ABSTRACT BOOK

ANADOLU
15TH INTERNATIONAL CONGRESS ON APPLIED SCIENCES
JULY 12-14, 2024
DIYARBAKIR

Edited By
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15TH INTERNATIONAL CONGRESS ON APPLIED SCIENCES

DATE – PLACE
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All applications have undergone a double-blind peer review process.

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PRESENTATION
Oral presentation

ASSOCIATION & ACADEMIC INCENTIVES :
31 papers presented by participating from Turkey and 44 papers from other Countreies Members of the organizing committees of the conference perform their duties with an "official assignment letter"

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ANADOLU 15th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES
ANADOLU 15th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES
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- Oturuma bağlanmadan önce Salon numaranızı adınızın önüne aşağıdaki gibi ekleyiniz. Bu sayede kongre açılışında beklemeden oturumlarınıza gönderilebileceksiniz. Ör. 5 Ahmet Ahmetoglu
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12 Temmuz / July 12, 2024 / 11:00 – 13:00 Time zone in Turkey (GMT+3)				
Salon	Moderator		Bildiri No ve Başlığı / Paper ID and Title	Authors
SALON 1	**Doç. Dr., Yakup YÜKSEL**	1	EBÜ'-L-KASIM EZ-ZEHRAVÎ VE CERRAHÎ TIP BİLİMİNE KATKILARI	Arş. Gör. Yaşar Emrah KOŞDAŞ
		2	AN EVALUATION OF THE WORD "MAHCUR" USED IN THE QUR'AN (Example of Surah Al-Furqan, verse 25/30)	Assoc. Prof. Dr. Hacı ÇİÇEK
		3	SOME EXAMPLES OF ZAMAKHSHARI'S APHORISMS REFERRED TO VERSES IN NAWABIGH	Assoc. Prof. Dr. Hacı ÇİÇEK
		4	MUFESSIR TÂHİR B. ÂŞUR'S APPROACH TO THE VERSES ABOUT IRON	Doç. Dr., Yakup YÜKSEL
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SALON 2	**DOÇ. DR. FİKRET YAZICI**	1	THE ROLE OF MUSIC IN EXERCISE INTENSITY AND PERFORMANCE	ASLI GÜN DOÇ.DR.ÖZGÜR EKEN
		2	CHRONOTYPE AND TRAINING PLANNING: THE SIGNIFICANCE OF TIMING IN PERFORMANCE ENHANCEMENT	ASLI GÜN DOÇ.DR.ÖZGÜR EKEN
		3	TÜRKÇE EĞİTİMİ BAĞLAMINDA CAHİT ZARİFOĞLU'NUN YÜREKDEDE İLE PADİŞAH ADLI ESERİNDEKİ TEMEL DEĞERLER	Prof. Dr. ŞENER DEMİREL Türkçe Öğretmeni HANZADE KIRAÇ
		4	TÜRKİYE'DE ÖĞRETMEN ADAYLARININ FEN BİLİMLERİ ÖĞRETİMİNE YÖNELİK YAPILAN TUTUM ARAŞTIRMALARI: BİR DOKÜMAN ANALİZ ÇALIŞMASI	Fatma TAŞKAN Prof. Dr. Lütfullah TÜRKMEN
		5	TÜRKİYE'DE ÖĞRETMEN ADAYLARININ FEN BİLİMLERİ ÖĞRETİMİNE YÖNELİK YAPILAN TUTUM ARAŞTIRMALARI: BİR DOKÜMAN ANALİZ ÇALIŞMASI	Fatma TAŞKAN Prof. Dr. Lütfullah TÜRKMEN
		6	M-İKLİM DERGİSİ MOBİL UYGULAMASI	Dr. Öğr. Üyesi Adem KENAN Fatma Nur HAZAR Seda AKYOL
		7	SU AYAK İZİ PLATFORMU MOBİL UYGULAMASI	Dr. Öğr. Üyesi Adem KENAN Bilge Aleyna ÇELİK
		8	ÇOCUĞA YÖNELİK ŞİDDETİN TÜRKİYE'DE YAZILI BASINA YANSIMASI	DOÇ. DR. FİKRET YAZICI EDANUR DEMİRCİ
		9	DİYALOJİK İLETİŞİMDE ÜNİVERSİTE WEB SAYFALARI ANALİZİ	YL. Öğr. , Hüsniye ATAK

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SALON 3	**Doç. Dr. Ahmet YILMAZ**	1	ROUSSEAU VE ÖZGÜRLÜK	Hatice YAŞAR Doç. Dr. Ahmet YILMAZ
		2	TÜRKİYE'DE İSLAMİYET VE KADIN BAĞLAMINDA SİVİL TOPLUMUN İZLENCESİ	Dr, CANSU KAYA
		3	ROMANTİK İLİŞKİLERDE ANA-BABA TUTUMU, BENLİK SAYGISI VE İLİŞKİ NİTELİĞİ ARASINDAKİ BAĞIN İNCELENMESİ	Dr. Öğr. Üyesi, FERİHAN TANRIKUT Psikolog, EZGİ ÖZTÜRK
		4	İNTERNET BAĞIMLILIĞIYLA ANKSİYETE VE DEPRESYON ARASINDAKİ İLİŞKİNİN İNCELENMESİ: KARAMAN İLİ KIRSAL KESİM VE ŞEHİR ORTAOKUL ÇOCUKLARI ÖRNEĞİ	Danışman Dr. Öğr. Üyesi, FERİHAN TANRIKUT Araştırma Yürütücüsü RABİA ŞİMŞİR
		5	ÇOCUĞA YÖNELİK İHMAL İLE İLGİLİ EBEVEYN ALGILARI	YL. Öğrencisi, ELİF NAZ ÜRÜNAL Dr. Öğr. Üyesi, AYSUN TURUPCU
		6	TİPİK GELİŞİM GÖSTEREN ÇOCUKLARIN ÖZEL GEREKSİNİMLİ KARDEŞE YÖNELİK ALGILARI	Dr. Öğr. Üyesi, AYSUN TURUPCU Yüksek Lisans Öğrencisi, FETHİYE NUR AKSOY Yüksek Lisans Öğrencisi, GAYE CİZDAN

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SALON 4	**Doç. Dr. Serpil ERSÖZ**	1	TÜRKÇEDEKİ +LIK EKİNİN İŞLEVLERİ ÜZERİNE BAZI NOTLAR	Doç. Dr. Serpil ERSÖZ
		2	JEAN JACQUES ROUSSEAU'NUN "EMİLİE YA DA EĞİTİM ÜZERİNE" ADLI YAPITININ EĞİTİM FELSEFESİ BAĞLAMINDA İNCELENMESİ	Seda YURTSEVEN
		3	M.KAŞĞARININ "DIVAN"INDA IŞLƏNƏN OMONIMLƏR	Mehdiyeva Mətanət Bahadur qızı ADPU, f.ü.f.d. baş müəllim
		4	HALİDE EDİP ADIVAR'IN HANDAN İSİMLİ ROMANINDA KADIN GÖRÜNÜMLERİ	Prof. Dr. Hanife Nâlân GENÇ Nuray EROĞLU
		5	EMİLE'İ TOPLUMSAL CİNSİYET ROLLERİ AÇISINDAN OKUMAK	Nuray EROĞLU Prof. Dr. Hanife Nâlân GENÇ
		6	THE PERCEPTION OF SPACE FEATURED IN PEYAMI SAFA'S NOVELS	Doç. Dr. SEVGÜL TÜRKMENOĞLU
		7	Sándor Márai'nin İşin Aslı Judit ve Sonrası Eserinde Otantiklik Temasının İncelenmesi	GÖKTUĞ ALTUNTAŞ

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SALON 5	**Prof. Dr. Murat AZALTUN**	1	EFFECTIVENESS OF INFLUENCER MARKETING : A LITERATURE REVIEW	PhD student, Sabir SALAMOV Prof.Dr.Salih YILDIZ Assoc.Prof.Emel YILDIZ
		2	EFFECTS OF INFLUENCER MARKETING ON BRAND ATTITUDE AND PURCHASE INTENTION THROUGH PARASOCIAL RELATIONSHIP AND ELECTRONIC WORD OF MOUTH COMMUNICATION	PhD student, Sabir SALAMOV Prof.Dr.Salih YILDIZ Assoc.Prof.Emel YILDIZ
		3	HAVAYOLU ŞİRKETLERİNİN FİRMA İMAJININ MÜŞTERİ MEMNUNİYETİNE VE MÜŞTERİ SATIN ALMA DAVRANIŞI ÜZERİNE ETKİSİ: BİR ALAN ÇALIŞMASI	Dr. Öğr. Üyesi Hale BÜTÜN BAYRAM Selvinaz Yaren YURTSEVER
		4	LOGISTICAL PROBLEMS EXPERIENCED BY INDIVIDUALS WITH SPECIAL NEEDS IN MEETING THEIR NEEDS DURING DISASTERS	MERVE TAN Dr. Öğr. Üyesi Fehmi Volkan AKYÖN
		5	YALIN ÜRETİM VE EKONOMİK BÜYÜME İLİŞKİSİ	Oktay Şahin
		6	MUHASEBE MESLEK MENSUPLARI HAKKINDA DÜZENLENEN DİSİPLİN VE MALİ SORUMLULUK RAPORLARINDA KARŞILAŞILAN SORUN ALANLARI ÜZERİNE BİR DEĞERLENDİRME	Vergi Müfettişi Ali ONAY Prof. Dr. Murat AZALTUN
			DEPOLAMA	Dr. Şule Ekinci Prof. Dr. Mustafa YÜCEL
		7	LOJİSTİK KAVRAMINA BİR BAKIŞ	Dr. Şule Ekinci Prof. Dr. Mustafa YÜCEL

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SALON 6	**Doç. Dr. Aslı Yılmaz Doç. Dr. Mehmet Yılmaz**	1	EVIDENCE OF ANTIOXIDATIVE AND OXIDATIVE RESPONSES BY Galleria mellonella LARVAE TO Carduus nutans L. (Asteraceae)	Hatice BAŞ Hülya DOĞAN
		2	Senecio vernalis Waldst. & Kit. (Asteraceae) EFFECTS ON SOME METABOLIC ENZYMES	Hülya DOĞAN Hatice BAŞ
		3	MAKİNE ÖĞRENMESİ ANALİZLERİ İLE DESTEKLENMİŞ YÜZEY ZENGİNLEŞTİRİLMİŞ RAMAN SPEKTROSKOPİSİ (SERS) YAKLAŞIMI İLE ALT SUŞ BAKTERİ TANISI	Feyzanur Can Gülmüş Nazlı Öncer Doç. Dr. Aslı Yılmaz Doç. Dr. Mehmet Yılmaz
		4	SAF KARAKOVAN BALI VE GLUKOZ İLE KATKILANDIRILMIŞ BALLARIN MAKİNE ÖĞRENMESİ İLE DESTEKLENMİŞ YÜZEY ZENGİNLEŞTİRİLMİŞ RAMAN SPEKTROSKOPİSİ (SERS) YAKLAŞIMI İLE İNCELENMESİ	Yunus Emre Geylani Nazlı Öncer Doç.Dr Aslı Yılmaz Doç.Dr Mehmet Yılmaz
		5	*Hypera postica'nın* (Gyllenhal,1883) (Coloeptera: Curculionidae) SİNDİRİM VE BOŞALTIM SİSTEMLERİNİN ANATOMİK VE HİSTOLOJİK YAPISI	Sema Nur Osma Doç. Dr. Nurcan Özyurt Koçakoğlu Doç. Dr. Üzeyir Çağlar
		6	İKLİM KRİZİ SORUNUNDA MİKROORGANİZMALAR	Hilal ERDOĞAN Prof. Dr. Nihal DOĞRUÖZ GÜNGÖR
		7	MULTIFACETED APPLICATIONS OF MICROFUNGI IN INDUSTRY AND BIOTECHNOLOGY	Prof. Dr. Nihal DOĞRUÖZ GÜNGÖR Hilal ERDOĞAN

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SALON 1	**Assis. Prof . Dr. Kalayanee Shaikh,**	1	A SIMULATION OF BASIC CONSCIOUSNESS PROCESSES	Nabila Charkaoui
		2	INVESTIGATING THE SIGNIFICANCE OF LIFE AND ITS PSYCHOSOCIAL FACTORS IN RECOVERING ADDICTS: AN INDIAN CONTEXT	Fouzia Koonmee Alsabah Anjali Koutstaal
		3	ENHANCING ORGANIZATIONAL JUSTICE IN INCENTIVE DISTRIBUTION WITHIN THAILAND'S PUBLIC SECTOR	Assis. Prof . Dr. Kalayanee Shaikh,
		4	GENDER VARIATIONS IN AUTOBIOGRAPHICAL MEMORY AND ADAPTIVE RECOLLECTION	A. Aizpurua, Ghosh
		5	CULTURAL ANXIETY'S EFFECT ON STUDENTS: A STUDY OF INTERNATIONAL STUDENTS AT WUHAN UNIVERSITY	Nadeem Roundy Shan Panova
		6	HEALING OR HARMING: ADDRESSING THE RE-VICTIMIZATION OF VICTIMS	Prof. Dr. Juliana Bo
		7	UNDERSTANDING ORGANIZATIONAL CHANGE THROUGH NARRATIVE THEORY: THE CASE OF MERGERS AND ACQUISITIONS	Philip T. Akhtar
		8	COMPARING ATTACHMENT STYLES OF NURSERY-RAISED CHILDREN VERSUS FAMILY-RAISED CHILDREN IN IRAN	Assoc. Prof. Dr. Narges Bouri
		9	A NOVEL METRIC FOR HERDING BEHAVIOR: DEVELOPMENT AND APPLICATIONS	Abdelfettah Amirat Dr. Razeghi Amina
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SALON 2	**Assis. Prof. Dr. Olimpia Abe,**	1	TRUST DYNAMICS AND LEARNING BEHAVIORS IN VIRTUAL TEAM ENVIRONMENTS	Prof. Dr. Indiramma M., K. R. Anandakumar
		2	ENHANCED AUTOMATED DIFFERENTIATION BETWEEN ALCOHOL DEPENDENCE AND SOBRIETY	Dr. Palaniappan Abbamonte
		3	RHETORICAL STRATEGIES IN COGNITIVE SCIENCE DISCOURSE: ANALYSIS OF COGNITIVE NEUROSCIENCES (2004) IN SCIENTIFIC COMMUNICATION	Lucia Ramaswamy Assis. Prof. Dr. Olimpia Matarazzo
		4	MORAL REASONING AND BEHAVIORAL PATTERNS IN ADULTHOOD	Nigro Antunes, Matarazzo Abbamonte,
		5	INVESTIGATIONS INTO THE ROLE OF EMOTIONS IN MORAL DECISION-MAKING	A. Hassad Arthur
		6	EFFECTS OF PROBABILITY AND INSTRUCTION ON SYLLOGISTIC CONDITIONAL REASONING	Assis. Prof. Dr. Olimpia Abe, Ivana Minoru
		7	ANALYZING KANJI CHARACTER RECOGNITION PROCESSES USING EEG SIGNALS	Hiroshi Matarazzo Baldassarre Nakayama
		8	INNOVATIVE APPROACHES TO TEACHING INTRODUCTORY STATISTICS IN HEALTH, SOCIAL, AND BEHAVIORAL SCIENCES: HISTORICAL PERSPECTIVES AND JUSTIFICATIONS	Rossi Yan
		9	A COGNITIVE FRAMEWORK FOR CLASSIFYING FREQUENCY SIGNALS	Rui Coito Fernando V.

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SALON 3	**Dr. Dorota Rucińska**	1	EXPLORING IRISH IDENTITY: MANIFESTATIONS OF 'IRISHNESS' IN THE WORKS OF WILLIAM BUTLER YEATS AND SEAMUS HEANEY	Rafik Massoudi
		2	DISASTER TOURISM: EXPLORING DARK TOURISM THROUGH NATURAL CALAMITIES	Dr. Dorota Rucińska
		3	THE INTERPLAY OF DEMOCRATIZATION AND MARKET LIBERALIZATION ON ANTI-CORRUPTION EFFORTS IN INDONESIA	Ahmad Naghizadeh
		4	CULTURAL AND ARTISTIC TRANSFORMATION DURING THE MODERNIZATION ERA OF KING RAMA VI	Weena Eiamprapai
		5	CREATING INNOVATIVE EVENTS THROUGH A DECONSTRUCTIVIST LENS	Maryam Kim Mahmood Khoirul
		6	IDENTITY RECONSTRUCTION: NARRATIVE (IN)CONSISTENCY DURING TRANSITIONAL PERIODS	Katerina Umam Antoniou
		7	IMPACT OF ORGANIZATIONAL RESOURCES ON ENHANCING INDEPENDENCE FOR INDIVIDUALS WITH SEVERE DISABILITIES: A STUDY OF VOCATIONAL REHABILITATION IN SOUTH KOREA	Dr. Soungwan Memarian,
		8	THE RELATIONSHIP BETWEEN CAPITAL ACCUMULATION AND UNEMPLOYMENT IN NAMIBIA, NIGERIA, AND SOUTH AFRICA	Prof. Dr. Abubakar Shakeela
		9	STRATEGIES FOR MANAGING WATER CRISIS IN TOURISM-DEPENDENT COMMUNITIES	Dikko Aishath

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SALON 4	**Assis. Prof. Bruno Aboutaleb**	1	EXAMINING THE IMPACTS OF ASSISTED REPRODUCTIVE TECHNOLOGIES ON WOMEN'S LIVES IN NEW DELHI: A FEMINIST PERSPECTIVE STUDY	Zairunisha
		2	ADDRESSING THE ABUSE OF LEGAL AUTHORITY IN SOCIETY	PHD . Student Niroobakhsh Ojo
		3	EXPLORING SOCIAL STRUCTURES, INVOLUNTARY RELATIONSHIPS, AND URBAN POVERTY DYNAMICS	Mahmood Ibraheem
		4	FACILITATING KNOWLEDGE TRANSFER THROUGH THE TRANSLATION OF TECHNICAL TEXTS	Ahmed Tajudeen Alaoui
		5	INVESTIGATING THE INFLUENCE OF ISLAMIC ARTS ON WEAVING PATTERNS IN OMAN	Ahmed Al-Zadjali Zahra
		6	APPROACHES TO MANAGING COMPLEXITY IN COMPLEX SYSTEM DESIGN: PARADIGMS, FORMALISMS, AND TRANSFORMATIONS	Hycham Barrere Assis. Prof. Bruno Aboutaleb
		7	EUROPE'S ROLE IN PROMOTING LIBERTY, SECURITY, AND JUSTICE: AN INTERNATIONAL PERSPECTIVE	Dr. Sarah Monsuez
		8	UNDERSTANDING OUT-MIGRATION METHODOLOGIES IN GEORGIA	Lec. Dr. Lnenicka Shorena
		9	A COMPREHENSIVE EXAMINATION OF OPEN DATA PORTALS AS EMERGING PUBLIC E-SERVICES	Assis. Prof. Dr. Martin Tsiklauri

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SALON 5	**Assoc. Prof. Dr. Ruiz Bhim**	1	THE IMPACT OF ORGANIZATIONAL DYNAMIC CAPABILITIES ON INNOVATION PERFORMANCE	Lovorka Galetic, Zeljko Vukelic
		2	A COMBINED PARTICLE SWARM OPTIMIZATION AND NELDER-MEAD ALGORITHM FOR CALIBRATING THE NELSON-SIEGEL-SVENSSON MODEL	Sofia Aboulaich Rachid Ellaia, Rajae Ayouche
		3	THE EFFECTS OF OIL PRICE FLUCTUATIONS ON RENEWABLE ENERGY INVESTMENT	Osamah A. Alsayegh
		4	LEAN HEALTHCARE: CHALLENGES AND FACILITATORS IN THE COLOMBIAN HEALTHCARE SYSTEM	Erika Singh Ortiz Nestor
		5	IDENTIFYING BARRIERS TO LEAN IMPLEMENTATION IN INDIAN MANUFACTURING INDUSTRIES	Assoc. Prof. Dr. Ruiz Bhim
		6	ENHANCING LOCAL PRODUCTS: THE ONE VILLAGE ONE PRODUCT APPROACH AND CUSTOMER SATISFACTION	Assoc. Prof. Drt. Wardoyo Sabauri,
		7	ANALYZING THE DECLINE OF ENGINEERING FIRMS DURING THE FINANCIAL CRISIS	Dr. Humairoh Levan
		8	CONSUMER BEHAVIOR MODELS: THE ROLE OF EMOTIONS IN DECISION MAKING	Dr. Mikel Vukelic Assis. Prof. DR. López Galetic,

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SALON 6	Assoc. Prof. Dr. Haya Y Alobaid	1	COMPETENCE-BASED EDUCATION FOR PURCHASING PROFESSIONALS IN AUSTRIA	Volker Koch
		2	FORMULATING AN AUDIT QUALITY FRAMEWORK FOR DEVELOPING MARKETS	Assoc. Prof. Dr. Bita Kummamuru, Azadeh Tahriri, Arash Maddahi,
		3	FACTORS INFLUENCING PROFITABILITY IN INDIAN PHARMACEUTICAL COMPANIES UNDER THE NEW INTELLECTUAL PROPERTY REGIME	Shilpi Tyagi, D. K. Nauriyal
		4	EFFECTS OF MOTIVATION, TRUST, AND CULTURAL DIFFERENCES ON KNOWLEDGE SHARING VIA EMAIL	Dr. Said Lotfi Al Saifi
		5	ANALYSIS OF FACTORS AFFECTING EARNINGS RESPONSE COEFFICIENT IN EMERGING MARKETS	Assoc. Prof. Dr. Bita Kummamuru, Zeynab Abdullah Aghel
		6	CHALLENGES AND BARRIERS IN ACCOUNTING INFORMATION SYSTEMS OF KUWAITI FIRMS	Assoc. Prof. Dr. Haya Y Alobaid
		7	SUPPLY CHAIN PLANNING WITH A FOCUS ON RISK AND ENVIRONMENTAL GOALS	Ghanima Al-Sharrah, Haitham M. Lababidi, Yusuf I. Ali
		8	ETHICAL GOVERNANCE AND CORPORATE SOCIAL RESPONSIBILITY IN NETWORK MARKETING ORGANIZATIONS	Venugopal Mashayekhi,
		9	THE RELATIONSHIP BETWEEN FINANCIAL REPORTING TRANSPARENCY AND INVESTMENT EFFICIENCY: INSIGHTS FROM IRAN	Assoc. Prof. Dr. Bita Kummamuru, Hamid Kalhornia

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SALON 1	**Dr. Öğr. Üyesi Mahire ASLAN**	1	EĞİTİM VE SÜRDÜRÜLEBİLİRLİK İLİŞKİSİ	Dr. Öğr. Üyesi Mahire ASLAN
		2	BİLİŞİM TEKNOLOJİLERİ ÖĞRETMENLERİNİN ÖRGÜTSEL YALNIZLIK ALGILARININ BAZI DEĞİŞKENLER AÇISINDAN İNCELENMESİ	Dr. Öğr. Üyesi Mahire ASLAN
		3	ÇİZİMLER YOLU İLE KAVRAMSAL YANILGILAR BERİLLENEBİLİR Mİ?	Prof. Dr. Güldem DÖNEL AKGÜL Dr. Öğrt. Üyesi Adem KENAN İpek ŞAHİN
		4	ERZİNCAN'DA ORGANİK TARIM YETİŞTİRİCİLİĞİNİN DEĞERLENDİRİLMESİ	Dr. Öğrt. Üyesi Adem KENAN Prof. Dr. Güldem DÖNEL AKGÜL İpek ŞAHİN Mine TAŞKIN
		5	RİCHARD BACH'IN "MARTI JONATHAN LİVİNGSTON" ADLI ESERİYLE SAFAİ'NİN "MARTI JONATHAN'DAN YÜN ATAN MARTI' YA" ADLI ESERİNİN TÜRKÇE EĞİTİMİNDEKİ TEMA/İLETİLER AÇISINDAN KARŞILAŞTIRILMASI	Prof. Dr. ŞENER DEMİREL Yüksek Lisans Öğrencisi DİLBER DİDEM CENGİZ
		6	3B YAZDIRMA TEKNOLOJİSİ KULLANIMININ EĞİTSEL ALANLARA YANSIMALARI: OKUL VE KÜTÜPHANELER	Dr. Öğr. Üyesi Okan YETİŞENSOY
		7	COMPARISON OF THE OUTCOMES IN THE SCIENCE TEACHING PROGRAM IN TERMS OF HEALTH EDUCATION BY YEARS	Ph.D. Students, ECE ALTAY Dr. Öğretim Üyesi, ASLI SADE MEMİŞOĞLU
		8	MESLEKİ CANLILIK ÖLÇEĞİNİN TÜRKÇEYE UYARLANMA	Demet CENGİZ GÜR Prof. Dr. İdris ŞAHİN

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SALON 2	**Prof. Dr. ERDEM ÜNVER**	1	SANAT, BİLİM, TEKNOLOJİ ve BÜYÜ İLİŞKİSİ ÜZERİNE	Prof. Dr. ERDEM ÜNVER
		2	BASIC COMPONENTS IN KINETIC TYPOGRAPHY WORKS	Dr. Öğr. Üyesi ANIL SARIKAVAK
		3	COFFEE AND THE SOCIAL VALUE OF COFFEE	Assist. Prof. Dr. Gizem Sultan KAMAN Assist. Prof. Dr. Rabia BÖLÜKBAŞ
		4	EVALUATION OF THE TOURİSM POTENTIAL OF GASTRONOMY CITIES WITHIN THE UNESCO CREATİVE CITIES NETWORK	Assist. Prof. Dr. Gizem Sultan KAMAN Assist. Prof. Dr. Rabia BÖLÜKBAŞ
		5	ANADOLU'DA ROMA İMPARATORLUK KÜLTÜ: TANRILAŞTIRILAN İMPARATORLAR	Öğr.Gör. Deniz GÜÇLÜ
		6	APPLICATIONS OF REFLECTIVE/SHINY/PHOSPHORESCENT FOILS USED IN TRANSFER PRINTING TECHNIQUE	Doç. Dr., MEHMET ZAHİT BİLİR
		7	PERFORMANCE OF VARIOUS FOILS USED IN TEXTILE PRINTING DESIGN WITH PLOTTER CUTTING	Doç. Dr., MEHMET ZAHİT BİLİR
		8	ROGER BALLEN FOTOĞRAFLARINDA ÖTEKİ'NİN TEMSİLİ	Doçent, EREN GÖRGÜLÜ
		9	ÖLÜMÜN TEKİNSİZ İMGELERİ: SAVAŞ FOTOĞRAFLARI ÜZERİNE BİR İNCELEME	Doçent, EREN GÖRGÜLÜ

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SALON 3	**Prof. Dr.Yalçın KARAGÖZ**	1	COLORFUL GENRES IN THE CREATION OF AZERBAIJAN ASHIQ AND POETS OF THE XIX-XX CENTURIES (Based on M. Huseynova's creativity)	Assoc. Prof. Dr. Nazile Abdullazade Nazrin Mustafazade
		2	EVLİLİK BİRLİĞİNDE MAL REJİMİ SEÇİMİ	Doç. Dr. İsmail ATAMULU Ozan Arif KARAKUŞ
		3	ÜÇÜNCÜ KİŞİ LEHİNE MEŞRU SAVUNMA	Dr. Araştırma Görevlisi Dilek Güler
		4	DERNEKLERİN, ZORUNLU ORGANLARIN OLUŞTURULMASINDAN ÖNCEKİ DÖNEMDE EHLİYET DURUMU VE HUKUKİ İŞLEMLERİ İLE DİĞER FİİLLERİNDEN SORUMLULUK	Dr. Öğr. Üyesi, HÜSEYİN BOZOK
		5	HAKSIZ FİİLE TEŞVİK EDENİN TAZMİNAT SORUMLULUĞU	Dr. Öğr. Üyesi, HÜSEYİN BOZOK
		6	E-SAĞLIK OKURYAZARLIK DÜZEYİNİN HASTA-HEKİM YÖNELİM TUTUMUNA ETKİSİ	Prof. Dr.Yalçın KARAGÖZ Dr.Öğr. Üyesi. Mustafa FİLİZ
		7	AŞI REDDİNİN TÜRKİYE'DEKİ AŞI POLİTİKALARINA ETKİSİ: BİR POLİTİKA ANALİZİ	Dr.Öğr. Üyesi. Mustafa FİLİZ Prof. Dr.Yalçın KARAGÖZ
		8	RECORDING AND PROTECTION OF TRADITIONAL CHILDREN'S PLAYS IN BINGOL	Evin BALUKEN Doç. Dr. Mehmet YAZICI
		9	TEKİRLER GÖLETİ'NİN (NALLIHAN-ANKARA) SU KALİTESİNİN İNCELENMESİ	Doç. Dr. Ekrem MUTLU

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SALON 4	**Dr. Öğr. Üyesi KADRİ KURT**	1	A SOLUTION PROPOSAL IN THE FIELD EQUATIONS OF GRAVITY	Dr. Öğr. Üyesi KADRİ KURT ŞÜKRÜ GÜNEŞ
		2	Some Diophantine Equations Involving Repdigits and Powers of Two or Five	Dr. Fatih ERDUVAN
		3	FAKÜLTELERİN SÜRDÜRÜLEBİLİRLİĞİNİ DEĞERLENDİRMEK İÇİN PLİTOJENİK KÜMEYE DAYALI YENİ BİR KARAR VERME MODELİ	Arş. Gör. İsmail AKARGÖL Prof. Dr. Hülya TORUN
		4	IDENTIFICATION OF SOURCE FUNCTION IN TIME FRACTIONAL DIFFUSION PROBLEM BY LAPLACE TRANSFORM AND DAFTARDAR-GEJJI AND JAFARI ITERATION METHOD	Asst. Prof. Dr. Suleyman CETINKAYA Prof. Dr. Ali DEMIR
		5	ON THE FRACTIONAL FORNBERG-WHITHAM EQUATION BY SHEHU VARIATIONAL ITERATION METHOD	Asst. Prof. Dr. Suleyman CETINKAYA Prof. Dr. Ali DEMIR
		6	DETERMINATION OF ENERGY RESOLUTION AND EFFICIENCY OF NAI(TL) DETECTOR USED IN GAMMA SPECTROSCOPY SYSTEM	Pınar İsel Esra Kaya Latife Sahin Ela Ganioğlu

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SALON 5	**Doç.Dr.Filiz YANGILAR**	1	BİTKİSEL VE HAYVANSAL SÜTLER	Doç.Dr.Filiz YANGILAR
		2	YEME BOZUKLARININ PATOGENEJİNDE VE TEDAVİSİNDE MİKROBİYOTANIN ROLÜ	Doç.Dr.Filiz YANGILAR
		3	AMBULANS TERCİH NEDENLERİ VE ETKİLERİ	Öğr. Gör. Esra YURT
		4	KAHRAMANMARAŞ'TAKİ MARKETLERDE SATILAN ŞİŞELENMİŞ DOĞAL MADEN SULARINI TÜKETEN İNSANLARIN YAŞAM BOYU KANSER RİSKİ	Dr. SERDAR GÜMBÜR
		5	SÖĞLE TULUM PEYNİRİNİN BAZI KARAKTERİSTİK ÖZELLİKLERİNİN BELİRLENMESİ	Yüksek Gıda Mühendisi, Havva GÜLERYÜZ Doç. Dr. Şenol KÖSE
		6	SÜT VE SÜT ÜRÜNLERİNDE LAKTOZ İNTOLERANSI	Dr. Öğretim Üyesi, İBRAHİM ALTUN
		7	SÜTÇÜLÜK ARTIKLARINI DEĞERLENDİRME YÖNTEMLERİ	Dr. Öğretim Üyesi, İBRAHİM ALTUN

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SALON 6	**Research Assistant Dr, Fulya ISLEK**	1	EVALUATION OF EXTREME WIND CLIMATE IN AN ENCLOSED BASIN BASED ON 8 DECADES	Research Assistant Dr, Fulya ISLEK
		2	HARDNESS CHANGES OF HARDOX 500 AND AISI 430 STEEL WELDED BY CMT AND GMAW WELDING	Erdal BULUT Dr. Öğr. Üyesi Mustafa Engin KOCADAĞİSTAN
		3	CAM ELYAF TAKVİYELİ EPOKSİ MATRİSLİ SANDVİÇ KOMPOZİTİN KÜRLENME ANALİZİ	Nihal PUHURCUOĞLU Yusuf ARMAN
		4	YARA ÖRTÜ MALZEMESİ KULLANIMINA YÖNELİK OLARAK POLİKAPROLAKTON/POLİDOPAMİN/Ag NANOPARÇACIK HİBRİT NANOFİBER SİSTEMLERİNİN GELİŞTİRİLMESİ	Mücahit Enes ATABEY Doç.Dr., Aslı YILMAZ Doç.Dr., Mehmet YILMAZ
		5	MOBİLYA ÜRETİM TESİSİ BAZA KASA OTOMASYON HATTINDA VERİMLİLİK ÇALIŞMASI	Hayriye TAŞKINER Prof. Dr., Sinem KULLUK
		6	MANGAN KATKILI BOR NİTRÜR NANOMATERYALİN SENTEZİ VE KARAKTERİZASYONU	Yüksek Lisanas Öğrencisi, Aygül BELGE Dr. Öğretim Üyesi, Kadri KURT
		7	KATLI KONUT GELİŞİMİNİN İRDELENMESİ: MALATYA ÖRNEĞİ	Mimar xHacı İbrahim ERDOĞAN Prof. Dr. Çiğdem Belgin DİKMEN
		8	KATLI KONUT CEPHELERİNİN MALATYA ÖRNEĞİNDE İRDELENMESİ	Mimar xHacı İbrahim ERDOĞAN Prof. Dr. Çiğdem Belgin DİKMEN
		9	KENTSEL DÖNÜŞÜM: BİLİMSEL ÇALIŞMALARIN BİBLİYOMETRİK YOLCULUĞU	ALİ BÖGE Doç. Dr. Gülay DEMİR

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SALON 7	**Dr., İPEK BALIKÇI ÇİÇEK Dr., ŞEYMA YAŞAR**	1	ARTIFICIAL NEURAL NETWORK BASED MODELING STUDY TO DETERMINE THE FACTORS THAT POSE A RISK OF HEART ATTACK	Zeynep Küçükakçalı Şeyma Yaşar İpek Balıkçı Çiçek
		2	ANALYZING AND INTERPRETING THE RISK FACTORS THAT CAUSE LUNG CANCER WITH MACHINE LEARNING METHODS	Zeynep Küçükakçalı İpek Balıkçı Çiçek Şeyma Yaşar
		3	THE CLASSIFICATION OF HIGH BLOOD PRESSURE IN PREGNANT WOMEN USING BAGGING ENSEMBLE LEARNING METHOD AND DETERMINATION OF POSSIBLE RISK FACTORS	Dr., ŞEYMA YAŞAR Dr., ZEYNEP KÜÇÜKAKÇALI Dr., İPEK BALIKÇI ÇİÇEK
		4	PREDICTING DIABETES IN WOMEN AND IDENTIFYING ASSOCIATED FACTORS WITH THE MACHINE LEARNING MODEL BAGGEDCART	Dr., ŞEYMA YAŞAR Dr., İPEK BALIKÇI ÇİÇEK Dr., ZEYNEP KÜÇÜKAKÇALI
		5	IDENTIFYING ASSOCIATIONS BETWEEN RISK FACTORS FOR DIABETES USING A RELATIONAL CLASSIFICATION APPROACH	Dr., İPEK BALIKÇI ÇİÇEK Dr., ZEYNEP KÜÇÜKAKÇALI Dr., ŞEYMA YAŞAR
		6	PREDICTING CARDIOVASCULAR DISEASE AND IDENTIFYING POTENTIAL RISK FACTORS WITH MACHINE LEARNING METHODS	Dr., İPEK BALIKÇI ÇİÇEK Dr., ŞEYMA YAŞAR Dr., ZEYNEP KÜÇÜKAKÇALI

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SALON 1	**Assis. Prof. Dr. Saule Nassif**	1	ASSESSMENT OF TRAFFIC CONDITIONS AND PREFERRED ENTERTAINMENT FOR DISTRACTION	Yoon-Hyuk Choi
		2	A COMPREHENSIVE ANALYSIS OF POLITICAL DEFECTIONS IN INDIA	Dr. Diya Vien Lec. Prafulla C. Shashkova
		3	THE CONSTITUTIONAL COURT OF RUSSIA: LIMITATIONS ON CITIZENS' RIGHTS AND BANKING SECRECY	A. V. Mishra
		4	RECOGNITION AND PROTECTION OF INDIGENOUS COMMUNITIES IN INDONESIA	Sarkar Triyanto, Permata Hartanto
		5	THE NECESSITY FOR NATIONAL SPACE LAWS IN SPACEFARING COUNTRIES	Prof. Dr. Muhammad Rima Yang Naveed
		6	HUMAN RIGHTS AND CONSTITUTIONAL LAW IN ARMED CONFLICTS	Antonios Caixia Maniatis
		7	FORENSIC ANALYSIS OF SALIVA STAINS ON EVIDENCE AFTER LAUNDERING	Assis. Prof. Dr. Saule Nassif
		8	OVERCOMING OBSTACLES IN COLLECTING DIGITAL EVIDENCE FOR COURT ACCEPTANCE	Lilian Mussabekova Noronha
		1	THE EUROPEAN UNION'S ROLE IN GLOBAL GOVERNANCE	Yrfet Georgiev
		2	ANTI-CORRUPTION MEASURES IN THE CONTEXT OF MIGRATION WAVES IN EUROPE	Assoc. Prof. Dr. Shkreli Deliversky

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SALON 2	**Dr. Luna Shamieh**	1	ADVANCING GENDER EQUITY IN ISLAM THROUGH CONTEXTUAL INTERPRETATIONS	Dr. Ali Akbar
		2	BA'ALBAKĪ'S IMPACT ON LEBANESE WOMEN WRITERS IN THE MID-20TH CENTURY	Khaled Ismelina Igbaria Farouk
		3	HUMAN-ENVIRONMENT INTERACTIONS THROUGH THE LENS OF ENVIRONMENTAL ETHICS	Mella Farma Rahayu
		4	THE ROLE OF THE EUROPEAN PARLIAMENT IN HUMAN RIGHTS PROTECTION	Aleksandra Chiniaeva
		5	EISENHOWER'S FAREWELL ADDRESS: INITIAL AND LONG-TERM COMMUNICATION IMPACTS	B. Kuiper
		6	ENSURING HUMAN SECURITY IN FRAGILE STATES DURING ASYMMETRIC CONFLICTS	Dr. Luna Shamieh
			DEVELOPING A CREDIBILITY SCALE FOR NEW MEDIA: A MULTIFACETED APPROACH	Hanaa Schiffauerova
			GENDER DISPARITIES IN ACADEMIC OUTPUT, FUNDING, AND COLLABORATION	Ashkan Ebadi Assis .Prof. Dr. Andrea Saleh
		7	THE SWISS SCIENTIFIC SOCIETY AND ITS ROLE IN SUPPORTING DEVELOPING COUNTRIES	Jawad Oyewumi,

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SALON 3	**Prof. Dr. Yen Chung-Ruey**	1	ISOLATION AND IDENTIFICATION OF DIACYLGLYCEROL ACYLTRANSFERASE TYPE- 2 (GAT2) GENES FROM THREE EGYPTIAN OLIVE CULTIVARS	Yahia I. Mohamed Ahmed I. Marzouk Mohamed A. Yacout
		2	EFFECT OF VARIOUS POLLEN SOURCES TO ABILITY FRUIT SET AND QUALITY IN 'LONG RED B' WAX APPLE	Dr. Nguyen Minh Tuan prof. Dr. Yen Chung-Ruey
		3	ELECTROCHEMICAL PERFORMANCE OF CARBON NANOTUBE BASED SUPERCAPACITOR	Jafar Khan Kasi Ajab Khan Kasi Muzamil Bokhari
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Senecio vernalis Waldst. & Kit. (Asteraceae)' in BAZI METABOLİK ENZİMLER ÜZERİNDEKİ ETKİLERİ

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ÖZET

Bu çalışma *Senecio vernalis*'in su çözücüsü ile elde edilen özütünün antioksidan, antidiyabetik, antiinflamatuar ve antimelanogenez potansiyelini tespit etmek için yapılmıştır. Su ekstraktları tirozinaz, α-amilaz, lipooksijenaz ve ksantin oksidaz *in vitro* inhibitor aktiviteleri için test edilmiştir.

Ekstraktın antioksidan potansiyeli, süperoksit anyon radikallerinin ksantin - ksantin oksidaz (XO) sistemi tarafından üretilmesi sonucunda ksantin oksidaz enzim inhibisyonu (%35.14) aracılığıyla değerlendirilmiştir. Bitki ekstraktı, α-amilaz (%30.20) inhibisyonu yoluyla önemli hipoglisemik aktivite gösterdiği tespit edilmiştir. *S. vernalis* ekstraktının lipooksijenaz enzimini inhibe ederek antiinflamatuar etkisi %42,28 olarak bulunmuştur. Ekstrakt, tirozinaz enziminin inhibisyonu yoluyla L-DOPA'nın oksidasyonu üzerinde orta derecede inhibitör etki (%25.82) gösterdiği sonucuna varılmıştır.

Anahtar Kelimeler: α-Amylase, Tirozinaz, Lipoksijenaz, Ksantin oksidaz

Senecio vernalis Waldst. & Kit. (Asteraceae) EFFECTS ON SOME METABOLIC ENZYMES

ABSTRACT

In the present work, water extract of *Senecio vernalis* were investigated as well as its in vitro inhibitory activities against α-amylase, tyrosinase, lipoxygenase and xanthine oxidase enzymes for detecting antioxidant, antidiabetic, antiinflammatory and antimelanogenesis potent. The

antioxidant potential of the extract was evaluated through xanthine oxidase enzyme inhibition (35.14 %) because the superoxide anion radicals generate by xanthine - xanthine oxidase (XO) system. The extract demonstrated significant hypoglycemic activity via inhibition of α-amylase (30.20 %). The antiinflammatory effects of the extract via inhibition of lipoxygenase enzyme were found as 42.28 %. The extract demonstrated moderate inhibitory effect (25.82 %) on oxidation of L-DOPA via inhibition of tyrosinase enzyme.

Keywords: α-Amylase, Tyrosinase, Lipoxygenase, Xanthine oxidase.

Galleria mellonella LARVALARININ Carduus nutans L.'a (Asteraceae) KARŞI ANTİOKSİDATİF VE OKSİDATİF YANITININ İNCELENMESİ

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ÖZET

Lepidoptera takımın bir üyesi olan *Galleria mellonella* L. ekonomik açıdan zararlı bir böcek türüdür. Büyük balmumu güvesi olarak bilinen bu türün larvaları, polen ve peteklerle beslenerek arı kovanlarına büyük zararlar verir. *G. mellonella*, kısa yaşam döngüsü ve yüksek verimliliğinin yanı sıra çeşitli besinler üzerinde iyi büyüyebilmesi nedeniyle biyolojik ve kimyasal mücadele çalışmaları için önemli bir böcek türü olarak kabul edilmektedir. *Carduus nutans*, Asteraceae familyasına ait bir bitki olup, bu çalışma, laboratuvar koşullarında yetiştirilen *G. mellonella* böceğinin larva evresine uygulanan *C. nutans* ekstraktının antioksidan enzim aktiviteleri ve MDA düzeyleri üzerine etkilerini araştırmak amacıyla yapılmıştır. Bu çalışmada, 20 larvadan oluşan gruplara farklı dozlarda bitki ekstraktı (30 mg/mL, 25 mg/mL, 20 mg/mL, 15 mg/mL, 10 mg/mL ve 5 mg/mL) uygulanmıştır. Çalışmada özellikle savunma mekanizmasında etkili olan süperoksit dismutaz, katalaz ve glutatyon peroksidaz enzim aktivitelerine bakılmıştır. Sonuçlar incelendiğinde; ekstrakt uygulanan larvalarda *C. nutans* ekstraktı konsantrasyonunun artmasına bağlı olarak enzim aktivitelerinin arttığı belirlenmiştir. Son yıllarda zararlı böceklerle mücadelede kullanılan pestisitlerin hedef dışı organizmalar üzerindeki zararlı etkileri nedeniyle bitkisel ürünlerin böcek fizyolojisi ve biyokimyası üzerindeki etki mekanizmaları araştırılmaktadır. Bu çalışmada, *Carduus* cinsine ait *C. nutans*'ın böceklerin oksidan/antioksidan metabolizması üzerindeki etkisini incelemek amacıyla model organizma olarak *G. mellonella* kullanılmıştır.

Anahtar Kelimeler: Bitki Ekstraktı, Böcek, Oksidatif Stres

EVIDENCE OF ANTIOXIDATIVE AND OXIDATIVE RESPONSES BY *Galleria mellonella* LARVAE TO *Carduus nutans* L. (Asteraceae)

ABSTRACT

Galleria mellonella L., which belongs to the order Lepidoptera, is an economically harmful insect species. The larvae of this species, known as the greater wax moth, cause great damage to beehives by feeding on pollen and honeycomb. *G. mellonella* is considered an important insect species for biological and chemical control studies due to its short life cycle and high productivity, as well as its ability to grow well on various artificial nutrients. *Carduus nutans* is a plant belonging to the Asteraceae family, and in this study, the effects of *C. nutans* extract applied to the larval stage of *G. mellonella* grown under laboratory conditions on the antioxidant enzyme activities and MDA levels of the insect were investigated. For the experimental groups, groups of 20 larvae were treated with different doses of plant extract (30 mg/mL, 25 mg/mL, 20 mg/mL, 15 mg/mL, 10 mg/mL, and 5 mg/mL). In the study, enzyme activities of superoxide dismutase, catalase and glutathione peroxidase, which are especially effective in the defense mechanism, were measured. When the results are examined; It was determined that enzyme activities increased in larvae treated with the extract due to the increase in the concentration of *C. nutans* extract. Due to the harmful effects of pesticides used in the fight against harmful insects on non-target organisms in recent years, the effect mechanisms of plant products on insect physiology and biochemistry are being investigated. In this study, *G. mellonella* was used as a model organism to examine the effect of *C. nutans*, belonging to the genus *Carduus*, on insect oxidant/antioxidant metabolism.

Keywords: Plant Extract, Insect, Oxidative Stress

MAKINE ÖĞRENMESI ANALIZLERI ILE DESTEKLENMIŞ YÜZEY ZENGINLEŞTIRILMIŞ RAMAN SPEKTROSKOPISI (SERS) YAKLAŞIMI ILE ALT SUŞ BAKTERI TANISI

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Son yıllarda, mikroorganizmalar tarafından meydana gelen hastalıkların sayısı önemli ölçüde artmaktadır ve bu durum sağlık sektöründe acil eylem çağrılarının yapılmasına neden olmaktadır. Mikroorganizmalar ciddi enfeksiyonlara yol açabilir ve ölümle sonuçlanabilecek durumlar oluşturabilir. Dünya Sağlık Örgütü (WHO) 1,2 milyondan fazla kişinin solunum, gastrointestinal ve merkezi sinir sistemlerini etkileyen ciddi bakteriyel enfeksiyonlara maruz kaldığını bildirmiştir. Patojenlerin tespiti ve belirlenmesi için kesin ve hassas prosedürler, patojenlerden kaynaklanan hastalıkların önlenmesi ve kontrolü ve insan güvenliğini sağlamak için çok önemlidir. Bununla birlikte, mevcut tüm yaklaşımların büyük laboratuvar ekipmanları, karmaşık veya pahalı prosedürler ve bazen yanlış pozitif sonuçlar gibi dezavantajları vardır. Bundan dolayı, hızlı, hassas, güvenilir ve düşük maliyetli bir bakteri tanımlama tekniğine olan ihtiyaç sürekli artmaktadır.

Önerilen çalışma kapsamında, etiketsiz yeni bir yüzey zenginleştirilmiş Raman spektroskopisi (SERS) yaklaşımı ile farklı bakteri alt suşlarının tanısının yapılması amaçlanmaktadır. Bu doğrultuda kullanılacak bakteriler temin edilmiş ve uygun besiyeri ortamında büyütülmüştür. Model olarak seçilen üç farklı bakteri türünün alt suşlarıyla beraber toplamda dokuz bakteri SERS platformu olarak seçilen altın nanoçubuk dizinler (GNA) ile kombine edilerek yeterli sayı ve kalitede SERS sinyalleri toplanmıştır. Toplanan sinyaller farklı denetimsiz ve denetimli makine öğrenmesi analizleri ile istatiksel olarak değerlendirilerek bakteri tanısı sağlanmıştır. Gözetimsiz analizlerden PCA, HCA ve PCA-LDA analizleri yapılarak elde edilen veriler sonucunda sırasıyla *P.auroginosa* için %70, *S.aureus* için %92 ve *E.coli* için de %63'lük bir varyasyon değeri elde edilmiştir. Gözetimli analizlerden LDA için *P.auroginosa* ve *S.aureus* için %100 sınıflandırma doğruluğu elde edilirrken, *E.coli* için daha düşük oranlar gözlemlenmiştir. Bu veriler sonucunda makine öğrenmesi analizlerin bakteri tanısında çalışmanın güvenilirliği ve kesinliği açısından öneme sahip olduğu kanısına varılmıştır.

Anahtar Kelimeler: SERS, Makine öğrenmesi analizleri, Bakteri tanısı, Gözetimli analiz, Gözetimsiz analiz

SAF KARAKOVAN BALI VE GLUKOZ ILE KATKILANDIRILMIŞ BALLARIN MAKINE ÖĞRENMESI ILE DESTEKLENMIŞ YÜZEY ZENGINLEŞTIRILMIŞ RAMAN SPEKTROSKOPISI (SERS) YAKLAŞIMI ILE İNCELENMESI

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Bal; arı tarafından yapılan, insanların beğenerek tükettiği kendine has tadı ve kokusu olan aynı zamanda besleyici ve tıbbi özelliği bulunan bir besin türüdür. Hakiki bal, arılar tarafından çeşitli nektar kaynakları kullanılarak üretilen ve üretim mevsiminde ya da sonrasında herhangi bir şeker şurubu ilave edilmeyen işlenmesi ve depolanması sırasında ısıl işleme tabi tutulmayan tüketim aşamasına kadar özelliğini koruyan doğal bir gıda malzemesidir. Sahte bal ise katkılı ve suni bal olarak ikiye ayrılabilir. Katkılı bal üretim esnasında arıya şeker şurupları ile takviye yapılarak bal üretimini artırmak ve ballara su ilave etmek, nişasta, jelatin vb. maddeler katılmasıyla balın genel birleşim özelliğini değiştiren balları kapsamaktadır. Bu katkı maddeleri genellikle mısır şurubu, şeker şurubu, sakkaroz şurubu ve glukoz şurubu gibi şeker şuruplarıyla yapılmaktadır. Başta bal olmak üzere gıdaların maruz kaldığı taklit ve tağşiş gibi etkenler gıdaların güvenilir ve hızlı bir şekilde tespit edebilecek analitik yöntemler gerektirmektedir.

Yapılan çalışma kapsamında saf karakovan balı ve farklı oranlarda glukoz şekeri ile katkılandırılmış bal arasındaki benzerlik ve farklılıkların yüzey zenginleştirilmiş Raman spektroskopi (SERS) yaklaşımı ve makine öğrenmesi analizleri kullanılarak belirlenmesi amaçlanmıştır. Bunun için SERS platformu olarak fiziksel buhar birikimi yöntemi ile altın nanoçubuk dizinler (GNA) üretilmiş ve bu sistem Raman etkisini önemli ölçüde arttırarak yüksek kalitede sinyaller elde edilmiştir. Elde edilen sinyaller denetimsiz ve denetimli makine öğrenmesi yöntemleri ile işlenmiş ve saf bal ile tağşiş bal arasında dikkate değer bir ayrım elde edilmiştir. Böylelikle bal örneklerinde taklit ve tağşişin belirlenmesinde; basit, hızlı, tekrar edilebilir, hassas ve düşük maliyetli bir yöntem geliştirilmiştir. Önerilen yöntemin bal dışında tağşişe uğrayan diğer gıda maddelerinde de uygulanabileceği düşünülmektedir.

Anahtar Kelimeler: Raman spektroskopi (SERS),Altın nanoçubuk dizinler (GNA), Tağşiş, Saf karakovan balı, Sakkaroz şurubu, Mısır şurubu, Glukoz şurubu

Hypera postica'nın (Gyllenhal,1883) (Coloeptera: Curculionidae) sindirim ve boşaltım sistemlerinin anatomik ve histolojik yapısı

Anatomical and histological structure of the digestive and excretory systems of Hypera postica (Gyllenhal,1883) (Coloeptera: Curculionidae)

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Özet

Bu çalışmada *Hypera postica*'nın (Gyllenhal,1883) (Coloeptera: Curculionidae) sindirim ve boşaltım sistemlerinin anatomik ve histolojik yapısı ışık ve taramalı elektron mikroskobu (SEM) kullanılarak çalışılmıştır. *H. postica* ülkemizde ve dünyada yonca tarımının yapıldığı her yerde yoncada ciddi zarar yapan ekonomik açıdan önemli bir böcektir. Çalışmada kullanılan *H. postica* ergin türleri Mayıs 2022-2024 de Bingöl'den toplanmıştır. Steoromikroskop altında disekte edilen *H. postica*'nın sindirim ve boşaltım sistemine ait örnekleri ışık ve elektron mikroskobunda incelenmiştir. Elde edilen verilere göre sindirim sistemi; ön, orta ve arka bağırsak olmak üzere üç ana kısımdan oluşmaktadır. İncelemeler sonucunda ön bağırsağın farinks, özofagus, kursak ve proventrikulustan oluştuğu görülmüştür. Özofagus boru şeklinde basit yapılıdır ve farinks ile kursak arasında bağlantıyı sağlamaktadır. Kursakta intima, tek tabakalı epitel ve kas tabakası gözlenmektedir. İntimada ikiye çatallanmış uzun dikensi yapılar mevcuttur. Proventrikulus kursak ve orta bağırsak arasında yer almakta olup halka ve boyuna kaslar iyi gelişmiştir, iç tarafında ise intimada dikenler paralel diziler halinde tabakalar oluşturmuş olup yıldız görünümündedir. Orta bağırsakta anteriyor ve posteriyor olarak ikiye ayrılmıştır. Orta bağırsakta slindirik epitel hücreleri lümeninde mikrovillus denen yapılar gözlenmiştir. Orta bağırsak ve arka bağırsak arasında Malpigi tübülleri ve gastrik çekumlar yer almaktadır. Çekum lümeninde yığınlar halinde bakteriler görülmüştür. Arka bağırsak; ileum, kolon ve rektumdan meydana gelmektedir. Malpigi tübüllerinin distal kısmı kolon duvarına yapışıktır. Rektumu çevreleyen kas yapısı oldukça kalındır, lümende bakterilere rastlanmıştır. Bu çalışma sonucunda daha önce incelenmemiş olan *H. postica*'nın sindirim ve boşaltım sisteminin anatomisi ve histolojisi detaylı olarak açıklanmış ve diğer türlerle benzerlikleri ve farklılıkları karşılaştırılmıştır. Böylece yapılan

çalışmalar sonucu bu konuda yapılacak diğer çalışmalara, sistematik çalışmalara ve tarım zararlısı olan bu türlerle mücadelede yapılacak olan çalışmalara temel oluşturarak katkı sağlaması amaçlanmıştır.

Anahtar Kelimeler : Ön bağırsak, orta bağırsak, arka bağırsak, malpigi tübülleri, ışık mikroskobu, elektron mikroskobu

MULTIFACETED APPLICATIONS OF MICROFUNGI IN INDUSTRY AND BIOTECHNOLOGY

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ABSTRACT

Fungi are crucial components of almost all ecosystems, from high mountains to deep oceans. They play a significant role in the decomposition, utilization, and transformation of a wide variety of organic and inorganic substances. These characteristics make fungi a valuable resource for industrial and biotechnological applications. Their applications span agriculture, food and feed, pharmaceuticals, the paper and textile industries, as well as the biodegradation of plastics and bioconcrete studies.

In the field of medical biotechnology, microfungi are of great importance, particularly in the production of antibiotics like penicillin derived from *Penicillium* species. Additionally, immunosuppressive drugs like cyclosporin A and cholesterol-lowering agents such as lovastatin are produced by microfungi.

In food biotechnology, *Aspergillus oryzae* and *Aspergillus sojae* have been used for thousands of years in the production of soy sauce. *Aspergillus niger* is a commercially significant fungus for the production of citric acid and amylase. These fungi are also valuable in the production of mycoprotein, dietary fibers, and polyunsaturated fatty acids.

In industrial biotechnology, filamentous fungi play a crucial role in enzyme production, biofertilizer, and biodiesel production. Fungal species like *Aspergillus* and *Trichoderma reesei* are used in the production of industrial enzymes, antibiotics, and organic acids. Filamentous fungi can also produce polyunsaturated fatty acids from low-cost substrates, offering significant advantages in biodiesel production.

In plastic degradation, fungi contribute to environmental sustainability by secreting biodegradable enzymes. Enzymes such as cutinase, lipase, and peroxidase facilitate the biological breakdown of plastics, with fungi playing a key role in this process.

The use of microfungi in industrial and biotechnological fields offers significant innovations and solutions in health, food, and environmental sustainability. These microorganisms have immense potential and are poised to provide further innovations in the future.

Key words: Biotechnology, medical biotechnology, mycoprotein, bioconcrete

A SOLUTION PROPOSAL IN THE FIELD EQUATIONS OF $f(Q)$ GRAVITY

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ABSTRACT

The main objective of our research is to determine a solution of the field equations of gravitational theory, specifically represented as $f(Q)$ gravity. Here, $Q = 6H^2$ denotes a non-metric tensor with the definitiation of Hubble parameter $H = \frac{\dot{a}}{a}$. Also, a is the scale factor of the universe. When evaluating the action integral of the theory of gravity, we take the Lagrangian of the scalar field. In the framework of the flat spacetime metric (Friedmann-Robertson-Walker) function, We consider a relationship in order to examine a solution of the field equation, which includes the equation of the state parameter and also along with the pressure and energy density contained inside the field equations. Consequently, we constructed a combined formulation for the two field equations of motion that is connected to this relationship. Next, we examine the solution to the differential equation that arises from this relationship. Based on this address, we observed that special solutions for some eras of the universe can be achieved in the resulting differential equation. We found that, in general, the solutions with an approximation are reduced to Einstein's theory of gravity. Considering the cosmological context, it has been determined that the solutions correspond to the existence of the radiation and dust eras in the universe. Moreover, in the framework of the Einstein gravity perspective, it can achieve a solution that can prove the presence of dark energy during the universe's expansion.

Keywords: the deceleration eras, dark energy, $f(Q)$ gravity

SOME DIOPHANTINE EQUATIONS INVOLVING REPDIGITS AND POWERS OF TWO OR FIVE

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ABSTRACT

In this paper, we solve some Diophantine equations involving repdigits and powers of two or five. That is, we deal with the equations

$$a^x = \frac{d_1 \cdot (10^n - 1)}{9} - \frac{d_2 \cdot (10^m - 1)}{9} \qquad \text{for } 1 \leq m \leq n, 0 \leq d_1, d_2 \leq 9,$$

$$a^x = \frac{d_1 \cdot (10^n - 1)}{9} + \frac{d_2 \cdot (10^m - 1)}{9} + \frac{d_3 \cdot (10^r - 1)}{9} \qquad \text{for } 1 \leq m \leq n < r, 0 \leq d_1, d_2, d_3 \leq 9,$$

$$a^x \pm a^y \pm a^z = \frac{d \cdot (10^n - 1)}{9} \qquad \text{for } 0 \leq z \leq y \leq x, 0 \leq d \leq 9, n \geq 1,$$

in nonnegative integers. Here a is equal to two or five. We also find some interesting results of these theorems. The main tool is elementary methods which involve various inequalities and congruences.

Anahtar Kelimeler: Diophantine equations, Repdigits, Congruences, Inequalities

FAKÜLTELERİN SÜRDÜRÜLEBİLİRLİĞİNİ DEĞERLENDİRMEK İÇİN PLİTOJENİK KÜMEYE DAYALI YENİ BİR KARAR VERME MODELİ

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ÖZET

Son zamanlarda, özellikle enerji kaynaklarının tükenmesi ve çevresel kaygıların artması sonucunda sürdürülebilirlik kavramı daha da önem kazanmıştır. UI GreenMetric üniversiteleri sürdürülebilirlik, çevre ve enerji konuları gibi çeşitli kriterlere göre sıralamakta ve çevre kirliliği, gıda, su kıtlığı ve enerji tedariki konularını ele almaktadır. Üniversiteler kampüslerinde ve yerleşkelerinde sürdürülebilirliği ön planda tutarak insanlık için daha sürdürülebilir bir gelecek sağlamada çalışma eğilimi göstermektedir. Günlük yaşamımızda ya da iş ortamında karşılaşılan sorunların çoğu birden fazla alternatif ve bu alternatiflere karşılık gelen kriterlerden oluşmaktadır. Literatüre baktığımızda bu tür problemlerin çözümü için çok kriterli karar verme (ÇKKV) yöntemleri kullanılmaktadır. Ancak bilinen ÇKKV yöntemleri, karar vericilere belirsizlik gibi durumlarda sözel olarak değerlendirme imkanı sunmamaktadır. Bu durumu ortadan kaldırmak için ÇKKV yöntemlerine bulanık mantık uygulanmaktadır. Son yıllarda literatürde yer alan Bulanık EDAS (Evaluation based on Distance from Average Solution- Ortalama Çözüm Uzaklığına Göre Değerlendirme) yöntemi, yine literatüre yeni kazandırılan Plitojenik küme ile entegre edilerek ele alınmıştır. Bu çalışmada, önerilen Plitojenik bulanık EDAS yöntemi Sivas Cumhuriyet Üniversitesinde sürdürülebilirlik performanslarının değerlendirilmesi problemine uygulanmıştır. Bu değerlendirme için altı kriterli IU GreenMetric modeli kullanılmıştır. Burada beş farklı fakülte (Sağlık Bilimleri Fakültesi, Tıp Fakültesi, İktisadi ve İdari Bilimler Fakültesi, Mühendislik Fakültesi ve Eğitim Fakültesi); Yapı ve Altyapı, Enerji ve İklim Değişikliği, Atıklar, Su, Ulaşım ve Eğitim kriterleri açısından değerlendirilmiş ve Plitojenik bulanık EDAS yaklaşımı ile fakülteler sıralanmıştır. Ayrıca elde edilen sonuçlar yine plitojenik kümenin bir alt kümesi olan nötrosofik bulanık EDAS ile karşılaştırılmıştır. Çalışma kapsamında çoklu karar vericinin olduğu durumlarda, karar vericiler arası çelişki katsayısını da dikkate alan Plitojenik küme yaklaşımı EDAS yöntemine ilk kez uygulanmaktadır.

A NEW DECISION-MAKING MODEL BASED ON PLITHOGENIC SET TO ASSESS THE SUSTAINABILITY OF FACULTIES

ABSTRACT

Recently, the concept of sustainability has gained more importance, especially as a result of the depletion of energy resources and increasing environmental concerns. UI GreenMetric ranks universities according to a variety of criteria, including sustainability, environmental and energy issues, and addresses environmental pollution, food and water scarcity and energy supply. Universities show a tendency to provide a more sustainable future for humanity by prioritizing sustainability in their campuses. Most of the problems encountered in our daily life or in the business environment consist of more than one alternative and the criteria corresponding to these alternatives. When we look at the literature, multi-criteria decision making (MCDM) methods are used to solve such problems. However, known MCDM methods do not offer decision makers the opportunity to verbally evaluate situations such as uncertainty. To eliminate this situation, fuzzy logic is applied to MCDM methods. Fuzzy EDAS (Evaluation based on Distance from Average Solution) method, which has been in the literature in recent years, has been discussed by integrating it with the Plithogenic Set, which has also been newly introduced to the literature. In this study, the proposed Plithogenic fuzzy EDAS method was applied to the problem of evaluating sustainability performances at Sivas Cumhuriyet University. The six-criteria IU GreenMetric model was used for this evaluation. There are five different faculties here (Faculty of Health Sciences, Faculty of Medicine, Faculty of Economics and Administrative Sciences, Faculty of Engineering and Faculty of Education); The faculties were evaluated in terms of Building and Infrastructure, Energy and Climate Change, Waste, Water, Transportation and Education criteria and the faculties were ranked with the Plithogenic fuzzy EDAS approach. Additionally, the results obtained were compared with neutrosophic fuzzy EDAS, which is also a subset of the plithogenic set. The importance of the method in terms of innovation is that; in the group decision making problems, Plithogenic set approach, which also takes into account the contradiction degree between decision makers, is applied to the EDAS method for the first time.

Keywords: Plithogenic set, fuzzy EDAS, sustainability, MCDM

ON THE FRACTIONAL FORNBERG-WHITHAM EQUATION BY SHEHU VARIATIONAL ITERATION METHOD

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ABSTRACT

The intetion of this research is to establish truncated solution of mathematical problem including fractional space time Fornberg-Whitham equation (FSTFWE) which is non-linear fractional differential equation. We come up with the algorithm named Shehu Variational Iteration Method (SVIM) which includes Shehu transform (ST) and variational iteration method (VIM), for the solution of this problem. First, we reduce this mathematical problem into one including ordinary differential equation. Later, the solution of the reduced problem is established by implementing VIM. Finally, inverse Shehu transformation is utilized to acquire the truncated solution of the problem we focus on. The convergence analysis of this method shows that the solutions obtained by VIM converges to the exact solution of the problem. Moreover, presented example confirms that the proposed method is one of the most effective procedure to tackle such nonlinear problems.

Keywords: Variational iteration method, Liouville-Caputo operator, Shehu transform, Fornberg-Whitham equation

IDENTIFICATION OF SOURCE FUNCTION IN TIME FRACTIONAL DIFFUSION PROBLEM BY LAPLACE TRANSFORM AND DAFTARDAR-GEJJI AND JAFARI ITERATION METHOD

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ABSTRACT

This research paper focus on the identificaiton of source function of space variable in a time fractional diffusion problem through Laplace transform. Utilization of Laplace transform allows us to reduce the problem into a simplier form by getting rid of time fractional derivative in Caputo sense. At this stage employing Daftardar-Gejji and Jafari iteration method (DGJIM) leads to the solution of the problem as well as unknown source function with the help of initial and boundary conditions. The novelty of this research is that in the determination of the source function, we don't use any overmeasured data.

Keywords: Time fractional diffusion problem, Caputo derivative, Inverse problem, Laplace transform, Daftardar-Gejji and Jafari iteration method

GAMA SPEKTROSKOPİSİ SİSTEMİNDE KULLANILAN NAI(TL) DEDEKTÖRÜNÜN ENERJİ ÇÖZÜNÜRLÜĞÜ VE VERİMLİLİĞİNİN BELİRLENMESİ

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ÖZET

Çevresel radyoaktivite ölçümlerinde NaI(Tl) sintilasyon dedektörleri yüksek verimli, güvenilir ve hassas ölçüm sonuçlarından dolayı gama spektroskopi sisteminde yaygın olarak kullanılmaktadır. Bu çalışmada, 1,5" x 2" inç boyutlarındaki NaI(Tl) dedektörü ile ^{137}Cs, ^{60}Co, ^{22}Na ve ^{241}Am radyoaktif gama kaynakları kullanılarak farklı mesafeler ve farklı enerji değerleri için enerji spektrumları elde edilmiştir. Spektrum sonuçları analiz edilerek enerji çözünürlüğü ve dedektör verimliliği belirlenmiştir. Farklı mesafelerde alınan ölçüm sonuçlarına dayanarak yapılan verim hesabı ile bu deneysel verilere fit yapılarak elde edilen fonksiyon ile hesaplanan verim değerleri karşılaştırılmıştır. Hesaplanan değerlerin deneysel değerlerden yüzdelik olarak ne kadar saptığı belirlenmiştir. NaI(Tl) dedektörünün artan enerji değerlerine karşılık verimliliğin ve enerji çözünürlüğünün azaldığı tespit edilmiştir. Elde edilen sonuçlar ileriki başka çalışmalara temel veri sağlamaktadır.

Anahtar Kelimeler: NaI(Tl) sintilasyon dedektörü, Gama radyasyonu, Gama spektroskopisi.

DETERMINATION OF ENERGY RESOLUTION AND EFFICIENCY OF NAI(TL) DETECTOR USED IN GAMMA SPECTROSCOPY SYSTEM

ABSTRACT

In environmental radioactivity measurements, NaI(Tl) scintillation detectors are widely used in gamma spectroscopy systems due to their highly efficient, reliable, and sensitive measurement results. In this study, energy spectra were obtained for different distances and different energy values using a 1.5" x 2" inch NaI(Tl) detector and ^{137}Cs, ^{60}Co ve ^{22}Na and ^{241}Am radioactive gamma sources. Energy resolution and detector efficiency were determined by analyzing the energy spectrum results. The efficiency calculation made based on the measurement results taken at different distances was compared with the efficiency values calculated with the function obtained by fitting these experimental data. It was determined how much the calculated values deviated from the experimental values in percentage terms. It has been determined that the efficiency and energy resolution of the NaI(Tl) detector decrease with increasing energy values. It is seen that the efficiency and energy resolution of the NaI(Tl) detector decrease as the energy values increase. The results obtained provide basic data for other future studies.

Keywords: NaI(Tl) scintillation detector, Gamma radiation, Gamma spectroscopy.

BİTKİSEL VE HAYVANSAL SÜTLER

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ÖZET

Süt, memeli hayvanların yeni doğurdukları yavrularını besleyebilmek üzere süt bezlerinden farklı sürelerde salgıladıkları bir sıvıdır. Bu sıvı yavrunun kendini besleyecek duruma gelinceye kadar almak zorunda olduğu bütün besin maddelerini yeterli miktarda bünyesinde bulundurur. Sütler, bitkisel ve hayvansal olmak üzere ikiye ayrılır. Bitkisel ve hayvansal sütler yüksek proteinler, lipitler, vitaminler, mineraller ve diyet lifleri açısından zengin depo kaynaklarıdır. Hayvansal sütler laktoz adı verilen, süt şekeri içeren tam yağlı sütlerdir. Hayvansal sütler; inek, keçi, koyun, manda, deve ve eşek sütü olarak kendi aralarında ayrılırlar. Bunlar arasında en çok tercih edilip tüketilen inek sütüdür. İnek sütü açısından büyük öneme sahip olan Jersey sütleri, jersey ırkı ineklerden elde edilir. Bu sütler diğer cinslerin ürettiği sütlere oranla daha lezzetli ve daha fazla besin değerine sahiptir. Doymuş yağ oranı düşük olan bitkisel sütler ise bünyesinde hayvansal ürün bulundurmayan tamamen bitkisel kaynaklı vegan içeceklerdir. Laktoz içermeyen bitkisel sütler az miktarda protein, kolesterol ve mineral içermektedir. Ayrıca tekli ve çoklu doymamış yağ oranları ve diyet lifi açısından büyük bir öneme sahiptir. Bununla birlikte vegan ve vejetaryen tüketiciler için tercih edilen önemli bir süt grubunu oluşturmaktadır. Bitkisel sütler; Hindistan cevizi, soya, badem, pirinç, yulaf, ceviz, kenevir, kaju, buğday, fındık sütü olarak kendi aralarında gruplandırılmaktadır. Bu süt çeşitleri hem sindirim kolaylığı hem de sahip oldukları yüksek besin değerleri sayesinde hayvansal sütler karşısında ikame olarak beslenme uzmanları tarafından önerilmektedir. Bu incelemede hayvansal ve bitkisel sütlerin beslenme kompozisyonu ve tüketici tercihleri hakkında bilgiler aktarılacaktır.

Anahtar Kelimeler: Bitkisel sütler, Hayvansal sütler, Jersey sütler, Alerji, vegan

PLANT BASED AND ANIMAL MILKS

Milk is a liquid secreted by mammary glands in mammals to nourish their newborn offspring. This fluid contains all the necessary nutrients in sufficient quantities for the young to thrive until they can feed themselves. Milk can be categorized into two main types: plant-based and

animal-based. Both types of milk are rich sources of proteins, lipids, vitamins, minerals, and dietary fibers. Animal-based milk, which includes cow, goat, sheep, buffalo, camel, and donkey milk, contains lactose (milk sugar) and is typically full-fat. Among these, cow's milk is the most widely consumed. Jersey milk, obtained from Jersey breed cows, is particularly prized for its superior taste and higher nutritional value than other breeds. On the other hand, plant-based milk is entirely derived from plant sources and contains no animal products. These vegan alternatives are often preferred by individuals who are lactose intolerant or follow vegetarian or vegan diets. Common plant-based milk varieties include coconut, soy, almond, rice, oat, walnut, hemp, cashew, wheat, and hazelnut milk. These milk alternatives are easier to digest and offer significant nutritional benefits. In summary, both animal-based and plant-based milk play essential roles in human nutrition, and their composition and consumer preferences are explored in this review.

Keywords: Plant milk, Animal milk, Jersey milk, Allergy, vegan

YEME BOZUKLARININ PATOGENEJİNDE VE TEDAVİSİNDE MİKROBİYOTANIN ROLÜ

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ÖZET

İnsan vücudu, çeşitli mikroorganizmaların bir arada yaşadığı bir ortamdır. Bu mikroorganizmaların çoğu, yeterli besin maddelerinin bulunması nedeniyle öncelikle mide-bağırsak kanalına yerleşir. Burada, bağırsağın içindeki mikroorganizmalarla etkileşime geçerek bir dengede kalır. Bu denge, bağırsak mikrobiyotasının beslenme üzerindeki etkisini de belirler. Bu mikroorganizmalar, bazı vitaminlerin sentezinin yanı sıra bazı gıda bileşenlerinin parçalanmasını da etkileyerek beslenmeyi önemli ölçüde etkiler. Mikrobiyotamız, yaşam tarzı, yediğimiz yiyecekler ve yaşadığımız ortam gibi bazzı parametrelere bağlı olarak değişebilmektedir. Obezite tedavisinde özellikle yeterli ve dengeli beslenmenin yanı sıra artan fiziksel aktivitenin ve yaşam tarzı değişikliğinin önemi vurgulanmaktadır. Bunun yanı sıra, bağırsak florasının obezite ile ilişkili olduğu da paylaşılmaktadır. Yapılan çoğu çalışmada bağırsak mikrobiyotasının beslenme alışkanlıkları ve obeziteyle değişebileceğini göstermiştir. Mikrobiyotadaki değişikliklerin obezite ve yeme bozukluklarından anoreksiya nervoza (AN), bulimiya nervoza (BN) ve tıkanırcasına yeme bozukluğu gibi birçok hastalıkla ilişkili olabileceği düşünülmektedir. Bütün bu faktörler göz önüne alındığında, mikrobiyotamızın sağlıklı kalması için yeterli ve dengeli bir beslenme tarzını benimsemek, fiziksel aktiviteyi arttırmak ve sağlıklı yaşam tarzı seçimlerini yapmak son derece önemlidir. Bu sayede, bağırsak mikrobiyotasını koruyarak obezite ve obeziteye bağlı hastalıkların riskini azaltabiliriz.

Anahtar Kelimeler: Yeme bozuklukları, anoreksiya nervoza, bulimiya nervoza, mikrobiyota, obezite

THE ROLE OF MICROBIOTA IN THE PATHOGENEGY AND TREATMENT OF EATING DISORDERS

Abstract

The human body is an environment where various microorganisms coexist. Most of these microorganisms primarily settle in the gastrointestinal tract due to the availability of sufficient nutrients. Here, they interact with the gut's resident microorganisms and maintain a balance. This balance significantly influences the impact of gut microbiota on nutrition. These microorganisms not only synthesize certain vitamins but also play a role in breaking down food components. Our gut microbiota can vary based on lifestyle, dietary choices, and environmental factors. In obesity management, emphasis is placed not only on adequate and balanced nutrition but also on increased physical activity and lifestyle changes. Additionally, the gut flora has been linked to obesity. Numerous studies have demonstrated that gut microbiota can change based on dietary habits and obesity. Changes in the microbiota may also be associated with eating disorders such as anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder. Considering all these factors, maintaining a healthy gut microbiota involves adopting a balanced diet, increasing physical activity, and making healthy lifestyle choices. By doing so, we can protect our gut microbiota and reduce the risk of obesity and related diseases.

Keywords: Eating disorders, anorexia nervosa, bulimia nervosa, microbiota, obesity

AMBULANS TERCİH NEDENLERİ VE ETKİLERİ

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Özet

Hastane öncesi acil tıbbi hizmetler (EMS), yaralı ve hasta hastaların acil servise stabilizasyonunda ve nakledilmesinde hayati bir rol oynamaktadır. Bu hizmetlerin faydaları acil servisteki aşırı kalabalıktan etkilenebilir, bu da hastaların acil servise 'yüklenmesinde' ve kesin bakımın alınmasında gecikmelere neden olabilir.Kökenleri akut tıbbi acil durumlara ve yaralanmalara yönelik hizmetler olmasına rağmen, ambulans kuruluşlarıyla temasların büyük çoğunluğu artık ciddi, doğrudan yaşamı tehdit eden durumlar için değildir. Acil ambulans hizmetine yapılan çağrılar son yıllarda yıllık %7 oranında artmaktadır ve potansiyel olarak birinci basamak sağlık hizmeti sağlayıcı tarafından yönetilebilecek durumlar için giderek daha fazla aranmaktadır. Acil bakımdaki en önemli sorunlardan biri, birçok hastanın acil servislerde (AS) uzun süre beklemek zorunda kalmasıdır; bu, hasta güvenliği ve düşük kaliteli bakım için bir risk faktörüdür ve aynı zamanda hastalar için hayal kırıklığı yaratır. Bu özellikle yaşlılar arasında problemdir. Sağlık görevlileri dava açılma korkusuyla çalışırlar ve olumsuz olayların meydana gelmesi durumunda, sevk etmeme kararları konusunda yönetimin desteğinin eksikliğini algılayabilirler. Hasta güvenliği ile hasta seçimi arasındaki dengeyi sağlamak ve sağlık görevlilerinin dava açılma korkuları, tedbir olarak acil servise sevk edilmelerine neden olabilir.

Sağlık hizmeti kullanımını, sağlık sonuçlarını ve maliyetleri optimize etmek için, acil sağlık hizmetlerini sık kullananların anlaşılmasını geliştirecek araştırmalara ihtiyaç vardır. Mevcut rutinler hakkında yüksek kaliteli çalışmalar yapmak ve sevk kriterlerini iyileştirmek ve gereksiz bakımı sınırlamak amacıyla hangi hastaların fayda görüp görmeyeceğini araştırmak faydalı ve etkili olacaktır.

Anahtar Kelimeler : Ambulans; Ambulans ihtiyacı; Acil servis; Ambulans yoğunluğu; Ambulans kullanımı

KAHRAMANMARAŞ'TAKİ MARKETLERDE SATILAN ŞİŞELENMİŞ DOĞAL MADEN SULARINI TÜKETEN İNSANLARIN YAŞAM BOYU KANSER RİSKİ

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ÖZET

Türkiye doğal maden suyu rezervleri açısından en zengin 10 ülke arasında yer almasına rağmen, Maden suyu üreticileri derneği raporuna göre Avrupa Birliği (AB) üyesi ülkelerde yıllık doğal maden suyu tüketimi 150 L civarında iken Türkiye'de 2010 yılında 6,5 L, 2019 yılında 12 L, 2022 yılında ise 14 L olarak gerçekleşmiştir. Son yıllarda meyve aromalı maden sularının piyasaya arz edilmesi ile tüketimi artan doğal maden sularının radyolojik açıdan riskinin değerlerderilmesi önem arz etmektedir. Bu çalışmada, Kahramanmaraş'taki marketlerde satılan şişelenmiş maden suyu örneklerini tüketen yetişkin insanlar için yaşam boyu kanser riskleri hesaplanmıştır. Bu hesaplamalar için, öncelikle, Kahramanmaraş'taki marketlerde satılan 10 farklı markanın her birinden 200 ml hacimli 1'i sade, 5'i meyve aromalı olmak üzere toplam 60 adet şişe maden suyu toplanarak laboratuvara getirilmiş ve radon gazı ile radyum elementi aktivite miktarları DURRIDGE Rad7 elektronik radon dedektörü kullanılarak ölçülmüştür. Daha sonra, üç farklı senaryoya göre yıllık efektif doz miktarları ve yaşam boyu kanser riskleri hesaplanmıştır. İlk seneryoda, dünya sağlık örgütünün yetişkin insanların yıllık içme suyu tüketimi için belirlediği ortalama 730 L (S1), ikinci seneryayoda, Avrupa Birliği üyesi ülkelerde tüketilen yıllık ortalama doğal maden suyu miktarı olan 150 L (S2) ve son olarak üçüncü senaryoda, Türkiye'de tüketilen yıllık ortalama doğal maden suyu miktarı olan 14 L (S3) yetişkin insanların doğal maden suyu tükettiği varsayılarak hesaplamalar yapılmıştır. Hesaplamalarda, yetişkinler için ortalama yaşam süresi 77,5 yıl ve risk faktörü 0,057/Sv olarak alınmıştır. Üç farklı senaryo göz önüne alınarak yetişkinler için ortalama yaşam boyu kanser risk değerleri, 3,75E-06 (S1), 7,71E-07 (S2) ve 7,24E-08 (S3) olarak hesaplanmıştır. Bu değerler, UNSCEAR'ın 2008 raporunda yer alan topraktaki yer kabuğu kökenli radyonüklitlerden kaynaklanan ortalama değerin ($2,9 \times 10^{-4}$) çok altındadır.

Anahtar Kelimeler : Yaşam boyu kanser riski, Doğal maden suyu, Radon, Radyum, Rad7

SÖĞLE TULUM PEYNİRİNİN BAZI KARAKTERİSTİK ÖZELLİKLERİNİN BELİRLENMESİ

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ÖZET

Söğle Tulum peyniri Antalya ilinin Elmalı ilçesinin Söğle mahallesinde keçi sütünden geleneksel yöntemle üretilen ve keçi tulumu içerisinde olgunlaştırılan bir peynir çeşididir.

Bu çalışmada Antalya ilinin Elmalı ilçesinde satışa sunulan farklı üreticilere ait, geleneksel yöntemle üretilen 25 adet Söğle Tulum peynirinin fizikokimyasal, biyokimyasal özellikleri ile beraber mineral madde içeriği, toplam fenolik madde miktarı ve antioksidan aktivitesi araştırılmıştır. Araştırma sonuçlarına göre ortalama kurumadde % 53.24, kül % 7.77, yağ % 4.32, protein % 37.66, tuz % 4.37, pH 5.58, asitlik (laktik asit cinsinden) % 1.34, suda çözünen azot oranı % 21.10, %12 trikloroasetik asitte çözünen azot oranı % 17.58, %5 fosfotungistik asitte çözünen azot oranı % 14.36, lipoliz oranı 1.75 ADV olarak bulunmuştur. Peynir örneklerinin kalsiyum (Ca), sodyum (Na), potasyum (K), magnezyum (Mg), demir (Fe), bakır (Cu), çinko (Zn) ve mangan (Mn) miktarlarının değişim aralığı sırasıyla 2530.06-3263.82, 2662.64-3692.48, 912.50-2104.60, 389.71-1187.73, 16.64-51.05, 1.34-6.85, 15.78-57.12 ve 0.66-3.83 mg/kg olarak bulunmuştur. Örneklerin ortalama toplam fenolik madde içeriği 2323 mg GAE/kg, DPPH inhibisyon oranı % 14.52, TEAK değeri ise 1.66 mmol TE/g olarak saptanmıştır.

Anahtar kelimeler: Antioksidan aktivite, Lipoliz, Mineral madde, Proteoliz, Söğle Tulum peyniri

ABSTRACT

Söğle Tulum cheese is a type of cheese produced in the Söğle neighborhood of Elmalı district of Antalya province, from goat's milk with the traditional method and ripened in goat skin.

In this study, the physicochemical and biochemical properties, mineral content, total phenolic content and antioxidant activities of 25 Sogle Tulum cheese produced by traditional method, belonging to different producers and offered for sale in the Elmalı district of Antalya province, were investigated. According to the results of the research, the average dry matter is 53.24%, ash 7.77%, fat 4.32%, protein 37.66%, salt 4.37%, pH 5.58, acidity (in terms of lactic acid) 1.34%, the rate of water-soluble nitrogen is 21.10%, the rate of nitrogen dissolved in 12%

trichloroacetic acid is 17.58%, the rate of nitrogen dissolved in 5% phosphotungistic acid is 14.36%, the lipolysis rate was found to be 1.75 ADV. The variation range of calcium (Ca), sodium (Na), potassium (K), magnesium (Mg), iron (Fe), copper (Cu), zinc (Zn) and manganese (Mn) amounts of cheese samples are 2530.06-3263.82, 2662.64-3692.48, 912.50-2104.60, 389.71-1187.73, 16.64-51.05, 1.34-6.85, 15.78-57.12 and 0.66-3.83 mg/kg, respectively. The average total phenolic content of the samples was determined as 2323.00 mg GAE/kg, the DPPH inhibition rate was 14.52%, and the TEAK value was 1.66 mmol TE/g.

Keywords: Antioxidant activity, Lipolysis, Mineral substance, Proteolysis, Sogle Tulum cheese.

SÜTÇÜLÜK ARTIKLARINI DEĞERLENDİRME YÖNTEMLERİ

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ÖZET

Canlıların en önemli bir besin maddesi olan sütün; tereyağı ve peynire işlenmesi sırasında tereyağı ve peynir dışında elde edilen maddelere sütçülük artıkları denmektedir. Sütü, tereyağına işlemeden önce krema makinesinden geçirerek o sütteki yağ, krema halinde alınır. Elde edilen yağsız süt ise ilk tereyağcılık artığını meydana getirir. Bununla birlikte yayık altı ve yayık ayranı gibi yan ürünler de sütçülük artığı olarak değerlendirilmektedir. Peynir üretiminde sütteki pıhtının alınmasından sonra geri kalan yeşilimsi, sarı, sıvı kısma peynir altı suyu denilmektedir. Peynir altı suyu, ilk yıllarda hastalıkları tedavi etmek amacıyla kullanılmaktaydı. Bazı Avrupa ülkelerinde romatizmadan anemiye kadar birçok hastalığın tedavisinde kullanılmıştır. Hammaddenin bileşimi ve asitliği, yapılacak peynir çeşidi ve işleniş tekniği, kullanılan mayanın kalitesi ve miktarı, pıhtılaşma sıcaklığı ve süresi, pıhtının parçalanma şekli, telemeye uygulanan işlemler peynir altı suyunun miktarını, kalitesini etkilemektedir. Fermentasyonla sütçülük artıklarının değerlendirilmesi; Bu yöntem kullanılarak en fazla yağsız süt ve peynir altı suyundan faydalanılmaktadır. Yağsız sütün fermantasyonundan Amerikan ayranı, fermente süt içecekleri hazırlanabilir. Yine yağsız süt ekşitilerek hayvanlara verilebilir. Konsantrasyonla sütçülük artıklarının değerlendirilmesi; Bu amaçla vakumlu buharlaştırıcılar kullanılır veya soğutularak kristalleşen su parçacıkları dekanterlerde uzaklaştırılır. Koagülasyonla sütçülük artıklarının değerlendirilmesi; Koagülasyonla sütçülük artıklarından elde edilen en önemli ürün kazeindir. Kazein den üretilecek ürün, maya, asit veya sıcaklık etkisiyle pıhtılaştırılır ve koagüle edilmiş olan protein, peynir üretiminde kullanılabildiği gibi endüstride değişik alanlarda da kullanılabilir. Pastörizasyonla sütçülük artıklarının değerlendirilmesi; Pastörize edilmiş süt artıkları ise pastörize yağsız süt ve pastörize peynir altı suyudur. Pastörize yağsız sütten kakaolu, kahveli sütler yapılır ve pastörize yağsız süt olarak satışa sunulur. Pastörize peynir altı suyundan ise içine konulan değişik meyve esanslarıyla içiler hazırlanır, bir kısım çorbalar yapılır, kreması çıkarılır, peynir altı suyu agarı, besiyeri hazırlanır, mide hastalıklarındaki kürlerde kullanılmaktadır. Bu makalede: bu yöntemlerin bir birine göre avantajları ve dezavantajları tartışılacaktır.

Anahtar Kelimeler: Sütçülük artıkları, tereyağı, peynir

SÜT VE SÜT ÜRÜNLERİNDE LAKTOZ İNTOLERANSI

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Laktoz dünyada sadece süt ve süt ürünlerinde bulunan yegâne karbonhidratdır. Karbonhidratlar insan diyetinin büyük bir kısmını teşkil eder. Karbonhidratların sindirim bozukluklarından en sık rastlananı laktoz intoleransıdır. Kişilerin yaşam kalitesini etkilemekte ve neden olduğu sosyal ve ekonomik kayıplarla toplumlara çok büyük maliyetler oluşturmaktadır. Laktaz enziminin yetersizliği, laktoz alımından yaklaşık 30 dakika ile 2 saat sonra şişkinlik, barsakta gaz oluşumu ve karın ağrısıyla sonuçlanabilir. Sindirilememiş laktoz barsağın pH'sını asi dikleştirir, ozmotik yük artışıyla birlikte sulu, hacimli köpüklü bir dışkı oluşur. Hastaların genelinde diyare sebebiyle ağırlık kayıpları gözlenmez. Laktoz intoleransının belirtilerinin yalnızca barsak semptomlarıyla sınırlı olmadığını baş ağrısı, baş dönmesi, hafıza bozukluğu, letarji, kas ve eklem ağrıları, alerji, kardiyak aritmi ve boğaz ağrısı gibi sistemik semptomların da gelişebileceği bilinmektedir. Bunun en büyük nedeni artan asetaldehit, etanol, peptid ve proteinler gibi toksik özellik gösterebilen bileşenlerdir. Toksik etki gösterdiği varsayılan bu metabolitler, hücre sinyal mekanizmalarını değiştirir ve sistemik belirtilere bu sebep olmaktadır. Semptomların ortaya çıkış sebepleri alınan laktozun miktarına, diğer yiyeceklerin alımına, mide boşalma hızına ve barsak transit süresine, barsak mikrobiyatasına, barsağın asiditesine ve bireysel faktörlere bağlıdır. Laktoz intoleransının tedavisinde laktozsuz veya laktozu azaltılmış süt ve süt ürünü tüketiminde, oral yolla dış kaynaklı enzim alımı gibi yöntemler uygulanabilmektedir. Ancak son zamanlarda probiyotik ve prebiyotik tüketiminin laktoz intoleransı üzerine olan olumlu etkilerine yoğunlaşılmıştır. Beslenme bakımından çok önemli olan ve günlük diyette mutlaka bulunması gereken süt ve süt ürünlerinin tüketimini kısıtlayan ve sütün birçok besin değerinden mahrum kalınmasına neden olan laktoz intoleransının etkilerinin ortadan kaldırılması önemli ve gereklidir. Özellikle beslenme yetersizliği ve dengesizliği görülen bölgelerde daha sık olarak karşılaşılan laktaz eksikliğine bağlı görülen hastalıkları gidermek için farklı yollar izlenmektedir. Bu derlemede laktozun teşhisi, tedavisi ve prevalansı üzerinde durulacaktır.

Anahtar Kelimeler: Laktoz, laktoz intöleransı, prevalans

CMT VE GAZALTI KAYNAĞI İLE BİRLEŞTİRİLMİŞ HARDOX500 VE AISI430 ÇELİKLERİNİN SERTLİK DEĞİŞİMLERİ

HARDNESS CHANGES OF HARDOX 500 AND AISI 430 STEEL WELDED BY CMT AND GMAW WELDING

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ÖZET

AISI-430 ve Hardox 500 çeliklerinin CMT ve Gazaltı kaynak yöntemleri ile birleştirerek kaynak ve ITAB bölgelerinin sertlik özelliklerindeki değişimler incelenmiştir. 4 mm kalınlığında 100x130 mm ebatlarındaki AISI 430 ve Hardox 500 çelikleri kaynak ağzı açılarak ve AWS 307 ilave tel kullanılarak CMT ve Gazaltı yöntemi ile kaynaklanmıştır. Kaynak işlemi 140 A, 130 A ve 120 A akımda, 3,5 mm/s kaynak hızında ve 4 mm/dak. tel ilerleme hızında birleştirme işlemi yapılmıştır. Koruyucu gaz olarak %97,5 Argon ve %2,5 CO_2 gazı kullanılmıştır. Çelikler su jeti ile uygun ebatlarda kesilerek kaynak işlemleri yapıldıktan sonra, kaynaklı bölgelerin özellikleri ve mikroyapısal değişimleri; Optik Mikroskop, Taramalı Elektron Mikroskobu, Enerji Dağılım Spektrometresi, X-Işını Kırınımı analizleriyle incelenmiştir. Kaynaklı numunelerin sertlik özelliklerini belirlemek için Mikrosertlik testleri yapılmıştır. Testler sonucunda Hardox-Hardox çelik çiftinde en yüksek sertlik; 130 A akımda, CMT kaynaklı numunede 516 HV, AISI-AISI çelik çiftinde ise 130A akımda, CMT kaynaklı numunede en yüksek sertlik; 209,5 HV olarak ölçülmüştür. ITAB bölgeleri incelendiğinde ise en yüksek sertlik değerleri Hardox-ITAB bölgesinde 130 A akımda CMT kaynaklı numunede 396 HV, minimum sertlik değeri ise AISI-ITAB bölgesinde 140 A akımda Gazaltı kaynaklı numunede 174 HV ölçülmüştür. Kaynak metali bölgesinde ise maksimum sertlik 130 A akımda

CMT kaynaklı Hardox çeliğinin kaynak bölgesinde 413 HV ölçülürken, minimum sertlik 120 A akımda Gazaltı kaynaklı AISI çeliğinin kaynak bölgesinde 183 HV olarak ölçülmüştür. Sonuç olarak CMT kaynağı ile kaynaklı malzemelerin sertlik değerlerinin gazaltı kaynağına göre daha yüksek değerlerde olduğu belirlenmiştir.

Anahtar Kelimeler : kaynak, CMT, gazaltı, mekanik özellikler, mikrosertlik

CAM ELYAF TAKVİYELİ EPOKSİ MATRİSLİ SANDVİÇ KOMPOZİTİN KÜRLENME ANALİZİ

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ÖZET

Sandviç kompozitler, hafiflik ve yüksek mukavemet özellikleri sayesinde mühendislik uygulamalarında önemli bir yer tutmaktadır. Rüzgar enerji sektörü, havacılık, otomotiv ve denizcilik gibi çeşitli sektörlerde yaygın olarak kullanılmaktadır. Sandviç kompozitlerin üretiminde meydana gelen proses kaynaklı hatalar, yapının bütünlüğünü ve performansını olumsuz etkileyebilir. Özellikle kürleme sürecinde oluşabilecek hataların önceden tahmin edilmesi ve önlenmesi, zaman ve maliyet güvenilirliği açısından büyük önem taşımaktadır. Kürlenme prosesinde kürlenme derecesi, parçanın kürlenme yüzdesi ve kalitesi hakkında önemli bilgiler vermektedir. Kürlenme sırasında bu bilginin elde edilmesi her zaman mümkün olmayabilir. Bu çalışmada, cam elyaf takviyeli epoksi reçine matrisli sandviç kompozitlerin kürlenme davranışı incelenmiştir. DSC testleri ile kinetik modeller arasında yapılan regresyon analizleri ile elde edilen termal parametreler sonlu elemanlar analizinde girdi verileri olarak kullanılmıştır. Üç boyutlu bir sonlu elemanlar analizi gerçekleştirilerek elde edilen camsı geçiş sıcaklık dağılımı kürlenme seviyesi hakkında bilgiler sağlamıştır. Bir termoset reçinenin tamamen kürlendiği durum için kürlenme seviyesi 1'dir. Bu çalışmada, kürlenme reaksiyonu sonunda, kürlenme seviyesi maksimum 0,93 olarak elde edilmiştir. Simülasyon analizinden elde edilen kürlenme seviyesi ile, deneysel DSC çalışmalarından elde edilen kürlenme seviyesi arasında %5,1 oranında bir fark görülmüştür. Bu da deneysel ve nümerik çalışmalar arasında iyi bir uyum olduğunu göstermektedir. Sonlu elemanlar analizi ile kürlenme seviyesi önceden tahmin edilerek zaman, maliyet, ve üretim kalitesi açısından mühendislik çalışmalarına katkı sağlayacak bir çalışma gerçekleştirilmiştir.

Anahtar Kelimeler: Epoksi reçine, kürleme simülasyonu, DSC

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ÖZET

Bu çalışma da yara örtü malzemesi kullanımı için bir antimikrobiyal ajan olarak uygulanmak üzere gümüş nanopartikül (AgNP) içeren elektroeğirilme yöntemi ile üretilmiş polikaprolakton (PCL) bir nanokompozit hazırlandı. Çalışma da AgNP içeren ve polidopamin (PDA) ile kaplı PCL nanolifler üretildi. AgNP içeren PCL membranının yaygın yara patojenleri gram-positive Staphylococcus aureus ve gram-negativ Escherichia coli'e karşı antibakteriyel analizi dikkate değer aktivite gösterdi. Sitotoksisite testlerinde önerilen film sisteminin yara örtü malzemesi olarak kullanımı düşünüldüğünden insan dermal fibroblast hücreleri (HDF) ile çalışmalar yapıldı. Çalışma sonucunda üretilen nanokompozitin hücre büyümesini desteklediği yapılan karakterizasyonlar sonucunda ortaya konuldu. Hazırlanan hibrit sistem Fourier Dönüşümlü Kızılötesi Spektroskopisi (FTIR), X-ışını kırınımı (XRD) ve Taramalı Elektron mikroskobu (SEM) ile karakterize edildi. Su temas açısı ölçümü ile değerlendirilen elektrospun membranların hidrofiliklik analizi, PDA ve AgNP'lerin eklenmesi üzerine PCL'nin hidrofobikliğinin hidrofiliğe dönüştüğünü gösterdi. AgNP'lerin eklenmesi nedeniyle PCL membranı için daha iyi mekanik özellikler de gözlemlendi ve biyomedikal uygulamalarının araştırılması için oldukça destekleyici ve ideal bir antibakteriyel yara örtü malzemesi olarak etkinliği değerlendirildi.

Anahtar Kelimeler: AgNP, PCL, antibakteriyel aktivite

MOBİLYA ÜRETİM TESİSİ BAZA KASA OTOMASYON HATTINDA VERİMLİLİK ÇALIŞMASI

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ÖZET

Günümüzde, firmalar arasında rekabet koşulları hızla değişmekte ve artmaktadır. Firmalar da buna uyum gösterebilmek, kaliteli ürün çıktısını koruyabilmek ve sektör içerisinde varlıklarını devam ettirebilmek adına birçok konu üzerine çalışmalar yapmaktadır. Bu konular arasında son yıllarda özellikle Yalın Üretim üzerine yapılan projeler artmaya başlamıştır. Bu sayede şirketlerin iyileştirilebilecek yönleri keşfedilmekte, müşteri memnuniyetini arttırma yolunda iyi adımlar atılmaktadır. Bu çalışmada da; mobilya üretimi yapan bir firmanın, baza iskeleti üretimi yapan makine parkurunda, hattın Toplam Ekipman Etkinliğini (TEE) arttırmak için çalışma gerçekleştirilmiştir. Hatta yaklaşık 30 farklı çeşit bazanın metal iskeletinin kaynak ve montaj işlemleri yapılmaktadır. Proje süresince veri madenciliği yöntemleriyle beraber yalın üretim tekniklerinden Kobetsu Kaizen tekniği kullanılmıştır. Toplam ekipman verimliğinin üç ana başlığı olarak; kullanılabilirlik, performans ve kalite verileri incelenmiştir. Buna göre; TEE verilerinde iyileştirme sağlayabilmek için duruş, kalite ve ekipman verileri üzerinde inceleme yapılmıştır. Elde edilen verilerden arıza verileri, Weka programında veri madenciliği teknikleri kullanılarak analiz edilmiştir. Weka'da J48, NaiveBayes, PART gibi farklı sınıflandırma teknikleri kullanılmış, %91,9 doğrulukla en iyi sonuç PART sınıflandırıcısında elde edilmiştir. Hattın duruş yaşamasında en etkili faktörün arıza çözümü olduğu belirlenmiştir Elde edilen 20 kuraldan en etkili olan 2 kural için Kobetsu Kaizen projesi içerisinde çalışma yapılmıştır. Proje sonucunda Toplam Ekipman Etkinliğinde artış gözlemlenmiş olup, diğer kurallar için de ilerleyen dönemde çalışma yapılması planlanmıştır.

Anahtar Kelimeler: Veri Madenciliği, Weka, Yalın Üretim, Toplam Ekipman Etkinliği, Kobetsu Kaizen

EFFICIENCY STUDY ON THE BASE BODY AUTOMATION LINE OF A FURNITURE PRODUCTION FACILITY

ABSTRACT

Nowadays, competitive conditions among companies are rapidly changing and increasing. Companies are working on many issues in order to adapt to this, maintain quality product output and continue their existence in the sector. Among these issues, projects on Lean Production have started to increase in recent years. In this way, aspects of companies that can be improved are discovered and good steps are taken to increase customer satisfaction. In this study too, a study was carried out to increase the Overall Equipment Effectiveness (OEE) of the line in the machine park of a furniture manufacturing company that produces base frames. In fact, welding and assembly of the metal frames of approximately 30 different types of bases are carried out. Kobetsu Kaizen technique, one of the lean production techniques, was used along with data mining methods throughout the project. The three main headings of total equipment efficiency are usability, performance and quality data were examined. According to this, in order to improve OEE data, machine stoppages, quality and equipment data were examined. Fault data obtained from the data were analysed using data mining techniques in the Weka program. Different classification techniques such as J48, NaiveBayes, PART were used in Weka, and the best result with 91.9% accuracy was obtained by the PART classifier. It has been determined that the most effective factor in preventing the line from stopping is fault resolution Studies were carried out within the Kobetsu Kaizen project for the 2 most effective rules among the 20 rules obtained. As a result of the project, an increase in Total Equipment Effectiveness was observed, and it is planned to work on other rules in the near future.

Key Words: Data Mining, Weka, Lean Production, Overall Equipment Effectiveness, Kobetsu Kaizen

MANGAN KATKILI BOR NİTRÜR NANOMATERYALİN SENTEZİ VE KARAKTERİZASYONU

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ÖZET

Nanobilim ve nanoteknolojide son birkaç yılda yaşanan gelişmeler, nano ölçekli yapıların güçlendirilmiş mekanik, termal ve elektriksel özellikleri nedeniyle elektronik, farmasötik, biyomedikal, çevre, tıp ve enerji depolama gibi çeşitli alanlarda birçok uygulamada kullanılmasını sağlamıştır. Bor nitrür nanoyapılar bunlara iyi bir örnektir. Bu çalışmada, amonyak gazının borik asit ve üre karışımı ile reaksiyonundan bor nitrür ve mangan destekli bor nitrür nanoyapılar başarıyla sentezlendi. Sentezlenen nano yapılı malzemelerin fiziksel ve yapısal özellikleri X-Işını Kırınımı (XRD), Enerji Dağılımı X-Işını Spektroskopisi (EDX), Fourier Dönüşümü Kızılötesi Spektroskopisi (FTIR) ve Taramalı Elektron Mikroskobu (SEM) ile belirlendi. Deneyler borik asit ve ürenin manyetik karıştırıcıda karıştırıldıktan sonra azot kaynağı olarak amonyak katıldıktan sonra bir hidrotermal reaksiyon sistemi (Fytronix, FYHT-8000) ile 200 °C'de 24 saat süreyle gerçekleştirildi ve bor nitrür (h-BN) nano yapılar elde edildi. Mangan destekli bor nitrür (h-BN-Mn) nano yapılar ise literatürde belirtilen yöntemde bazı modifikasyonlar yapılarak bor nitrürün sonike edilmesinden sonra mangan içeren çözeltinin eklenerek ultrasonik banyoda karıştırılmasından sonra sodyum bor hidrür ile indirgenmesinden elde edildi. FTIR sonuçları bor nitrür ile mangan destekli bor nitrürün varlığını ve borun nitrojene atomik oranının bor ve nitrojen arasındaki kimyasal stokiyometrik ilişki ile uyumlu olduğunu gösterdi. Ayrıca XRD, SEM ve EDX sonuçlarına göre h-BN ve h-BN-Mn nanoyapıların literatür ile uyumlu olduğunu göstermektedir. Sentezlenen h-BN-Mn nanoyapılar başta enerji depolama olmak üzere birçok uygulamalarda nanomateryal olarak kullanılabilir.

Anahtar Kelimeler : Bor nitrür, metal nanomateryal, mangan , katalizör

KATLI KONUT CEPHELERİNİN MALATYA ÖRNEĞİNDE İRDELENMESİ

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ÖZET

Tarihsel süreç içerisinde önemli yol güzergâhları üzerinde bulunan Malatya; konumu, coğrafyası, iklim koşulları ve arazisinin yaşama elverişli olması gibi nedenler ile yerleşim alanı olarak pek çok uygarlık tarafından tercih edilmiş ve kesintisiz olarak kullanılmıştır. Bu çalışma günümüzde pek çok sebeple tercih edilen katlı konutların cephelerinin gelişimini Malatya'nın Battalgazi ve Yeşilyurt ilçeleri örneğinde irdelemeyi amaçlamaktadır. Bu kapsamda ilk olarak çalışmanın önemi belirlenmiş, Türkiye'de ve Malatya'da katlı konutlara yönelik akademik çalışmalar kapsamlı şekilde taranarak kavramsal çerçeve oluşturulmuştur. İkinci aşamada katlı konut cephelerinin analizi için yöntem geliştirilmiş, Malatya kentinde katlı konutların cephelerinin izlenebilmesi için merkez ilçeler Battalgazi ve Yeşilyurt'ta alan çalışmasında kullanılacak caddeler belirlenmiş, bu caddelerde konumlanan yapıların mimari projeleri elde edilmiş, alan çalışması kapsamında incelenen konutlar inşaat alanı, yapım tekniği ve malzeme, plan tipolojileri, kat sayısı ve caddeye yüz veren cephelerinin düzeni açısından analiz edilmiş, fotoğraflanarak belgelenmiş ve yerinde yapılan gözlemlerle incelenen konutların cepheleri tartışılmıştır. Çalışmanın sonuç bölümünde analiz ve belgeleme çalışmalarından elde edilen veriler ile alan çalışmasında incelenen konutlara yönelik bulgular tartışılmış, Malatya'nın Battalgazi (Eşref Bitlis Caddesi ve Yeşilçam Caddesi) ve Yeşilyurt ilçelerinde ve (Mıhlıdut Caddesi ve Güngör Caddesi) alan çalışması için belirlenen caddelerde konumlanan katlı konutların cepheleri, cepheyi etkileyen parametreler ile analiz edilmiş, analiz sonucundan elde edilen bulgular ile konutların cepheleri değerlendirilmiş ve katlı konut cephelerine yönelik öneriler sunulmuştur.

Anahtar Kelimeler: Malatya, Battalgazi, Yeşilyurt, katlı konut cepheleri

ANALYSING STOREY HOUSING FACADES IN THE CASE OF MALATYA

ABSTRACT

Malatya, which is located on important road routes in the historical process, has been preferred and used uninterruptedly by many civilisations as a settlement area due to its location, geography, climatic conditions and land being suitable for life. This study aims to examine the development of the facades of storey houses, which are preferred for many reasons today, in the case of Battalgazi and Yeşilyurt districts of Malatya. In this context, firstly, the importance of the study has been determined and a conceptual framework has been created by comprehensively reviewing academic studies on storey housing in Turkey and Malatya. In the second stage, a method was developed for the analysis of the facades of storeyed houses. In order to monitor the facades of storeyed houses in Malatya, the streets to be used in the field study in the central districts of Battalgazi and Yeşilyurt were determined, the architectural projects of the buildings located on these streets were obtained, the houses examined within the scope of the field study were analysed in terms of construction area, construction technique and material, plan typologies, number of storeys and the layout of the facades facing the street, photographed and documented, and the facades of the houses examined were discussed with on-site observations. In the concluding part of the study, the data obtained from the analysis and documentation studies and the findings regarding the houses examined in the field study were discussed, the façades of the storeyed houses located in Battalgazi (Eşref Bitlis Street and Yeşilçam Street) and Yeşilyurt districts of Malatya (Mıhlıdut Street and Güngör Street) and on the streets determined for the field study were analysed with the parameters affecting the façade, the façades of the houses were evaluated with the findings obtained from the analysis and suggestions for the façades of the storeyed houses were presented.

Key Words: Malatya, Battalgazi, Yeşilyurt, storey housing facades

KATLI KONUT GELİŞİMİNİN İRDELENMESİ: MALATYA ÖRNEĞİ

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ÖZET

İnsanoğlunun varoluşundan günümüze çeşitli doğa olaylarından, vahşi hayvanlar ve olumsuz koşullardan korunmak amacıyla ortaya çıkan barınma gereksinimi tarihsel süreç içerisinde evrilerek gelişmiş, bulunduğu coğrafyaya, kullanıcının toplumsal ve sosyal yapısına, kültürüne, sahip olduğu teknolojiye ve ekonomik olanaklara bağlı olarak değişkenlik göstermiştir. Toplumların konut tercihleri de kullanıcının olanakları, konuta yükledikleri anlam ve değer ölçüsünde çeşitlenmiştir. Konutun; kullanıcının içerisinde kendini özgür, güvende ve rahat hissettiği konforlu bir mekân, değerini koruyan ve gelir getiren bir yatırım aracı ve kullanıcıya statü sağlayan bir yapı türü olarak görüldüğü söylenebilir. Türk toplumu için geçmişte 'Dünyada mekân, ahirette iman' anlayışı ile sahip olunması gereken en önemli nesne olarak tanımlanan, hatta ekonomik olanaklara bağlı olarak 'nohut oda, bakla sofa' şeklinde tanımlanacak kadar ufak da olsa beklentiyi karşılayan konut; günümüzde kullanıcının ihtiyacından fazla büyüklükte ve konfor koşulları yüksek mekanlar sunması nedeniyle statü belirleyici bir nesneye dönüşmüştür. Çalışmanın amacı, günümüzde giderek daha çok tercih sebebi olan katlı konutların gelişimini Malatya kenti örneğinde incelemektir. Bu kapsamda Malatya kentine ve katlı konutlara yönelik akademik çalışmalar kapsamlı şekilde taranarak literatür araştırılmış ve çalışmanın kuramsal çerçevesi oluşturulmuştur. İkinci aşamada Malatya kentinde katlı konutların gelişimi ve değişiminin izlenebilmesi için kentin planlanma süreci aktarılmış, merkez ilçeler Battalgazi (Eşref Bitlis Caddesi ve Yeşilçam Caddesi) ve Yeşilyurt'ta (Mıhlıdut Caddesi ve Güngör Caddesi) alan çalışması için kullanılacak caddeler belirlenmiş, bu caddelerde konumlanan yapıların mimari projeleri elde edilmiş, konutların gelişim ve değişimi 2000 ve 2024 yıllarına ait Google Earth görüntüleri ile yorumlanmıştır. Elde edilen veriler ile katlı konutların gelişim ve değişim süreci değerlendirilmiş, bulgular tartışılmış ve kentte 06.02.2023 tarihinde yaşanan deprem de dikkate alınarak katlı konutların gelişimine yönelik öneriler sunulmuştur.

Anahtar Kelimeler: Malatya, Battalgazi, Yeşilyurt, Malatya planlama süreci, katlı konut gelişimi

ANALYSING THE DEVELOPMENT OF MASS HOUSING: THE CASE OF MALATYA

ABSTARCT

The need for shelter, which has emerged since the existence of mankind in order to protect from various natural events, wild animals and adverse conditions, has evolved and developed in the historical process and has varied depending on the geography, social and social structure of the user, culture, technology and economic opportunities. The housing preferences of societies have also diversified according to the possibilities of the user, the meaning and value they attribute to housing. It can be said that housing is seen as a comfortable space in which the user feels free, safe and comfortable, an investment tool that preserves its value and generates income, and a type of building that provides status to the user. Housing, which was defined as the most important object to be owned with the understanding of 'space in this world, faith in the hereafter' for Turkish society in the past, and even meeting the expectation, even if it was small enough to be defined as 'chickpea room, broad bean sofa' depending on the economic possibilities; today, it has turned into a status-defining object because it offers spaces that are larger than the user's needs and with high comfort conditions. The aim of the study is to examine the development of storey houses, which are increasingly preferred today, in the case of Malatya city. In this context, academic studies on the city of Malatya and storeyed housing have been extensively reviewed and the theoretical framework of the study has been established. In the second stage, in order to monitor the development and change of storey houses in Malatya, the planning process of the city was explained, the streets to be used for the field study in the central districts of Battalgazi (Eşref Bitlis Street and Yeşilçam Street) and Yeşilyurt (Mıhlıdut Street and Güngör Street) were determined, the architectural projects of the buildings located on these streets were obtained, and the development and change of the buildings were interpreted with Google Earth images from 2000 and 2024. With the data obtained, the development and change process of storeyed houses was evaluated, the findings were discussed and suggestions for the development of storeyed houses were presented, taking into account the earthquake that occurred on 06.02.2023 in the city.

Key Words: Malatya, Battalgazi, Yeşilyurt, Malatya planning process, storey housing development

KENTSEL DÖNÜŞÜM: BİLİMSEL ÇALIŞMALARIN BİBLİYOMETRİK YOLCULUĞU

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ÖZET

Kentsel dönüşüm, şehirlerin fiziksel, sosyal ve ekonomik yapılarını yenileyerek daha yaşanabilir hale getirme sürecidir. Bu çalışma, kentsel dönüşüm üzerine yapılan bilimsel çalışmaların bibliyometrik analizini sunmaktadır. Çalışma, 2016-2024 (haziran) yılları arasında yayımlanan makaleleri inceleyerek, kentsel dönüşüm alanındaki ana temaları, araştırma eğilimlerini ve araştırma boşluklarını belirlemeyi amaçlamaktadır. Scopus veri tabanından elde edilen veriler, VOSviewer ve RStudio gibi bibliyometrik analiz yazılımları kullanılarak analiz edilmiştir.

Anahtar kelime analizi, kentsel dönüşüm, yeniden geliştirme, gentrifikasyon, sürdürülebilirlik ve iklim değişikliği gibi konuların sıkça çalışıldığını göstermektedir. Çin, Türkiye ve Hindistan gibi ülkeler ile İstanbul gibi büyük şehirler, kentsel dönüşüm araştırmalarında önemli bir yer tutmaktadır. Bununla birlikte, modernite, orta sınıf, zamansallık ve erişilebilirlik gibi konuların daha az çalışıldığı ve bu alanlarda araştırma yapılması gerektiği belirlenmiştir.

Bu çalışma, kentsel dönüşüm alanında mevcut eğilimleri ve araştırma boşluklarını belirleyerek, gelecekteki araştırmalar için yol gösterici öneriler sunmaktadır. Araştırma sonuçları, kentsel dönüşüm projelerinin daha sürdürülebilir, adil ve etkili bir şekilde planlanması ve uygulanması için önemli bilgiler sağlamaktadır. Bu bibliyometrik analiz, kentsel dönüşüm literatürüne genel bir bakış sunarak, araştırmacılar ve uygulayıcılar için değerli bir kaynak olmayı amaçlamaktadır.

Anahtar Kelimeler: Kentsel dönüşüm, bibliyometri analizi, VOSviewer ve RStudio.

URBAN TRANSFORMATION: A BIBLIOMETRIC JOURNEY THROUGH SCIENTIFIC RESEARCH

ABSTRACT

Urban transformation is the process of renewing the physical, social, and economic structures of cities to make them more livable. This study presents a bibliometric analysis of scientific research on urban transformation. By examining articles published between 2016 and June 2024, the study aims to identify the main themes, research trends, and gaps in the field of urban transformation. Data obtained from the Scopus database were analyzed using bibliometric analysis software such as VOSviewer and RStudio.

Keyword analysis reveals that topics such as urban transformation, redevelopment, gentrification, sustainability, and climate change are frequently studied. Countries like China, Turkey, and India, as well as major cities like Istanbul, play a significant role in urban transformation research. However, it has been identified that topics such as modernity, the middle class, temporality, and accessibility are less studied, indicating a need for further research in these areas.

This study provides guiding suggestions for future research by identifying current trends and research gaps in the field of urban transformation. The research findings offer valuable insights for planning and implementing urban transformation projects in a more sustainable, equitable, and effective manner. By offering a comprehensive overview of the urban transformation literature, this bibliometric analysis aims to serve as a valuable resource for researchers and practitioners.

Keywords: Urban transformation, bibliometric analysis, VOSviewer, RStudio.

PREDICTING CARDIOVASCULAR DISEASE AND IDENTIFYING POTENTIAL RISK FACTORS WITH MACHINE LEARNING METHODS

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Abstract

Aim: Cardiovascular diseases (CVD), also known as cardiovascular diseases, are defined as the formation of plaque on the inner wall of the arteries and the narrowing of the arteries as a result of hardening and making it difficult for blood to flow. Recent studies have shown that 46.2 percent of individuals who die suddenly die due to cardiovascular diseases. CVD claim an estimated 17.9 million lives each year. In the future, the number of deaths due to this disease is projected to increase even further. It is also the cause of many other diseases. Therefore, early diagnosis and treatment of this disease is very important. Thus, this study aims to establish a decision support system for CVD diagnosis through the use of Extreme Gradient Boosting (XGBoost) and Stochastic Gradient Boosting (SGB) classification algorithms.

Material and Methods: The cardiovascular disease dataset utilized in this study was generated by amalgamating previously separate datasets that were not previously joined. The datasets were merged based on 11 shared characteristics. The dataset is separated between 80% training and 20% test datasets. During the modeling phase of the project, XGBoost and SGB was employed to analyze the dataset. The analysis utilized a 10-fold cross-validation approach. The performance evaluation criteria employed were accuracy, balanced accuracy, sensitivity, specificity, positive predictive value, negative predictive value, and F1 score. The modeling process was conducted using Python Version 3.6.5.

Results: In the present study, XGBoost and SGB machine learning models were applied to predict cardiovascular disease and the results were compared. As a result, the XGBoost model showed higher performance. XGBooost modeling yielded accuracy, balanced accuracy, sensitivity, specificity, positive predictive value, negative predictive value, and F1 score values of 93.2%, 93.2%, 92.0%, 94.4%, 93.6%, 92.9%, and 92.8%. According to the variable importance values of the model, the five most important variables that may be associated with cardiovascular disease were stslope /upsloping, cholesterol, max. heart rate, old peak, chest pain type/asymptomatic.

Conclusion: The findings of this study demonstrated that the utilization of the XGBoost technique yielded accurate predictions in classifying individuals at risk of experiencing a cardiovascular disease.

The success of this disease's classification performance and identification of associated risk factors will have significant benefits in the field of health.

Key words: Cardiovascular diseases, Extreme gradient boosting, Machine learning, Scholastic Gradient Boosting, Risk factors.

IDENTIFYING ASSOCIATIONS BETWEEN RISK FACTORS FOR DIABETES USING A RELATIONAL CLASSIFICATION APPROACH

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Abstract

Aim: Diabetes is one of the leading causes of increasing deaths worldwide. It especially causes damage to the nervous system, kidneys, heart, eyes, limbs and blood vessels and can cause significant losses. For this reason, the ever-increasing number of cases shows that there is a need for scientific studies on the prevention, early diagnosis, treatment and follow-up of diabetes. Within the scope of diabetes, researchers are trying to develop data-based systematic approaches for diagnosing the disease. Therefore, early diagnosis of diabetes can significantly increase the effectiveness of the treatment procedure. Therefore, this study constitutes establishing a decision support system for diabetes diagnosis through the use of asso classification algorithms and methodologies.

Material and Method : This study involved the acquisition of 520 patient data from the Sylhet Diabetes Hospital, Sylhet, which were obtained from the University of California, Irvine (UCI) machine learning repository. The study employed the associative classification approach to assess the correlation between the variables contributing to diabetes and the modeling of diabetes prediction. The dataset is divided as 80%: 20% as training and test dataset. The performance evaluation criteria employed were accuracy, balanced accuracy, sensitivity, specificity, positive predictive value, negative predictive value, and F1 score. In addition, a 10-fold cross-validation method was used in the modeling phase. The modeling process was conducted using Python Version 3.6.5.

Results: The results obtained from the performance metrics with the associative classification modeling were 95.6%, 95.8%, 94.7%, 97%, 98.1%, 91.9%, and 96.3% for accuracy, balanced accuracy, sensitivity, specificity, positive predictive value, negative predictive value, and F1-score, respectively. According to the modeling results, factors that may be associated with PCOS were determined with high accuracy by the associative classification method.

Conclusion: The results of this investigation associative classification has demonstrated efficacy in diabetes prediction. This successful classification performance will be beneficial for medical specialists in illness and preventative medicine applications

Key words: Diabetes, ssociative classification, association rules, risk factor.

PREDICTING DIABETES IN WOMEN AND IDENTIFYING ASSOCIATED FACTORS WITH THE MACHINE LEARNING MODEL BAGGEDCART

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ABSTRACT

Diabetes mellitus (DM) is a metabolic disorder characterized by persistent high blood sugar levels, caused by issues with insulin production and/or its effectiveness. The main causes of diabetes include genetic predisposition, obesity, lack of physical activity, unhealthy eating habits and increasing age. In women specifically, hormonal disorders that occur during pregnancy, such as gestational diabetes and polycystic ovary syndrome (PCOS), can increase the risk of diabetes. PCOS can lead to insulin resistance, increasing the risk of developing diabetes, while gestational diabetes can cause high blood sugar during pregnancy, which can increase the risk of diabetes in the future. Regular health checks, healthy nutrition, regular exercise and medical treatment when necessary are of great importance for the prevention and management of diabetes in women. This study aims to predict diabetes using Bagged CART machine learning based on a variety of diagnostic measurements, including glucose level, blood pressure, skin thickness, insulin level, BMI, diabetes pedigree function, and age, for women aged 21 and over. Upsampling method was used for class imbalance in the dataset (Non-Diabet = 500, Diabet = 268). 80% of the dataset was used in training and 20% in the testing phase. 5-fold cross-validation was applied to verify the test data. Performance metrics such as model accuracy, sensitivity and specificity were obtained as 99.9%, 100% and 99.8% for training, and 88.5%, 80.0% and 97% for testing. According to model-dependent variable importance, the four most important risk factors for diabetes diagnosis in women are glucose, BMI, AE and number of pregnancies. Consequently, consideration of these factors is vital for early diagnosis and effective management of diabetes in women.

Keywords: Diabetes, Bagged CART, Ensemble learning.

THE CLASSIFICATION OF HIGH BLOOD PRESSURE IN PREGNANT WOMEN USING BAGGING ENSEMBLE LEARNING METHOD AND DETERMINATION OF POSSIBLE RISK FACTORS

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ABSTRACT

High blood pressure (hypertension) during pregnancy can lead to serious complications such as preeclampsia, placental abruption and intrauterine growth restriction (IUGR). These situations can pose life-threatening risks for both the mother and the baby and cause problems such as premature birth and low birth weight. Additionally, hypertension can have long-term effects on maternal health, such as heart attack and kidney failure. Regular blood pressure checks during pregnancy are critical for early detection and management of these risks. Machine learning methods can play an important role in predicting high-risk pregnancies and developing individualized care plans by learning from large datasets. These technologies provide innovative solutions to provide better outcomes to both healthcare professionals and patients. In this study, Bagging (Bootstrap Aggregating), a machine learning algorithm, was used to classify high blood pressure in pregnant women with high accuracy and to identify factors associated with high blood pressure. For modeling, 70% of the open source dataset was used in training and 30% in the testing phase. While the Random Forest missing value imputation method was used for missing values in the dataset, Random Forest-based RFE was used for variable selection. Accuracy, sensitivity, and selectivity performance criteria for the training and test datasets in classifying high blood pressure in pregnant women were obtained as 88.3%, 80.5%, 95.4%, 86.7% and 86.1%, 80.7%, 100%, 89.3%, respectively. The three most important risk factors in predicting high blood pressure in pregnant women based on the bagging model were obtained as genetic pedigree coefficient, level of hemoglobin and chronic kidney disease. Therefore, in the light of these findings, it is thought that planning processes such as early intervention, individualized care, birth planning and improving postnatal health follow-up can help prevent long-term health problems in order to protect the health of both the mother and the baby.

Keywords: Blood pressure, Machine learning, Bagging, Pregnant women.

ARTIFICIAL NEURAL NETWORK BASED MODELING STUDY TO DETERMINE THE FACTORS THAT POSE A RISK OF HEART ATTACK

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Abstract

Aim: Heart attack (HA) is a sudden cause of death and the survival rate varies depending on early intervention and treatment. The aim of this study is to identify the factors associated with heart attack and to determine which of them are more effective risk factors with neural network-based models and to determine prognostic markers for the disease.

Material and Methods : In an open-access dataset of patients with and without heart attacks, heart attack status is used as the dependent variable and Multilayer Perceptron and Radial Basis Function Neural Network methods are used to identify factors that may be associated with heart attacks in the modeling phase. The dataset was divided into training and test datasets in a 70:30 ratio. The results are reported using accuracy, sensitivity, specificity, PPV, NPV and F1 score as performance measures.

Results: According to the results of modeling with Multilayer Perceptron and Radial Basis Function Neural Network methods, the highest accuracy rate was obtained from the Multilayer Perceptron model and the metrics obtained from this model were 92.47%, 95.5%, 88.34%, 91.7%, 93.51%, 93.6% for accuracy, sensitivity, specificity, positive predictive value, negative predictive value and F1 score respectively. According to the variable significance values obtained from the modeling, troponin, kcm, age, glucose and elevated pressure were found to be the most important risk factors.

Conclusion: According to the modeling results, factors that may be associated with heart attack were identified with high accuracy by artificial neural network-based models. With the risk factors obtained with variable importance values, early diagnosis and poor prognosis can be prevented in individuals at risk of having a heart attack.

Key words: Heart attack, classification, neural network, risk factor

ANALYZING AND INTERPRETING THE RISK FACTORS THAT CAUSE LUNG CANCER WITH MACHINE LEARNING METHODS

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Abstract

Aim: Identifying the risk factors associated with lung cancer, which is on its way to becoming an important public health problem with increasing mortality rates, is very important for the treatment of the disease. The aim of this study is to identify the factors associated with the disease by machine learning using an open access dataset of lung cancer.

Material and Methods: BaggedCART and AdaBoost, two machine learning models, were used to classify the dependent variable, lung cancer, and identify associated factors. Accuracy, balanced accuracy, sensitivity, specificity, positive predictive value, negative predictive value and F1-score performance metrics are given to evaluate the models. The importance levels of the risk factors are given by the variable importance values obtained from the models.

Results: According to the results of modeling with BaggedCART and AdaBoost methods, the highest accuracy rate was obtained from BaggedCART model and the metrics obtained from this model were 93.4%, 77.6%, 57.1%, 98.1%, 80%, 94.6% and 66.7% for accuracy, balanced accuracy, sensitivity, specificity, positive predictive value, negative predictive value and F1 score, respectively. According to the variable importance values obtained from the modeling, age, alcohol consumption, swallowing problem, chronicdısease, allergy, fatigue, peer_pressure, wheezing, yellow_fıngers, anxiety, coughing, shortnessofbreath, gender, smokıng are the most important risk factors, respectively.

Conclusion: In the light of the findings obtained from the study, the best classification performance was obtained from the BaggedCART model and the risk factors associated with the disease were determined in order of importance. These results indicated that variables at the top of the variable importance ranking may be closely related to the disease and can be used in patient assessment.

Key words: Lung cancer, risk factor, BaggedCART, AdaBoost, machine learning,

ISOLATION AND IDENTIFICATION OF DIACYLGLYCEROL ACYLTRANSFERASE TYPE- 2 (GAT2) GENES FROM THREE EGYPTIAN OLIVE CULTIVARS

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Abstract:

Aim of this work was to study the genetic basis for oil accumulation in olive fruit via tracking DGAT2 (Diacylglycerol acyltransferase type-2) gene in three Egyptian Origen Olive cultivars namely Toffahi, Hamed and Maraki using molecular marker techniques and bioinformatics tools. Results illustrate that, firstly: specific genomic band of Maraki cultivars was identified as DGAT2 (Diacylglycerol acyltransferase type-2) and identical for this gene in Olea europaea with 100% of similarity. Secondly, differential genomic band of Maraki cultivars which produced from RAPD fingerprinting technique reflected predicted distinguished sequence which identified as DGAT2 (Diacylglycerol acyltransferase type-2) in Fragaria vesca subsp. Vesca with 76% of sequential similarity. Third and finally, specific genomic specific band of Hamed cultivars was identified as two fragments, 1- Olea europaea cultivar Koroneiki diacylglycerol acyltransferase type 2 mRNA, complete cds with two matches regions with 99% or 2- Predicted: Fragaria vesca subsp. vesca diacylglycerol O-acyltransferase 2-like (LOC101313050), mRNA with 86 % of similarity.

Keywords: Olea europaea, fingerprinting, Diacylglycerol acyltransferase type- 2 (DGAT2).

EFFECT OF VARIOUS POLLEN SOURCES TO ABILITY FRUIT SET AND QUALITY IN 'LONG RED B' WAX APPLE

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Abstract:

By hand pollination was conducted to evaluated different pollen sources and their affects on fruit set and quality of wax apple. The following parameters were recorded: fruit set, seed set, fruit characteristics. Results showed that fruit set percentage with seed were significantly high in 'Long Red B' when 'Black', 'Thyto' were used as pollen parents. Pollen of 'Black', 'Thyto' resulted in high fruit weight, fruit diameter, fruit length, bigger flesh thickness, better total soluble solids as compared with other pollens. The observation of pollen-growth in vitro revealed that pollen germination at 15% sucrose concentration are required for optimum pollen germination with the high pollen germination were found in 'Black', 'Thyto'. From the result, we concluded that 'Black', 'Thyto' were proved to be good pollinizers in 'Long Red B'. Therefore, artificial cross-pollination using 'Black', 'Thyto' as pollinizers were strongly recommended for 'Long Red B' cultivar in wax apple orchard.

Keywords: Wax apple, pollination, pollen source, in vitro, fruit quality.

ISOLATION AND IDENTIFICATION FIBRINOLYTIC PROTEASE ENDOPHYTIC FUNGI FROM HIBISCUS LEAVES IN SHAH ALAM

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Abstract:

Fibrin degradation is an important part in prevention or treatment of intravascular thrombosis and cardiovascular diseases. Plasmin like fibrinolytic enzymes has given new hope to patient with cardiovascular diseases by treating fibrin aggregation related diseases with traditional plasminogen activator which have many side effects. Various researches involving wide range of sources for production of fibrinolytic proteases, from bacteria, fungi, insects and fermented foods. But few have looked into endophytic fungi as a potential source. Sixteen (16) endophytic fungi were isolated from Hibiscus sp. leaves from six different locations in Shah Alam, Selangor. Only two endophytic fungi, FH3 and S13 showed positive fibrinolytic protease activities. FH3 produced 5.78cm and S13 produced 4.48cm on Skim Milk Agar after 4 days of incubation at 27°C. Fibrinolytic activity was observed; 3.87cm and 1.82cm diameter clear zone on fibrin plate of FH3 and S13 respectively. 18srRNA was done for identification of the isolated fungi with positive fibrinolytic protease. S13 had the highest similarity (100%) to that of Penicillium citrinum strain TG2 and FH3 had the highest similarity (99%) to that of Fusarium sp. FW2PhC1, Fusarium sp. 13002, Fusarium sp. 08006, Fusarium equiseti strain Salicorn 8 and Fungal sp. FCASAn-2. Media composition variation showed the effects of carbon nitrogen on protein concentration, where the decrement of 50% of media composition caused drastic decrease in protease of FH3 from 1.081 to 0.056 and also S13 from 2.946 to 0.198.

Keywords: Isolation, identification, fibrinolytic protease, endophytic fungi, Hibiscus leaves.

INHIBITORY EFFECT OF HELICHRYSUM ARENARIUM ESSENTIAL OIL ON THE GROWTH OF FOOD CONTAMINATED MICROORGANISMS

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Abstract:

The aim of this study was to determine the antimicrobial effect of *Helichrysum arenarium* L. essential oil in "in-vitro" condition on the growth of seven microbial species including *Bacillus subtilis*, *Escherichia coli*, *Staphylococcus aureus, Saccharomyces cereviciae, Candida albicans, Aspergillus flavus* and *Aspergillus parasiticus* using micro-dilution method. The minimum inhibitory concentration (MIC) and minimum bactericidal or fungicidal concentration (MBC, MFC) were determined for the essential oil at ten concentrations. Finally, the sensitivity of tested microbes to essential oil of *H. arenarium* was investigated. Results showed that *Bacillus subtilis* (MIC=781.25 and MBC=6250 µg/ml) was more resistance than two other bacterial species. Among the tested yeasts, *Saccharomyces cereviciae* (MIC=97.65 and MFC=781.25 µg/ml) was more sensitive than *Candida albicans* while among the fungal species, growth of *Aspergillus parasiticus* inhibited at lower concentration of oil than the *Aspergillus flavus*. The extracted essential oil exhibited the same MIC value in the liquid medium against all fungal strains (48.82 µg/ml), while different activity against *A. flavus* and *A. parasiticus* was observed in this medium with MFC values of 6250 and 390.625µg/ml, respectively. The results of the present study indicated that *Helichrysum arenarium* L essential oil had significant (P<0.05) antimicrobial activity; therefore, it can be used as a natural preservation to increase the shelf life of food products.

Keywords: Helichrysum arenarium, Antimicrobial agent, Essential oil, MIC.

DROUGHT STRESS INDICES IN SOME SILAGE MAIZE CULTIVARS

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Abstract:

Several yield-based stress indices have been developed that may be more applicable to work on drought tolerance. In this study, we investigate possibility of using stress susceptibility index (SSI), tolerance index (TOL), yield stability index (YSI), yield index (YI), stress tolerance index (STI), geometric mean productivity (GMP), harmonic mean (HARM), mean productivity (MP) to identify genotypic performance of some maize cultivars under normal and stressed condition. The results indicate that it was possible to identify superior genotypes for drought tolerance based on their stress indices and generally SSI indices which showed the lowest negative correlation with dry matter yield can be used as the best index for maize breeding programs to introduce drought tolerant hybrids. It was found that SC 647 showed the best behavior under drought stress condition based on TOL and SSI. A higher STI, GMP, and HARM values were attained for ko_6. It can be suggested that ko_6 should be cultivated in moderate stressful environment of Iran.

Keywords: Index, productivity, stress, susceptibility tolerance, yield.

STATISTICAL MODELING FOR PERMEABILIZATION OF A NOVEL YEAST ISOLATE FOR B-GALACTOSIDASE ACTIVITY USING ORGANIC SOLVENTS

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Abstract:

The hydrolysis of lactose using β-galactosidase is one of the most promising biotechnological applications, which has wide range of potential applications in food processing industries. However, due to intracellular location of the yeast enzyme, and expensive extraction methods, the industrial applications of enzymatic hydrolysis processes are being hampered. The use of permeabilization technique can help to overcome the problems associated with enzyme extraction and purification of yeast cells and to develop the economically viable process for the utilization of whole cell biocatalysts in food industries. In the present investigation, standardization of permeabilization process of novel yeast isolate was carried out using a statistical model approach known as Response Surface Methodology (RSM) to achieve maximal b-galactosidase activity. The optimum operating conditions for permeabilization process for optimal β-galactosidase activity obtained by RSM were 1:1 ratio of toluene (25%, v/v) and ethanol (50%, v/v), 25.0 ^{o}C temperature and treatment time of 12 min, which displayed enzyme activity of 1.71 IU /mg DW.

Keywords: β-galactosidase, optimization, permeabilization, response surface methodology, yeast.

INFLUENCE OF THE FIELD TYPE (MOUNTAIN AND PLAIN) ON THE CUPRIC STATUS OF LAMBS

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Abstract:

The study realized on alive lambs in two different areas mountain and plain in Batna region, aims to demonstrate the possible effect of field type on cupric status of lambs, through evaluation of copper contents in the chain: soil – plant – animal by atomic absorption spectrophotometry. This comparative study also allowed the investigation of the influence of the age and the season. The results obtained show that contents of copper in the soil, forage in the same way as in the plasma of lambs are higher in the plain than in the mountainous area; however, the difference is significant only between the values of feed.

Keywords: Copper, Forage, Lambs, Plasma copper.

A STUDY OF GENERAL ATTACKS ON ELLIPTIC CURVE DISCRETE LOGARITHM PROBLEM OVER PRIME FIELD AND BINARY FIELD

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Abstract:

This paper begins by describing basic properties of finite field and elliptic curve cryptography over prime field and binary field. Then we discuss the discrete logarithm problem for elliptic curves and its properties. We study the general common attacks on elliptic curve discrete logarithm problem such as the Baby Step, Giant Step method, Pollard's rho method and Pohlig-Hellman method, and describe in detail experiments of these attacks over prime field and binary field. The paper finishes by describing expected running time of the attacks and suggesting strong elliptic curves that are not susceptible to these attacks.c

Keywords: Discrete logarithm problem, general attacks, elliptic curves, strong curves, prime field, binary field, attack experiments.

INTEGRATED ACOR/IACOMV-R-SVM ALGORITHM

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Abstract:

A direction for ACO is to optimize continuous and mixed (discrete and continuous) variables in solving problems with various types of data. Support Vector Machine (SVM), which originates from the statistical approach, is a present day classification technique. The main problems of SVM are selecting feature subset and tuning the parameters. Discretizing the continuous value of the parameters is the most common approach in tuning SVM parameters. This process will result in loss of information which affects the classification accuracy. This paper presents two algorithms that can simultaneously tune SVM parameters and select the feature subset. The first algorithm, ACO_R-SVM, will tune SVM parameters, while the second $IACO_{MV-R}$-SVM algorithm will simultaneously tune SVM parameters and select the feature subset. Three benchmark UCI datasets were used in the experiments to validate the performance of the proposed algorithms. The results show that the proposed algorithms have good performances as compared to other approaches.

Keywords: Continuous ant colony optimization, incremental continuous ant colony, simultaneous optimization, support vector machine.

SOLAR-INDUCTED CLUSTER HEAD RELOCATION ALGORITHM

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Abstract:

A special area in the study of Wireless Sensor Networks (WSNs) is how to move sensor nodes, as it expands the scope of application of wireless sensors and provides new opportunities to improve network performance. On the other side, it opens a set of new problems, especially if complete clusters are mobile. Node mobility can prolong the network lifetime. In such WSN, some nodes are possibly moveable or nomadic (relocated periodically), while others are static. This paper presents an idea of mobile, solar-powered CHs that relocate themselves inside clusters in such a way that the total energy consumption in the network reduces, and the lifetime of the network extends. Positioning of CHs is made in each round based on selfish herd hypothesis, where leader retreats to the center of gravity. Based on this idea, an algorithm, together with its modified version, has been presented and tested in this paper. Simulation results show that both algorithms have benefits in network lifetime, and prolongation of network stability period duration.

Keywords: CH-active algorithm, mobile cluster head, sensors, wireless sensor network.

EFFECT OF MODIFICATION AND EXPANSION ON EMERGENCE OF COOPERATION IN DEMOGRAPHIC MULTI-LEVEL DONOR-RECIPIENT GAME

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Abstract:

It is known that the mean investment evolves from a very low initial value to some high level in the Continuous Prisoner's Dilemma. We examine how the cooperation level evolves from a low initial level to a high level in our Demographic Multi-level Donor-Recipient situation. In the Multi-level Donor-Recipient game, one player is selected as a Donor and the other as a Recipient randomly. The Donor has multiple cooperative moves and one defective move. A cooperative move means the Donor pays some cost for the Recipient to receive some benefit. The more cooperative move the Donor takes, the higher cost the Donor pays and the higher benefit the Recipient receives. The defective move has no effect on them. Two consecutive Multi-level Donor-Recipient games, one as a Donor and the other as a Recipient, can be viewed as a discrete version of the Continuous Prisoner's Dilemma. In the Demographic Multi-level Donor-Recipient game, players are initially distributed spatially. In each period, players play multiple Multi-level Donor-Recipient games against other players. He leaves offspring if possible and dies because of negative accumulated payoff of him or his lifespan. Cooperative moves are necessary for the survival of the whole population. There is only a low level of cooperative move besides the defective move initially available in strategies of players. A player may modify and expand his strategy by his recent experiences or practices. We distinguish several types of a player about modification and expansion. We show, by Agent-Based Simulation, that introducing only the modification increases the emergence rate of cooperation and introducing both the modification and the expansion further increases it and a high level of cooperation does emerge in our Demographic Multi-level Donor-Recipient Game.

Keywords: Agent-based simulation, donor-recipient game, emergence of cooperation, spatial structure, TFT, TF2T.

AUTOMATED JAVA TESTING: JUNIT VERSUS ASPECTJ

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Abstract:

Growing dependency of mankind on software technology increases the need for thorough testing of the software applications and automated testing techniques that support testing activities. We have outlined our testing strategy for performing various types of automated testing of Java applications using AspectJ which has become the de-facto standard for Aspect Oriented Programming (AOP). Likewise JUnit, a unit testing framework is the most popular Java testing tool. In this paper, we have evaluated our proposed AOP approach for automated testing and JUnit on various parameters. First we have provided the similarity between the two approaches and then we have done a detailed comparison of the two testing techniques on factors like lines of testing code, learning curve, testing of private members etc. We established that our AOP testing approach using AspectJ has got several advantages and is thus particularly more effective than JUnit.

Keywords: Aspect oriented programming, AspectJ, Aspects, JUnit, software testing.

MODELING AND ANALYZING THE WAP CLASS 2 WIRELESS TRANSACTION PROTOCOL USING EVENT-B

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Abstract:

This paper presents an incremental formal development of the Wireless Transaction Protocol (WTP) in Event-B. WTP is part of the Wireless Application Protocol (WAP) architectures and provides a reliable request-response service. To model and verify the protocol, we use the formal technique Event-B which provides an accessible and rigorous development method. This interaction between modelling and proving reduces the complexity and helps to eliminate misunderstandings, inconsistencies, and specification gaps. As result, verification of WTP allows us to find some deficiencies in the current specification.

Keywords: Event-B, wireless transaction protocol, refinement, proof obligation, Rodin, ProB.

ASSESSMENT OF DATA MINING TECHNIQUES IN PREDICTING SOFTWARE RELIABILITY PERFORMANCE

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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.

ENHANCING VOWEL SPEECH VIA PITCH AND FORMANT FREQUENCY ANALYSIS

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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.

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

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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.

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.

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

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.

DECLINE IN BIODIVERSITY OF HYRCANIAN FOREST DUE TO COAL MINING ACTIVITIES

Mahsa Kooch , Seyed Hojjati , Tavakoli Yahya

Amirkabir University of Technology (Tehran Polytechnic) _ İran

Abstract:

Considering that coal mining is one of the important industrial activities, it may cause damages to environment. According to the author's best knowledge, the effect of traditional coal mining activities on plant biodiversity has not been investigated in the Hyrcanian forests. Therefore, in this study, the effect of coal mining activities on vegetation and tree diversity was investigated in Hyrcanian forest, North Iran. After filed visiting and determining the mine, 16 plots ($20{\times}20$ m^2) were established by systematic-randomly ($60{\times}60$ m^2) in an area of 4 ha ($200{\times}200$ m^2-mine entrance placed at center). An area adjacent to the mine was not affected by the mining activity, and it is considered as the control area. In each plot, the data about trees such as number and type of species were recorded. The biodiversity of vegetation cover was considered 5 square sub-plots (1 m^2) in each plot. PAST software and Ecological Methodology were used to calculate Biodiversity indices. The value of Shannon Wiener and Simpson diversity indices for tree cover in control area ($1.04{\pm}0.34$ and $0.62{\pm}0.20$) was significantly higher than mining area ($0.78{\pm}0.27$ and $0.45{\pm}0.14$). The value of evenness indices for tree cover in the mining area was significantly lower than that of the control area. The value of Shannon Wiener and Simpson diversity indices for vegetation cover in the control area ($1.37{\pm}0.06$ and $0.69{\pm}0.02$) was significantly higher than the mining area ($1.02{\pm}0.13$ and $0.50{\pm}0.07$). The value of evenness index in the control area was significantly higher than the mining area. Plant communities are a good indicator of the changes in the site. Study about changes in vegetation biodiversity and plant dynamics in the degraded land can provide necessary information for forest management and reforestation of these areas.

Keywords: Vegetation biodiversity, species composition, traditional coal mining, caspian forest.

EXPLORING FACTORS INFLUENCING THE SUCCESS OF HIGH CONSERVATION VALUE AREAS IN OIL PALM PLANTATIONS: A PRELIMINARY STUDY

Yanto Kwatrina , Santosa Rozza Tri

University of Ahmed Draia – Algeria

Abstract:

High Conservation Value (HCV) is an area with conservation function within oil palm plantation. Despite the important role of HCV area in biodiversity conservation and various studies on HCV, there was a lack of research studying the factors determining its success. A preliminary study was conducted to identify the determinant factor of HCV that affected the diversity. Line transect method was used to calculate the species diversity of butterfly, birds, mammals, and herpetofauna species as well as their richness. Specifically for mammals, camera traps were also used. The research sites comprised of 12 HCV areas in 3 provinces of Indonesia (Central Kalimantan, Riau, and Palembang). The relationship between the HCV biophysical factor with the species number and species diversity for each wildlife class was identified using Chi-Square analysis with Cross tab (contingency table). Results of the study revealed that species diversity varied by research locations. Four factors determining the success of HCV area in relations to the number and diversity of wildlife species are land cover types for mammals, the width of area and distance to rivers for birds, and distance to settlements for butterflies.

Keywords: Ecological factors, high conservation value area, oil palm plantation, wildlife diversity.

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 Ibijbijen, Bouiamrine Nassiri

Djilali Bounaama University of Khemis Miliana - Algeria

Abstract:

Rangelands and silvopastoral systems of the middle Atlas are under a heavy pressure, which led to pasture degradation, invasion by non-palatable and toxic species and edaphic aridification due to the regression of the global vegetation cover. In this situation, the introduction of multipurpose leguminous shrubs, such as *Bituminaria bituminosa* (L.) Stirton, commonly known as bituminous clover, could be a promising socio-ecological alternative for the rehabilitation of these degraded areas. The application of biofertilizers like plant growth promoting rhizobacteria especially phosphate solubilizing bacteria (PSB) can ensure a successful installation of this plant in the selected degraded areas. The main objective of the present work is to produce well-inoculated seedlings using the best efficient PSB strains in the greenhouse to increase their ability to resist to environmental constraints once transplanted to the field in the central Middle Atlas.

Keywords: Biofertilizers, Bituminaria bituminosa, phosphate solubilizing bacteria, rehabilitation.

COMPARATIVE ANALYSIS OF THIRD-GENERATION RESEARCH DATA FOR ASSESSING SOLAR ENERGY POTENTIAL

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National Cheng Kung University- Taiwan

Abstract:

Renewable energy sources are dependent on climatic variability, so for adequate energy planning, observations of the meteorological variables are required, preferably representing long-period series. Despite the scientific and technological advances that meteorological measurement systems have undergone in the last decades, there is still a considerable lack of meteorological observations that form series of long periods. The reanalysis is a system of assimilation of data prepared using general atmospheric circulation models, based on the combination of data collected at surface stations, ocean buoys, satellites and radiosondes, allowing the production of long period data, for a wide gamma. The third generation of reanalysis data emerged in 2010, among them is the Climate Forecast System Reanalysis (CFSR) developed by the National Centers for Environmental Prediction (NCEP), these data have a spatial resolution of 0.50 x 0.50. In order to overcome these difficulties, it aims to evaluate the performance of solar radiation estimation through alternative data bases, such as data from Reanalysis and from meteorological satellites that satisfactorily meet the absence of observations of solar radiation at global and/or regional level. The results of the analysis of the solar radiation data indicated that the reanalysis data of the CFSR model presented a good performance in relation to the observed data, with determination coefficient around 0.90. Therefore, it is concluded that these data have the potential to be used as an alternative source in locations with no seasons or long series of solar radiation, important for the evaluation of solar energy potential.

Keywords: Climate, reanalysis, renewable energy, solar radiation.

POULTRY MANURE-DERIVED BIOCHAR AS SOIL AMENDMENT FOR RECLAIMED SANDY SOILS IN ARID AND SEMI-ARID REGIONS

Mohamed Hammam

Eastern University- Sri Lanka

Abstract:

Sandy soils under arid and semi-arid conditions are characterized by poor physical and biochemical properties such as low water retention, rapid organic matter decomposition, low nutrients use efficiency, and limited crop productivity. Addition of organic amendments is crucial to develop soil properties and consequently enhance nutrients use efficiency and lessen organic carbon decomposition. Two years field experiments were developed to investigate the feasibility of using poultry manure and its derived biochar integrated with different levels of N fertilizer as a soil amendment for newly reclaimed sandy soils in Western Desert of El-Minia Governorate, Egypt. Results of this research revealed that poultry manure and its derived biochar addition induced pronounced effects on soil moisture content at saturation point, field capacity (FC) and consequently available water. Data showed that application of poultry manure (PM) or PM-derived biochar (PMB) in combination with inorganic N levels had caused significant changes on a range of the investigated sandy soil biochemical properties including pH, EC, mineral N, dissolved organic carbon (DOC), dissolved organic N (DON) and quotient DOC/DON. Overall, the impact of PMB on soil physical properties was detected to be superior than the impact of PM, regardless the inorganic N levels. In addition, the obtained results showed that PM and PM application had the capacity to stimulate vigorous growth, nutritional status, production levels of wheat and sorghum, and to increase soil organic matter content and N uptake and recovery compared to control. By contrast, comparing between PM and PMB at different levels of inorganic N, the obtained results showed higher relative increases in both grain and straw yields of wheat in plots treated with PM than in those treated with PMB. The interesting feature of this research is that the biochar derived from PM increased treated sandy soil organic carbon (SOC) 1.75 times more than soil treated with PM itself at the end of cropping seasons albeit double-applied amount of PM. This was attributed to the higher carbon stability of biochar treated sandy soils increasing soil persistence for carbon decomposition in comparison with PM labile carbon. It could be concluded that organic manures applied to sandy soils under arid and semi-arid conditions are subjected to high decomposition and mineralization rates through crop seasons. Biochar derived from organic wastes considers as a source of stable carbon and could be very hopeful choice for substituting easily decomposable organic manures under arid conditions. Therefore, sustainable agriculture and productivity in newly reclaimed sandy soils desire one high rate addition of biochar derived from organic manures instead of frequent addition of such organic amendments.

Keywords: Biochar, dissolved organic carbon, N-uptake, poultry, sandy soil.

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

Bishkek State Economic and Commercial Institute - Kyrgyzstan

Abstract:

As a sediment production mechanism, soil erosion is the main environmental threat to the Bovilla watershed, including the decline of water quality of the Bovilla reservoir that provides drinking water to Tirana city (the capital of Albania). Therefore, an experiment with 25 erosion plots for soil erosion monitoring has been set up since June 2017. The aim was to determine the soil loss on plot and watershed scale in Bovilla watershed (Tirana region) for implementation of soil and water protection measures or payments for ecosystem services (PES) programs. The results of erosion monitoring for the period June 2017 - May 2018 showed that the highest values of surface runoff were noted in bare land of 38829.91 liters on slope of 74% and the lowest values in forest land of 12840.6 liters on slope of 64% while the highest values of soil loss were found in bare land of 595.15 t/ha on slope of 62% and lowest values in forest land of 18.99 t/ha on slope of 64%. These values are much higher than the average rate of soil loss in the European Union (2.46 ton/ha/year). In the same sloping class, the soil loss was reduced from orchard or bare land to the forest land, and in the same category of land use, the soil loss increased with increasing land slope. It is necessary to conduct chemical analyses of sediments to determine the amount of chemical elements leached out of the soil and end up in the reservoir of Bovilla. It is concluded that PES programs should be implemented for rehabilitation of sub-watersheds Ranxe, Vilez and Zall-Bastar of the Bovilla watershed with valuable conservation practices.

Keywords: ANOVA, Bovilla, land cover, slope, soil loss, watershed management.

MAPPING THE SPATIAL VARIABILITY OF BTEX CONCENTRATIONS AT A SOUTH AFRICAN INTERNATIONAL AIRPORT

Raeesa Johnson , Ryan S. Moolla

University of Hassan II Casablanca Ain Chok, Casablanca- Morocco

Abstract:

Air travel, and the use of airports, has experienced proliferative growth in the past few decades, resulting in the concomitant release of air pollutants. Air pollution needs to be monitored because of the known relationship between exposure to air pollutants and increased adverse effects on human health. This study monitored a group of volatile organic compounds (VOCs); specifically BTEX (viz. benzene, toluene, ethyl-benzene and xylenes), as many are detrimental to human health. Through the use of passive sampling methods, the spatial variability of BTEX within an international airport was investigated, in order to determine 'hotspots' where occupational exposure to BTEX may be intensified. The passive sampling campaign revealed $BTEX_{total}$ concentrations ranged between 12.95–124.04 µg m^{-3}. Furthermore, BTEX concentrations were dispersed heterogeneously within the airport. Due to the slow wind speeds recorded (1.13 m.s^{-1}); the hotspots were located close to their main BTEX sources. The main hotspot was located over the main apron of the airport. Employees working in this area may be chronically exposed to these emissions, which could be potentially detrimental to their health.

Keywords: Air pollution, air quality, hotspot monitoring, volatile organic compounds.

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.

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

THE EFFICACY OF COGNITIVE BEHAVIORAL INTERVENTION IN MITIGATING SOCIAL AVOIDANCE AMONG VISUALLY IMPAIRED STUDENTS

Mohamed Elsherbiny

University of Da Nang- Vietnam

Abstract:

Social Avoidance is one of the most important problems that face a good number of disabled students. It results from the negative attitudes of non-disabled students, teachers and others. Some of the past research has shown that non-disabled individuals hold negative attitudes toward persons with disabilities. The present study aims to alleviate Social Avoidance by applying the Cognitive Behavioral Intervention. 24 Blind students aged 19–24 (university students) were randomly chosen we compared an experimental group (consisted of 12 students) who went through the intervention program, with a control group (12 students also) who did not go through such intervention. We used the Social Avoidance and Distress Scale (SADS) to assess social anxiety and distress behavior. The author used many techniques of cognitive behavioral intervention such as modeling, cognitive restructuring, extension, contingency contracts, selfmonitoring, assertiveness training, role play, encouragement and others. Statistically, T-test was employed to test the research hypothesis. Result showed that there is a significance difference between the experimental group and the control group after the intervention and also at the follow up stages of the Social Avoidance and Distress Scale. Also for the experimental group, there is a significance difference before the intervention and the follow up stages for the scale. Results showed that, there is a decrease in social avoidance. Accordingly, cognitive behavioral intervention program was successful in decreasing social avoidance for blind students.

Keywords: Social avoidance, cognitive behavioral intervention, blind disability, disability.

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.

THE IMPACT OF METAPHOR THERAPY ON DEPRESSION IN FEMALE STUDENTS

Marzieh Shoushtari Talebzadeh

National University of Computer and Emerging Sciences- Pakistan

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 PROFICIENCY AND SL SENSITIVITY IN WRITING TASKS: COMPARING NOVICE AND PROFICIENT WRITERS IN A NON-ENGLISH SECOND LANGUAGE CONTEXT

Figueiredo Alves Martins, C. Silva, C. Simões

Casimir the Great University, - Poland

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.

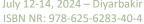# MODELING COGNITIVE AND BEHAVIORAL CHALLENGES IN AN UNDERREPRESENTED GROUP THROUGH A HIERARCHICAL APPROACH

Zhidong Zhi- Zhang, Zhang Chao

Choson University of Physical Education- North Korea

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.

HOW MUSICAL NOTATION READING COMPARES TO ALPHABET READING: IMPLICATIONS FOR TEACHING MUSIC TO DYSLEXIC STUDENTS

Geiger Ora

University of Lisbon- Portugal

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 OF FATIGUE AND DROWSINESS AMONG NIGHTTIME PASSENGER TRANSPORT WORKERS IN JAPAN

Hiroshi Ieno Ikeda

Polytechnic University of Bucharest - Romania

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 VMAT ALGORITHMS AND DOSIMETRY: AN INVESTIGATIVE APPROACH

Amone. Taqaddas

American University of Istaravshan- Tajikistan

Abstract:

Purpose: Planning and dosimetry of different VMAT algorithms (SmartArc, Ergo++, Autobeam) is compared with IMRT for Head and Neck Cancer patients. Modelling was performed to rule out the causes of discrepancies between planned and delivered dose. Methods: Five HNC patients previously treated with IMRT were re-planned with SmartArc (SA), Ergo++ and Autobeam. Plans were compared with each other and against IMRT and evaluated using DVHs for PTVs and OARs, delivery time, monitor units (MU) and dosimetric accuracy. Modelling of control point (CP) spacing, Leaf-end Separation and MLC/Aperture shape was performed to rule out causes of discrepancies between planned and delivered doses. Additionally estimated arc delivery times, overall plan generation times and effect of CP spacing and number of arcs on plan generation times were recorded. Results: Single arc SmartArc plans (SA4d) were generally better than IMRT and double arc plans (SA2Arcs) in terms of homogeneity and target coverage. Double arc plans seemed to have a positive role in achieving improved Conformity Index (CI) and better sparing of some Organs at Risk (OARs) compared to Step and Shoot IMRT (ss-IMRT) and SA4d. Overall Ergo++ plans achieved best CI for both PTVs. Dosimetric validation of all VMAT plans without modelling was found to be lower than ss-IMRT. Total MUs required for delivery were on average 19%, 30%, 10.6% and 6.5% lower than ss-IMRT for SA4d, SA2d (Single arc with 2^0 Gantry Spacing), SA2Arcs and Autobeam plans respectively. Autobeam was most efficient in terms of actual treatment delivery times whereas Ergo++ plans took longest to deliver. Conclusion: Overall SA single arc plans on average achieved best target coverage and homogeneity for both PTVs. SA2Arc plans showed improved CI and some OARs sparing. Very good dosimetric results were achieved with modelling. Ergo++ plans achieved best CI. Autobeam resulted in fastest treatment delivery times.

Keywords: Dosimetry, Intensity Modulated Radiotherapy, Optimization Algorithms, Volumetric Modulated Arc Therapy.

ADDRESSING AUTISM SPECTRUM DISORDER: A KEY CHALLENGE IN THE KINGDOM OF SAUDI ARABIA

Rana Zeina, Laila Ayadhi, Bashir Shahid

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Abstract:

Autism Spectrum Disorders (ASDs) are characterized by abnormalities in social interaction and communication, as well as repetitive and stereotyped behaviors. Although various studies have been conducted in ASDs etiology across the world, it seems that they are still unknown in Middle East. Some scientific researches have been conducted on ASDs in Middle East (ME) especially in Kingdom of Saudi Arabia (KSA). A systematic literature review was performed to identify the ASDs studies in KSA. Accordingly, PubMed, ISI web of Science and Google were searched to find KSA and ME studies in ASDs. The main focus of this review work is to outline an improved understanding of the underpinnings of ASD in order to achieve therapeutic interventions and we will discuss the main problem we waiting for solution with reference with role of Transcranial Magnetic Stimulation (TMS) to modulate cortical activity improve understanding ASD.

Keywords: Autism, Neurodevelopmental disorder

SEROLOGICAL IGG TESTING FOR DIAGNOSIS OF DIET-INDUCED CONDITIONS AND EFFICACY MONITORING IN CANINES

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Abstract:

Background. Food-related allergies and intolerances are frequently occurring in dogs. Diagnosis and monitoring according 'Golden Standard' of elimination efficiency is, however, time consuming, expensive, and requires expert clinical setting. In order to facilitate rapid and robust, quantitative testing of intolerance, and determining the individual offending foods, a serological test is implicated for Alimentary Induced Diseases and manifestations. *Method.* As we developed Medisynx IgG Human Screening Test ELISA before and the dog' immune system is most similar to humans, we were able to develop Medisynx IgG Dog Screening Test ELISA as well. In this randomized, double-blind, split-sample, retro perspective study 47 dogs suffering from Canine Atopic Dermatitis (CAD) and several secondary induced reactions were included to participate in serological Medisynx IgG Dog Screening Test ELISA (within < 0,02 % SD). Results were expressed as titers relative to the standard OD readings to diagnose alimentary induced diseases and monitoring efficacy of an individual eliminating diet in dogs. Split sample analysis was performed by independently sending 2 times 3 ml serum under two unique codes. *Results.* The veterinarian monitored these dogs to check dog' results at least at 3, 7, 21, 49, 70 days and after period of 6 and 12 months on an individual negative diet and a positive challenge (retrospectively) at 6 months. Data of each dog were recorded in a screening form and reported that a complete recovery of all clinical manifestations was observed at or less than 70 days (between 50 and 70 days) in the majority of dogs (44 out of 47 dogs =93.6%). *Conclusion.* Challenge results showed a significant result of 100% in specificity as well as 100% positive predicted value. On the other hand, sensitivity was 95,7% and negative predictive value was 95,7%. In conclusion, an individual diet based on IgG ELISA in dogs provides a significant improvement of atopic dermatitis and pruritus including all other non-specific defined allergic skin reactions as erythema, itching, biting and gnawing at toes, as well as to several secondary manifestations like chronic diarrhoea, chronic constipation, otitis media, obesity, laziness or inactive behaviour, pain and muscular stiffness causing a movement disorders, excessive lacrimation, hyper behaviour, nervous behaviour and not possible to stay alone at home, anxiety, biting and aggressive behaviour and disobedience behaviour. Furthermore, we conclude that a relatively more severe systemic candidiasis, as shown by relatively higher titer (class 3 and 4 IgG reactions to *Candida albicans*), influence the duration of recovery from clinical manifestations in affected dogs. These findings are consistent with our preliminary human clinical studies.

Keywords: Allergy, canine atopic dermatitis (CAD), food allergens, IgG-ELISA, food-incompatibility.

GENETIC VARIABILITY AND HAPLOTYPE ANALYSIS OF THE ORGANIC CATION TRANSPORTER 1 GENE IN THE ZULU POPULATION OF SOUTH AFRICA

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Abstract:

Organic cation transporter (OCT) 1could influence an individual's response to various treatments and increase their susceptibility to diseases.Genotypic and allelic frequencies of nineteen non-synonymous and one intronic Single Nucleotide Polymorphism (SNP) from the OCT1 gene were determined in 101 unrelated healthy Zulu participants, using a SNaPshot$^{®}$ multiplex assay. Minor allele frequencies (MAF)were compared to representative populations of Africa, Asia and Europe, from Ensembl. MAFs for S14F, V519F, rs622342 and P341L were 2.0%, 6.0%, 6.0% and 1.0%, respectively. Sixteen of nineteen investigated non-synonymous SNPs were monomorphic. No study participant harbored variant alleles for S189L, G220V, P283L, G401S, M420V, M440I, G465R, I542V, R61C, R287G, C88S, A306T, A413V, I421F, C436F and V501E. Haplotype, CGTCGCCGCGCAAGAGGTGA, was most frequently observed (81.23%).Further investigations are encouraged to evaluate potential roles these SNPs could play in the therapeutic efficacy of clinically important drugs and in the development of various diseases in the Zulu population.

Keywords: OCT1, PCR, SNaPshot assay, Zulu population.

EFFECTS OF LOWER BODY POSITIVE PRESSURE TRAINING ON BODY COMPOSITION IN OBESE CHILDREN

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Abstract:

Background: The high prevalence of obesity in Egypt has a great impact on the health care system, economic and social situation. Evidence suggests that even a moderate amount of weight loss can be useful. Aim of the study: To analyze the effects of lower body positive pressure supported treadmill training, conducted with hypocaloric diet, on body composition of obese children. Methods: Thirty children aged between 8 and 14 years, were randomly assigned into two groups: intervention group (15 children) and control group (15 children). All of them were evaluated using body composition analysis through bioelectric impedance. The following parameters were measured before and after the intervention: body mass, body fat mass, muscle mass, body mass index (BMI), percentage of body fat and basal metabolic rate (BMR). The study group exercised with antigravity treadmill three times a week during 2 months, and participated in a hypocaloric diet program. The control group participated in a hypocaloric diet program only. Results: Both groups showed significant reduction in body mass, body fat mass and BMI. Only study group showed significant reduction in percentage of body fat ($p = 0.0.043$). Changes in muscle mass and BMR didn't reach statistical significance in both groups. No significant differences were observed between groups except for muscle mass ($p = 0.049$) and BMR ($p = 0.042$) favoring study group. Conclusion: Both programs proved effective in the reduction of obesity indicators, but lower body positive pressure supported treadmill training was more effective in improving muscle mass and BMR.

Keywords: Children, Hypocaloric diet, Lower body positive pressure supported treadmill, obesity.

HOW THE BEHAVIORAL TRAITS OF AUTISM INFLUENCE COGNITIVE SKILLS IN CHILDREN WITH AUTISM SPECTRUM DISORDER

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Abstract:

Cognitive symptoms and behavioral symptoms may, in fact, overlap and be related to the level of the general cognitive function. We have measured the behavioral aspects of autism and its correlation to the cognitive ability in 30 children with ASD. We used a neuropsychological Battery CANTAB eclipse to evaluate the ASD children's cognitive ability. Individuals with ASD and challenging behaviors showed significant correlation between some cognitive abilities and Motor aspects. Based on these findings, we can conclude that the motor behavioral problems in autism affect specific cognitive abilities in ASDs such as comprehension, learning, reversal, acquisition, attention set shifting, and speed of reaction to one stimulus. Future researches should also focus on the relationship between motor stereotypes and other subtypes of repetitive behaviors, such as verbal stereotypes, ritual routine adherence, and the use of different types of CANTAB tests.

Keywords: Autism, Cognitive ability, Motor Behavior, and Neuropsychological battery.

MULTI-ORGAN PRESENTATION IN NEONATAL LUPUS ERYTHEMATOSUS (REPORT OF TWO CASES)

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Abstract:

Neonatal lupus erythematous (NLE) is a rare disease marked by clinical characteristic and specific maternal autoantibody. Many cutaneous, cardiac, liver, and hematological manifestations could happen with affect of one organ or multiple. In this case, both babies were premature, low birth weight (LBW), small for gestational age (SGA) and born through caesarean section from a systemic lupus erythematous (SLE) mother. In the first case, we found a baby girl with dyspnea and grunting. Chest X ray showed respiratory distress syndrome (RDS) great I and echocardiography showed small atrial septal defect (ASD) and ventricular septal defect (VSD). She also developed anemia, thrombocytopenia, elevated C-reactive protein, hypoalbuminemia, increasing coagulation factors, hyperbilirubinemia, and positive blood culture of *Klebsiella pneumonia*. Anti-Ro/SSA and Anti-nRNP/sm were positive. Intravenous fluid, antibiotic, transfusion of blood, thrombocyte concentrate, and fresh frozen plasma were given. The second baby, male presented with necrotic tissue on the left ear and skin rashes, erythematous macula, athropic scarring, hyperpigmentation on all of his body with various size and facial haemorrhage. He also suffered from thrombocytopenia, mild elevated transaminase enzyme, hyperbilirubinemia, anti-Ro/SSA was positive. Intravenous fluid, methyprednisolone, intravenous immunoglobulin (IVIG), blood, and thrombocyte concentrate transfution were given. Two cases of neonatal lupus erythematous had been presented. Diagnosis based on clinical presentation and maternal auto antibody on neonate. Organ involvement in NLE can occur as single or multiple manifestations.

Keywords: Neonatus lupus erythematous, maternal autoantibody, clinical characteristic.

EVALUATION OF EXTREME WIND CLIMATE IN AN ENCLOSED BASIN BASED ON 8 DECADES

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ABSTRACT

The present study evaluates the extreme wind climate in an enclosed sea (Black Sea) between 1943 and 2022 (an 80-year). The wind fields, namely ERA5, were downloaded from the latest wind product of ECMWF (European Centre for Medium-Range Weather Forecasts) and the datasets have higher spatial (0.25°) and temporal resolutions (1 hour) than previous versions. Although the Black Sea wind climate has been studied by many researchers in the recent 40 years (1983−2022), the wind climate between 1943 and 2021 (previous 40-year) is not yet fully known and a comprehensive study has not been conducted. Accurate and reliable wind climate assessments, wind power assessments, and extreme wind climate assessments require satisfactorily large datasets (at least 30 years). In the concept of determining the possible effects of climate change, longer datasets are required to better understand the wind climate histories, detect climate anomalies, and reveal the region(s) affected by climate change. In the present study, decadal and multidecadal averages (10-year, 20-year, 40-year, 80-year) and their long-term trends were investigated over the entire study area for both normal and extreme wind conditions. More importantly, it has been discussed whether these changing trends represent a significant change in the context of climate change and mapped for the Black Sea. The Black Sea wind climate tends to significant, slight, drastic, and significant decreases in the southwestern (90% confidence level [CL]), western (75% CL), northwestern (99% CL), and central (95%−97.5% CLs) Black Sea, respectively. On the other hand, significant increasing tendencies are detected in the southwestern Black Sea (90−99% CLs). On a local scale, the extreme value analysis was performed for the 5 critical points over the study area. The extreme value analysis revealed that the extreme wind speed in the western and central Black Sea tends to decrease and increase in the eastern basin.

Keywords: Black Sea, Wind Climate, ECMWF ERA5, Long-term trends, Spatiotemporal variability.

İKLİM KRİZİ SORUNUNDA MİKROORGANİZMALAR

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ÖZET

Mikroorganizmalar, dünyanın en eski yaşam formlarını oluşturur ve gezegenimizin ekosistemleri için pek çok açıdan bir yapı taşı işlevi görür. Karbon, azot, fosfor gibi temel elementlerin döngüsünde kilit bir rol oynar ve biyosferin döngüsünü sağlar. Ancak, gezegenimizdeki yaşam için büyük bir tehdit oluşturan iklim değişikliği, mikroorganizmalar üzerinde de büyük etkilere neden olabilir. Atmosferdeki sera gazlarının artması, mikroorganizmaların metabolizmasını ve ekosistem dinamiklerini değiştirerek karasal ve sucul ekosistemlerdeki tür çeşitliliği üzerinde olumsuz etkilere yol açabilir.

İklim değişikliğinin sonuçları arasında gösterilen, yağış rejimlerindeki düzensizlik ve deniz seviyelerinde yükselme giderek artmaktadır. Bu durum, mikroorganizmaların dağılımını ve aktivitelerini de önemli ölçüde etkileyebilir. Sıcaklıktaki artış mikrobiyal aktivitelerde ve toprak sağlığında değişikliklere yol açabilir. Bu yüzden, tarımda verimliliğin düşmesine, gıda güvenliğinde bozunmalara ve canlıların sağlığında sorunlara neden olabilir.

Ayrıca, denizlerde ve okyanuslarda iklim değişikliğinin etkileri özellikle belirgindir. Artan deniz suyu sıcaklıkları, mercan resifleri gibi önemli ekosistemler üzerinde ciddi tehditler oluşturabilir. Bu durum, mercan ağarması gibi fenomenlere yol açabilir ve deniz biyoçeşitliliğini olumsuz etkileyebilir.

Mikroorganizmaların iklim değişikliği üzerindeki rolü, küresel iklim krizinin ekosistemler üzerindeki karmaşık etkilerini anlamak için kritik öneme sahiptir. İklim değişikliği araştırmalarında mikrobiyal ekoloji ve biyogeo kimyası gibi disiplinlerin daha fazla dikkate alınması gerekmektedir. Mikroorganizmaların çeşitliliği ve işlevleri, ekosistemlerin ve insanlığın geleceği için önemli bir kaynaktır.

Bu yazıda, mikroorganizmalar ve iklim değişikliği arasındaki çeşitli ilişkiler ve bu ilişkilerin ekosistemlere olan olası sonuçlarını derlenmiştir. Mikroorganizmaların karbon döngüsü gibi ekolojik süreçlerdeki rolleri, iklim değişikliğinin biyolojik ve ekolojik sistemlere olan geniş etkilerini anlamamıza yardımcı olabilir.

Anahtar Kelimeler : İklim krizi, ekoloji, sera gazları, permafrost, metanojenler

ABSTRACT

Microorganisms represent some of the oldest forms of life on Earth and serve as a foundation for the planet's ecosystems in many ways. They play a crucial role in the cycling of essential elements like carbon, nitrogen, and phosphorus, and contribute to the biosphere's balance. However, climate change, which poses a significant threat to life on our planet, can also have profound effects on microorganisms. The increase in greenhouse gases in the atmosphere can alter the metabolism of microorganisms and ecosystem dynamics, potentially having negative impacts on species diversity in terrestrial and aquatic ecosystems.

Among the consequences of climate change are increasing irregularities in precipitation patterns and rising sea levels. These changes can significantly affect the distribution and activity of microorganisms. For instance, rising temperatures can lead to alterations in microbial activity and soil health, which can result in decreased agricultural productivity, disruptions in food security, and health issues for living organisms.

Moreover, the effects of climate change are particularly evident in seas and oceans. Rising sea temperatures pose serious threats to important ecosystems such as coral reefs, potentially leading to phenomena like coral bleaching and negatively impacting marine biodiversity.

Understanding the role of microorganisms in climate change is crucial for comprehending the complex effects of the global climate crisis on ecosystems. Increased attention to disciplines such as microbial ecology and biogeochemistry in climate change research is necessary. The diversity and functions of microorganisms represent a significant resource for the future of ecosystems and humanity.

This article reviews various relationships between microorganisms and climate change and explores the potential implications of these relationships for ecosystems. Understanding the roles of microorganisms in ecological processes such as the carbon cycle can help us grasp the broader biological and ecological impacts of climate change.

Keywords: Climate crisis, ecology, greenhouse gases, permafrost, methanogens.