. The model was developed based on the time-area conceptualization. Four calibration parameters, including initial loss, reduction factor, time of concentration and time-lag were considered as the primary set of parameters. Using these parameters, automatic calibration was performed using Approximate Bayesian Computation (ABC). ABC is a simulation-based technique for performing Bayesian inference when the likelihood is intractable or computationally expensive to compute. To test the performance and usefulness, the technique was used to simulate three small catchments in Gold Coast. For comparison, simulation outcomes from the same three catchments using commercial modelling software, MIKE URBAN were used. The graphical comparison shows strong agreement of MIKE URBAN result within the upper and lower 95% credible intervals of posterior predictions as obtained via ABC. Statistical validation for posterior predictions of runoff result using coefficient of determination (CD), root mean square error (RMSE) and maximum error (ME) was found reasonable for three study catchments. The main benefit of using ABC over MIKE URBAN is that ABC provides a posterior distribution for runoff flow prediction, and therefore associated uncertainty in predictions can be obtained. In contrast, MIKE URBAN just provides a point estimate. Based on the results of the analysis, it appears as though ABC the developed framework performs well for automatic calibration.

**Keywords:** Automatic calibration framework, approximate Bayesian computation, hydrologic and hydraulic modelling, MIKE URBAN software, R platform.

## LONG-TERM ANALYSIS OF PROFITABILITY ESTIMATION WITH A FOCUS ON BENEFITS

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Argentine Federal Police Institute - Argentina

### **Abstract:**

Strategic investment decisions are characterized by high innovation potential and long-term effects on the competitiveness of enterprises. Due to the uncertainty and risks involved in this complex decision making process, the need arises for well-structured support activities. A method that considers cost and the long-term added value is the cost-benefit effectiveness estimation. One of those methods is the “profitability estimation focused on benefits – PEFB”-method developed at the Institute of Management Cybernetics at RWTH Aachen University. The method copes with the challenges associated with strategic investment decisions by integrating long-term non-monetary aspects whilst also mapping the chronological sequence of an investment within the organization’s target system. Thus, this method is characterized as a holistic approach for the evaluation of costs and benefits of an investment. This participation-oriented method was applied to business environments in many workshops. The results of the workshops are a library of more than 96 cost aspects, as well as 122 benefit aspects. These aspects are preprocessed and comparatively analyzed with regards to their alignment to a series of risk levels. For the first time, an accumulation and a distribution of cost and benefit aspects regarding their impact and probability of occurrence are given. The results give evidence that the PEFB-method combines precise measures of financial accounting with the incorporation of benefits. Finally, the results constitute the basics for using information technology and data science for decision support when applying within the PEFB-method.

**Keywords:** Cost-benefit analysis, multi-criteria decision, profitability estimation focused on benefits, risk and uncertainty analysis.

## ENHANCING VOWEL SPEECH VIA PITCH AND FORMANT FREQUENCY ANALYSIS

**M. Vanitha Lakshmi**

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### **Abstract:**

Numerous signal processing based speech enhancement systems have been proposed to improve intelligibility in the presence of noise. Traditionally, studies of neural vowel encoding have focused on the representation of formants (peaks in vowel spectra) in the discharge patterns of the population of auditory-nerve (AN) fibers. A method is presented for recording high-frequency speech components into a low-frequency region, to increase audibility for hearing loss listeners. The purpose of the paper is to enhance the formant of the speech based on the Kaiser window. The pitch and formant of the signal is based on the auto correlation, zero crossing and magnitude difference function. The formant enhancement stage aims to restore the representation of formants at the level of the midbrain. A MATLAB software's are used for the implementation of the system with low complexity is developed.

**Keywords:** Formant estimation, formant enhancement, pitch detection, speech analysis.

## ASSESSMENT OF DATA MINING TECHNIQUES IN PREDICTING SOFTWARE RELIABILITY PERFORMANCE

**Pradeep Wahid , Abdul Kumar**

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### **Abstract:**

Accurate software reliability prediction not only enables developers to improve the quality of software but also provides useful information to help them for planning valuable resources. This paper examines the performance of three well-known data mining techniques (CART, TreeNet and Random Forest) for predicting software reliability. We evaluate and compare the performance of proposed models with Cascade Correlation Neural Network (CCNN) using sixteen empirical databases from the Data and Analysis Center for Software. The goal of our study is to help project managers to concentrate their testing efforts to minimize the software failures in order to improve the reliability of the software systems. Two performance measures, Normalized Root Mean Squared Error (NRMSE) and Mean Absolute Errors (MAE), illustrate that CART model is accurate than the models predicted using Random Forest, TreeNet and CCNN in all datasets used in our study. Finally, we conclude that such methods can help in reliability prediction using real-life failure datasets.

**Keywords:** Classification, Cascade Correlation Neural Network, Random Forest, Software reliability, TreeNet.

## BIOMECHANICAL MODELING AND SIMULATION: COMPARING HUMAN ARM MOTION TO ENHANCE ASTRONAUT TASKS DURING EXTRA VEHICULAR ACTIVITY

**Yash Gupta Vardhan**

Kumar Bhaskar Varma Sanskrit and Ancient Studies University- India

### **Abstract:**

During manned exploration of space, missions will require astronaut crewmembers to perform Extra Vehicular Activities (EVAs) for a variety of tasks. These EVAs take place after long periods of operations in space, and in and around unique vehicles, space structures and systems. Considering the remoteness and time spans in which these vehicles will operate, EVA system operations should utilize common worksites, tools and procedures as much as possible to increase the efficiency of training and proficiency in operations. All of the preparations need to be carried out based on studies of astronaut motions. Until now, development and training activities associated with the planned EVAs in Russian and U.S. space programs have relied almost exclusively on physical simulators. These experimental tests are expensive and time consuming. During the past few years a strong increase has been observed in the use of computer simulations due to the fast developments in computer hardware and simulation software. Based on this idea, an effort to develop a computational simulation system to model human dynamic motion for EVA is initiated. This study focuses on the simulation of an astronaut moving the orbital replaceable units into the worksites or removing them from the worksites. Our physics-based methodology helps fill the gap in quantitative analysis of astronaut EVA by providing a multisegment human arm model. Simulation work described in the study improves on the realism of previous efforts, incorporating joint stops to account for the physiological limits of range of motion. To demonstrate the utility of this approach human arm model is simulated virtually using ADAMS/LifeMOD<sup>®</sup> software. Kinematic mechanism for the astronaut's task is studied from joint angles and torques. Simulation results obtained is validated with numerical simulation based on the principles of Newton-Euler method. Torques determined using mathematical model are compared among the subjects to know the grace and consistency of the task performed. We conclude that due to uncertain nature of exploration-class EVA, a virtual model developed using multibody dynamics approach offers significant advantages over traditional human modeling approaches.

**Keywords:** Extra vehicular activity, biomechanics, inverse kinematics, human body modeling.



## EXAMINING LEARNER FEEDBACK ON THE ADAPTED RORSCHACH COMPREHENSIVE SYSTEM: A CRITICAL PSYCHOLOGICAL ANALYSIS

**Mokgadi Mukuna Moletsane-, Robert Kananga Kekae**

University of Hasanuddin- Indonesia

### **Abstract:**

The study focused on the analysis of the Adjusted Rorschach Comprehensive System's responses. The objective of this study is to analyse the participants' response rate of the Adjusted Rorschach Comprehensive System with regards to critical psychology approach. The use of critical psychology theory in this study was crucial because it responds to the current inadequate western theory or practice in the field of psychology. The study adopted a qualitative approach and a case study design. The study was grounded on interpretivist paradigm. The sample size comprised six learners (three boys and three girls, aged of 14 years) from historically disadvantaged school in the Western Cape, South Africa. The Adjusted Rorschach Comprehensive System (ARCS) administration procedure, biographical information, semi-structured interviews, and observation were used to collect data. Data was analysed using thematic framework. The study found out that, factors that increased the response rates during the administration of ARCS were, language, seating arrangement, drawing, viewing, and describing. The study recommended that, psychological test designers take into consideration the philosophy or worldviews of the local people for whom the test is designed to minimize low response rates.

**Keywords:** Adjusted Rorschach comprehensive system, critical psychology, learners, responses.

## **FACTORS INFLUENCING RECYCLING PARTICIPATION IN KOTA KINABALU, MALAYSIA: MOTIVATIONS AND CHALLENGES**

**Jasmine Adela Mutang, Chua Reok, Bahar Ferlis, Madlan Lailawati ,**

Sheikh Hasina University- Bangladesh

### **Abstract:**

Public participation in recycling domestic waste is still very low in Malaysia. Only 10.5% of solid waste was recycled up to now which is far below than of in developed countries. Therefore, understanding public motivations towards recycling domestic waste are important to improve current recycling rate. Thus, this study attempts to identify what are the possible motivations and hindrances for the public to recycle. Open-ended questions format were administered to 484 people in Kota Kinabalu, Sabah, Malaysia. Two specific questions we asked to explore their general determinants and barriers in practicing recycling: “What motivates you to recycle?” and “What are the barriers you encountered in doing recycling activities?” Thematic was conducted on the open-ended questions in which themes were created with the raw comments. It was found that the underlying recycling motivations are (i) awareness’ towards the environment; (ii) benefits to the society and individual; and (iii) social influence. Non participations are influence by (i) attitudes; (ii) commitment; (iii) facilities; (iv) knowledge; (v) inconvenience; and (vi) enforcement.

**Keywords:** Recycling motivation, recycling barrier, sustainable, household waste.

## **ASSESSING THE IMPACT OF METAPHOR THERAPY ON DEPRESSION AMONG FEMALE STUDENTS**

**Shoushtari Marzieh**

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### **Abstract:**

The present study aimed to determine the effectiveness of Metaphor therapy on depression among female students. The sample included 60 female students with depression symptoms selected by simple sampling and randomly divided into two equal groups (experimental and control groups). Beck Depression Inventory was used to measure the variables. This was an experimental study with a pre-test/post-test design with control group. Eight metaphor therapy sessions were held for the experimental group. A post-test was administered to both groups. Data were analyzed using multivariate analysis of covariance (MANCOVA). Results showed that the Metaphor therapy decreased depression in the experimental group compared to the control group.

**Keywords:** Metaphor therapy, depression, female, students.

## EXAMINING SL WRITING AND SENSITIVITY IN WRITING TASKS: PROFICIENCY LEVELS IN A SECOND LANGUAGE OTHER THAN ENGLISH

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### **Abstract:**

This study integrates a larger research empirical project that examines second language (SL) learners' profiles and valid procedures to perform complete and diagnostic assessment in schools. 102 learners of Portuguese as a SL aged 7 and 17 years speakers of distinct home languages were assessed in several linguistic tasks. In this article, we focused on writing performance in the specific task of narrative essay composition. The written outputs were measured using the score in six components adapted from an English SL assessment context (Alberta Education): linguistic vocabulary, grammar, syntax, strategy, socio-linguistic, and discourse. The writing processes and strategies in Portuguese language used by different immigrant students were analysed to determine features and diversity of deficits on authentic texts performed by SL writers. Differentiated performance was based on the diversity of the following variables: grades, previous schooling, home language, instruction in first language, and exposure to Portuguese as Second Language. Indo-Aryan languages speakers showed low writing scores compared to their peers and the type of language and respective cognitive mapping (such as Mandarin and Arabic) was the predictor, not linguistic distance. Home language instruction should also be prominently considered in further research to understand specificities of cognitive academic profile in a Romance languages learning context. Additionally, this study also examined the teachers' representations that will be here addressed to understand educational implications of second language teaching in psychological distress of different minorities in schools of specific host countries.

**Keywords:** Second language, writing assessment, home language, immigrant students, Portuguese language.

## MODELING COGNITIVE AND BEHAVIORAL CHALLENGES IN AN UNDERREPRESENTED GROUP WITH A HIERARCHICAL APPROACH

**Zhang Zhang, Zhi-Chao Zhidong**

Nagoya Zokei University of Art & Design- Japan

### **Abstract:**

This study examined the mental health and behavioral problems in early adolescence with the instrument of Achenbach System of Empirically Based Assessment (ASEBA). The purpose of the study was stratified sampling method was used to collect data from 1975 participants. Multiple regression models and hierarchical regression models were applied to examine the relations between the background variables and internalizing problems, and the ones between students' performance and internalizing problems. The results indicated that several background variables as predictors could significantly predict the anxious/depressed problem; reading and social study scores could significantly predict the anxious/depressed problem. However the class as a hierarchical macro factor did not indicate the significant effect. In brief, the majority of these models represented that the background variables, behaviors and academic performance were significantly related to the anxious/depressed problem.

**Keywords:** Behavioral problems, anxious/depression problems, empirical-based assessment, hierarchical modeling.

## COMPARING MUSICAL NOTATION READING TO ALPHABET READING: IMPLICATIONS FOR TEACHING MUSIC TO DYSLEXIC STUDENTS

**Ora Geiger**

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### **Abstract:**

This paper discusses the question whether a person diagnosed with dyslexia will necessarily have difficulty in reading musical notes. The author specifies the characteristics of alphabet reading in comparison to musical notation reading, and concludes that there should be no contra-indication for teaching standard music reading to children with dyslexia if an appropriate process is offered. This conclusion is based on a long term case study and relies on two main characteristics of music reading: (1) musical notation system is a systematic, logical, relative set of symbols written on a staff; and (2) music reading learning connected with playing a musical instrument is a multi-sensory activity that combines sight, hearing, touch, and movement. The paper describes music reading teaching procedures, using soprano recorders, and provides unique teaching methods that have been found to be effective for students who were diagnosed with dyslexia. It provides theoretical explanations in addition to guidelines for music education practices.

**Keywords:** Alphabet reading, music reading, multisensory teaching method, dyslexia, recorder playing.

## COMPARATIVE ANALYSIS: FATIGUE AND DROWSINESS IN JAPAN'S NIGHT-TIME PASSENGER TRANSPORTATION INDUSTRY

**Hiroshi Ikeda**

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### **Abstract:**

In this research, a questionnaire survey was conducted to measure nap, drowsiness and fatigue of drivers who work for long shifts, to discuss about the work environment and health conditions for taxi and bus drivers who work at night-time. The questionnaire sheet used for this research was organized into the following categories: tension/tiredness, drowsiness while driving, and the nap situation during night-time work. The number of taxi drivers was 127 and the number of bus drivers was 40. Concerning the results of a comparison of nap hours of taxi and bus drivers, the taxi drivers' nap hours are overwhelmingly shorter, and also the frequency of drivers who experience drowsiness is higher. The burden on bus drivers does not change because of the system of a two-driver rotation shift. In particular, the working environment of the taxi driver may lead to greater fatigue accumulation than the bus driver's environment.

**Keywords:** Bus and taxi, drowsiness, fatigue, nap.

## EXPLORING THE RELATIONSHIP BETWEEN JOB SATISFACTION, MOTIVATION, AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR FACTORS

**K. Umar Mushtaq**

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### **Abstract:**

The research aims to study the association between job satisfaction, motivation and the five factors of organizational citizenship behavior (i.e. Altruism, Conscientiousness, Sportsmanship, Courtesy and Civic virtue) among Public Sector Employees in Pakistan. In this research Structure Equation Modeling with confirmatory factor analysis was used to test the relationship between two independent and five dependent variables. Data was collected through questionnaire survey from 152 Public Servants Working in Gujrat District-Pakistan in different capacities. Stratified Random Sampling Technique was used to conduct this survey. The results of the study indicate that five factors of OCB have positive significant relation with both motivation and job satisfaction except the relationship of Civic Virtue with Motivation. The research findings implicate that factors other than motivation and job satisfaction may also affect OCB. Likewise, all the five factors of OCB may not be present in all populations. Thus, Managers must concentrate on increasing motivation and job satisfaction to increase OCB. Furthermore, the present research gives a direction to future researchers to use more independent variables (e.g. Culture, leadership, workplace environment, various job attitudes, types of motivation, etc.) on different types of populations with larger sample size in order to find the reasons behind insignificant relationship of civic virtue with Motivation in the research in hand and to generalize the tested model.

**Keywords:** Five Factors of Organizational Citizenship Behavior (OCB), Motivation, Job Satisfaction, Public Sector Employees in Pakistan.



## UTILIZING ONLINE GAMES FOR EDUCATIONAL SUPPORT: ADDRESSING LEARNING DIFFICULTIES

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### **Abstract:**

The current paper presents the results of a conducted case study. During the past few years the number of children diagnosed with Learning Difficulties has drastically augmented and especially the cases of ADHD (Attention Deficit Hyperactivity Disorder). One of the core characteristics of ADHD is a deficit in working memory functions. The review of the literature indicates a plethora of educational software that aim at training and enhancing the working memory. Nevertheless, in the current paper, the possibility of using for the same purpose free, online games will be explored. Another issue of interest is the potential effect of the working memory training to the core symptoms of ADHD. In order to explore the abovementioned research questions, three digital tests are employed, all of which are developed on the E-slate platform by the author, in order to check the levels of ADHD's symptoms and to be used as diagnostic tools, both in the beginning and in the end of the case study. The tools used during the main intervention of the research are free online games for the training of working memory. The research and the data analysis focus on the following axes: a) the presence and the possible change in two of the core symptoms of ADHD, attention and impulsivity and b) a possible change in the general cognitive abilities of the individual. The case study was conducted with the participation of a thirteen year-old, female student, diagnosed with ADHD, during after-school hours. The results of the study indicate positive changes both in the levels of attention and impulsivity. Therefore, we conclude that the training of working memory through the use of free, online games has a positive impact on the characteristics of ADHD. Finally, concerning the second research question, the change in general cognitive abilities, no significant changes were noted.

**Keywords:** ADHD, attention, impulsivity, online games.

## COMPARING SPATIAL ABILITIES, MEMORY, AND INTELLECT AMONG DRIVERS WITH VARYING LEVELS OF PROFESSIONAL EXPERIENCE

**N. Khon, Kim Mukhitdinova,**

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### **Abstract:**

The aim of this research was to reveal the link between mental variables, such as spatial abilities, memory, intellect and professional experience of drivers. Participants were allocated to four groups: no experience, inexperienced, skilled and professionals (total 85 participants). The level of ability for spatial navigation and indicator of nonverbal memory grow along the process of accumulation of driving experience. At high levels of driving experience, this tendency is especially noticeable. The professionals having personal achievements in driving (racing) differ from skilled drivers in better feeling of direction, which is specific for them not just in a short-term situation of an experimental task, but also in life-size perspective. The level of ability of mental rotation does not grow with the growth of driving experience, which confirms the multiple intelligence theory according to which spatial abilities represent specific, other than logical intelligence type of intellect. The link between spatial abilities, memory, intellect and professional experience of drivers seems to be different relating spatial navigation or mental rotation as different kinds of spatial abilities.

**Keywords:** Memory, spatial abilities, intellect, drivers.

## **ASSESSING THE QUALITY STANDARDS OF HOSPITAL PHARMACIES IN THERAPEUTIC CENTERS ASSOCIATED WITH KERMANSHAH UNIVERSITY OF MEDICAL SCIENCES, IRAN**

**Gharehbagh V.Hamishchkar , H.Aghababa**

Alex Ekwueme Federal University Ndufu Alike Ikwo- Nigeria

### **Abstract:**

Nowadays pharmaceutical care departments located in hospitals are amongst the important pillars of the healthcare system. The aim of this study was to evaluate quality of hospital drugstores affiliated with Kermanshah University of Medical Sciences. In this cross-sectional study a validated questionnaire was used. The questionnaire was filled in by the one of the researchers in all seventeen hospital drugstores located in the teaching and nonteaching hospitals affiliated with Kermanshah University of Medical Sciences. The results shows that in observed hospitals, 24% of pharmacy environments, 25% of pharmacy store and storage conditions, 49% of storage procedure, 25% of ordering drugs and supplies, 73% of receiving supplies (proper procedure are followed for receiving supplies), 35% of receiving supplies (prompt action taken if deterioration of drugs received is suspected), 23.35% of drugs delivery to patients and finally 0% of stock cards are used for proper inventory control have full compliance with standards.

**Keywords:** Hospital pharmacy standards, Kermanshah, pharmacy management

## OPTIMIZING VISIBLE LIGHT COMMUNICATION SYSTEMS THROUGH NATURAL LIGHT INTEGRATION

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### **Abstract:**

Visible Light Communication (VLC) offers advantages of low energy consumption, licence free and RF interference free operation. One application area for VLC is in the provision of health centred services circumventing issues of interference with any biomedical device within the environment. VLC performance is affected by natural light restricting systems availability and reliability. The paper presents an analysis of the performance of VLC systems under different meteorological conditions. The evaluation considered the impact of natural light as a function of different reflection surfaces in different room sizes.

**Keywords:** Visible light communication, impulse reponse , performance analysis , natural light.

## **INTEGRATING WIRELESS BODY AREA NETWORKS WITH WEB SERVICES: REVOLUTIONIZING UBIQUITOUS HEALTHCARE PROVISIONING THROUGH ARCHITECTURE**

**Ogunduyile O. Oluwbenga**

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### **Abstract:**

Recent advancements in sensor technologies and Wireless Body Area Networks (WBANs) have led to the development of cost-effective healthcare devices which can be used to monitor and analyse a person's physiological parameters from remote locations. These advancements provides a unique opportunity to overcome current healthcare challenges of low quality service provisioning, lack of easy accessibility to service varieties, high costs of services and increasing population of the elderly experienced globally. This paper reports on a prototype implementation of an architecture that seamlessly integrates Wireless Body Area Network (WBAN) with Web services (WS) to proactively collect physiological data of remote patients to recommend diagnostic services. Technologies based upon WBAN and WS can provide ubiquitous accessibility to a variety of services by allowing distributed healthcare resources to be massively reused to provide cost-effective services without individuals physically moving to the locations of those resources. In addition, these technologies can reduce costs of healthcare services by allowing individuals to access services to support their healthcare. The prototype uses WBAN body sensors implemented on arduino fio platforms to be worn by the patient and an android smart phone as a personal server. The physiological data are collected and uploaded through GPRS/internet to the Medical Health Server (MHS) to be analysed. The prototype monitors the activities, location and physiological parameters such as SpO<sub>2</sub> and Heart Rate of the elderly and patients in rehabilitation. Medical practitioners would have real time access to the uploaded information through a web application.

**Keywords:** Android Smart phone, Arduino Fio, Web application server, Wireless Body Area Networks.

## **DYNAMIC BRAIN WAVE ACQUISITION AND PSYCHOACOUSTIC ANALYSIS IN REAL TIME**

**Dipali SShweta , ingh Mahajan , Bansal Rashima**

Lithuanian Sports University- Lithuania

### **Abstract:**

Psychoacoustics has become a potential area of research due to the growing interest of both laypersons and medical and mental health professionals. Non invasive brain computer interface like Electroencephalography (EEG) is widely being used in this field. An attempt has been made in this paper to examine the response of EEG signals to acoustic stimuli further analyzing the brain electrical activity. The real time EEG is acquired for 6 participants using a cost effective and portable EMOTIV EEG neuro headset. EEG data analysis is further done using EMOTIV test bench, EDF browser and EEGLAB (MATLAB Tool) application software platforms. Spectral analysis of acquired neural signals (AF3 channel) using these software platforms are clearly indicative of increased brain activity in various bands. The inferences drawn from such an analysis have significant correlation with subject's subjective reporting of the experiences. The results suggest that the methodology adopted can further be used to assist patients with sleeping and depressive disorders.

**Keywords:** OM' chant, Spectral analysis, EDF Browser, EEGLAB, EMOTIV, Real time Acquisition.

## ENHANCING COMBAT EFFECTIVENESS IN NEW GENERATION FIGHTER PLANES THROUGH HUMAN FACTORS CONSIDERATIONS

**Binoy Bhargavan**

University of Macedonia- Greece

### **Abstract:**

Role of fighter planes in modern network centric military warfare scenarios has changed significantly in the recent past. New generation fighter planes have multirole capability of engaging both air and ground targets with high precision. Multirole aircraft undertakes missions such as Air to Air combat, Air defense, Air to Surface role (including Air interdiction, Close air support, Maritime attack, Suppression and Destruction of enemy air defense), Reconnaissance, Electronic warfare missions, etc. Designers have primarily focused on development of technologies to enhance the combat performance of the fighter planes and very little attention is given to human factor aspects of technologies. Unique physical and psychological challenges are imposed on the pilots to meet operational requirements during these missions. Newly evolved technologies have enhanced aircraft performance in terms of its speed, firepower, stealth, electronic warfare, situational awareness, and vulnerability reduction capabilities. This paper highlights the impact of emerging technologies on human factors for various military operations and missions. Technologies such as ‘cooperative knowledge-based systems’ to aid pilot’s decision making in military conflict scenarios as well as simulation technologies to enhance human performance is also studied as a part of research work. Current and emerging pilot protection technologies and systems which form part of the integrated life support systems in new generation fighter planes is discussed. System safety analysis application to quantify the human reliability in military operations is also studied.

**Keywords:** Combat effectiveness, emerging technologies, human factors, systems safety analysis.

## **CONSTRUCTING AN INTEGRATED RELATIONAL DATABASE UTILIZING SWISS NUTRITION NATIONAL SURVEY AND HEALTH DATASETS FOR DATA MINING OBJECTIVES**

**Helena Einsele , Jenzer Farshideh**

Fiji Institute of Technology- Fiji

### **Abstract:**

**Objective:** The objective of the study was to integrate two big databases from Swiss nutrition national survey (menuCH) and Swiss health national survey 2012 for data mining purposes. Each database has a demographic base data. An integrated Swiss database is built to later discover critical food consumption patterns linked with lifestyle diseases known to be strongly tied with food consumption. **Design:** Swiss nutrition national survey (menuCH) with approx. 2000 respondents from two different surveys, one by Phone and the other by questionnaire along with Swiss health national survey 2012 with 21500 respondents were pre-processed, cleaned and finally integrated to a unique relational database. **Results:** The result of this study is an integrated relational database from the Swiss nutritional and health databases.

**Keywords:** Health informatics, data mining, nutritional and health databases, nutritional and chronic databases.



## CAN EEG TESTING AID IN BRAIN TUMOR IDENTIFICATION?

**M. Sharanreddy, P. K. Kulkarni**

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### **Abstract:**

Brain tumor is inherently serious and life-threatening disease. Brain tumor builds the intracranial pressure in the brain, by shifting the brain or pushing against the skull, and also damaging nerves and healthy brain tissues. This intracranial pressure affects and interferes with normal brain functionality, which results in generation of abnormal electrical activities from brain. With recent development in the medical engineering and instruments, EEG instruments are able to record the brain electric activities with high accuracy, which establishes EEG as a primary tool for diagnosing the brain abnormalities. Research scholars and general physicians, often face difficulty in understanding EEG patterns. This paper presents the EEG patterns associated with brain tumor by combining medicine theory and neurologist experience. Paper also explains the pros-cons of the EEG based brain tumor identification.

**Keywords:** Brain tumor, Electroencephalogram (EEG).

**EXAMINING THE HAZARDS OF INADEQUATE MEDICAL WASTE  
MANAGEMENT PRACTICES ON HUMAN HEALTH AND THE ENVIRONMENT:  
A REVIEW OF LITERATURE**

**Babanyara Ibrahim, Garba Bogoro., M. Y. Abubakar,**

University of Novo Mesto, Novo Mesto- Slovenia

**Abstract:**

Medical care is vital for our life, health and well-being. But the waste generated from medical activities can be hazardous, toxic and even lethal because of their high potential for diseases transmission. The hazardous and toxic parts of waste from healthcare establishments comprising infectious, medical and radioactive material as well as sharps constitute a grave risks to mankind and the environment, if these are not properly treated / disposed or are allowed to be mixed with other municipal waste. In Nigeria, practical information on this aspect is inadequate and research on the public health implications of poor management of medical wastes is few and limited in scope. Findings drawn from Literature particularly in the third world countries highlights financial problems, lack of awareness of risks involved in MWM, lack of appropriate legislation and lack of specialized MWM staff. The paper recommends how MWM practices can be improved in medical facilities.

**Keywords:** Environmental pollution, infectious, management, medical waste, public health.

## **EXAMINING MAINTENANCE STRATEGIES AND RELIABILITY OF VITAL MEDICAL EQUIPMENT IN HOSPITALS: IMPACT ON PATIENT OUTCOMES**

**Flanagan Peter , Gibson John**

Charles Darwin University- Australia

### **Abstract:**

This study investigates the relationship between the reliability of critical medical equipment (CME) and the effectiveness of CME maintenance management strategies in relation to patient outcomes in 84 public hospitals of a top 20 OECD country. The work has examined the effectiveness of CME maintenance management strategies used by the public hospital system of a large state run health organization. The conceptual framework was designed to examine the significance of the relationship between six variables: (1) types of maintenance management strategies, (2) maintenance services, (3) maintenance practice, (4) medical equipment reliability, (5) maintenance costs and (6) patient outcomes. The results provide interesting insights into the effectiveness of the maintenance strategies used. For example, there appears to be about a 1 in 10 000 probability of failure of anesthesia equipment, but these seem to be confined to specific maintenance situations. There are also some findings in relation to outsourcing of maintenance. For each of the variables listed, results are reported in relation to the various types of maintenance strategies and services. Decision-makers may use these results to evaluate more effective maintenance strategies for their CME and generate more effective patient outcomes.

**Keywords:** Critical medical equipment, maintenance strategy, patient outcomes, reliability.

## CTIVE DYNAMIC FEATURES FOR HEART DISEASE CLASSIFICATION

**Walid Khelood**

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### **Abstract:**

The healthcare environment is generally perceived as being information rich yet knowledge poor. However, there is a lack of effective analysis tools to discover hidden relationships and trends in data. In fact, valuable knowledge can be discovered from application of data mining techniques in healthcare system. In this study, a proficient methodology for the extraction of significant patterns from the Coronary Heart Disease warehouses for heart attack prediction, which unfortunately continues to be a leading cause of mortality in the whole world, has been presented. For this purpose, we propose to enumerate dynamically the optimal subsets of the reduced features of high interest by using rough sets technique associated to dynamic programming. Therefore, we propose to validate the classification using Random Forest (RF) decision tree to identify the risky heart disease cases. This work is based on a large amount of data collected from several clinical institutions based on the medical profile of patient. Moreover, the experts- knowledge in this field has been taken into consideration in order to define the disease, its risk factors, and to establish significant knowledge relationships among the medical factors. A computer-aided system is developed for this purpose based on a population of 525 adults. The performance of the proposed model is analyzed and evaluated based on set of benchmark techniques applied in this classification problem.

**Keywords:** Multi-Classifier Decisions Tree, Features Reduction, Dynamic Programming, Rough Sets.

## OPTIMIZATION OF THE TUNED MASS DAMPER FOR VIBRATION SUPPRESSION OF A CUTTING TOOL HOLDER USING THE BEES ALGORITHM

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### ABSTRACT

In this study, a tuned mass damper (TMD) for vibrations suppression of a cutting tool holder is optimized using the Bees Algorithm. In order to reduce the undesired vibrations, a TMD with three unknown parameters (mass, damping ratio, and stiffness coefficient) is added to the cutting tool holder. The equations of the motion are obtained utilizing Newton's second law and solved. The Bees Algorithm is used to efficiently achieve the optimum value for each three parameters of the TMD. The effectiveness of the algorithm and the designed TMD is evaluated through comparing the vibration amplitude of the cutting tool holder in the presence and absence of the TMD. It is observed that the designed TMD reduces the vibrations occurring at the tip of the cutting tool holder. The numerical results obtained are presented graphically and numerically in tables.

**Keywords:** Cutting tool holder, Vibration suppression, Tuned mass damper (TMD), Optimization, The Bees Algorithm.

## BİR KESİCİ TAKIM TUTUCUSUNDAKİ TİTREŞİMİN ÖNLENMESİ İÇİN AYARLI KÜTLE SÖNÜMLEYİCİSİNİN ARI ALGORİTMASI KULLANILARAK OPTİMİZASYONU

### ÖZET

Bu çalışmada, Arı Algoritması kullanılarak bir kesici takım tutucusunun titreşimini önlemek için ayarlı kütle sönümleyicisinin (TMD) optimizasyonu yapılmıştır. İstenmeyen titreşimleri azaltmak için kesici takım tutucusuna üç bilinmeyen parametrelili (kütle, sönüm oranı ve rijitlik katsayısı) bir ayarlı kütle sönümleyici eklenmiştir. Newton'un ikinci yasasından yararlanılarak hareket denklemleri elde edilmiş ve çözülmüştür. Arı Algoritması, TMD 'nin her üç parametresi için optimum değere verimli bir şekilde ulaşmak için kullanılmıştır. Algoritmanın

ve tasarlanan TMD 'nin etkinliđi, TMD 'nin olması ve olmaması durumları için kesici takım tutucusunun titreşim genliđi karşılaştırmalı olarak değerlendirilmiştir. Tasarlanan TMD 'nin kesici takım tutucusunun ucunda oluşan titreşimleri azalttığı gözlenmiştir. Elde edilen sayısal sonuçlar grafiksel ve sayısal olarak tablolar halinde sunulmuştur.

**Anahtar kelimeler:** Kesici takım tutucusu, Titreşim önleme, Ayarlı kütle sönümleyici (TMD), Optimizasyon, Arı Algoritması.

## YÜKSEK BASINÇLI DÖKÜM PROSESİ İLE ÜRETİLEN ALÜMİNYUM AYDINLATMA PARÇALARINDA KALIP TASARIMI DEĞİŞİKLİKLERİNİN PARÇA DÖKÜM KALİTESİ ÜZERİNE ETKİLERİNİN ARAŞTIRILMASI

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### ÖZET

Günümüz otomotiv endüstrisinde alüminyum alaşımlarının sağladığı avantajlar nedeniyle kullanım oranı arttıkça, seri halde üretim kabiliyeti ve verimliliğini artıran döküm yöntemlerine olan ilgi de artmaktadır. Genel olarak bu talebi basınçlı döküm teknolojisi karşılamaktadır. Çok çeşitli otomotiv parçalarının üretiminde düşük yoğunluklu parça kullanımı giderek artmaktadır. Alüminyum basınçlı döküm alaşımları; kolay dökülebilirlik, düşük yoğunluk, alaşımlandırılabilme, yüksek korozyon direnci, yüksek mekanik dayanım ve sızdırmazlık özellikleri gibi avantajlarından dolayı tercih sebebi olmaktadır. Basınçlı döküm alüminyum alaşımları başta otomotiv olmak üzere elektrikli ev aletleri, ev eşyaları, makine, inşaat, denizcilik, havacılık, dekorasyon ve daha birçok sektörde yaygın olarak kullanılmaktadır.

Basınçlı döküm teknolojisi alüminyum alaşımının ergitilmesi ve sonrasında yüksek basınç etkisiyle yüksek sıcaklıklara dayanıklı çelik kalıbın içerisine sıvı metalin yüksek hızla enjeksiyonu (yüksek basınçlı döküm makinesinde) ve hızlı katılaşmasını sağlayan bir seri döküm işlemlerini kapsamaktadır. Bu hızlı üretim koşullarında parça, son şekle yakın halde ve yüksek yüzey kalitesinde kalıptan çıkarılmaktadır.

Her döküm yönteminde olduğu gibi basınçlı döküm prosesinde de döküm hataları, üretim verimliliğini sınırlayıcı etkiye sahiptir. Genel olarak döküm hataları: kullanılan tasarımdan, alaşımdan, kalıptan, proses parametrelerinden, döküm makinesinden kaynaklı ortaya çıkabilmektedir. Çoğunlukla yüzey hataları ve döküm içi hatalar olmak üzere iki hata grubu ile karşılaşılmaktadır. Döküm içi hatalar arasında en önemlileri: gaz porozitesi, çekinti porozitesi, soğuk birleşme yer alırken, kalıp kaynaklı hatalar yüzey hatalarına neden olmakta ve sonrasında ek işlemlere gereksinim duyulmaktadır. Hata oranlarının artması hem üretim verimliliğini düşürmekte hem de ek işlem maliyetlerini artırmaktadır. Birçok basınçlı döküm üretimi yapan tesis için başta kalıp tasarımı olmak üzere düzeltici önleyici faaliyetler, belirli standartlar doğrultusunda ve problem çözme teknikleri aracılığıyla kapsamlı bir şekilde sürdürülmektedir. Tüm hata kodları standartlar ile tanımlanmış olup, üretim kapsamında alınan örnekler ile test ve kalite kontrole tabi tutulmaktadır. Prosesin çevrim hızının kısa olması proses kontrolünü zorlaştırmaktadır. Bu nedenle döküm öncesi simülasyon çalışmaları ile döküm hatalarının azaltıcı tedbirler alınmaya çalışılmaktadır. Sektörde yaygın olarak NovaCast döküm simülasyon yazılımının kullanımı söz konusu olup, kalıp tasarımı üzerinde uygun revizyon,

iyileştirme çalışmaları ile birlikte bu hata türlerinin ortaya çıkması engellenmeye çalışılmaktadır.

Bu çalışma kapsamında da yüksek basınçlı döküm prosesi (HPDC) ile basınçlı döküm alüminyum alaşımları kullanılarak üretilen aydınlatma parçası olan Heatsink parça döküm kalitesi üzerine etkileri araştırılmış ve döküm simülasyon çalışmaları ile proses kontrol kabiliyeti detaylı bir şekilde incelenmiştir. Sonrasında döküm hataları gözle muayene, X-İşinleri röntgen muayeneleri, sızdırmazlık testleri ile birlikte analiz edilmiştir. Elde edilecek sonuçlara göre kalıp iyileştirmeleri sağlanarak üretim kalitesinde iyileştirme sağlanmıştır.

**Anahtar Kelimeler:** Aydınlatma Parçası Üretimi, Üretimde Kalıpsal Sorunlar ve Çözümleri, Yüksek Basınçlı Döküm Yöntemi



## COMPARISON OF TENSILE PROPERTIES AND HARDNESS OF POLYESTER COMPOSITES FILLED WITH SILICON DIOXIDE AND GLASS GRANULE FILLERS

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### ABSTRACT

Plastics and plastic-based composites continue to rapidly replace traditionally used materials in various fields of industry. In addition to their advantages such as lightness, easy shaping, coloring, good appearance, resistance to chemicals, they have disadvantages such as low strength and rigidity, scratchability, UV exposure, and aging. While plastic materials are indispensable in some industrial areas, polymer composites are produced to make the disadvantages of plastics advantageous and solutions to problems are sought. In this study, composites were produced by adding fillers such as silicon dioxide and glass granules to unsaturated polyester based composites. Composite test specimens were produced by liquid resin casting method. The tensile properties of the composites were investigated. In the production of composite materials, the amount of fillers in the polyester main matrix material was kept constant at 25% by weight. Tensile and hardness tests were performed on composite test specimens. The maximum load, tensile strength, Young's modulus, elongation at break and hardness properties of the composite materials were investigated. In the study, silicon dioxide filling was found to be better in all other properties except Young's modulus. Compared to unsaturated polyester resin containing 2% thickener, both silicon dioxide and glass granule filled composite materials showed a decrease in maximum load, tensile strength and strain at break properties, while Young's modulus and hardness values increased. In the study, the highest Young's modulus of 3.47 GPa was obtained in the composite containing glass granules, while the highest hardness of 38 Barcol hardness was obtained in the composite with silicon dioxide filler. Again, the highest tensile force of 2.40 KN, the highest tensile strength of 48.2 MPa and the highest elongation at break of 3.9% were obtained in polyester resin containing



thickener. Scanning electron microscopy was used to examine the interfacial bond structure between silicon dioxide and glass granule fillers and polyester resin.

**Keywords:** Glass granules, silicon dioxide, unsaturated polyester, composite, mechanical properties

## MINI REVIEW ON SMART PACKAGING TECHNOLOGY AND APPLICATIONS

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### ABSTRACT

Packaging is defined as a material that protects food from environmental influences, retains the product within, and allows for transportation and marketing. Packaging should be done with storage and transportation in mind, as well as maintaining the product's excellent qualities on the first day. To match consumer demands, the most suitable packaging material must be chosen, and the product must be wrapped in a specific shape. Packaging technology has advanced significantly in recent years, coinciding with a rise in customer needs and knowledge. Smart packaging technology is a technology that has emerged in this context and is a system. Smart packaging solutions use both inside and outside package indications to assure food safety. This technology, also known as smart labels, is a set of indicators used inside or outside packaging to monitor changes, deterioration, and product freshness along the entire process of producing and consuming packaged food. The system monitors temperature variations, O<sub>2</sub> and CO<sub>2</sub> levels, and product freshness throughout storage and reports them to the consumer. Smart packaging techniques enable effective communication between food and humans. In recent years, the food industry has seen a fast increase in the use of smart packaging technology. It is regarded as both consumer-friendly and a system that extends the shelf life of food through precise monitoring and control. In this approach, by adding fewer preservatives to foods, it may be ensured that the items are as fresh as the first day. In recent years, the usage of smart packaging has gained popularity. This mini-review discusses the technologies, and packaging types produced in this context, and their benefits.

**Keywords:** Smart packaging, food packaging, sensors, temperature-time indicators, freshness indicators

## İNOVATİF YAPAY ZEKÂ YÖNTEMLERİ İLE KÜTÜPHANE HİZMETLERİ ENTEGRASYONU

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### ÖZET

Geliştirmiş olduğumuz proje, kütüphane hizmetlerinde kullanıcı memnuniyetini artırmak ve iş süreçlerini optimize etmek amacıyla RPA (Robotik Süreç Otomasyonu) ve yapay zekâ teknolojilerini bir araya getiren yenilikçi bir çözüm sunmaktadır. Kütüphane kullanıcılarına daha kişiselleştirilmiş hizmetler sunmak ve kütüphane personelinin iş yükünü hafifletmek amacıyla çeşitli süreç akışları tasarlanmıştır. Kullanıcılar, kütüphane botuna kitap önerisi talebi içeren bir e-posta göndererek bu süreci başlatır. RPA botu, belirlenen kütüphane mailinin ‘Gelen Kutusundaki maillerden istenilen başlıktaki e-postayı filtreleyerek okur, sonrasında kitap türü tercihini belirlemek için yapay zekâ modeliyle etkileşime geçerek okuduğu ifadenin öneri sorgulamasını yapar. Ardından kullanıcıya ve kütüphane personeline belirlenen uygun kitap önerilerini e-posta yoluyla gönderir. Bu süreç, kütüphane kullanıcılarına daha hızlı ve kişiselleştirilmiş hizmet sunmak için otomatikleştirilmiş bir yöntem olarak tasarlanmıştır. Ayrıca, bu proje kütüphane personelinin vakitlerini kullanıcılarla daha fazla etkileşim kurmaya ve daha stratejik görevlere odaklanmalarına olanak tanırken, kullanıcıların isteklerine daha hızlı ve etkin bir şekilde yanıt verilmesini sağlar. Bu entegrasyon, kütüphanelerin dijital dönüşümünü hızlandırarak, çağdaş ve rekabetçi hizmetler sunmalarına olanak tanımaktadır.

**Anahtar Kelimeler:** RPA (Robotik Süreç otomasyonu), Kütüphane Sistemleri, Yapay Zekâ Teknolojisi, Yenilikçi Verimlilik, İş Süreçleri Optimizasyonu

### LIBRARY SERVICES INTEGRATION WITH INNOVATIVE ARTIFICIAL INTELLIGENCE METHODS

### ABSTRACT

The project we have developed offers an innovative solution that combines Robotic Process Automation (RPA) and artificial intelligence (AI) technologies to enhance user satisfaction and optimize processes in library services. Various process flows have been designed to provide users with more personalized services and alleviate the workload of library staff. Users initiate this process by sending an email to the library bot requesting a book recommendation. The

RPA bot reads the requested email from the 'Inbox' of the designated library mailbox, filters it, and then interacts with an artificial intelligence model to determine the preferred book genre by querying the phrase it has read. Subsequently, it sends suitable book recommendations to the user and library staff via email. This process is designed as an automated method to provide library users with faster and more personalized service. Additionally, this project enables library staff to spend more time engaging with users and focusing on strategic tasks, while ensuring quicker and more efficient responses to user requests. This integration accelerates the digital transformation of libraries, enabling them to offer more contemporary and competitive services.

**Keywords:** RPA (Robotic Process Automation), Library System, Artificial Intelligence Technology, Innovative Efficiency, Business Process Optimization

## RPA ENTEGRELİ DİJİTAL KÜTÜPHANE OTOMASYONU

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### ÖZET

Geleneksel kütüphane ortamlarında personelin tekrar eden işlemleri manuel olarak gerçekleştirilmesi, zaman alıcı ve hata oranını artırıcı bir faktör olarak karşımıza çıkmaktadır. Bu zorluğa çözüm getirmek adına geliştirilen proje, RPA (Robotik Süreç Otomasyonu) teknolojisiyle kütüphane süreçlerini manuel ortamdan dijital ortama dönüştürmektedir. RPA botu, kullanıcının yetkili e-posta adresine gelen talepleri otomatik olarak işlemektedir. Bu süreç, e-postaları analiz ederek kullanıcı adı, şifre ve kitap bilgilerini çıkartmakta birlikte kütüphane uygulamasına giriş yaparak istenen kitap işlemlerini belirlemektedir. Bu şekilde, personelin tekrarlayan ve zaman alan işlemlerini otomatik hale getirerek daha verimli bir çalışma ortamı sağlanmaktadır. Bu projenin en büyük avantajlarından biri, kullanıcıların kütüphaneye fiziksel olarak gitmelerine gerek kalmadan, istedikleri kitapları kolaylıkla ödünç alabilmeleridir. Bu hem kullanıcı deneyimini artırırken hem de personelin iş yükünü azaltarak daha etkin bir kütüphane hizmeti sunulmasını sağlamaktadır. RPA teknolojisinin kütüphane ortamlarındaki bu yenilikçi kullanımı hem personel hem de kullanıcılar için büyük bir kolaylık sağlamaktadır. Bu sayede, kütüphaneler daha çağdaş ve verimli bir yapıya dönüşmekte ve teknolojinin getirdiği imkanlardan en iyi şekilde faydalanabilmektedir.

**Anahtar Kelimeler:** İnovasyon, Dijital Dönüşüm, RPA (Robotik Süreç Otomasyonu), Akıllı Kütüphane Sistemleri, Verimlilik

## RPA INTEGRATED DIGITAL LIBRARY AUTOMATION

### ABSTRACT

The project developed to address the challenge of personnel manually performing repetitive tasks in traditional library environments, which are time-consuming and increase the error rate, transforms library processes from manual to digital with RPA (Robotic Process Automation) technology. The RPA bot automatically processes requests sent to the authorized email address of the user. This process not only analyzes emails to extract user names, passwords, and book information but also logs into the library application and performs the requested book transactions. In this way, automating repetitive and time-consuming tasks of personnel creates



a more efficient working environment. One of the biggest advantages of this project is that users can easily borrow books they want without physically going to the library. This not only enhances the user experience but also reduces the workload of the personnel, ensuring a more effective library service. The innovative use of RPA technology in library environments provides significant convenience for both staff and users. As a result, libraries are becoming more modern and efficient, making the most of the opportunities offered by technology.

**Keywords:** Innovation, Digital Transformation, RPA (Robotic Process Automation), Smart Library Systems, Efficiency

## BOYA ATIKLARININ ADSORPSİYON YÖNTEMİ İLE UZAKLAŞTIRILMASI

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### ÖZET

Evsel ve endüstriyel aktiviteler yüksek miktarda atık su oluşturmaktadır. Bunların doğal ortamlara boşaltımı çevre üzerinde ciddi etkilere neden olmaktadır. Bu nedenle suların tekrar kullanımı ve yüksek su kalitesi elde edilmesi konularında atık su işleme teknolojilerinin geliştirilmesi önem arz etmektedir. Özellikle tekstil endüstrisinde su ve boya yüksek miktarlarda kullanılmaktadır. Boyalar kağıt, plastik, deri, gıda, kozmetik, tekstil ve ilaç sanayii gibi birçok endüstri tarafından salınan sentetik organik bileşikler arasında yer alır. Boyaların sulu ortamlardaki varlığı en önemli çevresel ve sağlık problemleri arasında yer almaktadır. Ciddi çevre kirliliğine sebep olmalarının yanı sıra azo boya bileşikleri potansiyel kanserojen maddelerdir. Boya atıklarının ayrıştırılmasında kullanılan işlemler arasında uygulama ve maliyet konuları göz önüne alındığında adsorpsiyon bir adım öne çıkmaktadır. Çalışma kapsamında metil oranj ve parlak mavi R boyalarının, akrilonitril tabanlı kopolimer zarlar yardımıyla adsorpsiyon yöntemi kullanılarak uzaklaştırılması hedeflenmiştir. Ayrıca inorganik malzemelerin ( $\text{SiO}_2$ , zeolit,  $\text{TiO}_2$ ) ve polimerin (polianilin) kopolimer içerisine eklenmesinin adsorpsiyon performansına etkisi incelenmiştir.

**Anahtar Kelimeler:** Boya, adsorpsiyon, polimer



## **ELBISTAN REGION DAMAGE ASSESSMENT STUDY IN K. MARAS EARTHQUAKES**

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### **Abstract**

Turkey is situated on three significant fault lines, namely the North Anatolian fault zone, East Anatolian fault zone, and West Anatolian fault zone owing to its geographical location. Consequently, natural calamities such as earthquakes are frequently encountered. The assessment of damage after earthquakes holds great significance for effective disaster management. The process of damage assessment involves the observational evaluation of the effects of an earthquake on building structures, which are then classified by their level of damage as either undamaged, slightly damaged, moderately damaged, or heavily damaged/ruined. The current study focuses on assessments made after the earthquakes that took place in the K. Maraş/Elbistan district on the 6th of February, 2023.

**Keywords:** Natural disaster, Earthquake, Damage assessment type, Damage assessment principles

## KENT KİMLİĞİNİN SÜRDÜRÜLMESİNDE İŞARET ÖĞELERİNİN YERİ

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### ÖZET

Kentleri tanımlayan doğal ve yapay özellikler, sosyal, kültürel ve ekonomik yapı her kent için değişken olup, o kent için farklı noktaları ön plana çıkarmaktadır. Ancak son yıllarda kentlerin özgün özelliklerini dikkate almayan ve bu özelliklerin sürdürülmesini önemsemeyen uygulamalar birbirinden farklılaşmayan, aynı görünüme sahip kentlerin ortaya çıkmasına neden olmuştur. Bunun en önemli sebeplerinden biri de kent kimliğini etkileyen unsurları önemseyen, kentin akılda kalan benzersiz özelliklerini ortaya koyan, kent kimliğinin sürdürülebilirliğini sağlayacak tasarım ilkelerinin uygulanamamasıdır.

Kentin kimliğini anlamada ve kent kimliğinin sürdürülmesinde kent imajı ve bileşenleri bu bağlamda önemli rol oynar. O sebeple kent imajının önemini ortaya koyabilmek için kentin benzersiz özelliklerine ve akılda kalan öğelerine dikkat edilmesi gerekmektedir. Çalışmanın temel amacı kimliğe etki eden imaj öğelerinden özellikle de işaret öğelerinin planlama, kentsel mekan organizasyonu ve tasarım çalışmaları için önemini ortaya koymaktır.

Kent kimliği, kente özgün karakterini veren, kent imgesini etkileyen ve kentin imgesinden etkilenen bir yapıdadır. Her kent farklı ölçek ve yorumlarla kendine özgü nitelikler taşıyan, fiziksel, kültürel, sosyo-ekonomik, tarihsel ve biçimsel faktörlerle şekillenmektedir. Kentsel imaj ise o kentin benzersiz özelliklerinin fiziksel mekana yansımalarıdır. Fiziki mekanda karşılık bulan kent ve kentliler için anlam ifade eden yapıların saptanması ve bunların varlığının ortaya konulabilmesi kent kimliği açısından da oldukça önemlidir.

Lynch'in ortaya koyduğu 5 imaj öğesinin tümü doğrudan veya dolaylı olarak kimliğe etki etse de; işaret öğeleri diğer öğelere oranla kentin kolaylıkla fark edilen referans noktası olma özelliğiyle daha çok etkilidir. Bu nedenle kentlerde işaret öğesi olarak nitelendirilen, kimlik sağlayan objelerin/yapıların hassasiyetle korunması gerekmektedir.

İşaret öğeleri doğaları gereği kentte fiziksel (kentsel dokuda egemen olma ve vurgu, ölçeklendirme ve yönlendirme) nitelikleri ve sosyal işlevleri (ait hissetme, güven duygusu oluşturma ve hareket özgürlüğü sağlama, tarihi, sosyal, kültürel değeri yansıtma, belli politikaları yansıtma) ile kentlerin özgünlüğünü ortaya çıkarmaktadır. Kentsel dokuda yarattığı

bu etki sebebiyle işaret öğeleri kentsel imajda daha sık hatırlanan bir öğedir. Sadece bu konu bile işaret öğelerinin kent kimliği konusundaki önemini ortaya koymaktadır.

Çalışmanın yönteminde işaret öğelerinin kent kimliği konusundaki önemini ortaya koyabilmek için işaret öğeleri ve kent kimliği arasındaki ilişkiyi gösteren bir ilişkiler matrisi yapılmıştır. Bu kapsamda kent kimliğine etki eden işaret öğeleri ile kimlik bileşenlerinin etkileşimi değerlendirilmiştir. İşaret öğesi olma ölçütleri ve kent kimliği bileşenleri arasındaki ilişki irdelenmiştir.

Sonuç olarak kent kimliğini etkileyen unsurların içinde işaret öğesi güçlü bir öge olarak yer almaktadır. İşaret öğeleri kentsel mekanda daha algılanabilir hale geldiğinde, fiziksel niteliklerinin etkisiyle kent kimliğine daha büyük katkı sağlamaktadır. Bu veriden yola çıkarak işaret öğelerinin kent kimliğinde etkisini arttırmak için yapılacak kentsel tasarım çalışmalarında işaret öğelerini koruyup, öğelerin algılanabilirliğini arttıracak konulara dikkat edilmesi gerekmektedir. Bunu gerçekleştirirken dikkat edilmesi gereken en önemli konulardan birisi planlama ve tasarım çalışmalarında işaret öğelerini sadece tekil bir unsur olarak değerlendirmekten kaçınılmasıdır. Bu öğelerin yakın çevrelerinin yanı sıra kent ölçeğindeki önemi ve görünümünün de büyük önem taşıdığı daima dikkate alınarak mekansal düzenlemeler gerçekleştirilmelidir.

**Anahtar kelimeler:** Kent kimliği, kentsel imaj öğeleri, işaret öğeleri

## SOIL IMPROVEMENT WITH A SUSTAINABLE CEMENT

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### ABSTRACT

The cement sector is responsible for 8% of CO<sub>2</sub> emissions from greenhouse gases in the world. Turkey is located in the earthquake zone and surrounded by seas on three sides and ground strengthening operations should be carried out before the construction of infrastructure and superstructures. In deep soil mixing (DSM) and jet grouting (JG) methods performed with cement and water, soil improvement is achieved by constructing columns of certain diameters and lengths. JG and DSM methods, which are among the cement grouted soil reinforcement methods, are among the most frequently used techniques in world. In these methods, 300-450 kg/m<sup>3</sup> cement is used. Considering that cylindrical DSM or JG columns with a diameter of 40-100 cm and a height of at least 25-40 m are constructed under a subway or building foundation, this means the use of hundreds of tonnes of cement. In this research, 'net-zero cement' (NOVOCEM©) was used for the first time in the literature instead of Portland cement, which is the most widely used cement in the world and causes CO<sub>2</sub> emissions. In Turkey, OYAK Cement is at the forefront of the targets to reduce CO<sub>2</sub> emissions with calcined clay technology in parallel with carbon-in-limit applications and produces NOVOCEM© cement with 40% lower CO<sub>2</sub> emissions, 20% renewable fuel and 35% less energy consumption.

It was found according to the results obtained in general, the strength increase in the soil obtained from the JG and DSM soil reinforcement studies with Portland cement was also achieved with the new environmentally friendly cement. According to the fracture toughness test results obtained with environmentally friendly NOVOCEM© cement, the toughness values were found higher than the values obtained with OPC. The results of this research would stimulate further research into the use of greener cement, including economic cost and environmental (e.g. energy requirements, CO<sub>2</sub> emissions) data sets in terms of sustainable engineering solutions.

**Key Words:** DSM and jet grout applications, sustainable cement, soil improvement with environmental-friendly cement, soil improvement and fracture mechanics

## COHESIVE FRACTURING PROPERTIES IN CEMENT-REINFORCED COARSE AND FINE SOILS

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### ABSTRACT

Strength tests of concrete and similar composite materials are typically conducted using standard uniaxial compressive strength (UCS) tests, and fracture mechanics tests are rarely used to determine strength, both globally and in Turkey. However, in the failure criteria accepted in material mechanics, pre-existing defects such as notches, cracks, and voids in the material structure that increase stress intensity can lead to material failure. When subjected to loading, these small and stable (innocent) cracks in the material structure can propagate and merge to form macro-scale cracks that ultimately result in failure. Therefore, the ultimate failure and behavior under stress of composite materials such as concrete, rock, and cement-stabilized soils would be investigated and understood in more detail through fracture mechanics tests. In recent years, international standardized tests using semi-circular bending (SCB) specimen geometry with notch cracking have been proposed to determine mode I (tensile), mode II (shear) and mixed mode (I-II) fracture toughness of composites.

In this study, cohesive cracking analyses were performed using FRANC2D software, and numerical analyses were conducted using non-linear elements. The SCB specimen geometry was utilized in the analyses, with the specimen dimensions modeled as a disc diameter of 110 mm and a disc thickness of 42 mm. The results of the nonlinear cohesive fracture analysis showed that the initiation of the unstable cohesive crack occurred between the first chevron notch crack ( $a_0$ ) and the last chevron notch crack length ( $a_1$ ) in the SCB specimen in accordance with the fracture mechanics criteria. The minimum critical crack length was found to be 16 mm in the cement-stabilized coarse-grained soil specimens and the longest cohesive crack length was found to be 20 mm for the fine grain specimens in front of the chevron notch crack in the SCB specimens.

**Key Words:** Soil reinforcement with cement, fracture mechanics and cement-reinforced soils, cohesive fracturing and soil reinforcement

## YERALTI BARAJ TASARIMI İÇİN IRGAT BÖLGESİNİN GEOTEKNİK VE ZEMİN GEÇİRİMLİLİK ÖZELLİKLERİNİN İNCELENMESİ

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### ÖZET

Yeraltı barajı, yeraltı suyunu tabakaların gözeneklerinde depolayan ve yeraltı suyunu sürdürülebilir bir Görsele kullanan bir tesistir. Yeraltı barajlarının inşasında en kritik husus, uygun yerlerin belirlenmesinin karmaşıklığıdır. Fiziksel, sosyal ve ekonomik hususlar dahil olmak üzere birçok faktör yer seçimini etkiler. Bu unsurların geleneksel yöntemlerle araştırılması ve analiz edilmesi genellikle çok maliyetli ve zaman alıcıdır. Van'ın Erçek Bent Deresi üzerinde yapılacak Yeraltı Barajı ile mansap kısmında kalan tarım arazilerinin sulanması amaçlanmıştır. Sulama şebekesi güzergahlarının jeolojisi belirlenmiş, Irgat bölgesindeki temel arazi incelemeleri, malzeme araştırmaları, temel sondaj kuyularının açılması, yerinde deneyler ve karotlardan alınan numuneler üzerinde yapılan laboratuvar deneyleri ile zemin geçirimsizlik açısından değerlendirilmiştir. İnceleme alanında fay, heyelan gibi yapısal özellikler ile kayaçların fiziksel ve mekanik özellikleri araştırılmış ve bölgenin depremselliği ayrıca belirlenmiştir. Yapılan zemin geoteknik incelemeleri ve planlama çalışmaları sonuçlarına göre Van'ın Erçek Bent Deresi üzerinde yapılacak Irgat yeraltı barajında Slurry Trench (Bulamaç Hendeği) gövde tipli bir yeraltı barajı yapılması uygun bulunmuştur.

**Anahtar Kelimeler:** Yeraltı barajı, zemin özellikleri, yeraltı barajları ve zeminde geçirimsizlik, sondaj kuyuları ve yeraltı barajları

## SLURRY TRENCH TİPİ GÖVDELİ IRGAT BARAJI VE İLETİM HATLARININ TASARIMI

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### ÖZET

Yeraltı barajları, yeraltı suyunun doğal akışını kesen veya engelleyerek depolama sağlayan yapılardır. Yeraltı Barajı Eylem Planı” (YEP) 22 Temmuz 2019 tarihinde Tarım Bakanlığı tarafından kamuoyuna “Cumhuriyetin 100. Yılı Şerefine 100 Yeraltı Barajı” ve “Yerinde ve derinde depolama” sloganlarıyla duyurulan bir projedir. Proje kapsamında Türkiye genelinde 246 yer altı barajı inşa edilmesi planlandı ve 105 yeraltı barajı DSİ tarafından tamamlandı. Yeterli genişliğe, yeterli beslenme koşullarına, yüksek depolama katsayısına ve hidrolik iletkenliğe sahip bir akifer, akiferin altında geçirimsiz-düşük geçirimli bir ortam, gövde inşa edilebilecek yerde akiferin daraldığı bir kesit, yeterli yeraltı suyu ve kaliteli ve düşük maliyetli inşaat malzemesi, bir yeraltı barajının inşası için minimum gerekliliklerdir. Van’ın Erçek Bent Deresi üzerinde yapılacak Irgat Yeraltı Barajı ile tarım arazilerinin sulanması amaçlanmıştır. Yeraltı Barajı aktif hacminin, sulama alanındaki sulama suyu ihtiyacını karşılayacak olması planlanmıştır. Irgat Yeraltı Barajı topografik yapısı ve akifer kalınlığına bağlı olarak slurry trench (bulamaç hendeği) gövde tipi yapılması planlanmıştır. Slurry trench (bulamaç hendeği) ile yapılan yeraltı barajlarında akiferin altındaki geçirimsiz zemine soketlenen duvarın yeryüzüne veya projesine göre zemin seviyesi altında istenen kota kadar çıkartılması ve bu perde gerisinde depolanan suyun uygun bir su alma yapısı ile iletim hattına (boru veya kanal) aktarılması şeklindedir. Yeraltı barajlarında en fazla hata ise gövdenin geçirimsiz zemine ulaşmayarak askıda kalması nedeniyledir. Çalışmada, bölgedeki akım gözlem istasyonlarından yüzey sularının durumu ve yeraltı sularından elde edilen debi değerleri değerlendirildi. Yeraltı barajı rezervuarında teşkil edilen keson kuyudan pompajla YAS’ın (yeraltı su seviyesinin) en düşük olduğu kurak dönemler dikkate alınarak elde edilen debi için sulama alanları belirlenmiştir. Yeraltı barajı sahasında ve rezervuar alanında yapılan sondajlar ile keson kuyu arasında düşüm yüksekliğine göre keson kuyudan çekilebilecek pompaj debisi hesaplanmış ve bölgenin kotu da göz önünde bulunarak iletim hatlarının tayini yapılmıştır.

**Anahtar Kelimeler:** Yeraltı barajı, yeraltı barajları ve hidrolik özellikler, debi, yeraltı barajları iletim hattı

## COMPARISON OF SPECTRAL BEHAVIOR UNDER DISTINCT LEVELS OF APPROXIMATIONS

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### ABSTRACT

The spectral behavior of structures subjected to severe ground motions is a critical aspect in earthquake engineering for assessing their response and ensuring their resilience. This study presents a comparative analysis of spectral characteristics under severe ground motion conditions, examining how structures respond to varying levels of seismic intensity. Utilizing discrete wavelet transform, the earthquake acceleration is decomposed into approximation coefficients, employing a designated decomposition level of six. Subsequently, analyses of time response are conducted for both the primary signal and its approximations. The elastic response spectrum is then derived for each scenario, facilitating a robust comparison across varying seismic conditions. Through a systematic exploration of these spectral behaviors, this research aims to enrich the understanding of structural response mechanisms under extreme seismic events. Moreover, the insights garnered from this analysis hold promise in refining scaling coefficients, thereby enhancing the accuracy of seismic hazard assessments and bolstering the resilience of infrastructure against seismic threats.

**Keywords:** severe ground motion, approximation coefficient, elastic response spectrum, discrete wavelet transform



## COMPARISON OF STRUCTURAL RESPONSES OF A BASE-ISOLATED BUILDING WITH DISTINCT ISOLATION PARAMETERS

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### ABSTRACT

The parameters of the isolation system play a crucial role in influencing the structural responses, as they directly dictate how the structure interacts with seismic forces. Within the scope of this study, the focus is on examining the impact of base isolation parameters, particularly stiffness and damping coefficient, on structural behavior. These parameters, which are inherently dependent on the isolator's period and damping ratio, are systematically varied to distinguish their effects. Through time response analyses, base displacement and top acceleration measurements are obtained. Furthermore, to gain deeper insights into the dynamic behavior of the structure under seismic excitation, discrete wavelet transform is employed to decompose earthquake accelerations into three levels. This decomposition strategy allows for a detailed examination of the seismic input at different frequency bands, offering a compact understanding of the interaction between the structure and ground motion. Subsequently, time response analyses are conducted for each earthquake acceleration scenario and its corresponding approximation coefficients. By scrutinizing the temporal behavior of the structure under varying isolation parameters and seismic inputs, this study aims to unravel the intricate relationships between system dynamics, isolation settings and seismic response characteristics.

**Keywords:** base-isolation, seismic response, discrete wavelet transform, decomposition

## HARMONİK YÜKLEME ALTINDA MANYETO-REOLOJİK ELASTOMERLERİN KESME DAVRANIŞINA SERTLİĞİN ETKİSİNİN DENEYSSEL OLARAK BELİRLENMESİ

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### ÖZET

Manyeto-reolojik malzemeler dış manyetik alan etkisi altında tersinir ve hızlı bir şekilde cevap verebilmektedirler. Bu özellikleri bakımından akıllı malzemelerin bir türünü oluşturmaktadırlar. Bu tür malzemeler çeşitli mühendislik uygulamalarında, yapılarda isolator olarak ve aynı zamanda ses kontrol sistemlerinde kullanılmaktadır. Bu çalışma harmonik yüklemeye altında MRE malzemelerinin kayma davranışlarına yönelik mekanik özelliklerinin belirlenmesine odaklanmıştır. Farklı sertlik değerlerindeki matris malzemeleri, toz çeşitleri, manyetik alan, frekans ve şekil değişimi gibi parametreler göz önüne alınmıştır. Çalışma neticesinde manyetik alana duyarlılık parametresi göz önüne alındığında en uygun özelliklere sahip kompozit malzemeler, Shore 2 sertlik değeri ve SQ manyetik toz ile bulunmuştur. Sertlik değerleri kıyası neticesinde shore A10 ve shore A2 değerlerinde %200 oranında eksponansiyel bir artış olduğu gözlemlenmiştir.

**Anahtar Kelimeler:** Harmonik yüklemeye, histeresis, manyeto-reolojik elastomer, kayma deformasyonu, manyetik alan

### EXPERIMENTAL DETERMINATION OF THE EFFECT OF HARDNESS ON THE SHEARING BEHAVIOR OF MAGNETO-RHEOLOGICAL ELASTOMERS UNDER HARMONIC LOADING

### ABSTRACT

Magneto-rheological materials can respond quickly and reversibly under the influence of external magnetic field. They are a kind of intelligent materials in terms of their features. Such materials are used in various engineering applications, as isolators in constructions, and also in sound control systems. This work focuses on the determination of the mechanical properties of shear behavior of MRE materials under harmonic loading. The parameters such as matrix materials of different hardness values, powder types, magnetic field, frequency and shape change are taken into consideration. Considering the magnetic susceptibility parameter, composite materials with the most suitable properties were found with Shore 2 hardness value and SQ magnetic powder. As a result of the comparison of hardness values, it was observed that there was an exponential increase of 200% in shore A10 and shore A2 values.

**Keywords:** Harmonic loading, hysteresis, manyeto-rheological elastomer, shear deformation, magnetic field

## HIZLI KENTLEŞME HAREKETİNİN ÖNLENMESİ AMACIYLA TARIMSAL ÜRETİMİ ARTIRACAK ÇEŞİTLİ DESTEKLEME POLİTİKALARI

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### ÖZET

Kentleşme, genel olarak kırsal alanlardan kentsel alanlara doğru yapılan göçler sonucu nüfusun artması ve kentlerin büyümesi sürecidir. Bu süreç, insanların tarım ve hayvancılık gibi geleneksel faaliyetlerden şehirlerdeki sanayi, ticaret, hizmet sektörleri gibi daha çeşitli iş alanlarına yönelmeleriyle gerçekleşir. Kentleşme beraberinde bir dizi değişimi getirir. Bunlar arasında altyapı ve hizmetlerin artırılması, şehir planlaması, nüfus yoğunluğu, ulaşım, çevre etkisi, iş fırsatları gibi konular bulunur. Kentleşme süreci, bazen plansız ve kontrolsüz olabilir ve bunun sonucunda kentsel sorunlar ortaya çıkabilir.

“Hızlı kentleşme paralelinde yaşanan sorunlara çözüm önerileri” sunacak, çevre sorunlarının artmasını engelleyecek için çeşitli çalışmalar yapılmaktadır. Artan nüfusun yıkıcı etkisini teknoloji kullanarak azaltmak yerine, teknolojiyle beraber yıkımın etkisi artmaktadır.

Bu yıkıcı etkileri azaltmak için insanlara sağlam bir çevre bilinci verilmelidir. Hızlı kentleşme hareketi kontrol altına alınmalı ve çevre tahribatını önleyecek önlemler alınmalıdır. Tarım alanlarının plansız kentleşme malzemesi olmasının önüne geçilmelidir. Kırsal bölgelerde yaşayan vatandaşların daha iyi ekonomik koşullarda yaşamak için topraklarını bırakıp göç etmesinin önüne geçilmeli ve bu alanda gereken çalışmalar yapılmalıdır. Tarımda istihdamı artırıcı önlemler alınmalı ve tarım sektörü ekonomik anlamda cazip hale getirilmelidir.

Bu çalışmadaki amacımız; hızlı kentleşme hareketinin önlenmesi amacıyla tarımsal üretimi artıracak çeşitli destekleme politikaları sunmaktır. Tarımsal destekleme politikaları, çeşitli ülkelerde tarım sektörünün sürdürülebilirliğini ve gelişimini desteklemek amacıyla uygulanan çeşitli tedbirleri ön plana çıkarır. Bu politikalar genellikle çiftçilere gelirlerini artırmak, üretimi teşvik etmek, tarımsal riskleri azaltmak ve gıda güvenliğini sağlamak için tasarlanmıştır. Bu politikalar çerçevesinde; fiyat desteği, üretim teşviği, pazarlama gibi alanlarda daha bilinçli tarım üretimi yapılarak hem kırsaldan kentlere olan göçün azalması sağlanacak hem de ülke kalkınmasının yanında halkın refah düzeyinin de artması sağlanacaktır.

**Anahtar Kelimeler:** Hızlı Kentleşme, Destekleme Programları, Göç

## AFETLERDE SAHRA HASTANELERİNDE ÇALIŞAN SAĞLIK PERSONELİNİN İŞ SAĞLIĞI VE GÜVENLİĞİ: RİSKLER VE KORUYUCU ÇÖZÜMLER

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### ÖZET

Afetler toplumlarda can ve mal kaybına sebebiyet verirken, ekonomilerinde de ciddi derecede çöküntüye neden olmaktadır. Dünyada afetlerle ilgili olarak birçok yönetim sistemi mevcuttur. Ülkemizde de bu yönetim sistemlerinden bütünleşik afet yönetim sistemi kullanılmaktadır. Risk ve zarar azaltma, hazırlık, mücadele, iyileştirme aşamalarından oluşan sistem afet öncesinde, sırasında ve sonrasında kamu, özel sektör ve halkın etkin çalışmalarıyla oluşan afet tamamıyla ele alınmaktadır. Bu bağlamda afetlerde tüm aşamalarda sağlık hizmetinin devamlılığı esastır. Sağlık hizmeti toplumun yararlanması için 7/24 saat çalışma esasına dayanan sistem olup afetlerde devamlılığı ve sürdürülebilirliği sağlaması açısından önem arz etmektedir. Bunu sağlamak için ise afet bölgelerine sahra hastaneleri kurulmaktadır. Bu hastanelerde çalışan sağlık personelleri çalışma alanlarında sağlık ve güvenlik açısından birçok tehlike ve risk etmenine maruz kalmaktadır. Sahra hastanelerinde çalışan sağlık personelleri çalışma sırasında enfeksiyon ve bulaşıcı hastalıklar, hijyen eksikliği, iklim koşulları, kimyasal maddeler, yaralanmalar ve psikososyal etmenler vb. gibi bir çok faktör ile karşı karşıya kalmaktadırlar. Bu doğrultuda bu çalışmada afetlerde hizmetin devamlılığı için kurulan sahra hastanelerinde çalışan sağlık personellerinin karşılaştığı sağlık ve güvenliğini tehlikeye düşürebilecek risk etmenleri araştırılması amaçlanmıştır. Kurulan bu hastanelerde ve tiplerinde yapılan çalışma ile personel ve hasta sağlığının ve güvenliğinin sağlaması ile malzeme güvenliğinin sağlanarak iş devamlılığının aksamaması önemlidir. Risk etmenlerinin tanımlanması, tespiti ve kontrolü sağlık çalışanlarının sağlığı ve güvenliği açısından büyük önem arz etmektedir.

**Anahtar Kelimeler:** İş sağlığı ve güvenliği, sahra hastaneleri, tehlike ve riskler, sağlık çalışanlar

## **HEALTH AND SAFETY OF HEALTHCARE PERSONNEL WORKING IN FIELD HOSPITALS DURING DISASTERS: RISKS AND PROTECTIVE SOLUTIONS**

### **ABSTRACT**

Disasters cause loss of life and property in communities and also result in significant economic downturns. There are various management systems worldwide regarding disasters. In our country, we utilize an integrated disaster management system. This system, consisting of risk and damage reduction, preparation, response, and recovery phases, deals with the disaster caused by the effective work of the public, private sector and the civilians before, during, and after the disaster. In this context, ensuring the continuity of healthcare services is essential at all stages of disasters. Healthcare services operate on a 24/7 basis for the benefit of society, and ensuring their continuity and sustainability during disasters is crucial. To achieve this, field hospitals are established in disaster areas. Healthcare personnel working in these hospitals are exposed to various hazards and risk factors concerning health and safety. During their work, healthcare personnel in field hospitals face numerous factors such as infections and diseases, lack of hygiene, climatic conditions, chemical substances, injuries, and psychosocial factors. In this study, our aim is to investigate the risk factors that could endanger the health and safety of healthcare personnel working in field hospitals established for the continuity of services during disasters. It is important to ensure health and safety of the personnel and patient, and security of material to maintain uninterrupted operations in these hospitals and setups. Identifying, detecting, and controlling risk factors are of great importance for the health and safety of healthcare workers.

**Keywords:** Occupational health and Safety, field hospitals, hazards and risks, healthcare workers

## OFİS ÇALIŞMALARINDA İŞ SAĞLIĞI VE GÜVENLİĞİ AÇISINDAN YENİLİKÇİ YAKLAŞIMLAR

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### ÖZET

İş sağlığı ve güvenliği çalışma ortamlarında çalışanların sağlık ve güvenliğini etkileyen faktörlerden korunmak amacıyla gerçekleştirilen çalışmalardır. Çalışanlar çalışma ortamlarında yaptıkları işin türüne göre birçok tehlike ve riskle karşı karşıya kalmaktadırlar. Bu iş gruplarından bir tanesi de ofis çalışma ortamlarıdır. Ofis çalışma ortamları teknolojinin gelişmesiyle birlikte yaygınlaşmıştır. Genel itibariyle ofis ortamları tehlike yaratmayan güvenli olarak kabul edilse de bu ortamlarda çalışanlar birçok riskle karşı karşıya kalmaktadır. Çalışanların ofis ortamında masa başında uzun süreler geçirmeleri, aydınlatma, havalandırma, gürültü, termal konfor, elektrik, kaygan zemin, sabitlenmeyen objeler veya mobilyalar, istifleme vb gibi faktörler çalışanlar için iş kazalarına ve birçok sağlık sorununa yol açabilmektedir. Boyun ağrıları, sırt ağrıları, bel ağrıları gibi kas iskelet sistemi hastalıkları, dolaşım hastalıkları, kalp hastalığı, yüksek tansiyon, alerjik hastalıklar ve psikolojik rahatsızlıklar bu ortamlarda çalışanlarda görülen sağlık sorunlarından. Bu çalışmada ofis çalışanlarının çalışma ortamlarının iş sağlığı ve güvenliği açısından yenilikçi yaklaşımlar çerçevesinde değerlendirilmesi amaçlanmıştır. Bu kapsamda iş sağlığı ve güvenliğinin ofis ortamlarındaki önemi vurgulanarak tehlike ve riskler açıklanmıştır. Çalışanın sağlığının korunması ve sağlıklı olarak çalışma hayatına devam edebilmesi ve bununla birlikte yüksek verimlilik için ofis çalışma ortamlarının günümüz koşullarına göre iş sağlığı ve güvenliği açısından yeniden tasarlanması irdelenmiştir.

**Anahtar kelimeler:** İş sağlığı ve güvenliği, ofislerde çalışma, yenilikçilik

## **INNOVATIVE APPROACHES IN TERMS OF OCCUPATIONAL HEALTH AND SAFETY IN OFFICE WORKS**

### **ABSTRACT**

Occupational health and safety is the work carried out to protect employees from factors affecting their health and safety in working environments. Employees face many dangers and risks in their work environments depending on the type of work they do. One of these business groups is office work environments. Office working environments have become widespread with the development of technology. Although office environments are generally considered safe without hazards, employees working in this environment face many risks. Factors such as employees spending long periods of time at the desk in the office environment, lighting, ventilation, noise, thermal comfort, electricity, slippery floors, unstable objects or furniture, stacking, etc. can lead to work accidents and many health problems for employees. Musculoskeletal diseases such as neck pain, back pain, waist pain; Circulatory diseases, heart disease, high blood pressure, allergic diseases and psychological disorders are among the health problems seen in workers in these environments. In this study, it is aimed to evaluate the working environments of office employees within the framework of innovative approaches in terms of occupational health and safety. In this context, the importance of occupational health and safety in office environments is emphasized and hazards and risks are explained. The redesign of office working environments in terms of occupational health and safety according to today's conditions has been examined in order to protect the health of the employee and to continue their working life in a healthy way, as well as to ensure high efficiency.

**Keywords:** Occupational health and safety, working in offices, innovation

## DİJİTAL BASKININ ESTETİK DOKUNUŞU: DERİ TASARIMINDA MODERN SÜSLEME SANATI

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### ÖZET

Bu çalışma, deri tasarımında dijital baskının estetik dokunuşunu ve modern süsleme sanatını birleştiren bir yaklaşımı inceliyor. Dijital baskı teknolojisinin deri tasarımındaki evrimi, geleneksel süsleme sanatının dijital dünyayla buluşmasıyla birlikte endüstri üzerinde önemli bir etki yaratmıştır.

Dijital baskının yükselişi, tasarımcılara ve kullanıcılara özelleştirme imkanları sunarak kişisel ifade ve tasarım özgürlüğünü artırmıştır. Geleneksel süsleme sanatının dijital platformlarda uygulanması, tasarımcıların el işçiliğiyle oluşturdukları estetik değeri dijital ortama taşımalarına olanak sağlamıştır. Bu, sanat ve teknolojinin harmonik bir birleşimini temsil ederken, tasarımcılara daha fazla yaratıcılık ve esneklik sunmaktadır.

Üretim süreçlerinde dijital baskının kullanımı, tasarımcılara hızlı prototip üretimi ve tasarım iterasyonları için avantajlar sağlamıştır. Bu, tasarım süreçlerini daha verimli hale getirerek endüstriye yenilik ve rekabet avantajları kazandırmıştır. Ekonomik açıdan avantajları ve çevresel dostluğuyla dijital baskı, sürdürülebilir üretim pratiğini desteklemekte ve tasarımın detaylı işçiliğinde estetik dokunuşlar sağlamaktadır.

Renk harmonisi konusunda bilgisayar ekranından gerçek deriye başarılı bir şekilde uyum sağlaması, dijital baskının renk doğruluğunu vurgulamaktadır. Bu, tasarımcıların dijital ortamda oluşturdukları renk paletlerini gerçek dünyadaki deri ürünlerine başarılı bir şekilde yansıtılabilmelerini sağlamaktadır.

Sonuç olarak, deri tasarımında dijital baskının estetik dokunuşu, geleneksel ve modern unsurları bir araya getirerek endüstriye yeni bir boyut kazandırmaktadır. Bu teknolojinin kullanımıyla, tasarımcılar ve sanatçılar benzersiz ve özgün eserler ortaya çıkarabilirken, tüketicilere kişiselleştirilmiş ve çevresel olarak sürdürülebilir ürünler sunma fırsatına sahiptirler. Deri tasarımındaki dijital baskının geleceği, estetik ve teknolojinin uyumlu bir birleşimi ile şekillenmeye devam edecektir.

**Anahtar Kelimeler:** Dijital baskı, deri tasarım, estetik dokunuş



## **THE AESTHETIC TOUCH OF DIGITAL PRINTING: THE ART OF MODERN DECORATION IN LEATHER DESIGN**

### **ABSTRACT**

This study examines an approach that combines the aesthetic touch of digital printing and modern decorative art in leather design. The evolution of digital printing technology in leather design has had a significant impact on the industry as traditional ornamental art meets the digital world.

The rise of digital printing has increased personal expression and design freedom by offering customization opportunities to designers and users. The application of traditional ornamental art on digital platforms has enabled designers to transfer the aesthetic value they create with hand craftsmanship to the digital environment. This represents a harmonious combination of art and technology, offering designers greater creativity and flexibility.

The use of digital printing in production processes has provided designers with advantages for rapid prototype production and design iterations. This has made design processes more efficient, bringing innovation and competitive advantages to the industry. With its economic advantages and environmental friendliness, digital printing supports sustainable production practice and provides aesthetic touches in the detailed workmanship of the design.

In terms of color harmony, the successful adaptation of the computer screen to real leather emphasizes the color accuracy of digital printing. This enables designers to successfully reflect the color palettes they create digitally onto real-world leather products.

As a result, the aesthetic touch of digital printing in leather design brings a new dimension to the industry by combining traditional and modern elements. With the use of this technology, designers and artists have the opportunity to create unique and original works while providing consumers with personalized and environmentally sustainable products. The future of digital printing in leather design will continue to be shaped by a harmonious combination of aesthetics and technology.

**Key Words:** Digital printing, leather design, aesthetic touch

## KALİGRAFI SANATININ DERİ YÜZEYLER ÜZERİNDE KULLANIMI

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### ÖZET

Kaligrafi, insanlığın tarihinde kökleri derinlere uzanan, güzel yazı sanatı olarak kabul edilen bir sanat formudur. Yazının estetik güzelliğini vurgulayan ve elle yazılmış metinleri düzenleme konusunda uzmanlık gerektiren kaligrafi, farklı kültürlerde farklı biçimlerde gelişmiş ve evrimleşmiştir.

Bu sanat, antik uygarlıklardan günümüze kadar birçok medeniyetin kültür mirasında önemli bir rol oynamıştır. Çin'den Ortaçağ Avrupa'ya, İslam dünyasından Japonya'ya kadar geniş bir coğrafyada kendine özgü tarzlar ve teknikler geliştirmiştir. Kaligrafi, sadece estetik bir ifade biçimi olmanın ötesinde, aynı zamanda bir kültürün, toplumun ve zamanın yansımasıdır.

Bu çalışma, kaligrafi sanatının deri yüzeyler üzerindeki özel uygulamalarına değinilecektir. Deri üzerine yazı yazma geleneği, kaligrafinin zengin çeşitliliğini ve esnekliğini ortaya koymaktadır. Bu özel teknik, estetik değeriyle beraber deri üzerine yapılan yazıların dayanıklılığını da artırmaktadır. Deri üzerinde kaligrafi, sadece bir sanat eseri olmanın ötesinde, geçmişin geleneksel sanatını günümüzle buluşturan bir ifade biçimidir. Deri üzerinde kaligrafinin tarihçesi, teknikleri, kullanılan malzemeler ve sanatın bugünkü uygulama alanları üzerinde odaklanarak, bu özel sanat formunu daha yakından keşfedeceğiz.

**Anahtar Kelimeler:** Kaligrafi, deri, sanat

### USE OF CALIGRAPHY ART ON LEATHER SURFACES

#### ABSTRACT

Calligraphy is an art form that has deep roots in the history of humanity and is considered the art of beautiful writing. Calligraphy, which emphasizes the aesthetic beauty of writing and requires expertise in editing hand-written texts, has developed and evolved in different ways in different cultures.

This art has played an important role in the cultural heritage of many civilizations from ancient civilizations to the present day. He developed unique styles and techniques in a wide geography, from China to Medieval Europe, from the Islamic world to Japan. Calligraphy is



more than just a form of aesthetic expression, it is also a reflection of a culture, society and time.

This study will focus on the special applications of calligraphy art on leather surfaces. The tradition of writing on leather reveals the rich diversity and flexibility of calligraphy. This special technique increases the durability of the writings on the leather as well as its aesthetic value. Calligraphy on leather is more than just a work of art, it is a form of expression that brings together the traditional art of the past with the present. We will explore this special art form more closely, focusing on the history of calligraphy on leather, its techniques, the materials used and the current application areas of the art.

**Key Words:** Calligraphy, leather, art

## YAPAY ZEKA İLE OTOMASYONUN DÖNÜŞÜMÜ

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### ÖZET

Yapay zekanın gelişimiyle birlikte otomasyon araçları da gelişim göstermektedir. Gelişen yapay zekâ ile birlikte kullanılan teknoloji araçlarından daha fazla verim elde edildiği ve maliyetleri düşürmesinden dolayı bu araçların kullanılmasında artış gözlemlenmektedir. Bu artışla birlikte işletmelerde teknolojik dönüşümler hız kazanmıştır. Bu dönüşüm bazı teknolojik gelişmeleri içermekte ve işletmelerin verimliliklerini artırmak, maliyetleri düşürmek ve daha etkili kararlar almak için kullanılmaktadır. Bu gelişmeler arasında Robotik Süreç Otomasyonu(RSO), Optik Karakter Tanımlama, Süreç Madenciliği, Sohbet Robotları ve Doğal Dil İşleme gibi teknolojiler ve bu teknolojileri kullanan yapay zekâ alanları öne çıkmaktadır. Yapay zeka ile birlikte kullanılan teknoloji araçları, tekrarlayan görevleri otomatikleştirmekte, veri analizi yapmakta, kişiselleştirilmiş içerik ve öneriler sunmakta ve işletmelere rekabet avantajı sağlamaktadır.

Bu çalışmada Vakıf Katılım Bankası'ndaki dijital dönüşümde yapay zekâ ile birlikte kullanılan teknoloji çözümlerinin örnek projeler üzerinden gözlemlenmesi amaçlanmaktadır. Yapılan gözlemler sonucunda gelişen yapay zekâ ile birlikte kullanılan teknoloji araçlarının iş süreçlerinde verimlilik artışı ve maliyet kazanımı sağladığı tespit edilmiştir. Ayrıca bu araçların kullanılmasının veri güvenliği ve gizliliğinin iş süreçleri ile uyumlu olmasına dikkat edilmesinin önemli olduğu tespit edilmiştir.

**Anahtar Kelimeler:** Dijital Dönüşüm, Otomasyon, Yapay Zeka, Doğal Dil İşleme, Robotik Süreç Otomasyonu

### TRANSFORMATION OF AUTOMATION WITH ARTIFICIAL INTELLIGENCE

#### ABSTRACT

With the development of artificial intelligence, automation tools are also developing. There is an increase in the use of these tools due to the fact that more efficiency is obtained from the technology tools used with the developing artificial intelligence and reduces costs. With this increase, technological transformations have accelerated in enterprises. This transformation includes some technological developments and is used to increase the efficiency of businesses,

reduce costs and make more effective decisions. Among these developments, technologies such as Robotic Process Automation (RSO), Optical Character Recognition, Process Mining, Chatbots and Natural Language Processing and artificial intelligence fields that use these technologies stand out.

Technology tools used with artificial intelligence automate repetitive tasks, analyze data, provide personalized content and recommendations, and provide businesses with competitive advantage.

This study aims to observe the technology solutions used with artificial intelligence in digital transformation at Vakıf Participation Bank through sample projects. As a result of the observations made, it was determined that the technology tools used in conjunction with the developing artificial intelligence provide efficiency increase and cost savings in business processes. In addition, it has been determined that it is important to pay attention to the compatibility of data security and confidentiality with business processes when using these tools.

**Keywords:** Digital Transformation, Automation, Artificial Intelligence, Natural Language Processing, Robotic Process Automation

## THE EXISTENCE OF SOLUTIONS FOR THE SINGULAR FRACTIONAL BOUNDARY VALUE PROBLEM WITH P-LAPLACIAN

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### ABSTRACT

The aim of this study is to investigate the existence of solutions for singular fractional differential equation with the p-Laplacian operator. Our analysis rely on Krasnoselskii's fixed point theorem.

**Keywords :**  $\psi$ -Hilfer fractional derivative, the p-Laplacian operator, singular.

**Acknowledgements :** This work is supported by the Scientific and Technological Research Council of Turkey (TUBITAK) under the project 123F242.

## UNITY İLE YÜKSEKLİK KORKUSUNU AŞMA: ÖZEL ORTAM VE AŞAMALI YAKLAŞIM

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### ÖZET

Günlük hayatta karşılaşılan sorunlar, yaşamın kaçınılmaz bir gerçeğidir ve herkesin hayatında zaman zaman ortaya çıkabilir. Bu sorunlar, günlük yaşamın karmaşıklığından kaynaklanabilir ve genellikle beklenmedik durumlarla veya engellerle karşılaşmak şeklinde ortaya çıkmaktadır. Unity platformu, dünya genelinde yaygın olarak kullanılan akıllı üretim sistemlerinden oyun geliştirmeye kadar pek çok alanda kullanılmaktadır. Özellikle Endüstri 4.0 dersleri bağlamında sensör yerleştirme pratiği gibi konularda dijital oyun tabanlı incelemeler yapılmakta ve bu sayede öğrenme süreci daha etkili hale getirilmektedir. Ayrıca, robotik üretim istasyonları için sanal izleme sistemleri geliştirilerek, üretim süreçlerinin verimliliği artırılmaktadır. Etkileşimli özel ortamlar, kullanıcıları farklı günlük sorunlarla karşılaşabilecekleri sanal bir dünyaya taşıyarak, bu sorunlarla nasıl başa çıkacaklarını deneyimlemelerini sağlamaktadır. Bu ortamlarda, kullanıcılara duygusal ve zihinsel becerilerini geliştirme fırsatı sunulurken, stresle başa çıkma, problem çözme ve duygusal zeka gibi önemli yetenekler de öğretilmektedir. Bu sayede, kullanıcılar günlük yaşamlarında karşılaştıkları zorluklarla daha etkili bir şekilde başa çıkma becerisi kazanmaktadırlar. Bu çalışmada, yükseklik korkusunu yenmek amacıyla özel olarak tasarlanmış bir ortamda katılımcılara aşamalı bir yaklaşım benimsenmektedir. Katılımcılar, kademeli olarak artan zorluk seviyeleriyle karşılaşarak yükseklik korkularını aşma deneyimi yaşamaktadır. Her seviyede, katılımcılar korkularıyla yüzleşmeyi ve bu korkuları kontrol etmeyi öğrenmektedirler. Özel olarak tasarlanmış senaryolar ve simülasyonlar sayesinde katılımcılar, kademeli olarak yükseklik korkularını azaltırken aynı zamanda güvenlerini artırmaktadırlar. Bu süreç, katılımcıların kendi sınırlarını keşfetmelerine ve aşmalarına olanak tanırken, aynı zamanda başarı duygusunu deneyimlemelerini sağlamaktadır.

**Anahtar Kelimeler:** Unity, Yükseklik korkusu, Etkileşimli özel ortam ,Kademeli Yaklaşım

### ABSTRACT

Daily life problems are an inevitable reality and can arise for everyone from time to time. These problems may stem from the complexity of daily life and often manifest as unexpected situations or obstacles. The Unity platform is widely used across various fields, ranging from smart manufacturing systems to game development. Especially in the context of Industry 4.0 courses, digital game-based assessments, such as sensor placement practices, are conducted to enhance the learning process. Additionally, virtual monitoring systems are developed for

robotic production stations to improve production process efficiency. Interactive special environments transport users to a virtual world where they can encounter different daily problems, allowing them to experience how to cope with them. In these environments, users are provided with opportunities to develop emotional and cognitive skills, while important abilities such as coping with stress, problem-solving, and emotional intelligence are also taught. As a result, users gain more effective coping skills for the challenges they face in their daily lives. In this study, a gradual approach is adopted to overcome the fear of heights in a specially designed environment. Participants experience overcoming their fear of heights by gradually encountering increasing levels of difficulty. At each level, participants learn to confront their fears and control them. Through specially designed scenarios and simulations, participants gradually reduce their fear of heights while also boosting their confidence. This process allows participants to explore and overcome their own limitations while experiencing a sense of accomplishment.

**Key Words:**Unity, Fear Of Heights, Interactive Special Environment, Gradual Approach



## THE EFFECT OF BASALT FIBER REINFORCEMENT ON THE LIQUID LIMIT VALUE OF THE SOIL

ZEMİNİN LİKİT LİMİT DEĞERİNE BAZALT FİBER TAKVİYESİNİN ETKİSİ

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### ABSTRACT

Clayey soils are considered problematic soils in engineering applications. In areas with problematic soils, it is very difficult and sometimes impossible to build structures. Therefore, such soils need to be improved. A variety of methods have been used for this purpose from past to present. In particular, the use of additive materials (lime, silica fume, marble dust, fly ash, volcanic ash and tuff, etc.) is quite common. However, in recent years, as a result of developing technology and the search for new materials, fibers have gained importance and started to be used in many areas. One of the remarkable areas of use of fibers is the reinforcement of soils. There are many types of fibers such as glass, carbon and polypropylene. In this study, basalt fiber, which is a natural, widely distributed, environmentally friendly, economical, highly durable and sustainable fiber type, was preferred. 24 mm long basalt fiber, whose raw material is basalt rock, was used as a reinforcement material in a clay soil with low plasticity at rates varying between 0.25% and 3%. Liquid limit tests were carried out on all samples to determine the changes in the liquid limit of the soil with basalt fiber reinforcement. According to the data obtained from experimental studies, the basalt fiber ratio at which the maximum decrease in the liquid limit value occurred was determined as 2%.

**Keywords:** Basalt fiber, clay, liquid limit, reinforcement

## EXAMINING THE EFFECT OF CURING ON THE COHESION VALUES OF ADDITIVE CLAY SAMPLES

### KÜRLEMENİN KATKILI KİL ÖRNEKLERİNİN KOHEZYON DEĞERLERİNE ETKİSİNİN İNCELENMESİ

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In parallel with the increasing population, construction and urbanization, it is becoming difficult to find suitable soil for construction. In such cases, the soil improvement method is used. With the chemical stabilization made by adding additive materials with pozzolanic properties to the soils, pozzolanic reactions occur between the clay and the additive material, thus improving the soil. Although these additive materials are very diverse, the most common ones are lime, fly ash, blast furnace slag, silica fume, volcanic tuff and ash. In this study, acidic tuff, basic tuff and fly ash were used as additives at different rates in bentonite clay, which has high plasticity, and the changes in the cohesion values of the soil both before and after 28 days of curing were determined by triaxial compression test. The additive rates used are 10% acidic tuff (AT), 10% basic tuff (BT), 10% fly ash (FA), 10% AT + 10% FA and 10% BT + 10% FA. According to the data obtained from the experimental studies, cohesion values decreased in all samples with the addition of additives before curing, compared to pure clay. After 28 days of curing in the samples, it was determined that the cohesion values in all samples increased compared to pure clay. While the cohesion value of the pure clay after curing was 110.82 kN/m<sup>2</sup>, the maximum cohesion value after curing was determined as 170.64 kN/m<sup>2</sup> in the sample with 10% FA additive. It was determined that the cohesion value of the sample using 10% AT was 127 kN/m<sup>2</sup> and there was a slight increase after curing. It can be said that the increase in the cohesion value of the cure is due to the effect of the pozzolanic reactions that occur between the clay and additives after the cure.

**Keywords:** Acidic tuff, basic tuff, cohesion, fly ash, pozzolanic reaction

