ABSTRACT BOOK

EGE 6. ULUSLARARASI UYGULAMALI BİLİMLER KONGRESİ

İZMİR
10 - 11 EYLÜL 2022

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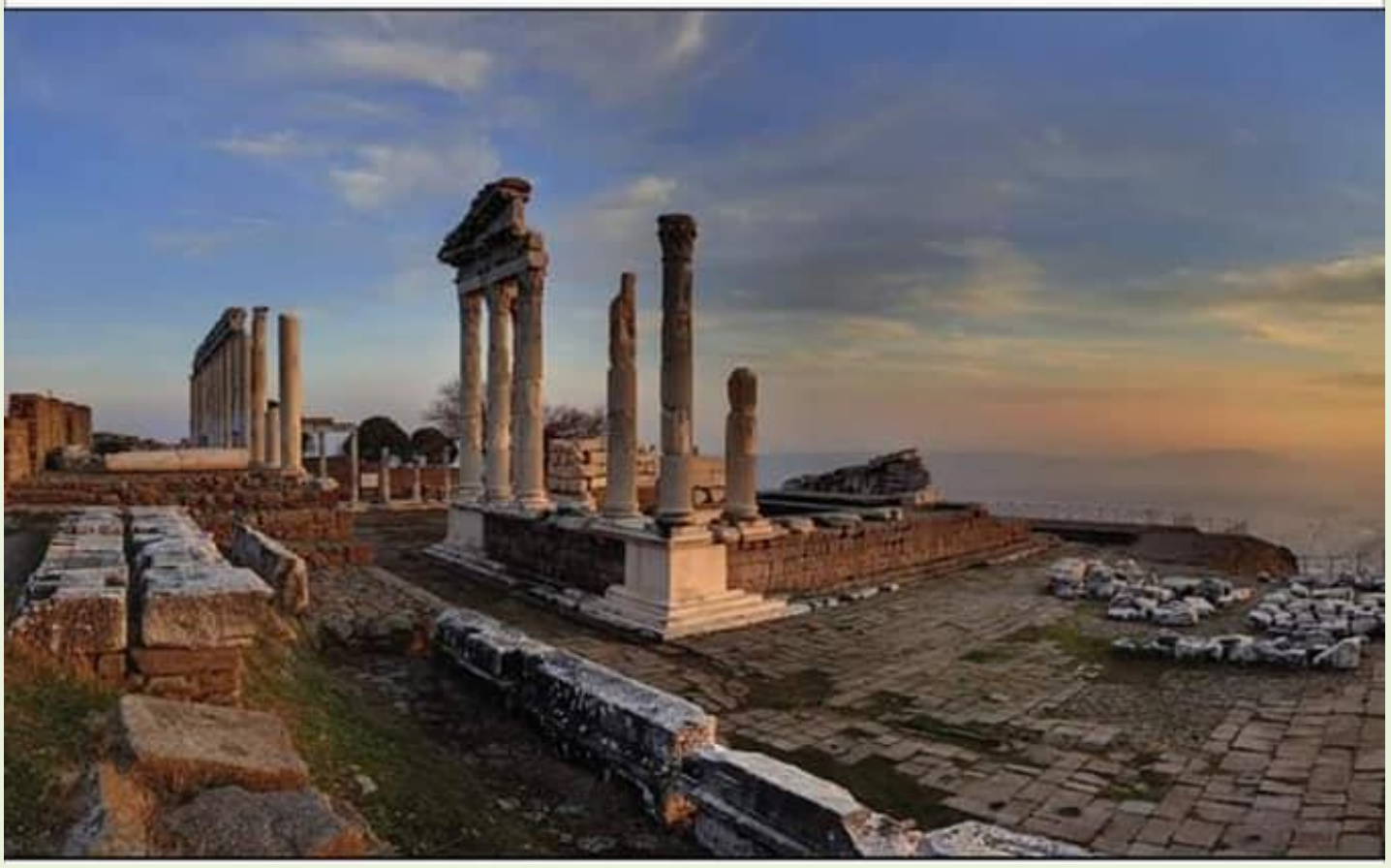

EGE
6th INTERNATIONAL CONFERENCE ON APPLIED SCIENCES

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6TH INTERNATIONAL CONFERENCE ON APPLIED SCIENCES
SEPTEMBER 10- 11, 2022
IZMIR

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PRESENTATION
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LANGUAGES
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6th INTERNATIONAL CONFERENCE ON SOCIAL SCIENCES

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September 10- 11, 2022 - Izmir

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10. 09. 2022	10: 00 – 12:00
Meeting ID: 875 0688 8156	Passcode: 11120922
HALL: 1 SESSION: 1	MODERATOR: **DOÇ. DR. GÜNEŞ SALI**
DOÇ. DR. RECAİ AKKUŞ ARŞ. GÖR. BEDİRHAN TEKE	Öğretmen Adayı Belirleme, Öğretmen Yetiştirme Programları Ve Öğretmen Atama Süreçleri Kapsamına Yönelik Karşılaştırmalı Bir Çalışma
PROF. DR. MEHMET ÖZBAŞ	The Most Basic And Important Problems Faced By Romani Population
HAYATİ DOKDEMİR PROF. DR. MEHMET ÖZBAŞ	Humanism In The Early Republic Period And Its Effect On Education
DR. ÖĞR. ÜYESİ, SEBAHATTİN KARTAL DR. ÖĞR. ÜYESİ, AYSEL ARSLAN	Şehzade Oyuncaklarının Çocukların Gelişim Alanlarına Etkisinin İncelenmesi
DR. ÖĞR. ÜYESİ, AYSEL ARSLAN DR. ÖĞR. ÜYESİ, SEBAHATTİN KARTAL	Okul Öncesi Çocuklarının Dokunma Duyusunu Geliştirmeye Yönelik Eğitim Temelli Duyu Bütünleme Materyali Geliştirme Çalışması
YÜKSEK LİSANS ÖĞR. KAMURAN EROL DAĞ	Triggering Primary Traumas Of Secondary Traumas: Migration Phenomenon
DOÇ. DR. GÜNEŞ SALI	Üstün Yetenekliler Alanında Yapılmış Tezlerin Analizi
DOÇ. DR. GÜNEŞ SALI	Türkiye'de Okul Öncesi Öğretmenlerinin Ve Okul Öncesi Öğretmen Adaylarının Drama Hakkındaki Görüşleri İle İlgili Yapılan Çalışmaların İncelenmesi
ASSİST. PROF. DR. EMRULLAH AKCAN	Investigation Of The Relationship Between The Life Studies Lesson Attitudes And Critical Thinking Tendencies Of Primary School 3rd Grade Students
DR. İLYAS KARA AHMET İNANOĞLU	The Place And Importance Of Non-Governmental Organizations In Environmental Education
DR. İLYAS KARA AHMET İNANOĞLU	Approaches Of Social Studies Teachers Towards Teaching Practice II

10. 09. 2022	10: 00 – 12:00
Meeting ID: 875 0688 8156	Passcode: 11120922

HALL: 2 SESSION: 1	MODERATOR: DR. NURKAN YILMAZ
EYYÜP YILDIRIM MESUT BULUT ÖMER FARUK TUTAR	Ortaokul Öğrencilerinin Beden Eğitimi Ve Spor Dersine İlişkin Tutumlarının İncelenmesi
EYYÜP YILDIRIM	Spor Seyircilerinin Zorbalık Davranışlarının İncelenmesi (Futbol Taraftarı Örneği)
DR PARASURAMA D	Relationship Between Achievement And Intelligence In CT And TBCT Classroom: A Linear Regression Analysis
ARİFE PEKER PROF. DR. İLKAY ULUTAŞ	Duygu Odaklı Resimli Öykü Kitaplarında Duygularla Baş Etme Yolları
DR. BURCU BAĞCI ÇETİN	Annelerin Ebeveynlik Stres Düzeylerinin Çeşitli Değişkenlere Göre İncelenmesi
ZOHAIB HASSAN SAIN	Challenges in Quality of Education in Higher Education Institutions (HEIs) of Pakistan
ƏLİYEVA VÜSALƏ SƏRDAR QIZI	Məktəbəqədər Yaşlı Uşaqların Öyrənmə Maraqlarının Artırılması Yolları.
ELNARE İSAKHAN GİZİ VELİYEVA	Opportunities Of Performing Proper Names In Written Literature
YÜKSEK LİSANS ÖĞRENCİSİ, ÜLKÜ TOKOĞLU	Sosyal Bilgiler Öğretmenlerinin Görev Yaptıkları Çevrenin Yerel Tarihi İle İlgili Uygulamaları Ve Karşılaşılan Problemler
DR. NURKAN YILMAZ	Examination Of Flexibility And Explosive Power Scores Of Sedentary Individuals After Regular Trainings
RESEARCHER, KADİR AYRILMAZ ASSIST. PROF., KURTULUŞ ÖZLÜ	Investigation Of The Relationship Between Physical Education Teachers'; Subject Area Competencies, Teaching Styles And Their Value Perceptions

10. 09. 2022	10: 00 – 12:00
Meeting ID: 875 0688 8156	Passcode: 11120922
HALL: 3 SESSION: 1	MODERATOR: DR. ERDAL KURTÇU
PROF. DR. ASSİYE AKA	Twitter Üzerinden Bazı Dugulara/Panoptik Etkilere Sosyolojik Bakış
ZEMFİRA ISAKHAN GİZİ ABBASOVA	Phonographic Implicit Symbols In Azerbaijani Literary Texts As One Of The Means Of Expression Creating Imagery
ARZU SABİR GİZİ KARİMOVA	Language Policy In The Baltic States After The Collapse Of The USSR
ÖĞR. GÖR. İLKNUR İLĞAR	Türkiye'deki Eğitim Sorunlarının Çözümü Üzerine
ÖĞR. GÖR. İLKNUR İLĞAR	Öğrencilerin Üstbiliş Farkındalıkları Ve Bilişüstü Öğrenme Stratejileri Kullanmalarının Akademik Başarıları Üzerindeki Etkisi
PROF. DR. AHMET ÜSTÜN MERVE ALICI	A Review Of The Increase Of The IBDP: International Baccalaureate Diploma Program Schools In Turkey In Recent Years
ARŞ. GÖR. DR. ERDAL KURTÇU	Detection And Analysis Of Ottoman Turkish Musical Texts As A Component Of Historical Musicology Studies In Turkey
YAHYA OCAK PROF. DR., MUSTAFA SAĞDIÇ	Web 2.0 Animasyon Araçları Kullanımının Sosyal Bilgiler Öğretimindeki Yeri
DR., SEZGİN ELBAY DOÇ. DR., TUBA ŞENGÜL BİRCAN	Ortaokul Seçmeli Hukuk Ve Adalet Dersi Kazanımlarının Yenilenmiş Bloom Taksonomisine Göre İncelenmesi

10. 09. 2022	10: 00 – 12:00
Meeting ID: 875 0688 8156	Passcode: 11120922
HALL: 4 SESSION: 1	MODERATOR: DR. ÖĞR. ÜYESİ ABDÜLHAKİM BAHADIR DARI
AYODEJI OLUWATOBI OJETUNDE	Ghrelin As A Potential Therapeutic Agent For Aging-Related Sarcopenia
DR. ÖĞR. ÜYESİ, GÜLŞAH BARĞI FZT, NİRAN ÇAKIR FZT, ROJDA KAYMAZ FZT, İLAYDA KAYAPINAR	Covid-19 Pandemi Sürecinde Ekran Karşısında Çalışan Bireylerde Göz Yorgunluğu, Baş Ağrısı, Fiziksel Ve Mental Yorgunluk
DR. ÖĞR. ÜYESİ ABDÜLHAKİM BAHADIR DARI	The Public Service Announcements About The Harms Of Smoking To The Natural Environment
DR. ÖĞR. ÜYESİ SERVET AŞKIN, ÖĞRETMEN HALİM YIMAZ	Examination The Effect Of Volcanic Geology İn Apricots The Arsenic, Selenium And Lead Element Concentrations
ÖĞRETİM GÖREVLİSİ, ESRA KARABULUT	Ağlayan Hasta İle Etkili İletişim
ÖĞRETİM GÖREVLİSİ, ESRA KARABULUT	Terapötik İletişimin, Ölümü Yaklaşan Birey İle Etkileşimdeki Önemi Ve Yeri
EDA NUR ÇAKIR AYDAN MOROVA GÜLİZAR PETEK İREM ERKILIÇ NERGİZ DEMET ÖZMAN NİSA HIZIROĞLU PROF. DR. ALİYE ÖZENOĞLU	The Impact Of The Use Of Social Media On Health Promotion In Adolescents
DR. CEMRE BOLGÜN	Sosyal Hizmet Eğitiminde Eleştirel Bir Yaklaşım: Paulo Freire Ve Ezilenlerin Pedagojisi
CEVRİYE ÜNAL YAŞAR TATAR KADRİYE AĞAN- YILDIRIM CENGİZ KARAGÖZOĞLU ADİL DENİZ DURU	Havalı Tabanca Atıcılarında Atış Performansına Göre Tetik Düşme Öncesi Ve Tetik Düşme Sonrasında Eeg Alfa Gücünün Karşılaştırılması

10. 09. 2022	10: 00 – 12:00
Meeting ID: 875 0688 8156	Passcode: 11120922
HALL: 5 SESSION: 1	MODERATOR: DOÇ. DR. FATİH KAR
ARŞ. GÖR. HAVVA NUR ATALAY PROF. DR. RECEP YÜCEL	Risk Factors In Health Institutions
PROF. DR. RECEP YÜCEL ARŞ. GÖR. HAVVA NUR ATALAY	Patient Safety And Leadership In Health Institutions: Content Analysis
ASSİST. PROF. DR. BURAK ÖNAL	Ascorbate May Reduce Atherosclerosis By Controlling ICAM-1 and VCAM-1 Expression
DOÇ. DR. FATİH KAR	Akut Böbrek Hasarında Yeni Biyokimyasal Belirteçler
OP. DR. AYHAN ERDEMİR	Safra Kesesinde Heterotopik Pankreas Dokusu
EREN TİMURTAŞ HALİT SELÇUK	Synchronous And Asynchronous Telerehabilitation Methods Have Similar Effects In Individuals With Non-Specific Neck Pain
HALİT SELÇUK EREN TİMURTAŞ	Short-Term Effects Of Telerehabilitation On Outcomes For People With Knee Osteoarthritis: A Preliminary Report
RUKİYE ADA BENDER RENGİNAR AKBULAK ALİ ŞENGÜL	Can Asymptomatic Sars-Cov-2 Infection Cause Spontaneous Abortion? Covid-19 And Spontaneous Abortion
DR.,FATMA CAVUS YONAR DR.,BERİL ANILANMERT	Adli Toksikoloji Perspektifinden Fentanil
DR.,BERİL ANILANMERT DR.,FATMA ÇAVUŞ YONAR	Cure Or Poison?

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HALL: 6 SESSION: 1	MODERATOR: GİZEM GEDİK
UJAS NATWARLAL PANDYA	Digital Literature: A Paradigm Shift
SİTARE HASANOVA YAŞAR BARUT	Psikolojide Kariyer Yelkenlisi Modeli Üzerine Kuramsal Bir Değerlendirme
ARŞ. GÖR. ELİF BARTAN DR. ÖĞR. ÜYESİ GAYE SOLMAZER	Mutluluk Paylaşımı Ve Duygusal Yeme Davranışı Arasındaki İlişkide Temel Psikolojik İhtiyaçların Aracı Rolü
ARAŞTIRMA GÖREVLİSİ, GİZEM GEDİK	Çocukluk Çağı Travmaları Ve Kişilik Örüntüleri Arasındaki İlişkinin İncelenmesi
YASEMİN TÜTER	Narsisistik Kişiliğin Tutum Ve Davranışlara Etkisi
YASEMİN UYAR DÜZGÜN	Siyah Deri Beyaz Maskeler: Sömürgecilik Bağlamında Psikoloji Kültür İlişkisini Yeniden Düşünmek
AGİT AKYEL	Tekinsiz Vadi: Sosyal Robotlarla Etkileşimde İnsan Psikolojisi

10. 09. 2022 10: 00 – 12:00 Time zone in Turkey (GMT+3)
Meeting ID: 816 5724 8099 Passcode: 10110922

HALL: 1 SESSION: 1 MODERATOR: **CLEMENTE LOBATO FRAILE**

YUNOS ZAHRI AB HAMID R. SUSANTY AHMAD MUSTAFFA	Cyber Security Situational Awareness among Students: A Case Study in Malaysia
A. BOUABID B. BIELENBERG S. AINANE N. PASHA	Learning Outcomes Alignment across Engineering Core Courses
CHRISTINE K. FULMER	Proposing Problem-Based Learning as an Effective Pedagogical Technique for Social Work Education
AGAH TUĞRUL KORUCU HANDAN ATUN	The Cloud Systems Used in Education: Properties and Overview
RIAM ABU-MUCH MUHAMAD HUGERAT	Lab Activities for Introducing Nanoscience to Teachers and Students
NAGORE GUERRA BİLBAO CLEMENTE LOBATO FRAILE	Elaboration and Validation of a Survey about Research on the Characteristics of Mentoring of University Professors' Lifelong Learning
ABDUL HALIM ABDULLAH NUR LIYANA ZAINAL ABIDIN MAHANI MOKHTAR	Using Thinking Blocks to Encourage the Use of Higher Order Thinking Skills among Students When Solving Problems on Fractions
FAHAD SULEIMAN	Students' Views on Mathematics Learning: A Cross-Sectional Survey of Senior Secondary Schools Students in Katsina State of Nigeria
SALINA BUDIN SHAIRA ISMAIL	Undergraduates Learning Preferences: A Comparison of Science, Technology and Social Science Academic Disciplines in Relations to Teaching Designs and Strategies
SHAHLAN SURAT SAEMAH RAHMAN SAADIAH KUMMIN	Inquiry on the Improvement Teaching Quality in the Classroom with Meta-Teaching Skills
ETSUO MORISHITA	Project and Experiment-Based Fluid Dynamics Education

10. 09. 2022 10: 00 – 12:00 Time zone in Turkey (GMT+3)
Meeting ID: 816 5724 8099 Passcode: 10110922

HALL: 2 SESSION: 1 MODERATOR: **SAMIA AIT ALI YAHIA**

M. M. MUHAMMED O. KHUZAIMA	21st Century Islam: Global Challenges of Islamic Representation and Knowledge Acquisition
DOROTA KOBUS-OSTROWSKA	Theory and Reality on Working Life of People with Disability: The Case in Poland
MURITALA BABATUNDE HASSAN	The Politics of Foreign Direct Investment for Socio-Economic Development in Nigeria: An Assessment of the Fourth Republic Strategies (1999 - 2014)
KEHINDE AUGUSTINA ODUKOYA	Sexualization of Women in Nigerian Magazine Advertisements
SAMIA AIT ALI YAHIA	The Cave Paintings of Libyc Inscriptions of Tifra, Kabylia, Algeria
DINABANDHU MAHATA AMIT KUMAR AMBARISH KUMAR RAI	Female Work Force Participation and Women Empowerment in Haryana
NURAN ÖZE	Communication and Devices: Face to Face Communication versus Communication with Mobile Technologies
MOHD YUSRI IBRAHIM	Developing Measurement Model of Interpersonal Skills of Youth
UCHENNA BELLA ONU	Preservation of Artistic Heritage: Effect of Modernization on Antiquities and Traditional Murals in Nigeria
ANDERS TROEDSSON	From Risk/Security Analysis via Timespace to a Model of Human Vulnerability and Human Security

10. 09. 2022 10: 00 – 12:00 Time zone in Turkey (GMT+3)
Meeting ID: 816 5724 8099 Passcode: 10110922

HALL: 3 SESSION: 1 MODERATOR: **DEWI FATMANINGRUM**

NUNTAPORN AUKKANIT	Effect of Different Oils on Quality of Deep-fried Dough Stick
ABTEHAL Y. ANAAS MOHD NAZMI BIN ABD. MANAP	Association between Single Nucleotide Polymorphism of Calpain1 Gene and Meat Tenderness Traits in Different Genotypes of Chicken: Malaysian Native and Commercial Broiler Line
AMIR SABER GHARAMALEKI, BEITOLLAH ALIPOUR ZEINAB FAGHFOORI AHMAD YARIKHOSROUSHAHI	Prophylactic Effects of Dairy Kluyveromyces marxianus YAS through Overexpression of BAX, CASP 3, CASP 8 and CASP 9 on Human Colon Cancer Cell Lines
KHAIRUL BARIAH SULAIMAN TAJUL ARIS YANG	Color Characteristics of Dried Cocoa Using Shallow Box Fermentation Technique
AHMED M. S. HUSSEIN SAHAR Y. AL-OKBI	Evaluation of Bakery Products Made from Barley-Gelatinized Corn Flour and Wheat-Defatted Rice Bran Flour Composites
MAMTA KUMARI SHASHI JAIN	Screening of Potential Sources of Tannin and Its Therapeutic Application
KUBRA SAYIN DERYA ARSLAN	Antioxidant Properties, Ascorbic Acid and Total Carotenoid Values of Sweet and Hot Red Pepper Paste: A Traditional Food in Turkish Diet
ASHRAF S. HAKIM RANDA M. ALAROUSY	Incidence of Fungal Infections and Mycotoxicosis in Pork Meat and Pork By-Products in Egyptian Markets
DEWI FATMANINGRUM ADE WIRADNYANI	Inadequacy of Macronutrient and Micronutrient Intake in Children Aged 12-23 Months Old: An Urban Study in Central Jakarta, Indonesia
ABTEHAL Y. ANAAS MOHD NAZMI BIN ABD. MANAP	Association between Single Nucleotide Polymorphism of Calpain1 Gene and Meat Tenderness Traits in Different Genotypes of Chicken: Malaysian Native and Commercial Broiler Line

10. 09. 2022	10: 00 – 12:00 Time zone in Turkey (GMT+3)
Meeting ID: 816 5724 8099	Passcode: 10110922
HALL: 4 SESSION: 1	MODERATOR: **SALEEM Z. RAMADAN**
ABHIMANYU PATI KRISHNA KUMAR VELURI	Oracle JDE Enterprise One ERP Implementation: A Case Study
CSABA I. HENCZ ISTVÁN Á. HARMATI	Improving the Quality of Transport Management Services with Fuzzy Signatures
ATUL DEV PANKAJ JHA	Beyond Taguchi's Concept of the Quality Loss Function
YUSUF S. DAMBATTA AHMED A. D. SARHAN	Surface Roughness Analysis, Modelling and Prediction in Fused Deposition Modelling Additive Manufacturing Technology
E. ASADOLLAHI-YAZDI J. GARDAN P. LAFON	Integrated Design in Additive Manufacturing Based on Design for Manufacturing
OSAMA ELGADI MARTIN BIRKETT WAI MING CHEUNG	Identifying the Barriers behind the Lack of Six Sigma Use in Libyan Manufacturing Companies
SALEEM Z. RAMADAN	Binary Programming for Manufacturing Material and Manufacturing Process Selection Using Genetic Algorithms
MENGIST HAILEMARIAM SILMA YOSEPH	Improving Production Capacity through Efficient PPC System: Lesson from Leather Manufacturing
FAHANIM ABDUL RASHID MUHAMMAD AZZAM ISMAIL	Embodied Carbon Footprint of Existing Malaysian Green Homes

10. 09. 2022 10: 00 – 12:00 Time zone in Turkey (GMT+3)
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HALL: 5 SESSION: 1	MODERATOR: **MONA SALAH EL-DIN HASSANEIN**
ASMA MEHAN	Public Squares and Their Potential for Social Interactions: A Case Study of Historical Public Squares in Tehran
M. AMINU SANDA K. EWONTUMAH	Organizational Involvement and Employees' Consumption of New Work Practices in State-owned Enterprises: The Ghanaian Case
YESUSELVI MANICKAM TAN SOON CHIN	Assessment on Communication Students' Internship Performances from the Employers' Perspective
MAJEED MOHAMMED MIDHIN CLARE FINBURGH	Tom Stoppard: The Amorality of the Artist
AHMED USMAN EGYE HAMZA MUHAMMAD	Analysis of Poverty Reduction Strategies as Mechanism for Development in Nigeria from 1999-2019
NINO ABESADZE MARINE MINDORASHVILI NINO PARESASHVILI	Investigation of the Main Trends of Tourist Expenses in Georgia
SAMIA AIT ALI YAHIA	Analysis of Steles with Libyan Inscriptions of Grande Kabylia, Algeria
SAYANTAN KHANRA ROJERS P. JOSEPH	Adoption and Diffusion of E-Government Services in India: The Impact of User Demographics and Service Quality
NAEEM AHMED	Social Work Practice to Labour Welfare: A Proposed Model of Field Work Practicum and Role of Social Worker in India
MONA SALAH EL-DIN HASSANEIN	From Victim to Ethical Agent: Oscar Wilde's The Ballad of Reading Gaol as Post-Traumatic Writing

10. 09. 2022	10: 00 – 12:00 Time zone in Turkey (GMT+3)
Meeting ID: 816 5724 8099	Passcode: 10110922
HALL: 6 SESSION: 1	MODERATOR: **SAULE MUSSABEKOVA**
MUHAMMAD NAVEED YANG CAIXIA	Need of National Space Legislation for Space Faring Nations
ANTONIOS MANIATIS	Human Rights in Armed Conflicts and Constitutional Law
SAULE MUSSABEKOVA	Forensic Medical Capacities of Research of Saliva Stains on Physical Evidence after Washing
FAHAD ALANAZI ANDREW JONES	A Method to Enhance the Accuracy of Digital Forensic in the Absence of Sufficient Evidence in Saudi Arabia
KHADIJA ALI	Sexual and Gender Based Crimes in International Criminal Law: Moving Forwards or Backwards?
UMAR UBANDAWAKI	Controlling Youths Participation in Politics in Sokoto State: A Constructive Inclusiveness for Good Governance in Nigeria
ABDUL SALIM AMIN	Judicial Institutions in a Post-Conflict Society: Gaining Legitimacy through a Holistic Reform
DINI DEWI HENIARTI	Military Court's Jurisdiction over Military Members Who Commit General Crimes under Indonesian Military Judiciary System in Comparison with Other Countries
KHODR FAKIH	The Ombudsman: Different Terminologies Same Missions
ARMEN YEZEKYAN	The Legal Procedure of Attestation of Public Servants

10. 09. 2022 14: 00 – 16:00 Time zone in Turkey (GMT+3)
Meeting ID: 875 0688 8156 Passcode: 11120922

HALL: 1 SESSION: 2 MODERATOR: DR. ÖĞR. ÜYESİ ENDER UZABACI

ÖĞR. GÖR. AYDIN SEVER DR. AR. GÖR. GÖZDE ARKALI AR. GÖR. EDANUR GÜLER PROF. DR. MEHMET ÇAY	The Effect Of Selenium Application On Oxidative Values In Rats Exercising Until Depletion
ÖĞR. GÖR. AYDIN SEVER PROF. DR. MEHMET ÇAY DR. AR. GÖR. GÖZDE ARKALI	The Effect Of Selenium On Swimming Endurance, Oxidative Stress And Nrf2/HO-1 Protein Expressions In Rats
DOÇ. DR. SEMRA KAYA ARŞ. GÖR. GÖKHAN KOÇAK	Üreme Mevsimindeki Romanov Koyunlarında Senkronizasyon Protokolleriyle Birlikte D Vitamini Enjeksiyonunun Bazı Üreme Parametreleri Üzerine Etkisi
ARŞ. GÖR. GÖKHAN KOÇAK	Koyunlarda Seksüel Senkronizasyon Ve Östrusun Uyarılması
DR.ÖĞR.ÜYESİ ENDER UZABACI	The Effect Of Synbiotics On Broiler Growth Performance: A Meta-Analysis
DR. ÖĞR. ÜYESİ NEHİR KAYMAK DR. ÖĞR. ÜYESİ NESRİN EMRE DR. F. BANU YALIM	Barajlı Bir Nehrin Balık Topluluk Yapısının Uzunlamasına Ve Zamansal Değişimi: Aksu Çayı, Antalya
DR.ÖĞR.ÜYESİ, NÜVİT COŞKUN	Proteins Encoded By Canine Distemper Virus, Their Importance In Pathogenesis And Molecular Diagnosis

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Meeting ID: 875 0688 8156	Passcode: 11120922
HALL: 2 SESSION: 2	MODERATOR: ASST.PROF., YEŞİM ESGİN
DR. BHAVNA B. TERAIYA	Knowledge Management in the Digital Library using Technology
ASST.PROF., YEŞİM ESGİN	A Study Of Social Proof And Consistency Strategies For Software As A Service (Saas) Products In The Digital Music Market As In The Context Of Persuasion
DR. ÖĞRETİM ÜYESİ, MÜJDE AKSOY	Online Anlık Satın Alma Davranışında Influencer Pazarlamanın Etkisi Üzerine Bir Araştırma
DR. ÖĞRETİM ÜYESİ, MÜJDE AKSOY	Dijital Tüketim Olgusu Ve Dijital Tüketici Trendleri
RES. ASSİST. DR. HAKAN ÖNDES	Forecasting Of Housing Sales In Turkey With Artificial Neural Networks And Hybrid Techniques
DR. HASAN YALÇIN	Favök (Ebitda) Kavramı Ve Muhasebe Tahminlerinin Favök Üzerine Etkisi
DR. ÖĞR. ÜYESİ ,ERKİN NEVZAT GÜDELCİ İLYAS ÖZER	Finansal Raporlama Dili XBRL Ve XBRL Hakkında Yazılmış Makalelerinin Şekil Ve İçerik Analizi
DR. BURCU YİĞİT	The Conceptual And Theoretical Investigation Of The Role Of Mobbing In The Relationship Between Job Stress And Burn Out Syndrome

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HALL: 3 SESSION: 2 MODERATOR: DOÇ.DR. GÜLDEN ŞİŞMAN

ELMER M. SORIANO BENJAMIN T. SABATER III DELBERT JEWEL M. NATAGOC SHANNEN LEIGH A. UY	The Philippine Fintech Industry And Its Impact On The Digital Efficiency Of The Local Government In Metro Manila
MURAT KARA	Süleyman Demirel Üniversitesinde Uygulanan Askıda Yemek Sosyal Sorumluluk Projesinin Ekonomik Etkilerinin Analizi
MURAT KARA	Kovid-19 Döneminde Türkiye'de Pazarlama Trendleri
DR. ÖĞR. ÜYESİ, CANAN YILDIRAN	Meslek Yüksekokulu Öğrencilerinin Girişimcilik Yönelimlerinin Demografik Değişkenler Açısından Değerlendirilmesi
ASST. PROF. DR. FULYA ZARALI	Evaluation Of The Logistics Performance Of G7 Countries With MCDM Method
ARŞ. GÖR. SAMET ÖZDEMİR	En Etkin 50 Üst Düzey İnsan Kaynakları Yöneticisinin (CHRO) Linkedin Profillerinin İncelenmesi
NURFİGEN FESLİOĞLU DR. KANSU GENÇER	An Example Of Sustainable Gastronomy Tourism: Tequila Tourism In The UNESCO Cultural Heritage Agave Region
DOÇ.DR. GÜLDEN ŞİŞMAN	Ödeme Kaydedici Cihazlara Yapılan Müdahalenin Kaçakçılık Suçu Açısından Değerlendirilmesi
YÜKSEK LİSANS ÖĞRENCİSİ, BETÜL ÇELİK	Uluslararası Ticarette Müdahale Araçları Olarak Kullanılan Tarife Dışı Engeller Ve Türkiye'nin Dış Ticareti Üzerine Etkileri

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HALL: 4 SESSION: 2 MODERATOR: DOÇ. DR. ÇİĞDEM TANYEL BAŞAR

SEGUN AYODELE	Improving Compliance To International Humanitarian Laws Amongst The North East Nigerian Troops During Counter-Insurgencies
ÖĞR. GÖR. DR., HAKAN IRAK	Dijitalleşen Demokrasi Ve Yeni Bir Siyasi Dönüşüm Olarak Dünyada Ve Türkiye'de Elektronik Siyasi Partiler
ZEYNEP SÖNMEZ	An Assessment On The Concept Of Modern Science And Progress
DR. GÜLLER ŞAHİN ÖĞR. GRV. DR. FATİH VOLKAN AYYILDIZ	The Relationship Of Globalization, Natural Resources And Ecological Footprint
DR. MEHTAP DOĞAN	A Discussion on Artificial Mind: Fading Qualia
DOÇ. DR. ÇİĞDEM TANYEL BAŞAR	Experimental Approaches To The Concept Of Migration From Different Disciplines

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HALL: 5 SESSION: 2 MODERATOR: **DOÇ. DR. MEHMET NURİ ÇINARCI**

DR.ÖĞR.ÜYESİ, ALEV ÖNDER	Bir Değişim Romanı Olarak Manves City'de Kimlik, Yitirilen Geçmiş Ve Bellek
DR. ÖĞR. GÖR., GÖKÇE ULUS	Fakir Gencin Hikâyesi'nde Anlatıcının Kimliği
DOÇ. DR. MEHMET NURİ ÇINARCI	A Translation Of Gulistan The Author Of Which Is Unknown In Library Of Behram Begova
DOÇ. DR. MEHMET NURİ ÇINARCI	The Works Of Ibnu'l-Arabi As A Source In Turkish Mesnevi Commentaries
ÖĞR. GÖR. DR. HÜSEYİN SELİM KOCABIYIK	Batılı Çeviribilimcilerin Kuramları Işığında Necib Mahfuz'un "Başkan'ın Öldürüldüğü Gün" Adlı Romanındaki Dil Oyunlarının Türkçe Çevirisinin Analizi
DR. ÖĞR. ÜYESİ ABDÜLHAKİM BAHADIR DARI	An Analysis Of Images In Anti-War Public Service Announcements In The Light Of Louis Hjelmslev's Indicative Model
DR. ÖĞR. ÜYESİ, MEHMET FATİH ELMAS	Camus'nün "Varoluşçuluk"U Üzerine
F.Ü.F.D.NƏRMİN CAHANGİROVA	Lu Sinin "A-Künün Həqiqi Hekayəsi" Povestinin İdeya-Bədii Xüsusiyyətləri

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HALL: 6 SESSION: 2	MODERATOR: Dr. Öğr. Üyesi TÜLAY KORKUSUZ POLAT
SEEMANT TIWARI	Data Set Clustering Using K-Means
OMAR SAGBAN AL-BUTTI PROF.DR. MUSTAFA BURUNKAYA	Comparison Between Using Genetic Algorithm And Fmincon Methods For Solving The Optimal Power Flow Of Ieee-30 Bus Standard System
CEMAL KÖR PROF.DR. MUSTAFA BURUNKAYA	Iot Tabanlı, Mobil Cihazlar İle İzlenebilen Ve Kontrol Edilebilen Yeni Ve Modern Bir Hassas Mantar Tarım Sistemi
MÜH. SEZGİN CEYLAN PROF. DR. MUSTAFA BURUNKAYA	Uçuş Simülatörü Hareket Sistemleri İçin Fpga Tabanlı Düşük Gürültülü Gerçek Zamanlı Veri Toplama Sistemi
AHMET KIZMAZ	Akıllı Şebekelere Yenilenebilir Enerji Kaynaklarının Entegrasyonunun Çevre Açısından İncelenmesi
EKİN BERFİN BIYIK CÜNEYT TEKİN TÜLAY KORKUSUZ POLAT	Bir Makine İşletmesinde Ergonomik Risk Analiz Yöntemi Kullanılarak Proses İyileştirme
ELİF ALADAĞ TÜLAY KORKUSUZ POLAT	Bir Treyler Firması İçin Üretim Sürecinin Analizi
BUSE YÜKSEL	Aşındırıcıların Fren Balatası Sürtünme Performansı Üzerine Etkileri (Poster)

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HALL: 1 SESSION: 2 MODERATOR: **MOHAMED M. ELSHERBINY**

AKM REZAUL KARIM TANIA SHARAFAT ABU YUSUF MAHMUD	Cognitive Emotion Regulation in Children Is Attributable to Parenting Style, Not to Family Type and Child's Gender
SHEILA MARIE G. HOCSON	Career Counseling Program for the Psychological Well-Being of Freshmen University Students
MOHAMED M. ELSHERBINY	The Effectiveness of Cognitive Behavioural Intervention in Alleviating Social Avoidance for Blind Students
ASIF ALI, DAUD SALIM FARUQUIE	A Quasi-Systematic Review on Effectiveness of Social and Cultural Sustainability Practices in Built Environment
VESILE EVRIM ALIYU AWWAL	Effect of Personality Traits on Classification of Political Orientation
MARZIEH TALEBZADEH SHOUSHTARI	The Effectiveness of Metaphor Therapy on Depression among Female Students
ASMITA SHUKLA SOMA PARIJA	Impact of Personality and Loneliness on Life: Role of Online Flow Experiences
A. GAGAT-MATUŁA	Family Relationships and Coping with the Stress of Young People from Migrant Families with Cerebral Palsy
ABDULKAREEM HUSSEIN BIBIRE	Job Satisfaction and Motivation as Predictors of Lecturers' Effectiveness in Nigeria Police Academy

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HALL: 2 SESSION: 2	MODERATOR: **RAJAMANI DORAISWAMI**
ANUPAM KUMAR ABDUL HAMID BHAT PRAMOD AGARWAL	Reduced Rule Based Fuzzy Logic Controlled Isolated Bidirectional Converter Operating in Extended Phase Shift Control for Bidirectional Energy Transfe
G. KHAMOOSHIAN	Designing a Robust Controller for a 6 Linkage Robot
AHMAD ZAHRAN AHMED HERZALLAH AHMAD AHMAD MAHRAN QURAAN	Modular Harmonic Cancellation in a Multiplier High Voltage Direct Current Generator
RAJESH KUMAR PUNEET AGGARWAL	Integration of Virtual Learning of Induction Machines for Undergraduates
MOHD TARIQ	Five-Phase Induction Motor Drive System Driven by Five-Phase Packed U Cell Inverter: Its Modeling and Performance Evaluation
RAJAMANI DORAISWAMI LAHOUARI CHEDED	Adaptive Kaman Filter for Fault Diagnosis of Linear Parameter-Varying Systems
ZAKIR HUSAIN NEEM SAGAR NEERAJ GUPTA	Steady State Analysis of Distribution System with Wind Generation Uncertainity
MAMIDI RAMAKRISHNA RAO	Optimization of Doubly Fed Induction Generator Equivalent Circuit Parameters by Direct Search Method
ALPANA AGARWAL AKHIL SHARMA	Inverter Based Gain-Boosting Fully Differential CMOS Amplifier

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HALL: 3 SESSION: 2	MODERATOR: **NILIMA D. GAJBHIYE**
KARUPPAIYA MARUTHAI VIRUTHAGIRI THANGAVELU MANIKANDAN KANAGASABAI	Statistical Screening of Medium Components on Ethanol Production from Cashew Apple Juice using Saccharomyces diasticus
EMMA K. SALES NILDA G. BUTARDO	Molecular Analysis of Somaclonal Variation in Tissue Culture Derived Bananas Using MSAP and SSR Markers
NILIMA D. GAJBHIYE	Toxic Effect of Sodium Nitrate on Germinating Seeds of Vigna radiata
E. BINAEIAN SH. SOROUSHNIA	Investigation on Toxicity of Manufactured Nanoparticles to Bioluminescence Bacteria Vibrio fischeri
ADNAN Y. ROJEAB	Magnetic Properties Govern the Processes of DNA Replication and the Shortening of the Telomere
SOMAYYEH AZIZI SAEED KABOLI ATSUSHI YAGI	Evolutionary Distance in the Yeast Genome
ARPITA SONI SAPNA MITTAL	Smart Motion
NADIA EL ALAMI EL HASSANI, SOUKAINA MOTIA BENACHIR BOUCHIKHI NEZHA EL BARI	Synthesis of Highly Sensitive Molecular Imprinted Sensor for Selective Determination of Doxycycline in Honey Samples

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Meeting ID: 816 5724 8099	Passcode: 10110922
HALL: 4 SESSION: 2	MODERATOR: **MOHAMMAD ABDOLLAHI**
ABU SALIM MUSTAFA	Microbial Contaminants in Drinking Water Collected from Different Regions of Kuwait
MANISHA CHAUDHARY JOYDIP DHAR GOVIND PRASAD SAHU	Mathematical Model of Depletion of Forestry Resource: Effect of Synthetic Based Industries
NOOR MOHAMMAD	The Agricultural Governance in Bangladesh: A Case Study
OQBA BASAL ANDRÁS SZABÓ	The Effects of Drought and Nitrogen on Soybean (Glycine max (L.) Merrill) Physiology and Yield
GERALD AMATRE JULIUS BUNNY LEJJU MORGAN ANDAMA	Jigger Flea (Tunga penetrans) Infestations and Use of Soil-Cow Dung-Ash Mixture as a Flea Control Method in Eastern Uganda
MOHAMMAD ABDOLLAHI	Application of Metarhizium anisopliae against Meloidogyne javanica in Soil Amended with Oak Debris
MUHAMMAD IMRAN IQRA BASİT MOBUSHİR RİAZ KHAN SAJİD RASHEED AHMAD	Analyzing the Impact of Spatio-Temporal Climate Variations on the Rice Crop Calendar in Pakistan
KUNWAR D. YADAV DAYANAND SHARMA	Vermicomposting of Textile Industries' Dyeing Sludge by Using Eisenia foetida

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HALL: 5 SESSION: 2 MODERATOR: **NGUYEN VIET TAN**

TRAVIS MORRIS	Analyzing Environmental Emotive Triggers in Terrorist Propaganda
JORGE A. SCHIAVON	Federalism and Foreign Affairs: The International Relations of Mexican Sub-State Governments
A. BAHAR GANIYEVA M. SABUHI TANRIVERDIYEV	The State Support to the Tourism Policy Formation Mechanism in Black Sea Basin Countries (Azerbaijan, Turkey, Russia, Georgia) and Its Impact on Sustainable Tourism Development
YVONNE AYERKI LAMPTEY	Behavioural-Orientation and Continuity of Informality in Ghana
TRIYANTO RIMA VIEN PERMATA HARTANTO	Recognition and Protection of Indigenous Society in Indonesia
NGUYEN VIET TAN	Identifying the Traditional Color Scheme in Decorative Patterns Used by the Bahnar Ethnic Group in the Central Highlands of Vietnam
MOHSEN DAVARZANI EHSAN LAME MOHAMMAD TAGHI HASSAN ZADEH	Reviewing the Relation of Language and Minorities' Rights
PUTHSODARY TAT	A Theory-Based Analysis on Implications of Democracy in Cambodia
JAILAN MOHAMED EL DEMERDASH	Millennials' Viewpoints about Sustainable Hotels' Practices in Egypt: Promoting Responsible Consumerism
MUHAMMAD NAVEED YANG CAIXIA	Need of National Space Legislation for Space Faring Nations

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HALL: 6 SESSION: 2 MODERATOR: **MUSA BALA ZAKARI**

AHMAD ALSOLAMI DARREN MUNDY MANUEL HERNANDEZ-PEREZ	A Structured Mechanism for Identifying Political Influencers on Social Media Platforms: Top 10 Saudi Political Twitter Users
NANCHE BILLA ROBERT	Income Inequality and the Poverty of Youth in the Douala Metropolis of Cameroon
MUSARRAT JABEEN	Conceptualizing Thoughtful Intelligence for Sustainable Decision Making
MUSA BALA ZAKARI MARK BUTTON	Insiders' Perspectives of Countering Public Sector Corruption in Nigeria: Identifying and Targeting Its Nature, Characteristics and Fundamental Causes
HASHEM DEHGHANNIRI	A Goal-Driven Crime Scripting Framework
MUJEEB SAIF MOHSEN AL-ABSY KU NOR IZAH KU ISMAIL SITRASELVI CHANDREN	Corporate Governance Mechanisms, Whistle-Blowing Policy and Earnings Management Practices of Firms in Malaysia
JAILAN MOHAMED EL DEMERDASH	Millennials' Viewpoints about Sustainable Hotels' Practices in Egypt: Promoting Responsible Consumerism
NAEEM ULLAH KHAN KALSOOM KHAN	Evolving Paradigm of Right to Development in International Human Rights Law and Its Transformation into the National Legal System: Challenges and Responses in Pakistan
MOHAMMAD TIPU SULTAN FARZANA SHARMIN KE XUE	Sharing Tourism Experience through Social Media: Consumer's Behavioral Intention for Destination Choice

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Meeting ID: 875 0688 8156	Passcode: 11120922
HALL: 1 SESSION: 1	**MODERATOR: KADRİ KURT**
M. MUSTAFA BEYDAĞI DOÇ.DR. A. FATİH ÖZCAN PROF.DR. İLHAN İÇEN	Alt-Or-Mat Köprüsü
M. MUSTAFA BEYDAĞI PROF.DR. İLHAN İÇEN DOÇ.DR. A. FATİH ÖZCAN	Zit Kenar Dik Üçgen
ASST. PROF. DR. ADEM YOLCU ASSOC. PROF. DR. TAHA YASİN ÖZTÜRK	Some New Results On Pythagorean Neutrosophic Soft Topological Spaces
ASST. PROF. DR. ADEM YOLCU ASSOC. PROF. DR. TAHA YASİN ÖZTÜRK	Some Operations On Pythagorean Neutrosophic Soft Topological Spaces
PROF. DR., ÖMÜR DEVECİ RES. ASSİST., ÖZGÜR ERDAĞ	The Narayana-Padovan Sequence Modulo *m*
RES. ASSİST., ÖZGÜR ERDAĞ PROF. DR., ÖMÜR DEVECİ	The Representation And Finite Sums Of The Narayana-Padovan Numbers
ASST. PROF. DR. YEŞİM AKÜZÜM	The Narayana-Jacobsthal Sequence Modulo *m*
ASST. PROF. DR. YEŞİM AKÜZÜM	The Representations And Finite Sums Of The Narayana- Jacobsthal Numbers
ÇİĞDEM CENGİZ MEHMET SAİT CENGİZ	Volumetric Lighting In Architectural Design
ÇİĞDEM CENGİZ MEHMET SAİT CENGİZ	Use Of White Light In Living Spaces
KADRİ KURT	Prunus Armeniaca L. Ekstraktından Gümüş Nanopartiküllerin Sentezi ve Yapısının Aydınlatılması

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HALL: 2 SESSION: 1	**MODERATOR: DR. GAMZE ALP**
ÖĞR. GÖR. DR. BARIŞ DEMİREL	Çocuk Koruma Politikaları Üzerine Bir Değerlendirme: "Çöp Evde Bulunan Çocuk Koruma Altına Alındı"
NESLİHAN CEYLAN	Çalışan Kadınlar Ve Yaşam Kalitesi Arasındaki İlişkiyi Ortaya Koyan Araştırmaların İçerik Analizi
ARŞ. GÖR. HAVVA NUR ATALAY PROF. DR. RECEP YÜCEL	Paternalistic Leadership In Healthcare Management
PROF. DR. RECEP YÜCEL ARŞ. GÖR. HAVVA NUR ATALAY	Workplace Incivility In Healthcare Management: Content Analysis
RESS ASST. HÜLYA YILDIZ	Sürdürülebilir Kalkınma Kapsamında Kadının Güçlendirilmesinde Eğitimin Rolü
ARAŞTIRMA GÖREVLİSİ DR. GAMZE ALP	JCI Belgeli Sağlık Tesislerinin Web Sitelerinin İncelenmesi
NURSİMA ŞAHKULUBEY BAYKAL	Kurumsal İtibarın Kurumsal Kimlik Üzerine Etkisinde Etik İklimin Aracılık Rolü

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HALL: 3 SESSION: 1	MODERATOR: DOÇ.DR., ZUHAL AKMEŞE DEMİR
DR. ÖĞR. ÜYESİ, AYLİN GÜNGÖR	Gerçek Ötesi Bir Yaklaşımla Viral Reklamlar: Simpsons Örneği
DR. ÖĞR. ÜYESİ, AYLİN GÜNGÖR	Bir Mecra Olarak Tasarımcının Sanal Portfolyosu: Instagram
DR. ÖĞR. ÜYESİ DİLAVER BAYINDIR PROF. DR. MEHMET IŞIK	Göç Belgeseli Çekmek: Otoetnografik Bir Bakış
DR. ÖĞR. ÜYESİ DİLAVER BAYINDIR PROF. DR. MEHMET IŞIK	Türk Sinemasının İlk Salgın Hastalık Konulu Filmi Salgın (1954) Üzerine Tespitler
YÜKSEK LİSANS ÖĞRENCİSİ, AHMET ENES BUDAK	20. Yüzyılda Ontoloji Akımları ve Sanat Akımları İlişkisi
DOÇ. DR. MEHMET FATİH KALIN	Aydınlanma Dönemi Sonrasında Değişen "Kutsal" Düşüncesinin Sanat Anlayışına Etkisi
DOÇ.DR. PINAR TOKTAŞ ARŞ. GÖR.ASLI SEDA AKBAŞ	Ankara Milli Kütüphane Ve Harvard Üniversitesi Kütüphanesi Açık Erişimde Yer Alan İki Mushaf-I Şerif'in Serlevha Bezemelerinin İncelenmesi
DOÇ. DR. ÖZCAN DEMİR	Klasik Anlatı Sinemasında Süper Kahraman Stereotiplerini Dönüşümü
M. FURKAN CAN HALİTOĞLU DOÇ. DR. ÖZCN DEMİR	Klasik Anlatı Unsurlarından Katharsis Ve Özdeşleşme Kavramlarının İnteraktif Sinema Filmlerinde Kullanımı: Black Mirror Bandersnatch Filmi Örneği
DOÇ.DR., ZUHAL AKMEŞE DEMİR	Covid-19 Pandemisinin Sinema Alanına Etkileri Üzrine Bir Değerlendirme
DOÇ.DR., ZUHAL AKMEŞE DEMİR	Edebiyattan Sinemaya Uyarlanan Filmler: Mutluluk İlmi Üzerine Bir Değerlendirme
ÖĞR. GÖR. OLGUN KÜÇÜK DR. ÖĞR. ÜYESİ MEVLÜT CAN KOÇAK	Yeni Medyadaki Komedi Programlarında Suçun Mizahi Sunumu

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HALL: 4 SESSION: 1 MODERATOR: ARŞ. GÖR. ECEM KARA

JERICHO N. MOLOBOCO GRACIELA MAE D.P. BREQUILLO EMMANUEL JOHN B. SOLIVA ESTEFANIE R. CORTEZ	The Urban Expansion Vs. The Sustainability Of Agri-Fishery In The Philippines: A Case Study Of "Tahong" Industry In The Municipality Of Jiabong, Samar
RAMCES M. DILI GLENZY KIN A. GINEZ PATRICIA M. ROMAN	Towards The Economic Development Of The Philippines: Achieving Sustainable Development And Food Security Through Urban Agriculture
DOÇ. DR. VALEH K. ŞUKUROV ÖĞRETİM GÖREVLİSİ. MEDİNE H.ABIŞOVA	Hacikent Ormanlarında Antropojenik Değişimler Ve Restorasyon Sorunları
TOLGAHAN AHMET COSKUN SUMER HORUZ	Phosphite Treatments to Control Tomato Bacterial Canker and Wilt
SERKAN YENER DOÇ. DR. MEHMET SAĞIROĞLU	Oflak Dağı (Kaynarca) Ve Çevresinin Florasına Katkılar
ARŞ. GÖR. ECEM KARA DR. ÖĞR. ÜYESİ GÖKHAN BAKTEMUR	Determining The Effects Of Some Heavy Metal Applications On White Cabbage (Brassica Oleracea Var. Capitata F. Alba) In In Vitro Conditions

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ASST. PROF. DR. DENİZ DİNÇ	Nationalist and Populist Ideologies of the Three Rival Political Actors in Tatarstan during the Collapse of the Soviet Union
BATTAL ŞENER	FIDIC Sözleşmeleri Kapsamında Uluslararası Tahkim
ARŞ. GÖR. DR. AZER EBRU MUTLU	The Evaluation Of The Principle Of Continuity And Change, From The Public Service Measurement Principles, In Terms Of The Library Services Offered By The Administration
DR. ÖĞR. ÜYESİ, EMRAH UTKU GÖKÇE	Uluslararası İlişkiler Çalışmalarında Karma Yöntem Yaklaşımının Kullanılması
YL. ÖĞRENCİSİ, GİZEM AYDIN	Turkey's Attitude Towards The International Criminal Court
ASSİST. PROF. MERİH ANGIN	An NLP Approach For Identifying Relevance To Sustainable Development Goals
HÜSNE TEMUR DOÇ. DR., SEÇİL GÜL MEYDAN YILDIZ	Türkiye'de Konut Politikaları Gelişiminin Kalkınma Planları Persfektifinde Değerlendirilmesi
HÜSNE TEMUR DOÇ. DR., SEÇİL GÜL MEYDAN YILDIZ	Ulusal Kalkınma Planlarında (1963-2023) Afet Yönetimi
Fidan Bahruz qızı Allahyarova	Legal issues regarding regulation of mediation payment

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ERIC HAWKINSON EDGARAS ARTEMCIUKAS	Simplified Mobile AR Platform Design for Augmented Tourism
NGONO MINDZENG TERENCIA	Community Based Tourism and Development in Third World Countries: The Case of the Bamileke Region of Cameroon
ELDAH EPHRAIM BUBA	An Evaluation of Tourism Education in Nigeria's Higher Institutions
BITA MASHAYEKHI MOHAMMAD ARA	Activity-Based Costing in the Hospitality Industry: A Case Study in a Hotel
CHUKIAT CHAIBOONSRI SATAWAT WANNAPAN	Asymmetrical Informative Estimation for Macroeconomic Model: Special Case in the Tourism Sector of Thailand
MAJA MARTINOVIC VALENTINA ZARKOVIC HRVOJE MALJAK	Potential of Croatia as an Attractive Tourist Destination for the Russian Market
CHUTIMA KLAYSUNG	Behaviors and Factors Affecting the Selection of Spa Services among Consumers in Amphawa, Samut Songkhram, Thailand
RADWA MABROOK	Collaborative and Experimental Cultures in Virtual Reality Journalism: From the Perspective of Content Creators
SADHANA GHNAYEM	The Impact of Socio-Economic and Type of Religion on the Behavior of Obedience among Arab-Israeli Teenagers

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LASZLO VARI	Freedom with Limitations: The Nature of Free Expression in the European Case-Law
EREZ COHEN	The Impact of Globalization on the Development of Israel Advanced Changes
GERGELY HORVÁTH	The Two Layers of Food Safety and GMOs in the Hungarian Agricultural Law Authors: Gergely Horváth
MARÍA JOSÉ BENÍTEZ JIMÉNEZ	Jurisprudencial Analysis of Torture in Spain and in the European Human Rights System
MOHSEN DAVARZANI EHSAN LAME MOHAMMAD TAGHI HASSAN ZADEH	Reviewing the Relation of Language and Minorities' Rights
ADA YURMAN	The Social Reaction to the Wadi Salib Riots (1959) as Reflected in Contemporary Israeli Press
DIYA SARKAR PRAFULLA C. MISHRA	An Analytical Study on the Politics of Defection in India
ISAIAS TEKLIA BERHE	The Ethio-Eritrea Claims Commission on Use of Force: Issue of Self-Defense or Violation of Sovereignty
MARISA CATARINA DA CONCEIÇÃO DINIS	Directors' Duties, Civil Liability, and the Business Judgment Rule under the Portuguese Legal Framework
JÚLIA SZŐKE	Negotiating Across Cultures: The Case of Hungarian Negotiators

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MAHA BENHAMAD ALI SNOUSSI AMMAR BEN BRAHIM	A Simulation Model and Parametric Study of Triple-Effect Desalination Plant
NUR SARMA PAUL M. TUOHY SINIŠA DJUROVIĆ	Investigation of Grid Supply Harmonic Effects in Wound Rotor Induction Machines
JOSE D. HERRERA MARIO A. RIOS	A Multiobjective Damping Function for Coordinated Control of Power System Stabilizer and Power Oscillation Damping
IDRIS A. ELFEITURI	Exergy Based Performance Analysis of a Gas Turbine Unit at Various Ambient Conditions
AHMAD K. JASSIM RAHEEM KH. AL-SUBAR	Studying the Possibility to Weld AA1100 Aluminum Alloy by Friction Stir Spot Welding
EKOW A. KWOFIE EMMANUEL K. ANTO GODFRED MENSAH	Determination of the Optimal DG PV Interconnection Location Using Losses and Voltage Regulation as Assessment Indicators Case Study: ECG 33 kV Sub-Transmission Network
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M. EMAMI R. TARIGHI R. GOODARZI	Simulation of Reflection Loss for Carbon and Nickel-Carbon Thin Films
MOSES C. SIAME KAZUTOSHI HAGA ATSUSHI SHIBAYAMA	Treatment of Low-Grade Iron Ore Using Two Stage Wet High-Intensity Magnetic Separation Technique
MOHAMED YOUSEF MAGDY SAMUEL MAHA EL-MELIGY TAHER EL-BITAR	Hot Deformability of Si-Steel Strips Containing Al

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R. SEKULA	Material Concepts and Processing Methods for Electrical Insulation
ALLURU GOPALA KRİSHNA THELLA BABU RAO	Performance Assessment of Carbon Nano Tube Based Cutting Fluid in Machining Process
AYHAN AYDOĞDU ERCAN CEYHAN ALİ KAHRAMAN NURSEL ÇÖL	Effects of Plant Densities on Seed Yield and Some Agricultural Characteristics of Jofs Pea Variety
AYMEN LAADHARİ	An Implicit Methodology for the Numerical Modeling of Locally Inextensible Membranes
AHMAD H. ABDELGWAD	Microstrip Patch Antenna Enhancement Techniques
LOCHAN BASYAL	Email Based Global Automation with Raspberry Pi and Control Circuit Module: Development of Smart Home Application
SHAIBU BAANNI AZUMAH WILLIAM ADZAWLA	Effect of Urea Deep Placement Technology Adoption on the Production Frontier: Evidence from Irrigation Rice Farmers in the Northern Region of Ghana
NURLIANI, IDA ROSADA	Strategy in Controlling Rice-Field Conversion in Pangkep Regency, South Sulawesi, Indonesia
AYUKO ITSUKI SACHIYO ABURATANI	Comparative Analysis of Soil Enzyme Activities between Laurel-Leaved and Cryptomeria japonica Forests

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R. SEKULA	Material Concepts and Processing Methods for Electrical Insulation
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DR. ÖĞRETİM ÜYESİ HACI ÇİÇEK	An Evaluation Of The Attribution Of "Idiot" Among The Slanders Thrown At The Prophets During The Invitation Process
MIHDAT AKTULGA	Zerdüştilikte Kötülük Problemi Ve İnsanın Rolü
DOÇ. DR. SABRİ ARICI	Phokaıa'nın Roma Dönemi'ndeki Durumu
DOÇ. DR. SABRİ ARICI	Phokaıa - Pers İlişkileri Üzerine Tespitler
UZM.ÖĞRT. AYHAN NİŞANCI PROF.DR.MUSA BİLGİZ	Kur'an'da Rahmet Ve Merhamet Üzerine Kavramsal Bir Analiz
UZM.ÖĞRT. AYHAN NİŞANCI	Kur'an'da Fıtrat Ve Fıtratullah'ın Kavramsal Analizi

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DOÇ. DR. ULUÇ ÇAĞATAY PROF. DR. AHMET UÇAR	Assessment Of The Tourism Goals Included In The Regional Plans
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SEHERGÜL KAYNAK PROF. DR. M. KAYHAN KURTULDU	Piyano Eğitiminde Bona Ve Solfej Çalışmasının Esere Adaptasyon Sürecine Etkisi
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DR. ÖĞR. ÜYESİ ŞERİFE GÜVENÇOĞLU ARAŞ. GÖR. ORKUN ZAFER ÖZGELEN	Türk Makam Müziği'nde Makam Ve Seyir Kompozisyonu

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ELLIE ABDI SUSANA JUNIU	Interdisciplinary Integrated Physical Education Program Using a Philosophical Approach
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K. BUSKO	Changes of Power-Velocity Relationship in Female Volleyball Players during an Annual Training Cycle
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RAZAN SALEM	Gender Differences in Risk Aversion Behavior: Case Study of Saudi Arabia and Jordan
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SALEEM ABU JABER KHALED IGBARIA	Spacial Poetic Text throughout Samih al-Qasim's Poetry
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KEVIN MOUSTAPHA	Psychopathic Disorders and Judges Sentencing: Can Neurosciences Change This Aggravating Factor in a Mitigating Factor?
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COVID-19 PANDEMİ SÜRECİNDE EKRAN KARŞISINDA ÇALIŞAN BİREYLERDE GÖZ YORGUNLUĞU, BAŞ AĞRISI, FİZİKSEL VE MENTAL YORGUNLUK

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ÖZET

Uzamış COVID-19 pandemi sürecinde karantina ve kısıtlama koşullarına bağlı olarak birçok iş yeri uzaktan çalışma sistemine geçiş yaptı ve ekran karşısında geçirilen süre arttı. Ancak bu süreçte ekran karşısında çalışan bireylerde göz yorgunluğu, baş ağrısı, fiziksel ve mental yorgunluğun ne düzeyde etkilendiği halen bilinmemektedir. Bu sebeple COVID-19 pandemi sürecinde ekran karşısında çalışan bireylerde göz yorgunluğu, baş ağrısı, fiziksel ve mental yorgunluğu araştırmayı amaçladık. Günde en az 4 saat ekran karşısında aktif olarak çalışan yetişkin bireyler (n=75, 28,61±6,60 yıl) çalışmaya dahil edildi. Çevrimiçi bir formla bireylerin göz yorgunluğu ve baş ağrısı (Sayısal Derecelendirme Skalası), baş ağrısının günlük yaşama olan etkisi (Baş Ağrısı Etki Testi (BAET)) ile fiziksel ve mental yorgunluk durumları (Chalder Yorgunluk Ölçeği (CYÖ)) değerlendirildi. Bireylerin %56'sı ekran karşısında baş ağrısı yaşıyordu, %90,7'si ekran karşısında göz yorgunluğu bildirdi. Bireylerin göz yorgunluğu puanı dinlenmede 3,20±2,69, aktiviteler yaparken 3,65±2,61'di. Bireylerin baş ağrısı puanı dinlenmede 2,17±2,33, aktiviteler yaparken 2,75±2,42'ydi. Bireylerin BAET ortalaması 55,27±7,48, CYÖ ortalaması 4,33±2,87, fiziksel yorgunluk alt ölçek ortalaması 2,99±2,15 ve mental yorgunluk alt ölçek puanı ortalaması 1,35±1,24 puandı. Baş ağrısının günlük yaşama etkisi 16 (%21,3) bireyde yok veya çok azdı, 23 (%30,7) bireyde biraz vardı, 13 (%17,3) bireyde kayda değerdi ve 23 (%30,7) bireyde şiddetliydi. Bireylerin CYÖ puanı ile BAET (r=0,341), dinlenmede baş ağrısı (r=0,259), aktivite yaparken baş ağrısı (r=0,282), dinlenmede göz yorgunluğu (r=0,231) ve aktivite yaparken göz yorgunluğu (r=0,276) puanları arasında anlamlı pozitif korelasyon vardı (p<0,05). Uzamış COVID-19 pandemi sürecinde ekran karşısında çalışan bireylerin büyük çoğunluğunda hafif şiddette göz yorgunluğu ve baş ağrısı bulunmaktadır. Bu bireylerin büyük çoğunluğunda baş ağrısı günlük yaşamı etkilemektedir. Fiziksel ve mental yorgunluk ise göz yorgunluğu, baş ağrısı ve baş ağrısının günlük yaşama olan etkisi arttıkça artar. Bu sebeple ekran karşısında çalışan bireylere düzenli göz muayenesi, ekran düzenlemesi, ergonomik düzenleme ve postür egzersizleri önerilmelidir.

Anahtar Kelimeler: astenopi, baş ağrısı, bilgisayarlar, COVID-19, yorgunluk

SİGARANIN DOĞAL ÇEVREYE ZARARLARINI KONU ALAN KAMU SPOTLARI

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Özet

Sigara kullanımının önüne geçmek amacıyla geçmişten günümüze sigaranın insan sağlığına yönelik olumsuz etkilerini yansıtan pek çok kamu spotu yayınlanmıştır. Bunun yanında sigaranın doğal çevreye yönelik oluşturduğu tehdide yönelik de kamuoyunda farkındalık oluşturulması amacıyla çeşitli kamu spotları hazırlanmıştır. Çalışmada sigaranın doğal çevreye yönelik zararlarını yansıtan kamu spotları incelenerek, bu kamu spotlarında hangi mesajlara yer verildiğinin ortaya konulması amaçlanmıştır. Bu amaçla çalışmada sigaranın doğal çevreye yönelik zararlarını konu alan kamu spotları, İsviçreli dilbilimci Ferdinand de Saussure'ün göstergebilim kavramları ışığında analiz edilmiştir. Çalışmada farklı ülkelerden örneklem olarak seçilen reklam kampanyalarında kullanılan kamu spotlarındaki görsel ve yazılı göstergelerdeki açık ve gizli mesajlar incelenmiştir. Çalışmada elde edilen bulgular ışığında konuya ilişkin kamu spotlarında hüzün çekiciliği tekniğinden yararlanılarak, sigaranın doğal çevreye yönelik zararlarına ilişkin insanların bilinçlendirilmesine çalışıldığı ortaya konulmuştur. Bu şekilde çalışmada sigaranın insan sağlığının dışında doğal çevre üzerinde de olumsuz etkilerine ilişkin kamuoyunda farkındalık oluşturularak insanların sigara konusunda daha duyarlı hareket etmelerinin sağlanmasının amaçlandığı sonucuna ulaşılmıştır.

Anahtar Kelimeler: Sigara, Doğal Çevre, Kamu Spotları, Reklam, Kampanya

THE PUBLIC SERVICE ANNOUNCEMENTS ABOUT THE HARMS OF SMOKING TO THE NATURAL ENVIRONMENT

Abstract

In order to prevent smoking, many public service announcements reflecting the negative effects of smoking on human health have been published from past to present. In addition, various public service announcements were prepared in order to raise public awareness about the threat posed by cigarettes to the natural environment. In the study, it was aimed to reveal which messages were included in these public service announcements by examining the public service announcements that reflected the harms of smoking on the natural environment. For this purpose, in this study, the public service announcements about the harm of smoking on the

natural environment were analyzed in the light of the semiotics concepts of the Swiss linguist Ferdinand de Saussure. In the study, the open and hidden messages in the visual and written indicators in the public service announcements used in the advertising campaigns selected as samples from different countries were examined. In the light of the findings obtained in the study, it was revealed that efforts are made to raise awareness of people about the harmful effects of smoking on the natural environment using the sadness appeal technique in the public service announcements on the subject. In this way, it was concluded that it was aimed to ensure that people act more sensitively about smoking forming awareness the negative effects of smoking on the natural environment as well as on human health in the public service announcements in the study.

Keywords: Cigarette, Natural Environment, Public Service Announcement, Advertising, Campaign

KAYISILARDAKİ ARSENİK, SELENYUM VE KURŞUN ELEMENT DÜZEYLERİNE VOLKANİK JEOLOJİNİN ETKİSİNİN ARAŞTIRILMASI

EXAMINATION THE EFFECT OF VOLCANIC GEOLOGY IN APRICOTS THE ARSENIC, SELENIUM AND LEAD ELEMENT CONCENTRATIONS

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ÖZET

Besin olarak tüketilen Iğdır ili ve ilçelerindeki kayısısına, üretim bölgelerindeki jeolojik niteliklerinin etkisi kaçınılmazdır. Bu etki, eser element olarak bilinen arsenik (As), selenyum (Se) ve kurşun (Pb) konsantrasyonları insan metabolizmasında belirli düzeyi aştığında toksite oluşturmaktadır. Ağrı dağı volkanik kayaçlardaki toksik mineraller suda çözünerek insanlarda besin zinciri ile toksik etkiler sonucunda semptomlar oluşturabilmektedir. Bu çalışmada, besin zincirinde yer alan kayısılarda; arsenik, selenyum ve kurşun gibi toksik elementlerin kayısı yetiştirme alanlarının volkanik özelliklerinden etkilendiği belirlenmiştir. Meyve ve kuruyemiş olarak tüketilen kayısılarda As, Se ve Pb insan metabolizmasında belirli derişimin üstünde olduğunda ciddi hastalıklara yol açmaktadır. Bunlar karaciğer, akciğer, böbrek, mesane ve kardiyovasküler kanserlerdir.

Kayısının yetiştirildiği bölgelerde bulunan volkanik nitelikli kayaçlardan alınan örnekler 300 mesh elek altı boyutunda öğütülerek Arsenik, selenyum ve kurşunun derişimleri ICP-MS ile tespit edildi. Bölgede yetişen kayısı yemişi ise 2021 Temmuz ayında meyve ağaçlarının bulunduğu dört farklı alandan temin edildi. Kayısılar çekirdek kabuk ve yemişleri şeklinde gruplandırıldı. Bunlar sadece 80 °C'de etüvde kurutulmakla kalmadı, aynı zamanda sabit ağırlığa getirildikten sonra steril cam şişelerde stoklandı. Stoklanan numuneler mikrodalga fırında asitte yakma yöntemi ile çözündürüldü. Çözeltiye geçen toksik elementler ise ICP- MS ile mg. L^{-1}- µg. L^{-1} konsantrasyonunda belirlendi.

Volkanik kayaçlar ve kayısılardaki toksik element derişimleri karşılaştırıldı. Volkanik kayaçlarda As, Se ve Pb'nin en yüksek konsantrasyonları sırasıyla 3.8 mg. L^{-1}, 0.2 mg. L^{-1} ve 19.35 mg. L^{-1} olarak belirlendi. Volkanik kayaçlardaki toksik element derişimleri As, Se ve Pb en küçük sırasıyla 0.9 mg. L^{-1}, <0.1 mg. L^{-1} ve 7.79 mg. L^{-1} tespit edildi. Kayısılarda en yüksek derişimleri As yemişte; Se ve Pb ise kabukta sırasıyla 33.90µg.L^{-1}, 8.66µg. L^{-1} ve 3.90mg. L^{-1} tespit edildi. Kayısılarda ise, As, Se ve Pb'nin en küçük derişimleri sırasıyla yemişlerde 0.21 µg. L^{-1}, 0.00 µg. L^{-1} ve 0.11mg. L^{-1} tespit edildi.

Bu sonuçlar, sadece kayısılardaki toksik elementlerin içinde büyüdükleri volkanik jeolojiden etkilenmediğini, aynı zamanda konsantrasyonlarının kayısının çekirdeğinde, kabuğunda ve yemişinde de değiştiğini kanıtlamaktadır.

Anahtar kelimeler: Arsenik, Selenyum, Kurşun, Kayısı, Volkanik Kayaç,

Bilgilendirme: Bu Çalışma IĞDIR ÜNİVERSİTESİ BAP Birimince desteklenen (SHY1021Y32 "**Iğdır İl ve İlçelerindeki Kayısı Çekirdeğindeki As, Hg, Cd, Pb, Cu ve Zn Element Düzeylerinin ICP MS ile tespitine Mikrodalga Fırında Yakmanın Etkisi**") ve (2016-FBE-B04 "**Ağrı Dağı Volkanik Kayaçların Yeraltı ve Yerüstü Sularına Etkisi**" adlı proje kapsamında hazırlanmıştır.

ABSTRACT

The Iğdır province and its districts produced of apricot, is inevitable to effect from geological characteristics in the areas. It is toxicity, when the concentrations of arsenic (As), selenium (Se), and lead (Pb) known as trace elements exceed a certain level in human metabolism. Toxic minerals are able to caused symptoms in humans with the food chain after dissolve in water in the volcanic rocks of Mount Ararat. In this study, in apricots in the food chain; was determined that were affected as the volcanic characteristics of the apricot growing areas to the toxic elements of arsenic, selenium and lead. They cause serious diseases when are exceed As, Se, and Pb a certain concentration in human metabolism in apricots consumed as fruits and kernels. These are conspicuous the liver, lung, kidney, bladder, and cardiovascular cancers.

Concentrations of arsenic, selenium and lead were determined by ICP-MS after were ground to 300 mesh size that samples gathered from volcanic rocks in the regions the apricot. Apricots were gathered from four distinct areas from fruit trees in the region in July 2021. Apricots were grouped as kernels, shells, and pulps. These were not only dried in an oven at 105°C, but also stored in sterile glass bottles after have got to constant weight. The stocked samples were dissolved with acid digestion method in microwave oven. They were determined toxic elements in the solution at the concentration mg. L^{-1}-µg. L^{-1} by ICP-MS.

The volcanic rocks to apricots were compared toxic element concentrations. The highest concentrations of As, Se and Pb were determined as 3.8 mg. L^{-1}, 0.2 mg. L^{-1} and 19.35 mg. L^{-1}, in the volcanic rocks respectively. The minimum in volcanic rocks were detected to be 0.9 mg. L^{-1}, <0.1 mg. L^{-1}, and 7.79 mg. L^{-1} concentrations of As, Se, and Pb respectively. The highest concentrations in the shell Se and Pb, in the pulp As were detected 8.66 µg. L^{-1} 3.90mg. L^{-1}, and 33.90 µg. L^{-1}, respectively. The minimum concentrations of As, Se, and Pb were determined to be 0.21 µg. L^{-1}, 0.00 µg. L^{-1}, and 0.11mg. L^{-1} in the pulp of apricots, orderly. These results prove not only the toxic elements in apricots are affected by the volcanic geology in which they grow, but their concentrations also variant in the kernel, shell and pulp of the apricot.

Keywords: Arsenic, Selenium, Lead, Apricot, Volcanic Rocks

Knowledgement: This study was carried out within the scope of the project "**The Effect of Mount Ararat Volcanic Rocks On Underground And Local Waters"** (2016-FBE-B04) and "**Effect of Combustion in Microwave Oven at Determination of As, Hg, Cd, Pb, Cu and Zn Element Levels with ICP MS in Apricot Kernels in Iğdır Province and Districts**" (SHY1021Y32). at IGDIR UNIVERSITY, Scientific Research Project Unit

AĞLAYAN HASTA İLE ETKİLİ İLETİŞİM

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ÖZET

İnsanoğlu günlük yaşamı içerisinde, olaylar ve durumlar karşısında birçok duygu ve davranış geliştirebilmektedir. Bu duygu ve davranışlar içerisindeyken iletişim sağlamak da zorluklar yaşanmaktadır. Özellikle sağlık alanında iletişim güçlüklerine neden olabilen durumlarla daha sık karşılaşılmaktadır. Sağlık alanında zor hasta olarak tabir edilen hasta gruplarıyla da iletişim kurmak karmaşık olabilmektedir. Zor hasta kelimesinin geniş bir açıklamasını yapacak olursak; hastanedeki sağlık profesyonelleri ile işbirliği içinde olmayan, tedaviyi reddeden, tedaviye uyum sağlamayan, ısrarla ilaç talep eden, genellikle öfkeli, endişeli, kendine ve etrafına zarar verme ihtimali olan, sağlık profesyonellerine güvenmeyen, hastalığı ve semptomları hakkında yalan söyleyen ya da bilgi vermeyen, iletişim kurmayan, sürekli ağlayan hastalar zor hasta olarak kabul edilmektedir. Bu tanıma bakıldığında ise iletişimin en önemli olabileceği bir hasta grubu var ki oda ağlayan hasta grubudur. Doğru ve etkili yaklaşım ile iletişimi sağlamak hastaya fayda sağlamaktadır.

Sağlık profesyonelleri genellikle hastalarda ağlama davranışıyla ağrı, acı çektiği zor anlarında ya da sağlıklı bir doğum gibi mutlu anlarda karşılaşırlar. Ancak zor anlarda sağlık alanında hastalarla kurulan iletişimde en çok zorluk yaşanan davranış ve duygulardan biri de ağlayan iletişimdir. Erişkin insanlar ağlama davranışını kontrol etmeyi öğrenmiş kişilerdir. Hatta bazı kültürlerde ağlama davranışı yetişkinler için zayıflık olarak algılanmaktadır. Ancak duyguları dışa dökme davranışlarından da biridir ağlamak. Bir iletişim yöntemi olarak bile tanımlanabilmektedir. Üzüntüyü, çaresizliği, öfkeyi, yardım isteğini ve hissettiği acıyı ifade etme yöntemi olarak ortaya çıkar. Aslında ağlama davranışının verdiği mesaj açıktır; beni görün ve yardım edin.

Hemşirelik bilgi verme, motive etme, moral verme ve teselli etme gibi kavramlardan daha geniş kapsamlıdır. Bir hemşire, psikolojik destek sağlama, duyguları anlama ve tanımlama, yardıma dâhil olabilecek her faktörü kullanma ve organize etme, hastanın algısını değerlendirme, problem çözme, baş etme becerilerini kullanmaya yönlendirme ve doğru ve etkili iletişim kurma gibi girişimleri de planlamalıdır.

Anahtar Kelime: ağlama, hasta, iletişim

TERAPÖTİK İLETİŞİMİN, ÖLÜMÜ YAKLAŞAN BİREY İLE ETKİLEŞİMDEKİ ÖNEMİ VE YERİ

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ÖZET

Sağlık profesyonellerinin sağlık yaklaşımlarındaki temel amacı hastaya yardım etmektir. Bu fenomenden yola çıkarak, hastaya yaklaşan sağlık profesyonelinin hastanın hastalık ve tedavi sürecinin merkezinde yer alıyor olması beklenen bir olgudur.

Yaşamın son anları, hem hasta hem de hasta yakınları için zorlu bir süreçtir. Kötü haberin verilmesi hasta ve yakınlarının bu haber karşısında takınacakları tavır, sahip oldukları kültürün getirileri ile birleşince süreç daha da zorlu bir hal almaktadır. Hastanın aldığı haberi nasıl yorumlayacağını anlamak için öncelikle hastanın öyküsüne hakim olmak gerekmektedir. Yetiştiği kültürde sağlık ve hastalık kavramlarının ne ifade ettiği, hastalık ve ölümün nasıl kabullenildiği çok önemlidir.

Hastalığın, hasta üzerinde nasıl bir duyguya yol açtığını öncelikle hastanın farkına varması beklenmelidir. Görüşme sırasında hastaya neler hissettikleri, şuan ki hislerini hangi kelimelerle açıklayabileceği öğrenilmelidir. Hastanın beden dili ve öfke, ağlama gibi davranışlarının da gözlenmesi gerekmektedir. Hastalık kabullenildikten sonra, sürecin daha huzurlu geçmesi için destek sağlanmalıdır. Hastanın bakıma en çok ihtiyacının olduğu bu dönemde sağlık profesyonellerinin desteği çok önemlidir. Hastalık kaynaklı ortaya çıkan fizyolojik ve psikolojik sorunlar açıklıkla dile getirildiği takdirde, problemin çözümü için çaba harcanmalıdır.

Ölüm yaşamın son anını temsil etmektedir. Ve her insan huzurla ölümü karşılamayı hak eder. Ölüm de yaşamdaki her evre gibi doğal bir süreçtir. Önemli olan bunun doğal olduğunun bilincinde olup, huzurla bu süreci tamamlayabilmektir. Sağlık profesyonelleri ise sahip oldukları terapötik donanımla hastanın bu süreçteki en önde gelen destekçileri olmaktadır. Sözlü ve sözsüz iletişimdeki, terapötik teknikleri bilmek, içselleştirmek ve uygulamak yaşam sonu dönemde hastalarla kurulan iletişimin etkinliğini artıracaktır.

Anahtar Kelime: terapötik iletişim, yaşam sonu, ölüm

ADÖLESANLARDA SOSYAL MEDYA KULLANIMININ SAĞLIĞI GELİŞTİRME DAVRANIŞLARI ÜZERİNE ETKİSİ

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ÖZET

Sosyal medya platformları, kullanıcıların fikirlerini, düşüncelerini, deneyimlerini ve duygularını farklı yollarla paylaşabildiği ya da diğer kullanıcılar ile iletişimde kalabildikleri çevrimiçi aracılardır. Bu çalışmada, adölesanlarda sosyal medya kullanımının sağlığı geliştirme davranışları üzerine etkisinin incelenmesi amaçlanmıştır.

Çalışma, İstanbul ilindeki liselerde öğrenim gören toplam 223 (%48,9 kız %51,1 erkek) öğrenci üzerinde yürütülmüştür. Verilerin toplanmasında Kişisel Bilgi Formu, Sosyal Medya Bağımlılığı Ölçeği (SMBÖ), Adölesan Sağlığı Geliştirme Ölçeği (ASGÖ), Sosyal Medya Kullanım Amaçları Ölçeği (SMKAÖ) kullanılmıştır.

Katılımcıların ortalama yaşı 16,13±,84 yıl, BKİ 22,14±3,70 kg/m^2'dir. Öğrencilerin çoğunluğunda (%49,8) sosyal medya bağımlılığı orta düzeydedir. Sosyal medya kullanım süresi 1 yıldan az olanların Adölesan Sağlığını Geliştirme Ölçeği puanları (142,88±20,60), 4-6 yıl arası kullananların puanlarından (126,07±21,85) anlamlı olarak daha yüksek bulunmuştur ($p<0.05$).

Sosyal medya platformlarından dublajlı video hesabı olanların sosyal medya bağımlılığı ölçeği toplam puanının diğer platformları kullananlara göre daha yüksek olduğu belirlenmiştir ($p<0.05$). Sosyal medya kullanım süresi ile SMBÖ toplam puanı arasındaki ilişki incelendiğinde; 1-3 yıl kullananların (11,51±4,43), 4-6 yıl arası kullananlar (13,94±5,17) ve 7 yıldan fazla kullananlara göre (14,37±6,61) sosyal medya bağımlılığının daha düşük olduğu saptanmıştır ($p<0.05$). Öğün Atlama Durumu ile ASGÖ toplam puanı arasındaki ilişki incelendiğinde ise öğünlerini atlamayanların ASGÖ toplam puanlarının kahvaltı ve öğle öğünleri atlayanların puanlarından anlamlı olarak daha yüksek olduğu görülmüştür ($p<0.05$).

Adölesanlarda sosyal medya bağımlılığının sağlığı geliştirme davranışlarını olumsuz yönde etkilediği, sosyal medya kullanım süresi arttıkça bağımlı olma durumunun da arttığı

görülmüştür. Adölesan dönemde kazanılan alışkanlıklar, bireylerin geleceğe ilişkin sağlıklarının da önemli belirleyicisi olabileceğinden, adölesan dönemdeki bireylerin sosyal medya araçlarını sağlığı geliştirmeye katkı sağlamak amacıyla kullanmaları konusunda bilinçlendirilmesi ve yönlendirilmesinin toplum sağlığı bakımından yararlı olacağı sonucuna varılmıştır.

Anahtar Sözcükler: Adölesan, sosyal medya, beslenme, sağlığı geliştirme, bağımlılık

EGE 6. ULUSLARARASI UYGULAMALI BİLİMLER KONGRESİ
İZMİR
10 - 11 EYLÜL 2022

THE IMPACT OF THE USE OF SOCIAL MEDIA ON HEALTH PROMOTION IN ADOLESCENTS

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ABSTRACT

Social media platforms are online intermediaries where users can share their ideas, thoughts, experiences and feelings in different ways or stay in touch with other users. In this study, it was aimed to examine the effect of social media use on health promotion behaviors in adolescents.

The study was carried out on a total of 223 (48.9% female, 51.1% male) students studying in high schools in Istanbul. Personal Information Form, Social Media Addiction Scale (SMAS), Adolescent Health Promotion Scale (AHPS), Social Media Use Purposes Scale (SMPS) were used to collect data.

The mean age of the participants was 16.13±.84 years, and their BMI was 22.14±3.70 kg/m2. Social media addiction is moderate in the majority of students (49.8%). Adolescent Health Promotion Scale scores of those who use social media for less than 1 year (142.88±20.60) were found to be significantly higher than those who use social media for 4-6 years (126.07±21.85) ($p<0.05$).

It was determined that the total score of the social media addiction scale of those who have a dubbed video account from social media platforms is higher than those who use other platforms ($p<0.05$). When the relationship between the duration of social media use and the total score of SMAS is examined; social media addiction was found to be lower in those who use it for 1-3 years (11.51±4.43) than those who use it for 4-6 years (13.94±5.17), and those who use it for more than 7 years (14.37±6.61) ($p<0.05$). When the relationship between Meal Skipping Status and AHPS total score was examined, it was seen that the AHPS total scores of those who did not skip their meals were significantly higher than of those who skipped breakfast and lunch ($p<0.05$).

It has been observed that social media addiction negatively affects health promotion behaviors in adolescents, and the state of being addicted increases as the duration of social media use increases. Since the habits acquired during adolescence may also be an important determinant

of the future health of individuals, it has been concluded that raising awareness and directing individuals in the adolescence period to use social media tools in a way to contribute to improving health will be beneficial for public health.

Key Words: Adolescent, social media, nutrition, health promotion, addiction

EGE 6. ULUSLARARASI UYGULAMALI BİLİMLER KONGRESİ
IZMIR
10 - 11 EYLÜL 2022

SOSYAL HİZMET EĞİTİMİNDE ELEŞTİREL BİR YAKLAŞIM: PAULO FREİRE VE EZİLENLERİN PEDAGOJİSİ

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ÖZET

Brezilya'nın en yoksul kentlerinden birinde hayata gelen Paulo Freire, baskıcı bir hükümet döneminde yoksulluk içerisinde yaşamını sürdüren gruplarla ve topluluklarla çalışmış, bu süreçte hapis yatmış ve sonrasında uzun yıllar sürgün edilmiştir. Freire'in Ezilenlerin Pedagojisinde ve diğer çalışmalarında dile getirmiş olduğu teoriler ve bunları uygulamaya koyma, yazdıklarına ve inandıklarına göre hareket etme kararlılığı hem eğitimcilere hem de sosyal hizmet çalışanlarına ilham vermiş ve onlara rehberlik etmiştir. Paulo Freire girişimleriyle uluslararası arenada eğitim alanına hayati katkılarda bulunmuştur. Her ne kadar kendisi bir eğitimci de olsa, hedefleri sosyal hizmet mesleği ve eğitimiyle benzerlik gösteren Freire, kariyeri boyunca sıklıkla sosyal hizmet uzmanlarıyla çalışmış ve özellikle Latin Amerika'da sosyal hizmet uygulamalarına katkı sağlamıştır. Bu kapsamda, görüşleri sosyal hizmet eğitiminde önemli bir yer tutmaktadır. Bu çalışmada, Freire'in eğitim felsefesi, ilkeleri ve uygulamalarını incelemek, bunları sosyal hizmet eğitimi ile ilişkilendirmek amaçlanmıştır. Çalışma kapsamında, insan merkezli değerler, sosyal sorumluluk, praxis ve farkındalık kavramları, eğitimin yerelleştirilmesi, eğitmen öğrenci ilişkisi ve eğitim kurumu öğrenci ilişkisi gibi önemli bağlamlardaki görüşleri ele alınmakta, bunların sosyal hizmet eğitimi ile ilişkisi tartışılmaktadır. Freire popüler eğitim sisteminin dışında bir eğitim sistemini savunmuştur. İletişimi vurgulayan ve sorgulayan bir öğrenme sürecini ve bu süreçte öğrenmenin ortak olduğunu dile getirmiştir. Bu noktada, bilginin el değiştirmesinin değil, kavrayışın gelişmesinin önemini vurgulamıştır. Geçmişten günümüze Freire'in bakış açısı ve yöntemi Latin Amerika, Kuzey Amerika ve başka ülkelerde sosyal hizmet alanında denenmiştir. Söz konusu yaklaşımın Türkiye'de de sosyal hizmet eğitiminde kullanılabileceği, sosyal hizmet uzmanları için rehber olabileceği düşünülmektedir.

Anahtar Kelimeler: Eğitim felsefesi, Ezilenlerin Pedagojisi, Paolo Freire, praxis, sosyal hizmet eğitimi.

HAVALI TABANCA ATICILARINDA ATIŞ PERFORMANSINA GÖRE TETİK DÜŞME ÖNCESİ VE TETİK DÜŞME SONRASINDA EEG ALFA GÜCÜNÜN KARŞILAŞTIRILMASI

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ÖZET

Bu çalışmada havalı tabanca atıcılarının atış performansı sırasındaki tetik düşme öncesi ve sonrası elektroensefalogram (EEG) ölçümlerinden elde edilen alfa gücünün, performans ile ilişkisi incelenmiştir. Ölçümlere aktif olarak atıcılık sporu yapan 7 kişi (41±14 yıl, 5 erkek, 2 kadın) katılmıştır. En az 3 yıldır 10 m havalı tabanca branşıyla ilgilenen ve müsabakalara katılan lisanslı sporcular ölçümlere alınmıştır. Ölçümler sırasında erkek sporcular 60 atış, kadın sporcular 40 atış yapmıştır. Beynin tüm bölgelerinden EEG kaydı alınmış ve bu kayıttan F3, F4, Fz, P3, P4, Pz, O1 ve O2 bölgeleri değerlendirilmiştir. Frekans bantlarından alfa gücü, alfa 1 (8-10 Hz) ve alfa 2 (11-14 Hz) olarak incelenmiştir. Dinlenme durumdaki alfa 1- alfa 2 güçlerinin, atış öncesi ve sonrası ölçülen alfa 1 – alfa 2 güçlerine göre daha yüksek olduğu gözlenmiştir. İyi-orta-kötü atışların gruplar arası karşılaştırılma sonuçlarına göre, frontal pariyetal ve oksipital alanlarda tetik düşme öncesi ve tetik düşme sonrasındaki alfa 1- alfa 2 değerlerinin arasında anlamlı düzeyde bir farklılık olmadığı belirlenmiştir. Alfa gücünün performansla ilişkisi incelendiğinde iyi, orta ve kötü atışlar sırasındaki alfa güçlerinde anlamlı farklılık bulunamamıştır.

Anahtar kelimeler: Spektral EEG, tabanca atıcılığı, SCATT antrenman simülatörü, alfa gücü

Comparison of Pre-Shot and Post Shot EEG Alpha Power According to Shooting Performance in Air Pistol Shooters

ABSTRACT

In the concept of this study, the shooting performance of air pistol shooters is investigated through EEG measurements during Preshot and post-shot periods. Scalp measurements are collected from 7 pistol shooters (41±14 age, 5 male, 2 female). Subjects as athletes, have experienced air pistol shooting at least 3 years of competetive level. Male athletes completed 60 shots while female athletes performed 40 shots during the experiments. EEG was measured from 23 electrodes and only F3, F4, Fz, P3, P4, Pz, O1 and O2 electrode data was analyzed. Fourier transform of the data was computed in order to extract low alpha band (8-10Hz) and high alpha band (11-14 Hz) power values. Resting state preshot alpha power values were observed to increase with respect to the post-shot period. Moreover,no significant differences were found in the fronto-parietal and occipital electrodes alpha values according to the performance levels. There were significant differences in the alpha band power values when compared within performance levels.

Keywords: Spectral EEG, air pistol shooting, SCATT training stimulator, alpha band power.

SAĞLIK KURUMLARINDA RİSK FAKTÖRLERİ

RISK FACTORS IN HEALTH INSTITUTIONS

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ÖZET

Kurumlarda, çalışanların sağlıklı ve güvenli bir ortamda faaliyet göstermeleri için güvenlik kültürünün oluşturulması verimlilik ve etkililik açısından oldukça önemli görülmektedir. Örneğin güvenlik kültürünün oluşturulması, organizasyonlardaki risk faktörlerinin en aza indirilmesini, iş kazalarının azalmasını ve iş kazalarına bağlı olarak işgücü kaybının da azalmasını sağlamaktadır. Güvenlik kültürü tüm üretim ve hizmet işletmelerinde olduğu gibi sağlık hizmetlerinde de üzerinde durulması gereken bir konudur. Çünkü sağlık kurumlarının mevcut yapıları ve çalışma alanları göz önüne alındığında risk faktörleri oldukça fazla olan organizasyonlardır. Bu nedenle çalışmada, sağlık kurumlarında risk faktörlerinin neler olduğunun araştırılması amaçlanmıştır. Bu amaç doğrultusunda çalışmada literatür taraması yapılmıştır. Sağlık kurumlarında risk faktörleri belirlenerek güvenlik kültürünün oluşturulmasının katkılarının neler olduğu belirtileceği için alana katkı sağlayacağı ve çalışmanın öneminin burada oluştuğu düşünülmektedir. Çalışmada güvenlik kültürü, güvenlik iklimi, sağlık kurumları, risk ve risk faktörleri kavramları tanımlanarak sağlık kurumlarında risk faktörlerinin neler olduğu üzerinde durulmuştur. Yapılan literatür taraması sonucunda sağlık kurumlarında fiziksel, ergonomik, biyolojik, psiko sosyal ve kimyasal olmak üzere beş farklı risk faktörü belirlenmiştir. Ayrıca sağlık kurumlarında güvenlik kültürü algısının mevcut risk faktörlerini en aza indirdiği tespit edilmiştir. Sağlık kurumlarında risk faktörlerinin ele alındığı çalışmalar incelendiğinde, genel olarak sağlık çalışanlarının algılarının ölçüldüğü belirlenmiştir. Buna ek olarak risk faktörlerinin, iş stresi, işten ayrılma niyeti, güvenlik iklimi, güvenlik kültürü, yönetimin rolü, kalite yönetim sistemi, iş kazası ve meslek hastalıkları kavramları ile ilişkilendirildiği sonucuna ulaşılmıştır. Diğer bir yandan, yetersiz denetimin, çalışanların işleri ile ilgili bilgi eksikliğinin, teknik donanım yetersizliğinin ve çalışma koşullarının sağlık kurumlarındaki risk faktörlerini artırdığı tespit edilmiştir. Sonuç olarak, sağlık kurumlarında kalitenin de bir bileşeni olan çalışan güvenliğinin sağlanması için güvenlik kültürünün oluşturulması gerekmekle birlikte risk faktörlerinin mevcut olduğunu kabul ederek bu faktörlerin zararlarını önlemeye yönelik çalışmalar yürütülmelidir.

Anahtar Kelimeler: Güvenlik kültürü, güvenlik iklimi, risk.

ABSTRACT

Establishing a safety culture in institutions so that employees can operate in a healthy and safe environment is considered very important in terms of efficiency and effectiveness. For example,

the creation of a safety culture ensures that risk factors in organizations are minimized, work accidents are reduced and labor loss due to work accidents is reduced. Safety culture is an issue that should be emphasized in health services as well as in all production and service enterprises. Because, considering the existing structures and working areas of health institutions, they are organizations with quite a lot of risk factors. Therefore, in this study, it is aimed to investigate what the risk factors are in health institutions. For this purpose, a literature review was conducted in the study. In the study, the concepts of safety culture, safety climate, health institutions, risk and risk factors were defined and the risk factors in health institutions were emphasized. As a result of the literature review, five different risk factors were determined in health institutions as physical, ergonomic, biological, psychosocial and chemical. In addition, it has been determined that the perception of safety culture in health institutions minimizes the existing risk factors. When the studies on risk factors in health institutions were examined, it was determined that the perceptions of health workers were measured in general. In addition, it was concluded that risk factors are associated with the concepts of work stress, intention to leave, safety climate, safety culture, role of management, quality management system, work accident and occupational diseases. On the other hand, it has been determined that insufficient supervision, lack of information about the work of the employees, inadequacy of technical equipment and working conditions increase the risk factors in health institutions. In conclusion, while it is necessary to establish a safety culture in order to ensure employee safety, which is also a component of quality in health institutions, studies should be carried out to prevent the damage of these factors by accepting that there are risk factors.

Keywords: Safety culture, safety climate, risk.

SAĞLIK KURUMLARINDA HASTA GÜVENLİĞİ VE LİDERLİK: İÇERİK ANALİZİ

PATIENT SAFETY AND LEADERSHIP IN HEALTH INSTITUTIONS: CONTENT ANALYSIS

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ÖZET

Sağlık kurum ve kuruluşlarında birçok risk faktörü (kimyasal, ergonomik, psiko sosyal gibi) mevcuttur. Bu sebeple sağlık kurumlarında hem çalışan güvenliğinin hem de hasta güvenliğinin oluşturulması oldukça önem taşımaktadır. Güvenliğin sağlanması için ilk olarak her düzeydeki liderlerin güvenlik kültürünü ve insanların verimlilikten daha önemli olduğunu benimsemeleri gerekmektedir. Bu doğrultuda çalışmanın amacı sağlık kurumlarında hasta güvenliği ve liderlik ile ilgili bir içerik analizi yapmaktır. Çalışmada nitel araştırma yöntemlerinden olan içerik analizi ile içerik analizinin alt tekniklerinden olan sıklık ve frekans analizleri kullanılmıştır. Araştırma kapsamında 2010-2022 yılları arasında İngilizce dilinde yazılmış olan çalışmalar incelenmiştir. Veri tabanı olarak Web of Science ve Science Direct kullanılmış olup bu veri tabanlarında "patient safety" and "leadership" anahtar kavramları kullanılarak tarama yapılmıştır. Bu doğrultuda İngilizce dilinde yazılan, 2010-2022 yılları arasında yayınlanan ve açık erişim olan araştırma makaleleri çalışmaya dâhil edilmiştir. Yapılan taramada elde edilen kitap bölümleri, editöre mektup, bildiri özetleri ve tam metin bildiriler çalışma kapsamı dışında tutulmuştur. İlk yapılan taramada 280 çalışmaya ulaşılmış fakat dâhil edilme ve dışlanma kriterlerine göre Web of Science veri tabanından 13 adet Science Direct veri tabanından 7 makale olmak üzere toplam 20 çalışma analiz edilmiştir. Yapılan analizler sonucunda hasta güvenliği ve kültür ile ilgili yapılan çalışmaların 2020 yılına kadar benzer eğilimde (n=1-2) gitmekte olduğu fakat 2020 yılında artış gösterdiği (n=6) belirlenmiştir. Yapılan çalışmaların türüne bakıldığında ise çalışmaların en çok nicel yöntem kullanılarak yapıldığı en az ise karma yöntem kullanıldığı sonucuna ulaşılmıştır. Ayrıca yapılan çalışmalara bakıldığında hasta güvenliği ve liderlik ile en çok dönüşümcü liderliğin (n=5) ele alındığı bunu takiben tükenmişliğin (n=2), çalışma koşullarının (n=1), iş tatminin (n=1), işe bağlılığın (n=1) geldiği tespit edilmiştir. Bu noktada hasta güvenliği ve liderliğin, çalışan psikolojisini ilgilendiren birçok kavramla birlikte araştırıldığı belirlenmiştir.

Anahtar Kelimeler: Liderlik, hasta güvenliği, sağlık kurumları, içerik analizi.

ABSTRACT

There are many risk factors (such as chemical, ergonomic, psychosocial) in health institutions and organizations. For this reason, it is very important to establish both employee safety and patient safety in health institutions. To ensure safety, leaders at all levels must first embrace a culture of safety and that people are more important than productivity. In this direction, the aim of the study is to make a content analysis about patient safety and leadership in health institutions. Content analysis, which is one of the qualitative research methods, and frequency and frequency analysis, which is one of the sub-techniques of content analysis, were used in the study. Within the scope of the research, studies written in English between the years 2010-2022 were examined. Web of Science and Science Direct were used as the database, and these databases were searched using the key concepts of "patient safety" and "leadership". In this direction, open access research articles written in English, published between 2010-2022, were included in the study. Book chapters, letters to the editor, abstracts and full-text papers obtained from the scan were excluded from the study. In the first search, 280 studies were reached, but according to the inclusion and exclusion criteria, a total of 20 studies, including 13 articles from the Web of Science database and 7 articles from the Science Direct database, were analyzed. As a result of the analyzes, it was determined that studies on patient safety and culture had a similar trend (n=1-2) until 2020, but increased in 2020 (n=6). Looking at the type of studies, it was concluded that the studies were mostly done using quantitative methods and the least mixed method was used. In addition, when the studies are examined, it has been determined that patient safety and leadership and transformational leadership (n=6) are mostly discussed, followed by burnout (n=2), working conditions (n=1), job satisfaction (n=1) and job commitment (n=1). At this point, it has been determined that patient safety and leadership are investigated together with many concepts related to employee psychology.

Keywords: Leadership, patient safety, healthcare institutions, content analysis.

Askorbat, ICAM-1 ve VCAM-1 ekspresyonunu kontrol ederek aterosklerozu azaltabilir

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ÖZET

Çok çeşitli vasküler ve kardiyak anomalilerden oluşan kardiyovasküler hastalıklar (KVH), hem düşük yaşam kalitesinin hem de küresel ölümün başlıca nedenidir. Dünya Sağlık Örgütü'ne göre KVH'ler her yıl yaklaşık 17,9 milyon ölüme neden olmakta ve dünya çapındaki tüm ölümlerin %32'sinden fazlasını oluşturmaktadır. İnflamasyon, ateroskleroz oluşumunun başlangıç noktası olduğu için aterosklerotik süreçte önemli bir role sahiptir. Hücrelerarası adezyon molekülü 1 (ICAM-1) ve vasküler hücre adezyon molekülü (VCAM-1) gibi hücre adezyon molekülleri, ateroskleroz gelişiminde önemli rollere sahiptir. ICAM-1'deki bir artış, lökosit transendotelyal göçü sırasında ateroskleroz gelişimini kolaylaştıran sıkı bağlanmalara yol açarken, VCAM-1 ekspresyonundaki bir artış, yakın zamanda oluşmuş olan aterom plağı üzerinde VCAM-1 ile T lenfositleri ve monositlerin ara bağlantısını tetikler. Askorbat veya en yaygın adıyla C vitamini, kardiyovasküler sistem üzerine olan olumlu etkileri nedeniyle geniş çapta kabul görmüştür, ancak etki mekanizması henüz net olarak bilinmemektedir. Son araştırmalara göre C vitamini, antioksidan özelliği sayesinde serbest radikalleri temizleyerek endotelyal disfonksiyonu azaltabilmektedir. Bu çalışmada, insan safen ven hücrelerinin (HSaVEC'ler) TNF-alfa ile indüklenen ateroskleroz modelinde, askorbatın ICAM-1 ve VCAM-1 aktivite farklılıkları üzerindeki etkisini araştırma amaçlanmıştır. İnkübe edilmiş HSaVEC'ler, 3. pasajdan sonra 6 kuyucuklu plakalara aktarıldı ve inflamasyona aracılı bir ateroskleroz modeli üretmek amacıyla deneye başlamadan 6 saat önce hücrelere TNF-alfa verildi. Askorbat, HSaVEC'lere uygulanmadan önce DMSO içinde çözüldü. Çalışmada 5 farklı grup vardır: sadece HSaVEC olan grup (negatif kontrol grubu), TNF-alfa ile indüklenmiş olan HSaVEC (pozitif kontrol), 10^{-4}M askorbat uygulanan ve TNF-alfa ile indüklenen HSaVEC (deney grubu), sadece 10^{-4}M askorbat uygulanan (kontrol grubu) ve sadece DMSO verilen HSaVEC (kontrol grubu). ICAM-1 ve VCAM-1 aktivite farklılıkları, üçlü tekrarlar şeklinde ELISA yöntemiyle hesaplandı. Askorbat uygulanan gruplarda ICAM-1 ve VCAM-1 ekspresyonları istatistiksel olarak anlamlı düzeyde azalırken ($p<0.001$) diğer gruplar arasında istatistiksel olarak anlamlı düzeyde farklı bir sonuç bulunamadı ($p>0.05$). İstatistiksel analiz ANOVA testi ile yapıldı. ICAM-1 ve

VCAM-1 gibi inflamasyon belirteçleri, antioksidan aktiviteleri sayesinde uygun askorbat konsantrasyonları ile düzenlenebilir.

Anahtar Kelimeler: Ateroskleroz, İnflamasyon, Askorbat

Ascorbate may reduce atherosclerosis by controlling ICAM-1 and VCAM-1 expression

ABSTRACT

Cardiovascular diseases (CVDs), which include a variety of vascular and cardiac abnormalities, are the major causes of both decreased quality of life and global death. According to the World Health Organization, CVDs cause roughly 17,9 million deaths each year, accounting for more than 32% of all fatalities worldwide. Inflammation has an essential role during the atherosclerotic process since it is the starting point of atherosclerosis formation. Cell adhesion molecules such as intercellular adhesion molecule 1 (ICAM-1) and vascular cell adhesion molecule (VCAM-1) have essential roles during atherosclerosis progression. An increase in the ICAM-1 leads to tight adhesion during leukocyte transendothelial migration facilitating the development of atherosclerosis whereas an increase in VCAM-1 expression triggers VCAM-1, T lymphocytes, and monocytes interconnection on recently formed atheroma. Ascorbate or with its most common name-Vitamin C has been widely recognized for its cardiovascular benefits, but the mechanism of action is unknown. According to recent research, vitamin C may reduce endothelial dysfunction by scavenging free radicals owing to its anti-oxidant property. We aimed to investigate the effect of ascorbate on ICAM-1 and VCAM-1 activity differences in the TNF-induced atherosclerosis model of Human saphenous vein cells (HSaVECs). Incubated HSaVECs were transferred to 6-well plates after the 3rd passage and TNF-alpha was introduced 6 hours before the experiment was performed to produce an inflammation-based atherosclerosis model. The ascorbate was dissolved in DMSO before administration to HSaVECs. There were 5 different groups: The HSaVECs-only group as the negative control, the TNF-alpha induced HSaVECs as the positive control, 10^{-4}M ascorbate administrated TNF-alpha induced HSaVECs as the experiment group, 10^{-4}M ascorbate administrated HSaVECs as the non-template control group and DMSO only administrated HSaVECs as the non-template control group. ICAM-1 and VCAM-1 activity differences were calculated by the ELISA method in triplicates. The expressions of ICAM-1 and VCAM-1 were decreased in the ascorbate administered groups ($p<0.001$) whereas we could not find any statistically different results between the other groups ($p>0.05$). The differences were calculated by the ANOVA test. The inflammation markers such as ICAM-1 and VCAM-1 may be regulated with appropriate ascorbate concentrations thanks to their antioxidant activity.

Keywords: Atherosclerosis, Inflammation, Ascorbate

AKUT BÖBREK HASARINDA YENİ BİYOKİMYASAL BELİRTEÇLER

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ÖZET

Böbrek fonksiyonlarının değerlendirilmesi, böbrek hastalığı veya böbrek fonksiyonunu etkileyen patolojileri olan hastaların tedavisinde önemlidir. Akut böbrek hasarı (ABH) ise böbrekte oluşan ani fonksiyon kaybına bağlı olarak üre ve diğer azotlu atık ürünlerinin vücuttan atılamaması, hücre dışı sıvı hacmi ve elektrolit içeriğinin bozulmasıyla sonuçlanan klinik bir tablodur. Böbrek disfonksiyonu veya hasarı daha uzun bir süre içerisinde ortaya çıkabileceği gibi akut ve kronik böbrek hastalığı olan kişilerde altta yatan inflamatuar süreçler sonucu hızlı bir şekilde de gelişebilir. Böbrek hasarı veya stres biyobelirteçleri risk değerlendirmesi için yeni araçlardır ve muhtemelen tedaviye rehberlik edebilir. Son zamanlarda, ABH'nin potansiyel biyobelirteçleri tanımlanmıştır. İdeal olarak, yeni biyobelirteçler spesifik olmalı, nedeni tanımlamalı, risk altındaki hastaları belirlemeli, erken tanı koymalı, yaralanmanın ciddiyetini sınıflandırmalı ve sonuçları tahmin etmelidir. ABH patofizyolojisinin daha iyi anlaşılmasıyla, glomerüller tarafından filtrelenen proteinler, yaralanma sonrası tübüler hücreler tarafından salınan enzimler ve inflamatuar aracılar dahil olmak üzere yeni biyobelirteçler tanımlanmıştır. Gerçekten de ABH karmaşık bir sendromdur ve belki de sendromun farklı aşamalarını kapsayan çeşitli biyobelirteçlerden oluşan bir panelin kullanılması, etiyolojisini ve patofizyolojisini daha iyi anlamayı sağlayabilir ve gelecekteki tedaviler için hedefleri belirleyebilir.

Anahtar Kelimeler: ABH, Semaforin, Lipoksijenaz

SAFRA KESESİNDE HETEROTOPİK PANKREAS DOKUSU

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Özet:

Heterotopik pancreas(HP), ana pancreas dokusu ile vasküler veya doku bağlantısı olmayan ayrı bir anatomik alanda bulunan pancreas dokusu olarak tanımlanır. Genellikle mide olmak üzere gastrointestinal sistemin (GİS) herhangi bir yerinde görülebilir. Safra kesesi, HP yerleşimi için oldukça nadir bir lokalizasyondur. Literatürde sadece 38 hasta tanımlanmıştır. Burada oldukça nadir görülen bir hastayı literatüre katkı amaçlı sunulması amaçlandı. Kırksekiz yaş kadın hasta. Yemek sonrası artan sağ üst kadran ağrısı ile yapılan ultrasonografide (usg) safra kesesi polipleri satandı. Laparoskopik kolesistektomi yapılan hastanın patolojisinde, safra keseside en büyüğü 7 mm olan 10 adet kolesterol polipler ve bir alanda az miktarda ductus ve yoğun asinüslerin olduğu HP dokusu saptandı (Resim. Otopsi serilerinde %0,5-13,7 oranında görülürken, laparotomi yapılan hastalarda %0,2 oranında görülebilmektedir[1]. HP dokusunun ana pancreas dokusu gibi abse, psödokist, kronik pankreatiti süreçlerini gösterebilmektedir. Mide heterotopisindeki pancreas dokusundan malignite geliştiği de bildirilmiştir. Özellikler akalkülöz kolesistitlerde veya safra kesesi poliplerinde, parsiyel duvar kalınlaşması olan nodülarite gösteren safra kesesinde ayırıcı tanıda HP düşünülmelidir. Bizim hastamızda safra kesesi polipleri ile presente olmuştur. Laparoskopik kolesistektomi tedavi açısından yeterli olmaktadır. Spesifik bir semptom ve tanı yöntemi olmayıp, başka bir neden ile yapılan ameliyatlarda tedadüfen saptanarak patolojik tanı konabilmektedir. Bu nedenle safra kesesi ameliyatlarında tüm spesmenlerin mutlaka patolojik inceleme yapılması gerekmektedir.

Anahtar kelimeler: Safra kesesi, Heterotopi, Pankreas

SYNCHRONOUS AND ASYNCHRONOUS TELEREHABILITATION METHODS HAVE SIMILAR EFFECTS IN INDIVIDUALS WITH NON-SPECIFIC NECK PAIN

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ABSTRACT

Background: Evidence exists on the clinical benefits of synchronous and asynchronous telerehabilitation for patients with non-specific neck pain (NSNP), however, limited studies are comparing synchronous and asynchronous telerehabilitation (TR) programs in this population. The aim of this study was to estimate the relative effectiveness of an 8-week synchronous or asynchronous TR in improving pain, functional disability, kinesiophobia, and mobility in patients with NSNP.

Methods: This was a randomized, controlled clinical trial carried out on 60 individuals with NSNP. Participants were randomly assigned to the synchronous TR group (n=30) or asynchronous TR group (n=30) that received the same exercise program for 8 weeks. Pain measured by numeric pain rating scale (NPRS), disability measured by Neck Disability Index (NDI), kinesiophobia measured by Tampa Scale of Kinesiophobia (TSK), and cervical range of motion were used as outcome measures. Assessments were performed at baseline, 4th week, 8th week, and 16th week.

Results: The analysis showed a significant effect of time and significant interaction between group and time in NPRS, NDI, TSK, and cervical mobility scores ($p<0.05$); yet the group effect was not significant ($p>0.05$). There were no significant differences between the groups at all time points ($p>0.05$) except for cervical right lateral flexion at the 8th week ($p=0.036$).

Conclusion: Telerehabilitation technologies are expanding at a rapid rate, and it is essential to understand the outcomes produced using these technologies in health conditions. This study showed that synchronous and asynchronous telerehabilitation produces similar results in patients with NSNP, supporting that either method can be used interchangeably.

Keywords: Non-specific neck pain, Synchronous telerehabilitation, Asynchronous telerehabilitation

SHORT-TERM EFFECTS OF TELEREHABILITATION ON OUTCOMES FOR PEOPLE WITH KNEE OSTEOARTHRITIS: A PRELIMINARY REPORT

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ABSTRACT

Background: Evidence exists on clinical benefits of telerehabilitation (TR) for patients with knee osteoarthritis (OA), however, no studies are conducted on the Turkish population. The aim of this study was to estimate the short-term effects of telerehabilitation on pain, stiffness, physical function, and muscle strength for people with knee OA.

Methods: This was a preliminary report from a clinical trial on 14 participants with knee OA. Participants were assigned to a synchronous TR group that received an exercise program focusing on strengthening, stretching, and functional exercises for 4 weeks. Visual Analogue Scale (VAS) was used for measuring pain, and WOMAC for pain, stiffness, and physical function. Isometric knee flexion and extension muscle strength were assessed at 30 and 60 degrees with an isokinetic dynamometer. Assessments were performed at baseline and 4th week.

Results: The analysis showed a significant 2.4 cm improvement (95% CI: 1.1 to 3.7) in VAS scores (p= 0.002). For WOMAC subscales, there was a 2.8 points improvement (95% CI: 1.3 to 4.3, p= 0.001) in the pain subscale, a 1.4 points improvement (95% CI: 0.2 to 2.5, p= 0.026) in stiffness subscale, and a 9.1 points improvement (95% CI: 3.3 to 14.8, p= 0.005) in physical function subscale. However, the only significant improvement in isometric muscle strength (peak torque per body weight) was for 30 degrees right knee flexion with a 10.1% improvement (95% CI: 0.1 to 20.1, p= 0.049). No other significant differences were observed for isometric muscle strength (p> 0.05).

Conclusion: This study showed that a synchronous telerehabilitation program is beneficial for pain, stiffness, and physical function in patients with knee OA even in the short term. However, the lack of significant improvement for muscle strength except for right knee 30 degrees flexion underlines the need for a longer treatment duration for increasing muscle strength.

Keywords: Osteoarthritis, Knee, Telerehabilitation

ASEMPTOMATiK SARS-COV-2 ENFEKSiYONU SPONTAN ABORTUSA NEDEN OLABiLiR Mi?

COVID-19 VE SPONTAN ABORTUS

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ÖZET

Giriş ve Amaç: Daha önce maternal enfeksiyonlar nedeniyle semptomatik ve hatta "Severe Acute Respiratory Syndrome (SARS)" geliştiren gebe kadınlarda spontan abortus olasılığının arttığı (%15) bilinmektedir. Bu enfeksiyon ajanlarından biri olan SARS-CoV-2 virüsünün, angiotensin-converting enzim 2'ye (ACE2) bağlanarak konak hücrelere girdiği bilinmektedir. Yeni literatür verileri, desidualizasyon aşamasında endometriumda artmış olan ACE2 reseptörünü ve SARS-CoV-2'nin ACE2 proteinleri yoluyla endometrial stromal hücrelere girme kabiliyetini göstermiştir. Bu da COVID-19 enfeksiyonunun erken gebelik kaybı gibi birçok patolojiye neden olabileceğini göstermektedir. Bu çalışmanın amacı, uterin örneklerde pozitif olan SARS-CoV-2 virüsünün gebelik kaybı üzerindeki etkilerini araştırmaktır.

Yöntem ve Gereçler: Bu kesitsel çalışmaya birinci trimester gebelik kaybı olan 13 kadın dahil edildi. Bu gebe kadınların hiçbirinde bilinen SARS-CoV-2 enfeksiyonu semptomu yoktu. Bu gebelerde gerçek zamanlı polimeraz zincir reaksiyonu (RT-PCR) testi ile uterus ve nazo-orofarenks numunelerinde SARS-CoV-2 enfeksiyonu tarandı. Pozitif RT-PCR sonucu olan kadınların akciğer tomografisi ile pnömoni açısından değerlendirilmesi ve bu kadınların partnerlerinde nazo-orofarenksten alınan numunenin SARS-CoV-2 enfeksiyonu için RT-PCR

ile değerlendirilmesi planlandı. Ayrıca pozitif vakalara negatife dönene kadar 7 günlük aralıklarla uterus ve nazo-orofarenks numunelerinde RT-PCR bakılması planlandı.

Bulgular: Sadece bir (%7,6) kadında uterusdan alınan örnekte SARS-CoV-2 için RT-PCR testi pozitif çıktı. Aynı hastanın nazo-orofaringeal numunesi negatif olup hastada COVID-19 semptomu yoktu. Aynı zamanda bu hastanın eşine de nazo-orofaringeal numune ile SARS-CoV-2 için RT-PCR testi yapıldı. Test sonucu negatifti. Bu hastanın akciğer tomografisinde COVID-19 ile ilişkili lezyon izlenmedi. Uterus ve naso-farenksten alınan örneklerle 7 gün sonra yapılan RT-PCR testi sonuçları da negatifti.

Tartışma ve Sonuç: SARS-CoV-2 virüsünün düşük yapan gebe kadında nazo-orofaringeal numunede negatif iken uterin örnekte pozitif olması virüs için endometriumun bir giriş yolu olabileceğini düşündürmektedir. Ayrıca bu veriler, virüsün bilinen semptomları olmadan da erken gebelik kaybı dahil olumsuz gebelik sonuçlarına yol açabileceği düşündürmektedir. Sık görülen virüslerin benzer yollarla beklenen ve tanımlanmış semptomlarının dışında gebelik üzerine olan etkilerini değerlendirmek için çok sayıda çalışmaya ihtiyaç vardır.

Anahtar Kelimeler: Gebelik kaybı; SARS-CoV-2; abortus; intrauterin; COVID-19

CAN ASYMPTOMATIC SARS-COV-2 INFECTION CAUSE SPONTANEOUS ABORTION?

COVID-19 AND SPONTANEOUS ABORTION

ABSTRACT

Introduction: The probability of spontaneous abortion is known to increase (15%) in the pregnant women who develop symptomatic and even “Severe Acute Respiratory Syndrome (SARS)” due to maternal infections. It is known that the SARS-CoV-2 virus, one of these infectious agents, enters host cells by binding to angiotensin-converting enzyme 2 (ACE2). New literature data have shown the increased ACE2 receptor in the endometrium during the decidualization phase and the ability of SARS-CoV-2 to enter endometrial stromal cells through ACE2 proteins. This shows that the COVID-19 infection can cause many pathologies such as early pregnancy loss. The aim of this study is to investigate the effects of SARS-CoV-2 virus which are positive in the uterine samples on pregnancy loss.

Methods: 13 women who had first trimester pregnancy loss were included in this cross-sectional study. None of these pregnant women had any known symptoms of SARS-CoV-2

infection. SARS-CoV-2 infection was screened in uterus and naso-oropharynx samples by real-time polymerase chain reaction (RT-PCR) test in these pregnant women. Women with positive RT-PCR results will be evaluated for pneumonia by lung tomography. It is planned to evaluate the sample taken from the naso-oropharynx in the partners of these women for SARS-CoV-2 infection by RT-PCR. In addition, in positive cases, RT-PCR was planned from the uterus and naso-oropharynx samples at 7-day intervals until the case turned negative.

Results: RT-PCR test for SARS-CoV-2 was positive only in a sample taken from the uterus of one woman (7.6%). The naso-oropharyngeal sample of the same patient was negative, and the patient had no symptoms of COVID-19. No COVID-19-related lesion was observed in the lung tomography of this patient. The results of the RT-PCR test performed 7 days later with samples taken from the uterus and naso-pharynx were also negative. After the patient's positive RT-PCR result, a naso-oropharyngeal sample was taken from his partner. The RT-PCR test result for SARS-CoV-2 in the patient's partner was negative.

Discussion and Conclusion: The fact that the SARS-CoV-2 virus was negative in the naso-oropharyngeal sample and positive in the uterine sample in a pregnant woman who had a miscarriage suggests that the endometrium may be an entry route for the virus. These data suggest that the virus can lead to adverse pregnancy outcomes, including early pregnancy loss, even without known symptoms. A large number of studies are needed to evaluate the effects of common viruses on pregnancy beyond the expected and defined symptoms.

Keywords: Pregnancy loss; SARS-CoV-2; abortion; intrauterine; COVID-19

ADLİ TOKSİKOLOJİ PERSPEKTİFİNDEN FENTANİL

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ÖZET

Fentanil molekül ağırlığı düşük, yağda çözünürlüğü yüksek, morfinden 100 kat daha güçlü etkiye sahiptir. Yavaş salınımlı bir opioid analjezik olduğundan kronik ağrı tedavisinde sıklıkla tercih edilmektedir. Tedavi amacıyla kullanımında fentanil zehirlenmeleri ve aşırı doza bağlı ani ölümler görülebilmektedir. Ameliyathanelerde, yoğun bakım ünitelerinde ve ağrı kliniklerinde çalışanların kişisel hassasiyetine bağlı olarak çevresel/mesleki maruziyet, kötüye kullanım veya bağımlılık vakalarıda görülebilmektedir. Kronik ağrı tedavisinde uygulanan fentanil bantların kullanımında 72 saatlik dozun aşımı ile akut zehirlenmeler meydana gelmekte ayrıca bu bantlar intihar amaçlı da kullanılmaktadır. Medikal kullanımının yanı sıra yasa dışı suiistimali de yaygın olan bu madde ve analogları adli bilimler açısından önemlidir. İllegal fentanil tüketiminde uyuşturucu etkisinden yararlanmak suretiyle saf olarak veya eroin benzeri narkotiklerin sedatif etkisini arttırmak için katkı maddesi olarak kullanılmaktadır. Kırmızı reçeteye tabi bir opioid olmasına rağmen, sokakta uyuşturucu madde kullanıcıları arasında kullanımı çok yaygındır. Fentanil ve analoglarının artan prevalansının bir sonucu olarak, dünya çapındaki adli ve klinik toksikoloji laboratuvarlardan sürekli olarak bu yeni ilaçların çeşitli biyolojik matrikslerden tanımlanması ve miktarının belirlenmesi için analitik prosedürleri güncellemeleri istenmektedir. Ülkemizde yasadışı kullanımı ve suiistimali her geçen gün artan bu maddenin biyolojik örneklerden hızlı, güvenilir ve ucuz yöntemlerle tespiti için çalışmaların yapılması gerekliliği doğmuştur. Çalışmamızda, LC-MS/MS kullanılarak fentanilin idrarda hızlı, düşük tayin limitli, güvenilir, ucuz ve yüksek geri kazanımlı bir yöntem geliştirildi. Çalışmamızda, tespit edilen alıkonma zamanı 1,730 (±0,020) dakika, izlenen iyon 337,00'dan 188,00 iyonudur. Özütleme yönteminin geri kazanımı 95,50 (±2,61)'dir. LOD ve LOQ değerleri sırasıyla 0,22 ng/mL ve 0,40 ng/mL, R^2 değeri 0,9993, ortalama % RSD değeri ise 5,31 olup yöntem 500,00 ng/mL'a kadar geniş bir aralıkta doğrusaldır. Günler arası ve analistler arası kesinlik değerleri (RSD%≤%14.30) ile %95 güvenilirlik düzeyinde tek yönlü F tablosundan belirtilen serbestlik derecelerinde elde edilen kritik değerler (<6,599) kabul edilebilir aralıklardadır. Geliştirilen yöntemin, fentanil tedavisi gören kişilerin takibinde, kullanımına veya suistimaline bağlı adli olguların aydınlatılmasında katkı sağlayacağı öngörülmektedir.

Anahtar Kelimeler: Fentanil, Kötüye Kullanım, LC-MS/MS, İdrar, Validasyon

CURE OR POISON?

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ABSTRACT

Plants used in nutrition/medicine aren't always safe. Different plants produce various toxic alkaloids, glycosides, proteins, terpenes and steroids. Synergism/antagonism/chemical reactions may occur between different phytochemicals and beneficial/harmful effects may occur when used in combination. In high doses, plants can be used for murder/suicide. Therapeutic/toxic effects of phytochemicals as an important malpractice subject, will be discussed. Plants having both medicinal and toxic effects was reviewed in literature. Roots and seeds of Ricinus communis are lethal, are used for assassination, besides their laxative/antiinfective/antiinflammatory effect.Abrus precatorius, used for alopecia and arthralgia treatment, inhibitis protein synthesis as well, contains abrin and lectin (more toxic than ricin). Colchicine in Colchicum autumnale is benefited in gout,arthritis and irritable bowel syndrome, while having fatal toxicity. Veratrum album, besides its benefits in skin/hair parasites of the animals, is an arrow poison, a heart and respitory depressant. Aconitum species are also used as arrow poisons and has arrhythmic,gastrointestinal side effects,and risk of cardiotoxicity, besides their anti-inflammatory/analgesic effects. Laurocerasus officinalis, used as expectorant and sedative in therapy, can cause poisoning due to prunasin and amigdalin. HCN, released through amygdalin hydrolysis, may inactivate some enzymes involved in respiration. Although some plants carry tropane alkaloids used in therapy, Brugmansia and Datura are used in sexual crimes and theft due to their inactivating properties. Mixing some herbs cause poisoning:Roots of Hyoscyamus niger is mistaken for parsnip or chicory. Digitalis species are mixed with poisonous comfrey (Symphytum spp.). Metabolites of pyrrolizidine alkaloids in comfrey cause DNA damage in liver and cancer. Poisoning with digoxin may be the result of accidental/overdose/intentional use.The fatal "taxin" in Taxus baccata is used in cancer. Crime scene investigators and analysts should consider poisoning from medicinal plants in toxicological cases while screening the crime scene, and forensic evidences using analytical techniques.

Keywords: Poisonous/therapeutic plants, forensic pharmacy, toxicological interactions, phytochemicals

EFFECT OF DIFFERENT OILS ON QUALITY OF DEEP-FRIED DOUGH STICK

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Abstract:

The aim of this study was to determine the effect of oils on chemical, physical, and sensory properties of deep-fried dough stick. Five kinds of vegetable oil which were used for addition and frying consist of: palm oil, soybean oil, sunflower oil, rice bran oil, and canola oil. The results of this study showed that using different kinds of oil made significant difference in the quality of deep-fried dough stick. Deep-fried dough stick fried with the rice bran oil had the lowest moisture loss and oil absorption ($p \leq 0.05$), but it had some unsatisfactory physical properties (color, specific volume, density, and texture) and sensory characteristics. Nonetheless, deep-fried dough stick fried with the sunflower oil had moisture loss and oil absorption slightly more than the rice bran oil, but it had almost higher physical and sensory properties. Deep-fried dough sticks together with the sunflower oil did not have different sensory score from the palm oil, commonly used for production of deep-fried dough stick. These results indicated that addition and frying with the sunflower oil are appropriate for the production of deep-fried dough stick.

Keywords: Deep-fried dough stick, palm oil, sunflower oil, rice bran oil.

ASSOCIATION BETWEEN SINGLE NUCLEOTIDE POLYMORPHISM OF CALPAIN1 GENE AND MEAT TENDERNESS TRAITS IN DIFFERENT GENOTYPES OF CHICKEN: MALAYSIAN NATIVE AND COMMERCIAL

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Abstract:

Meat Tenderness is one of the most important factors affecting consumers' assessment of meat quality. Variation in meat tenderness is genetically controlled and varies among breeds, and it is also influenced by environmental factors that can affect its creation during rigor mortis and postmortem. The final postmortem meat tenderization relies on the extent of proteolysis of myofibrillar proteins caused by the endogenous activity of the proteolytic calpain system. This calpain system includes different calcium-dependent cysteine proteases, and an inhibitor, calpastatin. It is widely accepted that in farm animals including chickens, the μ-calpain gene (CAPN1) is a physiological candidate gene for meat tenderness. This study aimed to identify the association of single nucleotide polymorphism (SNP) markers in the CAPN1 gene with the tenderness of chicken breast meat from two Malaysian native and commercial broiler breed crosses. Ten, five months old native chickens and ten, 42 days commercial broilers were collected from the local market and breast muscles were removed two hours after slaughter, packed separately in plastic bags and kept at -20ºC for 24 h. The tenderness phenotype for all chickens' breast meats was determined by Warner-Bratzler Shear Force (WBSF). Thawing and cooking losses were also measured in the same breast samples before using in WBSF determination. Polymerase chain reaction (PCR) was used to identify the previously reported C7198A and G9950A SNPs in the CAPN1 gene and assess their associations with meat tenderness in the two breeds. The broiler breast meat showed lower shear force values and lower thawing loss rates than the native chickens ($p<0.05$), whereas there were similar in the rates of cooking loss. The study confirms some previous results that the markers CAPN1 C7198A and G9950A were not significantly associated with the variation in meat tenderness in chickens. Therefore, further study is needed to confirm the functional molecular mechanism of these SNPs and evaluate their associations in different chicken populations.

Keywords: CAPNl, chicken, meat tenderness, meat quality, SNPs.

Oracle JDE Enterprise One ERP Implementation: A Case Study

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Abstract:

The paper intends to bring out a real life experience encountered during actual implementation of a large scale Tier-1 Enterprise Resource Planning (ERP) system in a multi-location, discrete manufacturing organization in India, involved in manufacturing of auto components and aggregates. The business complexities, prior to the implementation of ERP, include multi-product with hierarchical product structures, geographically distributed multiple plant locations with disparate business practices, lack of inter-plant broadband connectivity, existence of disparate legacy applications for different business functions, and non-standardized codifications of products, machines, employees, and accounts apart from others. On the other hand, the manufacturing environment consisted of processes like Assemble-to-Order (ATO), Make-to-Stock (MTS), and Engineer-to-Order (ETO) with a mix of discrete and process operations. The paper has highlighted various business plan areas and concerns, prior to the implementation, with specific focus on strategic issues and objectives. Subsequently, it has dealt with the complete process of ERP implementation, starting from strategic planning, project planning, resource mobilization, and finally, the program execution. The step-by-step process provides a very good learning opportunity about the implementation methodology. At the end, various organizational challenges and lessons emerged, which will act as guidelines and checklist for organizations to successfully align and implement ERP and achieve their business objectives.

Keywords: ERP, ATO, MTS, ETO, discrete manufacturing, strategic planning.

IMPROVING THE QUALITY OF TRANSPORT MANAGEMENT SERVICES WITH FUZZY SIGNATURES

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Abstract:

Nowadays the significance of road transport is gradually increasing. All transport companies are working in the same external environment where the speed of transport is defined by traffic rules. The main objective is to accelerate the speed of service and it is only dependent on the individual abilities of the managing members. These operational control units make decisions quickly (in a typically experiential and/or intuitive way). For this reason, support for these decisions is an important task. Our goal is to create a decision support model based on fuzzy signatures that can assist the work of operational management automatically. If the model sets parameters properly, the management of transport could be more economical and efficient.

Keywords: Freight transport, decision support, information handling, fuzzy methods.

BEYOND TAGUCHI'S CONCEPT OF THE QUALITY LOSS FUNCTION

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Abstract:

Dr. Genichi Taguchi looked at quality in a broader term and gave an excellent definition of quality in terms of loss to society. However the scope of this definition is limited to the losses imparted by a poor quality product to the customer only and are considered during the useful life of the product and further in a certain situation this loss can even be zero. In this paper, it has been proposed that the scope of quality of a product shall be further enhanced by considering the losses imparted by a poor quality product to society at large, due to associated environmental and safety related factors, over the complete life cycle of the product. Moreover, though these losses can be further minimized with the use of techno-safety interventions, the net losses to society however can never be made zero. This paper proposes an entirely new approach towards defining product quality and is based on Taguchi's definition of quality.

Keywords: Existing concept, goal post philosophy, life cycle, proposed concept, quality loss function.

SURFACE ROUGHNESS ANALYSIS, MODELLING AND PREDICTION IN FUSED DEPOSITION MODELLING ADDITIVE MANUFACTURING TECHNOLOGY

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Abstract:

Fused deposition modelling (FDM) is one of the most prominent rapid prototyping (RP) technologies which is being used to efficiently fabricate CAD 3D geometric models. However, the process is coupled with many drawbacks, of which the surface quality of the manufactured RP parts is among. Hence, studies relating to improving the surface roughness have been a key issue in the field of RP research. In this work, a technique of modelling the surface roughness in FDM is presented. Using experimentally measured surface roughness response of the FDM parts, an ANFIS prediction model was developed to obtain the surface roughness in the FDM parts using the main critical process parameters that affects the surface quality. The ANFIS model was validated and compared with experimental test results.

Keywords: Surface roughness, fused deposition modelling, adaptive neuro fuzzy inference system, ANFIS, orientation.

INTEGRATED DESIGN IN ADDITIVE MANUFACTURING BASED ON DESIGN FOR MANUFACTURING

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Abstract:

Nowadays, manufactures are encountered with production of different version of products due to quality, cost and time constraints. On the other hand, Additive Manufacturing (AM) as a production method based on CAD model disrupts the design and manufacturing cycle with new parameters. To consider these issues, the researchers utilized Design For Manufacturing (DFM) approach for AM but until now there is no integrated approach for design and manufacturing of product through the AM. So, this paper aims to provide a general methodology for managing the different production issues, as well as, support the interoperability with AM process and different Product Life Cycle Management tools. The problem is that the models of System Engineering which is used for managing complex systems cannot support the product evolution and its impact on the product life cycle. Therefore, it seems necessary to provide a general methodology for managing the product's diversities which is created by using AM. This methodology must consider manufacture and assembly during product design as early as possible in the design stage. The latest approach of DFM, as a methodology to analyze the system comprehensively, integrates manufacturing constraints in the numerical model in upstream. So, DFM for AM is used to import the characteristics of AM into the design and manufacturing process of a hybrid product to manage the criteria coming from AM. Also, the research presents an integrated design method in order to take into account the knowledge of layers manufacturing technologies. For this purpose, the interface model based on the skin and skeleton concepts is provided, the usage and manufacturing skins are used to show the functional surface of the product. Also, the material flow and link between the skins are demonstrated by usage and manufacturing skeletons. Therefore, this integrated approach is a helpful methodology for designer and manufacturer in different decisions like material and process selection as well as, evaluation of product manufacturability.

Keywords: Additive manufacturing, 3D printing, design for manufacturing, integrated design, interoperability.

Binary Programming for Manufacturing Material and Manufacturing Process Selection Using Genetic Algorithms

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Abstract:

The material selection problem is concerned with the determination of the right material for a certain product to optimize certain performance indices in that product such as mass, energy density, and power-to-weight ratio. This paper is concerned about optimizing the selection of the manufacturing process along with the material used in the product under performance indices and availability constraints. In this paper, the material selection problem is formulated using binary programming and solved by genetic algorithm. The objective function of the model is to minimize the total manufacturing cost under performance indices and material and manufacturing process availability constraints.

Keywords: Optimization, Material selection, Process selection, Genetic algorithm.

IMPROVING PRODUCTION CAPACITY THROUGH EFFICIENT PPC SYSTEM: LESSON FROM LEATHER MANUFACTURING

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Abstract:

A well designed and executed Production Planning and Control (PPC) system is one of the key levers for superior performance in the current manufacturing set-up. Hence, measuring the PPC system performance has become a necessity for long term success. The present study examined PPC related issues which impact the production capacity and productivity of leather companies with special focus on Kombolcha Tannery Share Company (KTSC), Ethiopia. Physical observation, interview, and questionnaire were used to generate necessary information from the respondents and reach valid conclusions. Company annual reports were referred and analyzed to triangulate primary data. Consequently, the study revealed that KTSC runs below its capacity due to its inefficient PPC system being in use for which the root causes were identified. The study thereby conceptualizes a PPC system improvement framework comprising three pillars viz., management culture, internal capability and performance measurement together with key considerations in each case. The study findings enable the company to recognize the importance of efficient PPC system as a source of competitive advantage. It also aid managers in evaluating various PPC execution schemes to enhance productivity.

Keywords: Ethiopia, Leather manufacturing, Production planning and control, PPC improvement framework.

EMBODIED CARBON FOOTPRINT OF EXISTING MALAYSIAN GREEN HOMES

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Abstract:

Part and parcel of building green homes (GHs) with favorable thermal comfort (TC) is to design and build with reduced carbon footprint (CF) from embodied energy in the building envelope and reduced operational CF overall. Together, the environmental impact of GHs can be reduced significantly. Nevertheless, there is still a need to identify the base CF value for Malaysian GHs and this can be done by assessing existing ones which can then be compared to conventional and vernacular houses which are built differently with different building materials. This paper underlines the research design and introduces the case studies. For now, the operational CF of the case studies is beyond the scope of this study. Findings from this research could identify the best building material and construction technique combination to build GHs depending on the available skills, financial constraints and the condition of the immediate environment.

Keywords: Embodied carbon footprint, Malaysian green homes.

PROPHYLACTIC EFFECTS OF DAIRY KLUYVEROMYCES MARXIANUS YAS THROUGH OVEREXPRESSION OF BAX, CASP 3, CASP 8 AND CASP 9 ON HUMAN COLON CANCER CELL LINES

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Abstract:
Colorectal cancer (CRC) is one of the most prevalent cancers and intestinal microbial community plays an important role in colorectal tumorigenesis. Probiotics have recently been assessed as effective anti-proliferative agents and thus this study was performed to examine whether CRC undergo apoptosis by treating with isolated Iranian native dairy yeast, Kluyveromyces marxianus YAS, secretion metabolites. The cytotoxicity assessments on cells (HT-29, Caco-2) were accomplished through 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay as well as qualitative DAPI (4',6-diamidino-2-phenylindole staining) and quantitative (flow cytometry assessments) evaluations of apoptosis. To evaluate the main mechanism of apoptosis, Real time PCR method was applied. Kluyveromyces marxianus YAS secretions (IC50) showed significant cytotoxicity against HT-29 and Caco-2 cancer cell lines (66.57 % and 66.34 % apoptosis) similar to 5-Fluorouracil (5-FU) while apoptosis only was developed in 27.57 % of KDR normal cells. The prophylactic effects of Kluyveromyces marxianus (PTCC 5195), as a reference yeast, was not similar to Kluyveromyces marxianus YAS indicating strain dependency of bioactivities on CRC disease prevention. Based on real time PCR results, the main cytotoxicity is related to apoptosis phenomenon and the core related mechanism is depended on the overexpression of BAX, CASP 9, CASP 8 and CASP 3 inducing apoptosis genes. However, several investigations should be conducted to precisely determine the effective compounds to be used as anticancer therapeutics in the future.

Keywords: Anticancer, anti-proliferative, apoptosis, cytotoxicity, yeast.

COLOR CHARACTERISTICS OF DRIED COCOA USING SHALLOW BOX FERMENTATION TECHNIQUE

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Abstract:

Fermentation is well known as an essential process to develop chocolate flavor in dried cocoa beans. Besides developing the precursor of cocoa flavor, it also induces the color changes in the beans. The fermentation process is influenced by various factors such as planting material, preconditioning of cocoa pod and fermentation technique. Therefore, this study was conducted to evaluate color of Malaysian cocoa beans and how the duration of pods storage and fermentation technique using shallow box will effect on its color characteristics. There are two factors being studied i.e. duration of cocoa pod storage (0, 2, 4 and 6 days) and duration of cocoa fermentation (0, 1, 2, 3, 4 and 5 days). The experiment is arranged in 4 x 6 factorial designs with 24 treatments and arrangement is in a Completely Randomised Design (CRD). The produced beans are inspected for color changes under artificial light during cut test and divided into four groups of color namely fully brown, purple brown, fully purple and slaty. Cut tests indicated that cocoa beans which are directly dried without undergone fermentation has the highest slaty percentage. However, application of pods storage before fermentation process is found to decrease the slaty percentage. In contrast, the percentages of fully brown beans start to dominate after two days of fermentation, especially from four and six days of pods storage batch. Whereas, almost all batches of cocoa beans have a percentage of fully purple less than 20%. Interestingly, the percentage of purple brown beans are scattered in the entire beans batch regardless any specific trend. Meanwhile, statistical analysis using General Linear Model showed that the pods storage has a significant effect on the color characteristic of the Malaysian dried beans compared to fermentation duration.

Keywords: Cocoa beans, color, fermentation, shallow box.

EVALUATION OF BAKERY PRODUCTS MADE FROM BARLEY-GELATINIZED CORN FLOUR AND WHEAT-DEFATTED RICE BRAN FLOUR COMPOSITES

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Abstract:

In the present research, whole meal barley flour (WBF) was supplemented with gelatinized corn flour (GCF) in 0 and 30%. Whole meal wheat flour (WWF) was mixed with defatted rice bran (DRB) to produce 0, 20, 25, and 30% replacement levels. Rheological properties of dough were studied. Thermal properties and starch crystallinity of flours were evaluated. Flat bread, balady bread and pie were prepared from the different flour blends. The different bakeries were sensory evaluated. Color of raw materials and crust of bakery products were determined. Nutrients contents of raw flours and food products were assessed. Results showed that addition of GCF to WBF increased the viscosity and falling number of the produced dough. Water absorption, dough development time and dough stability increased with increasing the level of DRB in dough while, weakening and mixing tolerance index decreased. Extensibility and energy decreased, while, resistance to extension increased as DRB level increased. Gelatinized temperature of WWF, WBF, GCF, and DRB were 13.26, 35.09, 28.33, and 39.63, respectively. Starch crystallinity was affected when DRB was added to WWF. The highest protein content was present in balady bread made from 70% WWF and 30% DRB. The highest calcium, phosphorus, and potassium levels were present in products made from 100% WBF. Sensory attributes of the products were slightly affected by adding DRB and GCF. Conclusion: Addition of DRB or GCF to WWF or WBF, respectively affect the physical, chemical, rheological and sensory properties of balady bread, flat bread, and pie while improved their nutritive values.

Keywords: Bakeries, rheological properties, chemical and sensory attributes, flour thermal properties and starch crystallinity.

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SCREENING OF POTENTIAL SOURCES OF TANNIN AND ITS THERAPEUTIC APPLICATION

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Abstract:

Tannins are a unique category of plant phytochemicals especially in terms of their vast potential health-benefiting properties. Researchers have described the capacity of tannins to enhance glucose uptake and inhibit adipogenesis, thus being potential drugs for the treatment of non-insulin dependent diabetes mellitus. Thus, the present research was conducted to find out tannin content of food products. The percentage of tannin in various analyzed sources ranged from 0.0 to 108.53%; highest in kathaa and lowest in ker and mango bark. The percentage of tannins present in the plants, however, varies. Numerous studies have confirmed that the naturally occurring polyphenols are key factor for the beneficial effects of the herbal medicines. Isolation and identification of active constituents from plants, preparation of standardized dose & dosage regimen can play a significant role in improving the hypoglycaemic action.

Keywords: Tannins, Diabetes, Polyphenols, Antioxidants, Hypoglycemia.

INCIDENCE OF FUNGAL INFECTIONS AND MYCOTOXICOSIS IN PORK MEAT AND PORK BY-PRODUCTS IN EGYPTIAN MARKETS

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Abstract:

The consumption of food contaminated with molds (microscopic filamentous fungi) and their toxic metabolites results in the development of food-borne mycotoxicosis. The spores of molds are ubiquitously spread in the environment and can be detected everywhere. Ochratoxin A is a toxic and potentially carcinogenic fungal toxin found in a variety of food commodities. In this study, the mycological quality of various ready-to-eat local and imported pork meat and meat byproducts sold in Egyptian markets were assessed and the presence of various molds was determined in pork used as a raw material, edible organs as liver and kidney as well as in fermented raw meat by-products. The study assessed the mycological quality of pork raw meat and their by-products sold in commercial shops in Cairo, Egypt. Mycological analysis was conducted on (n=110) samples which included pig's livers and kidneys from Egyptian Bassatin slaughter house; local and imported processed pork meat by-products from Egyptian pork markets. The isolates were identified using traditional mycological and biochemical tests. All kidney and liver samples were positive to molds growth while all byproducts were negative. Ochratoxin A levels were quantitatively analyzed using the high performance liquid chromatography (HPLC) and the highest results were present in kidney 7.51 part per billion (ppb) followed by minced meat 6.19 ppb generally the local samples showed higher levels than the imported ones. To the best of our knowledge, this is the first report on mycotoxins detection and quantification from pork by-products in Egypt.

Keywords: Egypt, imported pork by-products, local, mycotoxins.

INADEQUACY OF MACRONUTRIENT AND MICRONUTRIENT INTAKE IN CHILDREN AGED 12-23 MONTHS OLD: AN URBAN STUDY IN CENTRAL JAKARTA, INDONESIA

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Abstract:

Optimal feeding, including optimal micronutrient intake, becomes one of the ways to overcome the long-term consequences of undernutrition. Macronutrient and micronutrient intake were important to a rapid growth and development of young children. The study objective was to assess macro and micronutrient intake and its adequacy in children aged 12-23 months. This survey was a cross-sectional study, involving 83 caregivers with children aged 12-23 months old in Senen Sub-district, Central Jakarta selected through simple random sampling. Data on nutrient intake was obtained through interview using single 24-hour recall. Repeated 24- hour recall to sub-sample was done to estimate the proportion of nutrient inadequacy. The highest prevalence of nutrient inadequacy was iron (52.4%), followed by vitamin C (30.9%) and zinc (28.8%). Almost 12% children had inadequate energy intake. More than half of children (62.6%) were anemic (25.3% were severely anemic). Micronutrient inadequacy, especially iron, was more problematic than macronutrient inadequacy in the study area.

Keywords: Micronutrient, macronutrient, children under five, urban setting.

Association between Single Nucleotide Polymorphism of Calpain1 Gene and Meat Tenderness Traits in Different Genotypes of Chicken: Malaysian Native and Commercial Broiler Line

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ABSTRACT

Meat Tenderness is one of the most important factors affecting consumers' assessment of meat quality. Variation in meat tenderness is genetically controlled and varies among breeds, and it is also influenced by environmental factors that can affect its creation during rigor mortis and postmortem. The final postmortem meat tenderization relies on the extent of proteolysis of myofibrillar proteins caused by the endogenous activity of the proteolytic calpain system. This calpain system includes different calcium-dependent cysteine proteases, and an inhibitor, calpastatin. It is widely accepted that in farm animals including chickens, the μ-calpain gene (CAPN1) is a physiological candidate gene for meat tenderness. This study aimed to identify the association of single nucleotide polymorphism (SNP) markers in the CAPN1 gene with the tenderness of chicken breast meat from two Malaysian native and commercial broiler breed crosses. Ten, five months old native chickens and ten, 42 days commercial broilers were collected from the local market and breast muscles were removed two hours after slaughter, packed separately in plastic bags and kept at -20ºC for 24 h. The tenderness phenotype for all chickens' breast meats was determined by Warner-Bratzler Shear Force (WBSF). Thawing and cooking losses were also measured in the same breast samples before using in WBSF determination. Polymerase chain reaction (PCR) was used to identify the previously reported C7198A and G9950A SNPs in the CAPN1 gene and assess their associations with meat tenderness in the two breeds. The broiler breast meat showed lower shear force values and lower thawing loss rates than the native chickens ($p<0.05$), whereas there were similar in the rates of cooking loss. The study confirms some previous results that the markers CAPN1 C7198A and G9950A were not significantly associated with the variation in meat tenderness in chickens. Therefore, further study is needed to confirm the functional molecular mechanism of these SNPs and evaluate their associations in different chicken populations.

Keywords: CAPN1 , chicken – meet tenderness – meet quality- SNPs

TÜKENİNCEYE KADAR EGZERSİZ YAPTIRILAN RATLARDA, SELENYUM UYGULAMASININ OKSİDATİF DEĞERLER ÜZERİNE ETKİSİ

The Effect of Selenium Application on Oxidative Values in Rats Exercising Until Depletion

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ÖZET

Bu çalışmada, antioksidanlar arasında önemli bir yeri olan Selenyum elementinin, tükeninceye kadar yüzdürülen ratlarda çeşitli dokularda oksidatif stres ve oksidatif stresle ilişkili protein ekspresyonları üzerine olan etkisinin araştırılması amaçlanmıştır.

Wistar-Albino ırkı 18 adet erkek sıçan her grupta 9 adet olacak şekilde 2 gruba ayrılmıştır. Ratların yüzmeye alışması amacıyla deneysel uygulamalar başlamadan önce ratlar yüzdürülmüştür.

Kontrol grubuna 20 gün boyunca günde bir kez olmak üzere; plasebo (serum fizyolojik), selenyum grubuna ise 0,8 mg/kg dozda selenyum verilmiştir. 20. günün sonunda gruplar tükeninceye kadar yüzdürülmüştür.

Son yüzdürmenin ardından ratlar hemen anestezi altında sakrifiye edilmiştir. Böbrek, kalp ve hemolizatta; MDA, GSH düzeyine; CAT ve GSH-Px aktivitesine bakılmıştır. Böbrek dokusunda oksidatif stresle ilişkili proteinler olan HO-1 ve Nrf2 düzeylerine Western blot yöntemiyle bakılmıştır.

Selenyum grubu böbrek dokusunda MDA düzeyi anlamlı düzeyde düşük çıkmıştır ($p<0,01$).

Selenyum grubu böbrek dokusunda GSH düzeyi ve GSH-Px aktivitesi anlamlı düzeyde yüksek çıkmıştır ($p<0,05$).

Böbrek dokusunda Nrf2 ve HO-1 protein düzeylere anlamlı düzeyde yüksek bulunmuştur($p<0,05$).

Sonuç olarak tükeninceye kadar yüzdürülen ratlarda selenyum takviyesinin böbrek dokusunda oksidatif stresi azalttığı ve oksidatif yanıtla ilişkili olan Nrf2 ve HO-1 protein düzeylerini artırdığı bulunmuştur.

Anahtar Kelimeler: *Antioksidan, egzersiz, oksidatif stres, yüzme*

ABSTRACT

In this study, it was aimed to investigate the effect of Selenium, which has an important place among antioxidants, on oxidative stress and oxidative stress-related protein expressions in various tissues of rats that were floated until exhaustion.

Eighteen male Wistar-Albino rats were divided into 2 groups, 9 in each group. In order for the rats to get used to swimming, the rats were floated before the experimental applications started.

In the control group, once a day for 20 days; placebo (physiological saline) and 0.8 mg/kg selenium were given to the selenium group. At the end of the 20th day, the groups were floated until exhaustion.

After the final float, the rats were immediately sacrificed under anesthesia. In kidney, heart and hemolysate; MDA to GSH level; CAT and GSH-Px activity were examined. The levels of HO-1 and Nrf2, which are proteins associated with oxidative stress in kidney tissue, were measured by Western blot method.

The MDA level in the kidney tissue of the selenium group was significantly lower ($p<0,01$).

GSH level and GSH-Px activity were significantly higher in the selenium group kidney tissue ($p<0,05$).

Nrf2 and HO-1 protein levels were found to be significantly higher in kidney tissue ($p<0,05$).

As a result, it was found that selenium supplementation decreased oxidative stress in kidney tissue and increased Nrf2 and HO-1 protein levels, which are associated with oxidative response, in rats that were floated until exhaustion.

Keywords: *Antioxidant, exercise, oxidative stress, swimming*

Ratlarda Selenyumun Yüzme Dayanıklılığı, Oksidatif Stres ve Nrf2/HO-1 Protein Ekspresyonları Üzerine Etkisi

The Effect of Selenium on Swimming Endurance, Oxidative Stress and Nrf2/HO-1 Protein Expressions in Rats

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ÖZET

Bu çalışmada, önemli bir antioksidan olan selenyumun tükeninceye kadar yüzdürülen ratlarda yüzme süresi, oksidatif stres ve oksidatif stresle ilişkili HO-1 ve Nrf2 protein düzeylerine olan etkisinin araştırılması amaçlanmıştır. Bu amaçla, 18 adet Wistar- Albino ırkı erkek sıçanlar, her grupta 9 adet olacak şekilde 2 gruba ayrılmıştır. Deneysel uygulama başlamadan önce ratların yüzmeye alışması için gruplar yarım saat yüzdürülmüştür.

Kontrol grubuna plasebo (serum fizyolojik), selenyum grubuna ise 0,8 mg/kg/gün selenyum intraperitoneal olarak 20 gün süreyle uygulanmıştır. Çalışmada 20. günün sonunda gruplar yüzdürülüp, yüzme süreleri kayıt altına alınmıştır. Ratlar yüzme işleminden hemen sonra anestezi altında sakrifiye edilmiştir. Kan, kas ve karaciğer doku örneklerinden MDA, GSH düzeyi, katalaz ve GSH-Px aktiviteleri belirlenmiştir. Kas ve karaciğer doku örneklerinden HO-1 ve Nrf2 protein düzeylerine Western blot tekniğiyle bakılmıştır. Elde edilen sonuçlara göre; Gruplar arasında yüzme süresi yönüyle bir fark bulunmamıştır ($p>0.05$). Karaciğer ve kas dokusu MDA düzeyinin selenyum grubunda kontrol grubuna göre anlamlı düzeyde düşük olduğu görülmüştür ($p<0.05$). Karaciğer GSH düzeyinde selenyum grubunda kontrol grubuna göre anlamlı artış tespit edilmiştir ($p<0.05$). Kas, plazma ve karaciğer dokusunda, GSH-Px düzeyinde selenyum grubunda kontrol grubuna göre olarak anlamlı artış görülmüştür ($p<0.05$). Karaciğer dokusu HO-1 ve Nrf2 protein düzeyi selenyum grubunda anlamlı düzeyde yüksek bulunmuştur ($p<0.01$).

Sonuç olarak tükeninceye kadar yüzdürülen ratlarda selenyum uygulaması, oksidatif stresi azaltıp antioksidan aktiviteyi ve Nrf2 ve HO-1 protein ekspresyon düzeylerini arttırmıştır, yüzme sürelerini etkilememiştir.

Anahtar Kelimeler: *Antioksidan, egzersiz, oksidatif stres, yüzme*

ABSTRACT

In this study, it was aimed to investigate the effect of an important antioxidant selenium, on swimming time, oxidative stress, and oxidative stress-related HO-1 and Nrf2 protein levels in rats floated until depleted. For this purpose, 18 male Wistar-Albino rats were divided into 2

groups, 9 in each group. Before the experiment, the groups were floated for half an hour for rats to get used to swimming.

Placebo (physiological saline) was administered to the control group, and 0.8 mg/kg/day selenium was administered intraperitoneally to the selenium group for 20 days. At the end of the 20th day, the groups were floated and swimming times were recorded. Rats were sacrificed under anesthesia immediately after swimming. MDA, GSH levels, catalase and GSH-Px activities were determined from blood, muscle and liver tissue *samples*. HO-1 and Nrf2 protein levels from muscle and liver tissue were measured by Western blot technique. According to the results; There was no difference between the groups in terms of swimming time ($p>0.05$). Liver and muscle MDA levels were found to be significantly lower in the selenium group ($p<0.05$). There was a significant increase in liver GSH level in the selenium group ($p<0.05$). In muscle, plasma and liver, GSH-Px levels were significantly increased in the selenium group ($p<0.05$). Liver HO-1 and Nrf2 protein levels were significantly higher in the selenium group ($p<0.01$).

As a result, selenium application decreased oxidative stress and increased antioxidant activity and Nrf2 and HO-1 protein expression levels in rats floated until exhaustion, but did not affect swimming times.

Key words: *Exercise, swimming, oxidative stress, antioxidant*

Üreme Mevsimindeki Romanov Koyunlarında Senkronizasyon Protokolleriyle Birlikte DVitamini Enjeksiyonunun Bazı Üreme Parametreleri Üzerine Etkisi

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ÖZET

Sunulan çalışmada üreme mevsiminde bulunan Romanov koyunlarında senkronizasyon protokolüne başlandığı gün D vitamini enjeksiyonunun kuzulama performansı ve bazı fertilite parametreleri üzerine etkisinin araştırılması amaçlandı. Senkronizasyon protokolüne iki grup toplamda 40 adet romanov koyunu üzerinde çalışma ve kontrol grubu olmak üzere başlandı. Çalışma grubundaki koyunlara (n=23) kontrol grubundan (n=17) farklı olarak D vitamini enjeksiyonu (1 mL, Provet-D3®, Provet, TÜRKİYE) yapıldı. Tüm koyunların kızgınlık senkronizasyonları, 14 gün süreyle 20 mg flugestone asetat içeren vagina içi sünger (Chronogest®, FRANSA)ve süngerin çıkarılma anında 300 IU kas içi eCG (Chrono-Gest/PMSG®, ALMANYA) enjeksiyonu ile yapıldı. Her iki grupta östrus (%100), gebelik (%100) ve kuzulama oranı (%100) benzerdi. D vitamini uygulanan grupta çoklu kuzulama oranının (%91,3) kontrol grubundan (%71,59) yüksek olduğu belirlendi. Fekundite 55/23 (2,39) ve verimlilik oranı (2.4±0.2) da D vitamini uygulanan grupta daha yüksekti. Sonuç olarak D vitamini uygulamasının senkronizasyon protokolünden elde edilecek yavru veriminin artmasına katkı sağlayabileceği düşünülmektedir. D vitamini enjeksiyonlarının fertilite parametreleri üzerindeki etkilerini daha net ortaya koyabilmek için daha kapsamlı çalışmaların yapılması gerektiği sonucuna varılmıştır.

Anahtar kelimeler: D vitamini, Koyun, Mevsim içi, Senkronizasyon

Effect of Vitamin D Injection with Synchronization Protocols on Some Reproductive Parameters in Romanov Sheep in Breeding Season

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ABSTRACT

In the present study, it was aimed to investigate the effect of vitamin D injection on lambing performance and some fertility parameters on the day the synchronization protocol was started in Romanov sheep in breeding season. The synchronization protocol was started on a total of 40 Romanov sheep in two groups, the study and the control group. Differently from the control group (n=17), the sheep in the study group (n=23) were injected with vitamin D (1 mL, Provet-D3®, Provet, TURKEY).The estrus synchronization of the all sheep were performed with 20 mg flugestone acetat impregnated intravaginal sponge (Chronogest®, FRANCE) for 14 days and 300 IU intramusculare CG (Chrono-Gest/PMSG®, GERMANY) at the time of sponge removal.estrus (100%), pregnancy (100%) and lambing rate (100%) were similar in both groups It was determined that the rate of multiple lambing (91.3%) in the vitamin D administered group was higher than the control group (71.59%). Fecundity 55/23 (2.39) and productivity rate (2.4±0.2) were also higher in the vitamin D administered group.As a result, it is thought that the application of vitamin D may contribute to the increase in the yield of off spring to be obtained from the synchronization protocol. It has been concluded that more comprehensive studies are needed to more clearly reveal the effects of vitamin D injections on fertility parameters.

Keywords: Breeding season, D vitamin, Synchronization, Ewes.

KOYUNLARDA SEKSÜEL SENKRONİZASYON VE ÖSTRUSUN UYARILMASI

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ÖZET

Günümüzde mera alanlarının azalmasına bağlı olarak koyun yetiştiriciliği olumsuz olarak etkilenmektedir. Bu durumdan dolayı koyunlarda verim özelliklerinin arttırılması amacıyla farklı alternatif kaynaklara ulaşılmak istenmektedir. Koyunların gebelik sürelerinin kısa olması, bir batında elde edilen yavru sayısının fazla olması ile beraber sürü idaresindeki kolaylığın olması yetiştiriciler tarafından daha çok tercih edilmektedir. Seksüel sezona bağlı olarak, kuzularda verimin arttırması için sürü idaresinin ve seksüel senkronizasyon programlarının uygulanması önem kazanmıştır. Östrusların kontrol edilmesi bu noktada önemli uygulamalardan biridir. Modern koyunculuk yetiştiriciliği östrusun uyarılması yada östrus senkronizasyon yöntemlerine başvurmaktadır. Bu yöntemlerin değişik hormonların verilmesi ile ya da doğal yöntemlerin kullanımı ile östrussiklusu kontrol edilebilir hale gelmiştir. Bu derlemede koyunlarda seksüel senkronizasyon ve östrusun uyarılması amacı ile uygulama alanı bulan yöntemlerözetlenmiştir.

Anahtar Kelimeler: Koyun, Senkronizasyon,Östrus, Hormon.

Sexual Synchronization And Stimulation Of Oestrus In Sheep

ABSTRACT

Today, sheep farming is adversely affected due to the decrease in pasture areas. Because of this situation, it is desired to reach different alternative sources in order to increase the yield characteristics of sheep. The fact that the gestation period of the sheep is short, the number of offspring obtained in one litter is high, and the ease of herd management are more preferred by the breeders. Depending on the sexual season, it has become important to apply herd management and sexual synchronization programs to increase productivity in lambs. Controlling estrus is one of the important applications at this point. Modern sheep breeding relies on estrus stimulation or estrus synchronization methods. The estrus cycle has become controllable with the administration of different hormones or the use of natural methods. In this review, the methods that have found application for the purpose of sexual synchronization and induction of estrus in sheep are summarized.

Keywords: Sheep, Synchronization,Oestrus,Hormone.

SİNBİYOTİKLERİN BROYLER BÜYÜME PERFORMANSINA ETKİSİ: BİR META-ANALİZ

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ÖZET

Bu çalışmanın amacı sinbiyotiklerin broyler büyüme performasına etkisini meta-analiz yöntemi ile değerlendirmektir. Bu çalışmada sinbiyotiklerin broylerlerde büyüme performasına etkisini inceleyen çalışmaları elde etmek için "broyler", "sinbiyotik" ve "büyüme" anahtar kelimeleri ile PubMed veritabanında literatür taraması yapılmıştır. Bu araştırmaya 42 gün süren ve büyüme parametreleri olarak canlı ağırlık artışı ve yemden yararlanma oranı değerlerinden en az birini raporlayan çalışmalar dahil edilmiştir. İncelenen çalışmalarda hiçbir katkı maddesi verilmeyen kontrol grubu ile sinbiyotik grubunun yer almasına dikkat edilmiştir. Literatür taraması sonucunda belirlenen 50 çalışmadan on ikisi bu meta-analiz için uygun bulunmuştur. Meta-analize alınan dokuz çalışmada canlı ağırlık artışı değerleri raporlanırken on çalışmada yemden yararlanma oranı değerleri belirtilmiştir. Cochran Q testine göre çalışmalar arası heterojenliğin anlamlı olması nedeniyle her iki parametre için standartlaştırılmış ortalama farklar (SMD) rasgele etkiler modeli kullanılarak birleştirilmiştir. Bu çalışmanın sonucunda sinbiyotik kullanımının canlı ağırlık artışı (p=0.239) ve yemden yararlanma oranı (p=0.195) değerlerine istatistiksel olarak anlamlı bir etkisinin olmadığı belirlenmiştir. Bu çalışmaya farklı veri tabanlarında yer alan çalışmalar da dahil edilerek araştırmanın geliştirilmesi planlanmaktadır.

Anahtar Kelimeler: sinbiyotik, broyler, meta-analiz, heterojenlik

THE EFFECT OF SYNBIOTICS ON BROILER GROWTH PERFORMANCE: A META-ANALYSIS

ABSTRACT

The aim of this study is to evaluate the effect of synbiotics on broiler growth performance by meta-analysis method. In this study, a literature search was conducted in the PubMed database with the keywords "broiler", "synbiotic" and "growth" to obtain studies examining the effects of synbiotics on growth performance in broilers. Studies lasting 42 days and reporting at least one of the body weight gain and feed conversion ratio values as growth parameters were included in this study. In the studies examined, attention was paid to include the control group, which did not receive any additives, and the synbiotic group. Twelve of the 50 studies identified as a result of the literature review were found suitable for this meta-analysis. While body weight gain values were reported in nine studies included in the meta-analysis, feed conversion ratio

values were reported in ten studies. Due to the significant heterogeneity between studies according to the Cochran Q test, standardized mean differences (SMD) for both parameters were combined using a random effects model. As a result of this study, it was determined that the use of synbiotics did not have a statistically significant effect on body weight gain (p=0.239) and feed conversion ratio (p=0.195). It is planned to develop the research by including studies in different databases in this study.

Keywords: synbiotic, broiler, meta-analysis, heterogeneity

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The longitudinal and temporal gradient of fish assemblages' structure in a dammed river: Aksu River, Antalya

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Abstract

Dams, by changing the natural flow pattern and regime of rivers, cause habitat fragmentation and change in the physicochemical structure of the water. This could result in extensive damage to aquatic biodiversity and ecosystem functions. Although the effects of dams on fish fauna have been widely studied, there is still a lack of data from a diversity perspective. For this reason, in this study, seasonal and spatial changes in fish community structure and diversity were investigated along the longitudinal gradient of dammed the Aksu River. Environmental parameters and fish samples were collected from a total of 5 stations between 2019-2020 in the winter and summer seasons. During study periods, 22 fish taxa belonging to 12 families were obtained. Cyprinids were determined as the most dominant family in terms of both species richness and abundance. During the study, the highest species richness was determined in the Aksu Estuary (site 1), and the lowest number of species was determined at site 5. The species richness increased in winter and decreased in summer. Species diversity was determined as the highest in site 1, but there was no difference between seasons. In this study, it has been determined that the fish community structure has changed due to the environmental parameters of the habitats, and the community structure of the station, which is located on the dam, has been affected especially due to the dams.

CANINE DISTEMPER VİRUS TARAFINDAN KODLANAN PROTEİNLER, PATOGENEZ VE MOLEKÜLER TEŞHİSTEKİ ÖNEMLERİ

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ÖZET

Canine distemper virus (CDV) *Paramyxoviridae* ailesi *Morbillivirus* cinsi içerisinde sınıflandırılmaktadır ve köpek gençlik hastalığının etkeni olarak bilinir. Hastalık özellikle yavru köpeklerde sık görülen ve genellikle ölümle sonlanan bazen sınırlı bazen de multisistemik olan bir hastalıktır. Sindirim sistemi, solunum sistemi ve merkezi sinir sistemi ile ilişkili semptomlar multisistemik enfeksiyon sırasında görülür. Konak olarak en çok her ne kadar *Canidae* (köpek, kurt, çakal, tilki) ailesi görülse de rakun, aslan gibi diğer bazı vahşi yaşam türlerinde de tespiti yapılmıştır.

CDV genomu genellikle küresel, zarflı, 150 nanometre çapında olup tek iplikçikli RNA yapısına sahiptir. Yaklaşık 15000 nükleotitden oluşan genom toplamda altı transkripsiyonel ünite ve bunlardan oluşan sekiz protein kodlamaktadır. Sırasıyla altı transkripsiyonel ünite Nükleokapsit proteini (N), Fosfoprotein (P), Matriks proteini (M), Füzyon proteini (F), Hemagglutinin (H) ve büyük polimeraz proteinidir (L). P geni ayrıca C ve V proteinlerini de kodlar ve toplamda sekiz protein virus replikasyonunda farklı görevler üstlenir.

CDV ile ilgili çalışmalar ilerledikçe moleküler yöntemler sadece teşhis amaçlı değil hastalığın patogenezi ile ilgili olarak da bilgi sağlar duruma gelmiştir. N virusun en korunaklı gen bölgesi olduğu için teşhis amaçlı hedef alınması gereken bölge durumundayken, H varyasyonu en fazla bölge olarak virus değişimini araştırmak için en uygun bölgedir. H bölgesindeki değişim durumuna göre 17 değişik CDV genotipi tespit edilmiştir. L proteini polimeraz aktivitesi ile progeni virus toplanması görevini üstlenirken, P proteini L'nin kofaktörü olarak görev yapmaktadır. F proteini H proteini ile beraber virus-hücre arası tanıma, bağlanma görevlerinden sorumludur. M proteini virus partiküllerin toplanması ve yeni virusların hücreden tomurcuklanması için gereklidir. C ve V proteinleri ise replikasyonda gerekli olmayıp virusun organizmanın immun yanıtından kaçması için önemlidir. CDV ile ilgili çalışılacak gen bölgesi seçilirken amaç göz önünde tutulmalı, yalnızca teşhis amaçlanıyorsa mutasyona daha kapalı olan bölgeler tercih edilmelidir.

Anahtar Kelimeler : Canine Distemper Virus, Teşhis, Moleküler, Genom

PROTEINS ENCODED BY CANINE DISTEMPER VIRUS, THEIR IMPORTANCE IN PATHOGENESIS AND MOLECULAR DIAGNOSIS

ABSTRACT

Canine distemper virus (CDV) is classified in *Paramyxoviridae* under genus *Morbillivirus* and responsible for canine distemper disease. Disease is mostly seen in puppies, has high mortality and can have local or systemic symptoms. Digestive, respiratory, central nervous system symptoms can be seen in systemic spread. *Canidae* (dog, wolf, jackal, fox) family is most common host of the disease but it is also detected in some wild species like raccoon and lion.

CDV genome is spherical, enveloped, around 150 nm diameter and has single strand RNA. It has around 15000 nucleotides and has six transcriptional units and encodes eight proteins. Six transcriptional units are Nucleocapsid protein (N), Phosphoprotein (P), Matrix protein (M), Fusion protein (F), Hemagglutinin (H) ve large polymerase protein (L). P gene also encodes C ve V proteins, with those a total of eight proteins having different role in virus replication cycle are produced.

As more and more studies on CDV were conducted, molecular studies started to be used not only for diagnosis but also subjects like pathogenesis. N is the most conservative gene region so it is selected for routine diagnosis. H is the most variable region which can be used for understanding the evolution of the virus. 17 CDV genotypes are recognized by H gene variability. L protein shows polymerase activity, helps progeny virus assembly and P protein acts as its cofactor. F protein with H protein mediate recognition and attachment. M protein is required for assembly and budding of progeny viruses. C and V proteins are not essential for replication but have a role in preventing host immune response. Gene choice in CDV studies are dependent on aim of the study, if the aim is only diagnosis, conservative regions should be considered.

Keywords : Canine Distemper Virus, Diagnosis, Molecular, Genome

JOB SATISFACTION AND MOTIVATION AS PREDICTORS OF LECTURERS' EFFECTIVENESS IN NIGERIA POLICE ACADEMY

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Abstract:

Job satisfaction and motivation have been given an important attention in psychology because they are seen as main instruments in maintaining organizational growth and development; they are also used to accomplish organizational aims and objectives. However, it has been observed that some institutions failed in motivating and stimulating their workers; in contrast, workers may be motivated but not satisfied with the job and failed to perform efficiently and effectively. It is hoped that the study of this nature would be of significance value to all stakeholders in education specifically, lecturers in higher institutions in Nigeria. Also, it is hoped that the findings of this study will enhance lecturers' effectiveness and performance in discharging their duties. In the light of the above statements, this study investigated whether job satisfaction and motivation predict lecturers' effectiveness in Nigeria Police Academy, Wudil, Kano State. Correlational research method was adopted for the study, while purposive sampling technique was used to choose the institution and the sampled lectures (70). Simple random sampling technique was used to select one hundred cadets across the academy. Two instruments were used to elicit information from both lecturers and cadets. These were job satisfaction and motivation; and lecturers' effectiveness Questionnaires. The instruments were subjected to pilot testing and found to have reliability coefficient of 0.69 and 0.71 respectively. The results of the study revealed that there was a significance relationship among job satisfaction, motivation and lecturers effectiveness in Nigeria Police Academy. There was a significance relationship between job satisfaction and lecturers' effectiveness in Nigeria Police Academy the cal r is 0.21 while the crt r is 0.19. at $p<0.05$ and; there was a significance relationship between job motivation and lecturers effectiveness in Nigeria Police Academy the cal r is 0.20 while the crt r is 0.19 at $p<0.05$This study therefore concluded that there was a significance relationship among job satisfaction, motivation and lecturers effectiveness in Nigeria Police Academy. Based on the data collected, collated and analyzed Recommendations were made for both the lecturers and the Academy management. It is also suggested that lecturers should be industrious in their primary assignment in other to make values to cadets lives and career. And management should also try to enhance lecturers performance by more motivational needs for the lecturers.

Keywords—Satisfaction, motivation, lecturer effectiveness, academy.

A QUASI-SYSTEMATIC REVIEW ON EFFECTIVENESS OF SOCIAL AND CULTURAL SUSTAINABILITY PRACTICES IN BUILT ENVIRONMENT

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Abstract:

With the advancement of knowledge about the utility and impact of sustainability, its feasibility has been explored into different walks of life. Scientists, however; have established their knowledge in four areas viz environmental, economic, social and cultural, popularly termed as four pillars of sustainability. Aspects of environmental and economic sustainability have been rigorously researched and practiced and huge volume of strong evidence of effectiveness has been founded for these two sub-areas. For the social and cultural aspects of sustainability, dependable evidence of effectiveness is still to be instituted as the researchers and practitioners are developing and experimenting methods across the globe. Therefore, the present research aimed to identify globally used practices of social and cultural sustainability and through evidence synthesis assess their outcomes to determine the effectiveness of those practices. A PICO format steered the methodology which included all populations, popular sustainability practices including walkability/cycle tracks, social/recreational spaces, privacy, health & human services and barrier free built environment, comparators included 'Before' and 'After', 'With' and 'Without', 'More' and 'Less' and outcomes included Social well-being, cultural coexistence, quality of life, ethics and morality, social capital, sense of place, education, health, recreation and leisure, and holistic development. Search of literature included major electronic databases, search websites, organizational resources, directory of open access journals and subscribed journals. Grey literature, however, was not included. Inclusion criteria filtered studies on the basis of research designs such as total randomization, quasirandomization, cluster randomization, observational or single studies and certain types of analysis. Studies with combined outcomes were considered but studies focusing only on environmental and/or economic outcomes were rejected. Data extraction, critical appraisal and evidence synthesis was carried out using customized tabulation, reference manager and CASP tool. Partial meta-analysis was carried out and calculation of pooled effects and forest plotting were done. As many as 13 studies finally included for final synthesis explained the impact of targeted practices on health, behavioural and social dimensions. Objectivity in the measurement of health outcomes facilitated quantitative synthesis of studies which highlighted the impact of sustainability methods on physical activity, Body Mass Index, perinatal outcomes and child health. Studies synthesized qualitatively (and also quantitatively) showed outcomes such as routines, family relations, citizenship, trust in relationships, social inclusion, neighbourhood

social capital, wellbeing, habitability and family's social processes. The synthesized evidence indicates slight effectiveness and efficacy of social and cultural sustainability on the targeted outcomes. Further synthesis revealed that such results of this study are due weak research designs and disintegrated implementations. If architects and other practitioners deliver their interventions in collaboration with research bodies and policy makers, a stronger evidence-base in this area could be generated.

Keywords—Built environment, cultural sustainability, social sustainability, sustainable architecture.

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THE EFFECTIVENESS OF METAPHOR THERAPY ON DEPRESSION AMONG FEMALE STUDENTS

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Abstract:

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

Keywords—Metaphor therapy, depression, female, students

PSYCHOPATHIC DISORDERS AND JUDGES SENTENCING: CAN NEUROSCIENCES CHANGE THIS AGGRAVATING FACTOR IN A MITIGATING FACTOR?

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Abstract:

Psychopathic disorders are taking an important part in judge sentencing, especially in Canada. First, we will see how this phenomenon can be illustrated by the high proportion of psychopath offenders incarcerated in North American prisons. Many decisions in Canadians courtrooms seem to point out that psychopathy is often used as a strong argument by the judges to preserve public safety. The fact that psychopathy is often associated with violence, recklessness and recidivism, could explain why many judges consider psychopathic disorders as an aggravating factor. Generally, the judge reasoning is based on Article 753 of Canadian Criminal Code related to dangerous offenders, which is used for individuals who show a pattern of repetitive and persistent aggressive behaviour. Then we will show how, with cognitive neurosciences, the psychopath's situation in courtrooms would probably change. Cerebral imaging and news data provided by the neurosciences show that emotional and volitional functions in psychopath's brains are impaired. Understanding these new issues could enable some judges to recognize psychopathic disorders as a mitigating factor. Finally, two important questions ought to be raised in this article: can exploring psychopaths 'brains really change the judge sentencing in Canadian courtrooms? If yes, can judges consider psychopathy more as a mitigating factor than an aggravating factor?

Keywords—Criminal law, judges sentencing, neurosciences, psychopath

THE USE OF EMOTICONS IN POLITE PHRASES OF GREETINGS AND THANKS

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Abstract:

This paper shows the connection between emoticons and politeness in written computer-mediated communication. It studies if there are some differences in the use of emoticon between Czech and English written tweets. The assumptions about the use of emoticons were based on the use of greetings and thanks in real, faceto-face situations. The first assumption, that welcome greeting phrase would be accompanied by positive emoticon, was correct. But for the farewell greeting are both positive and negative emoticons possible. The results show lower frequency of negative emoticons in this context. There were also quite often found both positive and negative emoticon in the same tweet. The expression of gratitude is associated with positive emotions. The results show that emoticons accompany polite phrases of greeting and thanks very often both in Czech and English. The use of emoticons with studied polite phrases shows that emoticons have become an integral part of these phrases.

Keywords—Computer-mediated communication, emoticons, politeness, Twitte

GHRELIN AS A POTENTIAL THERAPEUTIC AGENT FOR AGING-RELATED SARCOPENIA

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ABSTRACT

Sarcopenia is a condition that occurs as people age and is characterized by a loss of both muscle mass and function. This condition increases the risk of falling, impairs stability, causes immobility, and even results in death. Ghrelin, a 28-amino acid peptide hormone is produced mainly by the stomach. Also, the digestive system, energy balance, and reproductive and cardiovascular systems are all known to be regulated by ghrelin. But does it help to treat or ameliorate sarcopenia brought on by ageing? From the literature, both the acylated and unacylated forms of ghrelin have been demonstrated to increase muscle anabolism and exert protective effects against muscle atrophy in animals. However, unacylated ghrelin is a better option for sarcopenia because it has not been linked to obesity and because it caused a strong shift towards oxidative metabolism in muscle. In older mice, unacylated ghrelin decreased age-related muscular atrophy and enhanced muscle function. Additionally, there is a connection between patients with sarcopenia and plasma ghrelin levels. Furthermore, when tested on healthy older adults, MK-677 (a ghrelin mimic) has also been associated with an increase in lean body mass and total body weight. Additionally, in healthy older people at risk for functional decline, capromorelin, a ghrelin agonist, enhanced physical performance and body composition. To ascertain the mechanism of action by which ghrelin reduces and ameliorates sarcopenia in animal models and elderly people, more experimental studies must be conducted. But drug developers and researchers should focus on ghrelin's potential as a treatment or preventative for age-related sarcopenia.

Keywords: Sarcopenia, Ghrelin, Aging, Ameliorative effects, Therapeutic agent

The Formation of Mutual Understanding in Conversation: An Embodied Approach

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Abstract

The mutual understanding in conversation is very important for human relations. This study investigates the mental function of the formation of mutual understanding between two people in conversation using the embodied approach. Forty people participated in this study. They are divided into pairs randomly. Four conversation situations between two (make/listen to fun or pleasant talk, make/listen to regrettable talk) are set for four minutes each, and the finger plethysmogram (200 Hz) of each participant is measured. As a result, the attractors of the participants who reported "I did not understand my partner" show the collapsed shape, which means the fluctuation of their rhythm is too small to match their partner's rhythm, and their cross correlation is low. The autonomic balance of both persons tends to resonate during conversation, and both LLEs tend to resonate, too. In human history, in order for human beings as weak mammals to live, they may have been with others; that is, they have brought about resonating characteristics, which is called self-organization. However, the resonant feature sometimes collapses, depending on the lifestyle that the person was formed by himself after birth. It is difficult for people who do not have a lifestyle of mutual gaze to resonate their biological signal waves with others'. These people have features such as anxiety, fatigue, and confusion tendency. Mutual understanding is thought to be formed as a result of cooperation between the features of self-organization of the persons who are talking and the lifestyle indicated by mutual gaze. Such an entanglement phenomenon is called a nonlinear relation. By this research, it is found that the formation of mutual understanding is expressed by the rhythm of a biological signal showing a nonlinear relationship.

Keywords
Embodied approach, finger plethysmogram, mutual understanding, nonlinear phenomenon.

EFFECT OF ORGANIZATIONAL COMPETITIVE CLIMATE ON ORGANIZATIONAL PROSOCIAL BEHAVIOR: WORKPLACE ENVY AS A MEDIATOR

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Abstract:

Scarce resources are the inseparable part of organization life. This fact that only small number of the employees can have these resources such as promotion, raise, and recognition can cause competition among employees, which create competitive climate. As well as any other competition, small number wins the reward, and a great number loses, one of the possible emotional reactions to this loss is negative emotions like malicious envy. In this case, the envious person may try to harm the envied person by reducing the prosocial behavior. Prosocial behavior is a behavior that aimed to benefit others. The main propose of this action is to maintain and increase well-being and well-fare of others. Therefore, one of the easiest ways for harming envied one is to suppress prosocial behavior. Prosocial behavior has positive and important implication for organizational efficiency. Our results supported our model and suggested that competitive climate has a significant effect on increasing workplace envy and on the other hand envy has significant negative impact on prosocial behavior. Our result also indicated that envy is the mediator in the relation between competitive climate and prosocial behavior. Organizational competitive climate can cause employees respond envy with negative emotion and hostile and damaging behavior toward envied person. Competition can lead employees to look out for proof of their self-worthiness; and, furthermore, they measure their self-worth, value and respect by the superiority that they gain in competitions. As a result, loss in competitions can harm employee's self-definition and they try to protect themselves by devaluating envied other and being 'less friendly' to them. Some employees may find it inappropriate to engage in the harming behavior, but they may believe there is nothing against withholding the prosocial behavior.

Keywords—Competitive climate, mediator, prosocial behavior, workplace envy.

FACILITATING FAMILIAL SUPPORT OF SAUDI ARABIANS LIVING WITH HIV/AIDS

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Abstract:

This paper provides an overview of the current situation of HIV/AIDS patients in the Kingdom of Saudi Arabia (KSA) and a literature review of the concepts of stigma communication, communication of social support. These concepts provide the basis for the proposed methods, which will include conducting a textual analysis of materials that are currently distributed to family members of people living with HIV/AIDS (PLWHIV/A) in KSA and creating an educational brochure. The brochure will aim to help families of PLWHIV/A in KSA (1) understand how stigma shapes the experience of PLWHIV/A, (2) realize the role of positive communication as a helpful social support, and (3) develop the ability to provide positive social support for their loved ones.

Keywords—HIV/AIDS, Saudi Arabia, social support, stigma communicatio

DATA SET CLUSTERING USING K-MEANS

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ABSTRACT

Clustering is a data analysis process that involves grouping several objects into clusters. One of the most crucial components of data mine is clustering. The fundamental clustering method and perhaps most popular methodology is K-means clustering. Finding your closest neighbor is another name for it. The data are essentially clustered into a specified amount of clusters. The K-means clustering computation effectiveness has undergone several improvements. Numerous disciplines, including science, sociology, finance, and the power industry, employ clustering. The amount of clusters or the number of design variables is rarely encountered, and it needs to be established before clustering, also as the outcome of clustering differs also as the number of cluster variables fluctuates. The technique over many clustering has indeed been put out. K-means algorithm is a straightforward and quick clustering technique among these. Numerous attempts have been made in the past to enhance the efficiency of the K-means algorithms. For small to medium-sized data sets, the result of enhanced k-means exhibits a significant increase in performance. K-means, however, lags well behind huge and also very large amounts of information. In this document, the information done by various researchers employing K-means clustering is summarized in the shape of a study. We've also spoken about the K-means clustering computation drawbacks and uses. This study examines several approaches, their benefits, and drawbacks, and assesses whether the k-means methodology still needs to be improved. An updated review of the K means clustering methodology is presented in this study.

Keywords: Seeking for the closest neighbor, K-means clustering, Clusters, Data, Unsupervised learning

COMPARISON BETWEEN USING GENETIC ALGORITHM AND FMINCON METHODS FOR SOLVING THE OPTIMAL POWER FLOW OF IEEE-30 BUS STANDARD SYSTEM

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ABSTRACT

In this study, Fmincon MATLAB optimization and Genetic Algorithm-based computational intelligence optimization techniques (GA) have been employed to aim to solve the Optimal Power Flow issue (OPF) in a power system in order to satisfy both conditions load requirement of the system (demand) and operational limitations of the system including equality and inequality constraints at the possible lowest generation cost. The used method provides the best setting for controlling the variables in the OPF including the active generator output and generator bus voltages with the aim of reducing the cost of generation and production. The proposed soft computing optimization strategies were evaluated and tested. The results of both optimization strategies were compared and assessed on an American Electric IEEE 30-bus standard system while meeting the maximum and minimum limits for the control and system data variables. The results demonstrated the effectiveness of the strategy based on MATLAB optimization fmincon, which was offered as a solution to the optimal power flow problem with high efficiency and flexibility for implementation and analysis on power system networks. Additionally, the effectiveness of AG-OPF was tested by keeping the number of generations constant while choosing various population size values of candidate solutions. It was found that the effectiveness of AG is higher when the population size values rise, but it is still inferior to the fmincon method. As a result, the GA-OPF approach and the fmincon method can both be used to deal with the problem of optimal power flow. Because of their adaptability to impose a wide range of constraints and their ability to optimize generation cost curves, so they can be used on a large scale and in larger networks of electrical systems.

Keywords: Optimal power flow, MATLAB optimization, Genetic Algorithm

IOT TABANLI, MOBİL CİHAZLAR İLE İZLENEBİLEN VE KONTROL EDİLEBİLEN YENİ VE MODERN BİR HASSAS MANTAR TARIM SİSTEMİ

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ÖZET

Günümüzde insanlığın varlığı ve devamı için zaruri olan enerji, su ve besin kaynakları hızla azalmakta veya gittikçe daha yetersiz hale gelmektedir. Bu sebeplerle tarım sektöründe de verim ve sürdürülebilirlik büyük önem kazanmıştır. Tarımda gözlem ve kontrol verimi artırmakla birlikte bu işlemler insan gücü ile konvansiyonel yöntemler kullanılarak yapıldığında çok fazla emek ve zaman gerektirmektedir. Günümüzde tarım alanında da yeni bir yöntem olarak elektronik otomasyonun kullanımı üretimde verim artışı ve kısıtlı kaynakların daha etkin ve verimli kullanılabilmesine yardımcı olabilir. Ayrıca içinde bulunduğumuz Endüstri 4.0 çağının en önemli gelişmelerinden biri ise nesnelerin internetidir (IoT: Internet of Things). Bu amaçlarla otomasyonda izleme, iletişim ve kontrol işlemleri için yeni bir teknoloji olan IoT sistemlerin kullanılmasının önemli bir rol oynayabileceği düşünülmektedir. Bu çalışmada insanlar için besin sektöründen ilaç ve kozmetik sektörüne kadar yaygın bir kullanımı olan mantar üretimi ve otomasyonu konusunda konvansiyonel yöntemler yerine güncel ve yeni bir yöntem sunulmuştur. Mantar hızlı bir gelişme periyoduna sahip olması ve kontrollü ortamda otomasyonla üretime uygun olması nedenleri ile tercih edilmiştir. Gerçekleştirilen sistemde üretim için kullanılan kontrollü ortamda dış ve iç ortam fiziksel büyüklükleri sensörler kullanılarak ölçülmektedir. Alınan veriler bir Raspberry Pi mikrodenetleyici ile işlenmekte ve sahip olduğu WIFI ve ethernet modülü ile internet aracılığıyla veri tabanına gönderilmektedir. Bulut sistemi için Google FireBase platformu kullanılmıştır. Sistemde veriler anlık olarak görüntülenebilmiş ve mobil sistemler ile kontrol edilebilmiştir. Ayrıca her bir sensör verisi ayrı ayrı kaydedilebildiği için önceki verilerin farklı amaçlarla kullanılabilmesi de mümkündür. Bu veriler araştırma ve geliştirme için kullanılabileceği gibi, analiz sonuçları günümüzde popüler bir konu olan gelecek zamanlardaki şartları tahmin etmek için vb. kullanılabilir. Bu çalışmada mantar üretimi için gerekli olan parametreler belirlenmiş; sürecinin mobil cihazlar ile izlenmesi, gözlenmesi ve kontrol edilebilmesi için IoT tabanlı yeni bir ölçüm ve kontrol sistemi gerçekleştirilmiştir. Kontrollü ortamın başarılı ölçüm sonuçları önerilen sistemin sahada kullanımı ile verimin artabileceğini göstermektedir.

Anahtar Kelimeler: Hassas tarım, Mantar, IoT, Tarım teknolojileri.

UÇUŞ SİMÜLATÖRÜ HAREKET SİSTEMLERİ İÇİN FPGA TABANLI DÜŞÜK GÜRÜLTÜLÜ GERÇEK ZAMANLI VERİ TOPLAMA SİSTEMİ

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ÖZET

Atalet Ölçüm Birimi (IMU: Inertial Measurement Unit) tipik olarak açısal hızı ve belirli bir kuvveti ölçmek için kullanılan bir elektronik cihazdır. Jiroskop sensörü, ivme sensörü ve açı sensörü kombinasyonundan oluşur. İvme ölçer, atalet ivmesini veya zaman içindeki hız değişimini ölçmekten sorumlu birincil sensördür. Jiroskop, bir nesnenin açısal hızını bir atalet referans çerçevesine göre ölçen bir atalet sensörüdür. Bu çalışmada FPGA tabanlı Ataletsel Ölçüm Birimi (IMU) için yeni bir donanım tasarımı ve veri toplama sisteminin gerçekleştirilmesi sunulmaktadır. FPGA' nın küçük boyutlu olması, düşük güç tüketimine sahip olması ve programlanabilir yapıda olması tasarlanan sistem için önemli anahtar faktörlerdir. Gerçekleştirilen sistemde DE2 altera FPGA kartı IMU sensörlerinden okunan ivme ölçerin verilerini SPI protokolü ile paralel olarak ve yüksek hızlı bir şekilde almayı başarmıştır. FPGA kartında SPI modülü ve kalman filtresini uygulayabilmek için çarpma modülü, bölme modülü ve kaydedici modülü olmak üzere 3 alt modül tasarlanmıştır. Tasarlanan alt modüller için VHDL programlama dili kullanılmıştır. Ayrıca bu çalışma, gyro ve ivme ölçer verilerinin aynı anda alınması sırasında yaşanan senkronizasyon problemlerini çözmüş ve sistem için sensor verisi okunurken yaşanan gürültüyü kalman filtre kullanarak engellemiştir. Sekiz bin örnekleme yapılarak sensörden alınan açısal hız için kalman filtre kullanıldığı ve kullanılmadığı durumlar için grafikler çizdirilmiştir. FPGA kartı literatürde yer alan çalışmalarda kullanılan 80C196KC ve ADDUC812 kartları ile karşılaştırıldığında daha küçük boyutlu olması, yüksek hızda ve senkron çalışma özelliklerinin olması sağlanan önemli bazı avantajlardır. 80C196KC, ADDUC812 ve DE2 kartları ile alınan gyro sensör verileri grafik olarak çizdirilmiştir. Ayrıca gyro sensörden alınan verilere göre ortalama hatalar hesaplanıp grafik olarak çizdirilmiştir. Hatalar hesaplanırken MSE (Mean Square Error) yöntemi kullanılmıştır. Çalışmaya görüntü işleme algoritması dahil edilmesi durumunda ihtiyaç duyulacak güç tablolarda belirtilmiş ve görüntü işleme için kullanılabilecek ekran kartları ile kıyaslanmıştır. Alınan sonuçlar, kurulan FPGA tabanlı devrenin uçuş simülatör sistemlerinin ihtiyaçlarını karşılayabildiğini göstermektedir.

Anahtar Kelimeler : Uçuş Simülatör Sistemi, Veri Toplama, SPI, FPGA, IMU, Atalet Ölçüm Birimi, Kalman Filtre.

BİR MAKİNE İŞLETMESİNDE ERGONOMİK RİSK ANALİZ YÖNTEMİ KULLANILARAK PROSES İYİLEŞTİRME

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ÖZET

Üretim süreçlerinde ağırlıklı olarak insan gücü kullanılan, tam otomasyona geçmemiş işletmelerde, duruş bozuklukları ve yanlış hareketlerden kaynaklanan meslek hastalıkları ve iş kazaları meydana gelebilmektedir. İşletme süreçlerinden meydana gelen meslek hastalıkları ve iş kazaları, hemen olmasa bile uzun vadede işletmeye ve çalışanlara büyük ölçüde zararlar verebilmektedir. Meslek hastalıklarına yakalanan personelin çalışma performansı düşmekte ve dolayısıyla işgücü yoğun olarak çalışan işletmelerde üretim verimliliği ve üretim kalitesi de azalabilmektedir. Meslek hastalıklarının ve iş kazalarının oluşmadan önlenmesine yönelik olarak risk analizi yapmak için çeşitli ergonomik risk analizi yöntemlerinden faydalanılmaktadır. Ergonomik risk analizi yöntemleri ile analiz edilen personel duruş ve hareketlerinden mesleki hastalıklara sebep olma ihtimali fazla olan çalışma duruşları ve hareketlerinde iyileştirme yapılarak mesleki hastalıkların oluşmasını en aza indirmek amaçlamaktadır. Meslek hastalıklarının ve iş kazalarının en aza indirilmesi için makine imalatı yapan bir işletmede yapılan bu çalışmada, üretim sürecindeki kriterlerin uygun olması sebebiyle risk analiz yöntemlerinden Owas Analiz Metodu tercih edilmiştir. Sakarya'da faaliyet gösteren işletmede tesviye süreci, çalışan personel tarafından iş gücüyle yapılmaktadır. Tesviye sürecinde çalışan personelin çalışma esnasında ergonomik duruş bozukluklarına maruz kalması, personelin zamanla meslek hastalığına yakalanma ve/veya iş kazalarına uğrama olasılığını artırmaktadır. Meslek hastalığına yakalanan personelin verimi düşmekte, bu durum işletmeyi maddi ve manevi olarak zarara uğratmaktadır. Bu çalışmada bu problemin çözümü için bir uygulama yapılacaktır. Çalışmada, Owas metodu kullanılarak prosesin risk kategorisi belirlenmiş olup bu risk kategorisine göre iyileştirme önerilerinde bulunulmuştur.

Anahtar Kelimeler: Owas, Ergonomi, Risk Analiz Yöntemleri, Meslek Hastalıkları, İyileştirme.

BİR TREYLER FİRMASI İÇİN ÜRETİM SÜRECİNİN ANALİZİ

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ÖZET

Siparişlerin zamanında teslimi işletmenin itibarı için önemli olduğu kadar aynı zamanda da müşterilerin işletme ile çalışmaya devam edip etmeyecekleri kararını etkileyen önemli faktörlerdendir. Müşteri siparişlerinin zamanında teslim edilememesinin üretimin zamanında başlamaması, hammaddelerin üretim zamanı için hazır olmaması, hatalı üretim yapılması, makinelerin arızalanması, anahtar personelin işe gelmemesi gibi sebepleri olabilmektedir. Bu çalışmada küçük ölçekli bir treyleri üretim işletmesinde yapılan uygulama anlatılacaktır. İşletmenin yaşadığı en büyük problemlerden birisi müşteri siparişlerini zamanında yetiştirememesidir. Problemin çözümü için öncelikle sipariş ve üretim süreçleri analiz edilecektir. Son dört yılın (2018-2019-2020-2021) dört çeyrek dönemi için işletmeye gelen ürün talebi ile üretilen ürün sayısı karşılaştırılmıştır. Talebin zamanında karşılanmadığı, gecikmeler yaşandığı gözlemlenmiştir. Regresyon analizi ile 2022 yılının dört çeyreklik dönemi için talep tahmini yapılmıştır. Böylece önümüzdeki dönemler için ne kadar ürün üretilmesi gerektiği belirlenmiştir. Üretimde kaynaklanabilecek gecikmelerin sebeplerini bulabilmek için balık kılçığı analizi uygulanmıştır. İşletmenin üretim sürecinde kullanılmak üzere stoklanan hammaddelerin depolardaki durumunun bilinmemesi önemli bir problem olarak ortaya çıkmaktadır. Depolardaki hammaddelerin takip edilebilmesi için bir sistem olmamasından dolayı depo personelinin malzeme eksikliğini zamanında fark etmemesi, eksik parçaların temin edilmesi için geçen sürede de üretimde gecikmeler yaşanması sıklıkla yaşanan bir problemdir. Balık kılçığı diyagramında da bu problem net bir şekilde ortaya çıkmaktadır. Depodaki hammaddelerin stok takibinin yapılması için Excel Programı ile stok takip sistemi yapılmıştır. Sisteme, depoda stokları bulunan hammaddelerin adları ve malzeme kodları girilmiştir. Depoya alınan ve depodan ayrılan stokların, giriş-çıkış ekranından malzeme adı seçilerek giren veya çıkan miktar ve işlem tarihi verilerinin kaydedilmesi sağlanmıştır. Böylece üretimde kullanılacak hammaddelerin stok durumları takip edilebilecek, yetersizlik durumunda üretimin aksamaması için gereken zamanlarda hammadde siparişi verilebilecektir. Stok takip sisteminin verimli çalışması ile üretim sürecinde hammadde eksikliğinden kaynaklanan gecikmeler yaşanmayacak ve müşteri siparişleri zamanında teslim edilebilecektir.

Anahtar Kelimeler: Talep Tahmini, Regresyon Analizi, Balık Kılçığı, Stok Takip.

METAL OKSİTLERİN VE SİLİKATLARIN FREN BALATASI SÜRTÜNME PERFORMANSI ÜZERİNE ETKİLERİ

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ÖZET

Bu çalışmada karayolu ulaşımında en çok kullanılan binek ve ağır ticari araçların fren sisteminin en önemli elemanlarından olan disk fren balatası üzerine çalışılmıştır. Fren balatalarının temel prensibi olan durdurma işleminde en aktif görev alan ve sürtünme katsayısını(μ) birebir etkileyen aşındırıcı malzemeler çalışılmıştır. Çalışma kapsamında farklı çeşit aşındırıcı malzemelerin, farklı partikül boyutu kullanılarak polimer matriks hazırlanmıştır. Bu aşamada formülasyon dizaynı için 'Design Expert' programı ile aşındırıcıların Mohs sertlik değerine, partikül boyutuna ve partiküllerin geometrik şekilleri de göz önünde bulundurularak istatiksel şekilde deney tasarımı yapılmıştır. Kullanılan aşındırıcılar; alümina (Al_2O_3), silisyum karbür (SiC), zirkonyum oksit (ZrO_4), zirkonyum silikat ($ZrSiO_4$), magnetit (Fe_2O_3), chromite ($FeCr_2O_4$) ve alümina kimyasalının farklı partikül boyutları denenmiştir. Hazırlanan 8 farklı denemeye Sertlik Testi (ISO 2039), Sıkıştırılabilirlik Testi (ISO 6310), balatanın fren sistemi üzerinde performansını gösterdiği Atalet Dinamometresi(ISO 26865) ile simülasyon testi yapılmış ve test sonucunda karşı disk yüzeyine yüzey pürüzlülüğü(Ra, Rz) testi yapılmıştır. Sonuçlara bakıldığında Deneme 4'ün sürtünme katsayısı μ=0,40 olarak ölçülüp, alüminanın sürtünme katsayısına etkisinin daha fazla olduğu, disk üzerine etkisi değerlendirildiğinde yüzeyi daha az çizdiği ve yüzeydeki kayıp(wear) miktarının 0,05 mm olduğu görülmektedir.

Anahtar Kelimeler : Disk Balata, aşındırıcı, sürtünme

REDUCED RULE BASED FUZZY LOGIC CONTROLLED ISOLATED BIDIRECTIONAL CONVERTER OPERATING IN EXTENDED PHASE SHIFT CONTROL FOR BIDIRECTIONAL ENERGY TRANSFER

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Abstract:

Bidirectional energy transfer capability with high efficiency and reduced cost is fast gaining prominence in the central part of a lot of power conversion systems in Direct Current (DC) microgrid. Preferably, under the economics constraints, these systems utilise a single high efficiency power electronics conversion system and a dual active bridge converter. In this paper, modeling and performance of Dual Active Bridge (DAB) converter with Extended Phase Shift (EPS) is evaluated with two batteries on both sides of DC bus and bidirectional energy transfer is facilitated and this is further compared with the Single Phase Shift (SPS) mode of operation. Optimum operating zone is identified through exhaustive simulations using MATLAB/Simulink and SimPowerSystem software. Reduced rules based fuzzy logic controller is implemented for closed loop control of DAB converter. The control logic enables the bidirectional energy transfer within the batteries even at lower duty ratios. Charging and discharging of batteries is supervised by the fuzzy logic controller. State of charge, current and voltage for both the batteries are plotted in the battery characteristics. Power characteristics of batteries are also obtained using MATLAB simulations.

Keywords: Fuzzy logic controller, rule base, membership functions, dual active bridge converter, bidirectional power flow, duty ratio, extended phase shift, state of charge.

DESIGNING A ROBUST CONTROLLER FOR A 6 LINKAGE ROBOT

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Abstract

One of the main points of application of the mechanisms of the series and parallel is the subject of managing them. The control of this mechanism and similar mechanisms is one that has always been the intention of the scholars. On the other hand, modeling the behavior of the system is difficult due to the large number of its parameters, and it leads to complex equations that are difficult to solve and eventually difficult to control. In this paper, a six-linkage robot has been presented that could be used in different areas such as medical robots. Using these robots needs a robust control. In this paper, the system equations are first found, and then the system conversion function is written. A new controller has been designed for this robot which could be used in other parallel robots and could be very useful. Parallel robots are so important in robotics because of their stability, so methods for control of them are important and the robust controller, especially in parallel robots, makes a sense.

Keywords: 3-RRS, 6 linkage, parallel robot, control.

MODULAR HARMONIC CANCELLATION IN A MULTIPLIER HIGH VOLTAGE DIRECT CURRENT GENERATOR

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Abstract:

Generation of high DC voltages is necessary for testing the insulation material of high voltage AC transmission lines with long lengths. The harmonic and ripple contents of the output DC voltage supplied by high voltage DC circuits require the use of costly capacitors to smooth the output voltage after rectification. This paper proposes a new modular multiplier high voltage DC generator with embedded Cockcroft-Walton circuits that achieve a negligible harmonic and ripple contents of the output DC voltage without the need for costly filters to produce a nearly constant output voltage. In this new topology, Cockcroft-Walton modules are connected in series to produce a high DC output voltage. The modules are supplied by low input AC voltage sources that have the same magnitude and frequency and shifted from each other by a certain angle to eliminate the harmonics from the output voltage. The small ripple factor is provided by the smoothing column capacitors and the phase shifted input voltages of the cascaded modules. The constituent harmonics within each module are determined using Fourier analysis. The viability of the proposed DC generator for testing purposes and the effectiveness of the cascaded connection are confirmed by numerical simulations using MATLAB/Simulink.

Keywords: Cockcroft-Walton circuit, Harmonics, Ripple factor, HVDC generator.

INTEGRATION OF VIRTUAL LEARNING OF INDUCTION MACHINES FOR UNDERGRADUATES

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Abstract:

In context of understanding problems faced by undergraduate students while carrying out laboratory experiments dealing with high voltages, it was found that most of the students are hesitant to work directly on machine. The reason is that error in the circuitry might lead to deterioration of machine and laboratory instruments. So, it has become inevitable to include modern pedagogic techniques for undergraduate students, which would help them to first carry out experiment in virtual system and then to work on live circuit. Further advantages include that students can try out their intuitive ideas and perform in virtual environment, hence leading to new research and innovations. In this paper, virtual environment used is of MATLAB/Simulink for three-phase induction machines. The performance analysis of three-phase induction machine is carried out using virtual environment which includes Direct Current (DC) Test, No-Load Test, and Block Rotor Test along with speed torque characteristics for different rotor resistances and input voltage, respectively. Further, this paper carries out computer aided teaching of basic Voltage Source Inverter (VSI) drive circuitry. Hence, this paper gave undergraduates a clearer view of experiments performed on virtual machine (No-Load test, Block Rotor test and DC test, respectively). After successful implementation of basic tests, VSI circuitry is implemented, and related harmonic distortion (THD) and Fast Fourier Transform (FFT) of current and voltage waveform are studied.

Keywords: Block rotor test, DC test, no-load test, virtual environment, VSI.

FIVE-PHASE INDUCTION MOTOR DRIVE SYSTEM DRIVEN BY FIVE-PHASE PACKED U CELL INVERTER: ITS MODELING AND PERFORMANCE EVALUATION

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Abstract:
The three phase system drives produce the problem of more torque pulsations and harmonics. This issue prevents the smooth operation of the drives and it also induces the amount of heat generated thus resulting in an increase in power loss. Higher phase system offers smooth operation of the machines with greater power capacity. Five phase variable-speed induction motor drives are commonly used in various industrial and commercial applications like tractions, electrical vehicles, ship propulsions and conveyor belt drive system. In this work, a comparative analysis of the different modulation schemes applied on the five-level five-phase Packed U Cell (PUC) inverter fed induction motor drives is presented. The performance of the inverter is greatly affected with the modulation schemes applied. The system is modeled, designed, and implemented in MATLAB®/Simulink environment. Experimental validation is done for the prototype of single phase, whereas five phase experimental validation is proposed in the future works.

Keywords: Packed U-Cell inverter, pulse width modulation, five-phase system, induction motor.

ADAPTIVE KAMAN FILTER FOR FAULT DIAGNOSIS OF LINEAR PARAMETER-VARYING SYSTEMS

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Abstract:
Fault diagnosis of Linear Parameter-Varying (LPV) system using an adaptive Kalman filter is proposed. The LPV model is comprised of scheduling parameters, and the emulator parameters. The scheduling parameters are chosen such that they are capable of tracking variations in the system model as a result of changes in the operating regimes. The emulator parameters, on the other hand, simulate variations in the subsystems during the identification phase and have negligible effect during the operational phase. The nominal model and the influence vectors, which are the gradient of the feature vector respect to the emulator parameters, are identified off-line from a number of emulator parameter perturbed experiments. A Kalman filter is designed using the identified nominal model. As the system varies, the Kalman filter model is adapted using the scheduling variables. The residual is employed for fault diagnosis. The proposed scheme is successfully evaluated on simulated system as well as on a physical process control system.

Keywords: Keywords—Identification, linear parameter-varying systems, least-squares estimation, fault diagnosis, Kalman filter, emulators

STEADY STATE ANALYSIS OF DISTRIBUTION SYSTEM WITH WIND GENERATION UNCERTAINITY

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Abstract:

Due to the increased penetration of renewable energy resources in the distribution system, the system is no longer passive in nature. In this paper, a steady state analysis of the distribution system has been done with the inclusion of wind generation. The modeling of wind turbine generator system and wind generator has been made to obtain the average active and the reactive power injection into the system. The study has been conducted on a IEEE-33 bus system with two wind generators. The present research work is useful not only to utilities but also to customers.

Keywords: Distributed generation, distribution network, radial network, wind turbine generating system.

OPTIMIZATION OF DOUBLY FED INDUCTION GENERATOR EQUIVALENT CIRCUIT PARAMETERS BY DIRECT SEARCH METHOD

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Abstract:

Doubly-fed induction generator (DFIG) is currently the choice for many wind turbines. These generators, when connected to the grid through a converter, is subjected to varied power system conditions like voltage variation, frequency variation, short circuit fault conditions, etc. Further, many countries like Canada, Germany, UK, Scotland, etc. have distinct grid codes relating to wind turbines. Accordingly, following the network faults, wind turbines have to supply a definite reactive current. To satisfy the requirements including reactive current capability, an optimum electrical design becomes a mandate for DFIG to function. This paper intends to optimize the equivalent circuit parameters of an electrical design for satisfactory DFIG performance. Direct search method has been used for optimization of the parameters. The variables selected include electromagnetic core dimensions (diameters and stack length), slot dimensions, radial air gap between stator and rotor and winding copper cross section area. Optimization for 2 MW DFIG has been executed separately for three objective functions - maximum reactive power capability (Case I), maximum efficiency (Case II) and minimum weight (Case III). In the optimization analysis program, voltage variations (10%), power factor-leading and lagging (0.95), speeds for corresponding to slips (-0.3 to +0.3) have been considered. The optimum designs obtained for objective functions were compared. It can be concluded that direct search method of optimization helps in determining an optimum electrical design for each objective function like efficiency or reactive power capability or weight minimization.

Keywords: Direct search, DFIG, equivalent circuit parameters, optimization.

INVERTER BASED GAIN-BOOSTING FULLY DIFFERENTIAL CMOS AMPLIFIER

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Abstract:

This work presents a fully differential CMOS amplifier consisting of two self-biased gain boosted inverter stages, that provides an alternative to the power hungry operational amplifier. The self-biasing avoids the use of external biasing circuitry, thus reduces the die area, design efforts, and power consumption. In the present work, regulated cascode technique has been employed for gain boosting. The Miller compensation is also applied to enhance the phase margin. The circuit has been designed and simulated in 1.8 V 0.18 µm CMOS technology. The simulation results show a high DC gain of 100.7 dB, Unity-Gain Bandwidth of 107.8 MHz, and Phase Margin of 66.7o with a power dissipation of 286 µW and makes it suitable candidate for the high resolution pipelined ADCs.

Keywords: CMOS amplifier, gain boosting, inverter-based amplifier, self-biased inverter.

STATISTICAL SCREENING OF MEDIUM COMPONENTS ON ETHANOL PRODUCTION FROM CASHEW APPLE JUICE USING SACCHAROMYCES DIASTICUS

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Abstract:

In the present study, effect of critical medium components (a total of fifteen components) on ethanol production from waste cashew apple juice (CAJ) using yeast Saccharomyces diasticus was studied. A statistical response surface methodology (RSM) based Plackett-Burman Design (PBD) was used for the design of experiments. The design contains a total of 32 experimental trails. The effect of medium components on ethanol was studied at two different levels such as low concentration level (-) and high concentration levels (+). The dependent variables selected in this study were ethanol concentration (g/L) and cellmass concentration (g/L). Data obtained from RSM on ethanol production were subjected to analysis of variance (ANOVA). In general, initial substrate concentration significantly influenced the microbial growth and product formation. Of the medium components evaluated, CAJ concentration, yeast extract, (NH4)2SO4, and malt extract showed significant effect on ethanol fermentation. A second-order polynomial model was used to predict the experimental data and the model fitted the data with a high correlation coefficient (R2 > 0.98). Maximum ethanol (15.3 g/L) and biomass (6.4 g/L) concentrations were obtained at the optimum medium composition and at optimum condition (temperature-30°C; initial pH-6.8) after 72 h fermentation using S.diasticus.

Keywords: cashew apple juice, ethanol, fermentation, yeast, response surface methodology

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MOLECULAR ANALYSIS OF SOMACLONAL VARIATION IN TISSUE CULTURE DERIVED BANANAS USING MSAP AND SSR MARKERS

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Abstract:

The project was undertaken to determine the effects of modified tissue culture protocols e.g. age of culture and hormone levels (2,4-D) in generating somaclonal variation. Moreover, the utility of molecular markers (SSR and MSAP) in sorting off types/somaclones were investigated.

Results show that somaclonal variation is in effect due to prolonged subculture and high 2,4-D concentration. The resultant variation was observed to be due to high level of methylation events specifically cytosine methylation either at the internal or external cytosine and was identified by methylation sensitive amplification polymorphism (MSAP).Simple sequence repeats (SSR) on the other hand, was able to associate a marker to a trait of interest.

These therefore, show that molecular markers can be an important tool in sorting out variation/mutants at an early stage.

Keywords: Methylation, MSAP, somaclones, SSR, subculture, 2, 4-D.

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TOXIC EFFECT OF SODIUM NITRATE ON GERMINATING SEEDS OF VIGNA RADIATA

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Abstract:

Sodium nitrate has been used industrially in a number of work fields ranging from agriculture to food industry. Sodium nitrate and nitrite are associated with a higher risk of cancer in human beings. In present study, the effect of sodium nitrate on germinating seeds was studied. Two different sets of ungerminated Vigna radiata seeds were taken. In one set Vigna radiata seeds were soaked in distilled water for 4 hours and they were allowed to germinate in distilled water (Control) and 0.1 to 1% and 10% concentrations of sodium nitrate (NaNo3). In soaked seed set, on 2nd day radical developed in control and 0.1 to 1% concentrations of sodium nitrate. Seeds size was enlarged in 1% and 10% concentrations of sodium nitrate. On 3rd day in 0.1% sodium nitrate length of the radicle was 7.5cm with one leaf let and control sample showed 9cm with one leaflet. On 5th day in 0.1% sodium nitrate length of the radicle was 10 cm with one leaf let and control sample showed 11.5cm with one leaflet. No radicle developed in 1 and 10% NaNo3 concentrations. On 10th day all plants including control were dead. More number of mitotic cells was observed in apical root meristems of control germinating seeds and less mitotic cells were observed in 0.1% NaNo3 germinating seeds. But cells were elongated in 0.9%NaNo3 concentration and particles are deposited in the cells and no mitotic cells were observed. In other sets, dry seeds were allowed to germinate in Distilled water (control) and in 0.1 to 1% and 10% concentrations of sodium nitrate. In dry seed set, on 2nd day radicle developed from control set. In 0.1 to 1% concentrations of sodium nitration seed enlarged in size but but not allowed germination. But in 10% NaNo3 seeds coat colour was changed from dark green to brown. On 3rd day the radicle was developed in 0.1% concentration of NaNo3. No growth of radicle was observed in 0.3 to 10% concentrations of NaNo3 but plumule was observed in control plant. Seed coat color was changed from dark green to brown in color in 1% and 10% NaNo3. On 5th day in control seeds the radicle growth was 11cm and 0.1% NaNo3 concentration was 1.3 cm. On 10th day all plants including control were dead. More number of mitotic cells was observed in apical root meristems of control germinating seeds and less mitotic cells were observed in 0.1% NaNo3 germinating seeds. At higher concentrations of NaNo3 allowed seed germination in soaked seeds but produced radicle decay. In comparison to it, in dry seed set, germination of seeds observed only in 0.1% NaNo3 concentration. The inhibitory effect of NaNo3 on seed germination is due to reduction of water imbibition and mitotic activity.

Keywords: Germinating seeds, NaNo3, Vigna radiate, mitotic activity.

INVESTIGATION ON TOXICITY OF MANUFACTURED NANOPARTICLES TO BIOLUMINESCENCE BACTERIA VIBRIO FISCHERI

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Abstract:

Acute toxicity of nano SiO2, ZnO, MCM-41 (Meso pore silica), Cu, Multi Wall Carbon Nano Tube (MWCNT), Single Wall Carbon Nano Tube (SWCNT) , Fe (Coated) to bacteria Vibrio fischeri using a homemade luminometer , was evaluated. The values of the nominal effective concentrations (EC), causing 20% and 50% inhibition of biouminescence, using two mathematical models at two times of 5 and 30 minutes were calculated. Luminometer was designed with Photomultiplier (PMT) detector. Luminol chemiluminescence reaction was carried out for the calibration graph. In the linear calibration range, the correlation coefficients and coefficient of Variation (CV) were 0.988 and 3.21% respectively which demonstrate the accuracy and reproducibility of the instrument that are suitable. The important part of this research depends on how to optimize the best condition for maximum bioluminescence. The culture of Vibrio fischeri with optimal conditions in liquid media, were stirring at 120 rpm at a temperature of 150C to 180C and were incubated for 24 to 72 hours while solid medium was held at 180C and for 48 hours. Suspension of nanoparticles ZnO, after 30 min contact time to bacteria Vibrio fischeri, showed the highest toxicity while SiO2 nanoparticles showed the lowest toxicity. After 5 min exposure time, the toxicity of ZnO was the strongest and MCM-41 was the weakest toxicant component.

Keywords: Bioluminescence, effective concentration, nanomaterials, toxicity, Vibrio fischeri.

MAGNETIC PROPERTIES GOVERN THE PROCESSES OF DNA REPLICATION AND THE SHORTENING OF THE TELOMERE

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Abstract:

This hypothesis shows that the induction and the remanent of magnetic properties govern the mechanism processes of DNA replication and the shortening of the telomere. The solenoid–like formation of each parental DNA strand, which exists at the initial stage of the replication process, enables an electric charge transformation through the strand to produce a magnetic field. The magnetic field, in turn, induces the surrounding medium to form a new (replicated) strand by a remanent magnetisation. Through the remanent [residual] magnetisation process, the replicated strand possesses a similar information pattern to that of the parental strand. In the same process, the remanent amount of magnetisation forms the medium in which it has less of both repetitive and pattern magnetisation than that of the parental strand, therefore the replicated strand shows a shortening in the length of its telomeres.

Keywords: DNA replication, magnetic properties, residual magnetisation, shortening of the telomere.

EVOLUTIONARY DISTANCE IN THE YEAST GENOME

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Abstract:
Whole genome duplication (WGD) increased the number of yeast Saccharomyces cerevisiae chromosomes from 8 to 16. In spite of retention the number of chromosomes in the genome of this organism after WGD to date, chromosomal rearrangement events have caused an evolutionary distance between current genome and its ancestor. Studies under evolutionary-based approaches on eukaryotic genomes have shown that the rearrangement distance is an approximable problem. In the case of S. cerevisiae, we describe that rearrangement distance is accessible by using dedoubled adjacency graph drawn for 55 large paired chromosomal regions originated from WGD. Then, we provide a program extracted from a C program database to draw a dedoubled genome adjacency graph for S. cerevisiae. From a bioinformatical perspective, using the duplicated blocks of current genome in S. cerevisiae, we infer that genomic organization of eukaryotes has the potential to provide valuable detailed information about their ancestrygenome.

Keywords: Whole-genome duplication, Evolution, Double-cutand- join operation, Yeast.

SYNTHESIS OF HIGHLY SENSITIVE MOLECULAR IMPRINTED SENSOR FOR SELECTIVE DETERMINATION OF DOXYCYCLINE IN HONEY SAMPLES

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Abstract:
Doxycycline (DXy) is a cycline antibiotic, most frequently prescribed to treat bacterial infections in veterinary medicine. However, its broad antimicrobial activity and low cost, lead to an intensive use, which can seriously affect human health. Therefore, its spread in the food products has to be monitored. The scope of this work was to synthetize a sensitive and very selective molecularly imprinted polymer (MIP) for DXy detection in honey samples. Firstly, the synthesis of this biosensor was performed by casting a layer of carboxylate polyvinyl chloride (PVC-COOH) on the working surface of a gold screen-printed electrode (Au-SPE) in order to bind covalently the analyte under mild conditions. Secondly, DXy as a template molecule was bounded to the activated carboxylic groups, and the formation of MIP was performed by a biocompatible polymer by the mean of polyacrylamide matrix. Then, DXy was detected by measurements of differential pulse voltammetry (DPV). A non-imprinted polymer (NIP) prepared in the same conditions and without the use of template molecule was also performed. We have noticed that the elaborated biosensor exhibits a high sensitivity and a linear behavior between the regenerated current and the logarithmic concentrations of DXy from 0.1 pg.mL−1 to 1000 pg.mL−1. This technic was successfully applied to determine DXy residues in honey samples with a limit of detection (LOD) of 0.1 pg.mL−1 and an excellent selectivity when compared to the results of oxytetracycline (OXy) as analogous interfering compound. The proposed method is cheap, sensitive, selective, simple, and is applied successfully to detect DXy in honey with the recoveries of 87% and 95%. Considering these advantages, this system provides a further perspective for food quality control in industrial fields.

Keywords: Electrochemical sensor, molecular imprinted polymer, doxycycline, food control.

MICROBIAL CONTAMINANTS IN DRINKING WATER COLLECTED FROM DIFFERENT REGIONS OF KUWAIT

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Abstract:

Water plays a major role in maintaining life on earth, but it can also serve as a matrix for pathogenic organisms, posing substantial health threats to humans. Although, outbreaks of diseases attributable to drinking water may not be common in industrialized countries, they still occur and can lead to serious acute, chronic, or sometimes fatal health consequences. The analysis of drinking water samples from different regions of Kuwait was performed in this study for bacterial and viral contaminations. Drinking tap water samples were collected from 15 different locations of the six Kuwait governorates. All samples were analyzed by confocal microscopy for the presence of bacteria. The samples were cultured in vitro to detect cultivable organisms. DNA was isolated from the cultured organisms and the identity of the bacteria was determined by sequencing the bacterial 16S rRNA genes, followed by BLAST analysis in the database of NCBI, USA. RNA was extracted from water samples and analyzed by real-time PCR for the detection of viruses with potential health risks, i.e. Astrovirus, Enterovirus, Norovirus, Rotavirus, and Hepatitis A. Confocal microscopy showed the presence of bacteria in some water samples. The 16S rRNA gene sequencing of culture grown organisms, followed by BLAST analysis, identified the presence of several non-pathogenic bacterial species. However, one sample had Acinetobacter baumannii, which often causes opportunistic infections in immunocompromised people, but none of the studied viruses could be detected in the drinking water samples analyzed. The results indicate that drinking water samples analyzed from various locations in Kuwait are relatively safe for drinking and do not contain many harmful pathogens.

Keywords: Drinking water, 16S rRNA, microbial diversity, viruses, Kuwait.

MATHEMATICAL MODEL OF DEPLETION OF FORESTRY RESOURCE: EFFECT OF SYNTHETIC BASED INDUSTRIES

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ssociate Professor, is with the Applied Sciences Department, ABV-Indian Institute of Information Technology and Management Gwalior, India

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Abstract:

A mathematical model is proposed considering the forest biomass density B(t), density of wood based industries W(t) and density of synthetic industries S(t). It is assumed that the forest biomass grows logistically in the absence of wood based industries, but depletion of forestry biomass is due to presence of wood based industries. The growth of wood based industries depends on B(t), while S(t) grows at a constant rate, independent of B(t). Further there is a competition between W(t) and S(t) according to market demand. The proposed model has four ecologically feasible steady states, namely, E1: forest biomass free and wood industries free equilibrium; E2: wood industries free equilibrium and two coexisting equilibria $E*1$, $E*2$. Behavior of the system near all feasible equilibria is analyzed using the stability theory of differential equations. In the proposed model, the natural depletion rate h1 is a crucial parameter and system exhibits Hopf-bifurcation about the non-trivial equilibrium with respect to h1. The analytical results are verified using numerical simulation.

Keywords: A mathematical model, Competition between wood based and synthetic industries, Hopf-bifurcation, Stability analysis.

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THE AGRICULTURAL GOVERNANCE IN BANGLADESH: A CASE STUDY

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Abstract:

Agriculture is one of the single largest sectors of Bangladesh economy. Bangladesh is an agro based country and predominantly is an agrarian economy. It is the backbone of the economy of Bangladesh. Around 75% of the total population directly or indirectly depends on agriculture and near about 84% of the total population lives in rural areas almost depend on agriculture for livelihood. Agriculture includes the sub-sectors of crop, livestock, forestry and fisheries. The contribution of all sub sectors is around 22.83 percent to national GDP in 2003-2004. The crops sub sector alone contributes 12.94 percent of GDP.

Keywords: Agricultural Governance

THE EFFECTS OF DROUGHT AND NITROGEN ON SOYBEAN (GLYCINE MAX (L.) MERRILL) PHYSIOLOGY AND YIELD

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Abstract:

Legume crops are able to fix atmospheric nitrogen by the symbiotic relation with specific bacteria, which allows the use of the mineral nitrogen-fertilizer to be reduced, or even excluded, resulting in more profit for the farmers and less pollution for the environment. Soybean (Glycine max (L.) Merrill) is one of the most important legumes with its high content of both protein and oil. However, it is recommended to combine the two nitrogen sources under stress conditions in order to overcome its negative effects. Drought stress is one of the most important abiotic stresses that increasingly limits soybean yields. A precise rate of mineral nitrogen under drought conditions is not confirmed, as it depends on many factors; soybean yield-potential and soil-nitrogen content to name a few. An experiment was conducted during 2017 growing season in Debrecen, Hungary to investigate the effects of nitrogen source on the physiology and the yield of the soybean cultivar 'Boglár'. Three N-fertilizer rates including no N-fertilizer (0 N), 35 kg ha-1 of N-fertilizer (35 N) and 105 kg ha-1 of N-fertilizer (105 N) were applied under three different irrigation regimes; severe drought stress (SD), moderate drought stress (MD) and control with no drought stress (ND). Half of the seeds in each treatment were pre-inoculated with Bradyrhizobium japonicum inoculant. The overall results showed significant differences associated with fertilization and irrigation, but not with inoculation. Increasing N rate was mostly accompanied with increased chlorophyll content and leaf area index, whereas it positively affected the plant height only when the drought was waived off. Plant height was the lowest under severe drought, regardless of inoculation and N-fertilizer application and rate. Inoculation increased the yield when there was no drought, and a low rate of N-fertilizer increased the yield furthermore; however, the high rate of N-fertilizer decreased the yield to a level even less than the inoculated control. On the other hand, the yield of non-inoculated plants increased as the N-fertilizer rate increased. Under drought conditions, adding N-fertilizer increased the yield of the non-inoculated plants compared to their inoculated counterparts; moreover, the high rate of N-fertilizer resulted in the best yield. Regardless of inoculation, the mean yield of the three fertilization rates was better when the water amount increased. It was concluded that applying N-fertilizer to provide the nitrogen needed by soybean plants, with the absence of N2-fixation process, is very important. Moreover, adding relatively high rate of N-fertilizer is very important under severe drought stress to alleviate the drought negative effects. Further research to recommend the best N-fertilizer rate to inoculated soybean under drought stress conditions should be executed.

Keywords: Drought stress, inoculation, N-fertilizer, soybean physiology, yield.

JIGGER FLEA (TUNGA PENETRANS) INFESTATIONS AND USE OF SOIL-COW DUNG-ASH MIXTURE AS A FLEA CONTROL METHOD IN EASTERN UGANDA

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Department of Biology, Mbarara University of Science and Technology Uganda
Department of Biology, Muni University. Uganda

Abstract:

Despite several interventions, jigger flea infestations continue to be reported in the Busoga sub-region in Eastern Uganda. The purpose of this study was to identify factors that expose the indigenous people to jigger flea infestations and evaluate the effectiveness of any indigenous materials used in flea control by the affected communities. Flea compositions in residences were described, factors associated with flea infestation and indigenous materials used in flea control were evaluated. Field surveys were conducted in the affected communities after obtaining preliminary information on jigger infestation from the offices of the District Health Inspectors to identify the affected villages and households. Informed consent was then sought from the local authorities and household heads to conduct the study. Focus group discussions were conducted with key district informants, namely, the District Health Inspectors, District Entomologists and representatives from the District Health Office. A GPS coordinate was taken at central point at every household enrolled. Fleas were trapped inside residences using Kilonzo traps. A Kilonzo Trap comprised a shallow pan, about three centimetres deep, filled to the brim with water. The edges of the pan were smeared with Vaseline to prevent fleas from crawling out. Traps were placed in the evening and checked every morning the following day. The trapped fleas were collected in labelled vials filled with 70% aqueous ethanol and taken to the laboratory for identification. Socio-economic and environmental data were collected. The results indicate that the commonest flea trapped in the residences was the cat flea (Ctenocephalides felis) (50%), followed by Jigger flea (Tunga penetrans) (46%) and rat flea (Xenopsylla Cheopis) (4%), respectively. The average size of residences was seven squire metres with a mean of six occupants. The residences were generally untidy; with loose dusty floors and the brick walls were not plastered. The majority of the jigger affected households were headed by peasants (86.7%) and artisans (13.3%). The household heads mainly stopped at primary school level (80%) and few at secondary school level (20%). The jigger affected households were mainly headed by peasants of low socioeconomic status. The affected community members use soil-cow dung-ash mixture to smear floors of residences as the only measure to control fleas. This method was found to be ineffective in controlling the insects. The study recommends that home improvement campaigns be continued in the affected communities to improve sanitation and hygiene in residences as one of the interventions to combat flea infestations. Other cheap, available and effective means should be identified to curb jigger flea infestations.

Keywords: Cow dung-soil-ash mixture, infestations, Jigger flea, Tunga penetrans.

APPLICATION OF METARHIZIUM ANISOPLIAE AGAINST MELOIDOGYNE JAVANICA IN SOIL AMENDED WITH OAK DEBRIS

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Abstract:

Tomato (Lycopersicon esculentum Mill.) is one of the most popular, widely grown and the second most important vegetable crop, after potatoes. Nematodes have been identified as one of the major pests affecting tomato production throughout the world. The most destructive nematodes are the genus Meloidogyne. Most widespread and devastating species of this genus are M. incognita, M. javanica, and M. arenaria. These species can cause complete crop loss under adverse growing conditions. There are several potential methods for management of the root knot nematodes. Although the chemicals are widely used against the phytonematodes, because of hazardous effects of these compounds on non-target organisms and on the environment, there is a need to develop other control strategies. Nowadays, non-chemical measures are widely used to control the plant parasitic nematodes. Biocontrol of phytonematodes is an important method among environment-friendly measures of nematode management. There are some soil-inhabiting fungi that have biocontrol potential on phytonematodes, which can be used in nematode management program. The fungus Metarhizium anisopliae, originally is an entomopathogenic bioagent. Biocontrol potential of this fungus on some phytonematodes has been reported earlier. Recently, use of organic soil amendments as well as the use of bioagents is under special attention in sustainable agriculture. This research aimed to reduce the pesticide use in control of root-knot nematode, Meloidogyne javanica in tomato. The effects of M. anisopliae IMI 330189 and different levels of oak tree debris on M. javanica were determined. The combination effect of the fungus as well as the different rates of soil amendments was determined. Pots were filled with steam pasteurized soil mixture and the six leaf tomato seedlings were inoculated with 3000 second stage larvae of M. javanica/kg of soil. After eight weeks, plant growth parameters and nematode reproduction factors were compared. Based on the results of our experiment, combination of M. anisopliae IMI 330189 and oak debris caused more than 90% reduction in reproduction factor of nematode, at the rates of 100 and 150 g/kg soil ($P \leq 0.05$). As compared to control, the reduction in number of galls was 76%. It was 86% for nematode reproduction factor, showing the significance of combined effect of both tested agents. Our results showed that plant debris can increase the biological activity of the tested bioagent. It was also proved that there was no adverse effect of oak debris, which potentially has antimicrobial activity, on antagonistic power of applied bioagent.

Keywords: Biological control, nematode management, organic soil, Quercus branti, root knot nematode, soil amendment.

ANALYZING THE IMPACT OF SPATIO-TEMPORAL CLIMATE VARIATIONS ON THE RICE CROP CALENDAR IN PAKISTAN

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Abstract:

The present study investigates the space-time impact of climate change on the rice crop calendar in tropical Gujranwala, Pakistan. The climate change impact was quantified through the climatic variables, whereas the existing calendar of the rice crop was compared with the phonological stages of the crop, depicted through the time series of the Normalized Difference Vegetation Index (NDVI) derived from Landsat data for the decade 2005-2015. Local maxima were applied on the time series of NDVI to compute the rice phonological stages. Panel models with fixed and cross-section fixed effects were used to establish the relation between the climatic parameters and the time-series of NDVI across villages and across rice growing periods. Results show that the climatic parameters have significant impact on the rice crop calendar. Moreover, the fixed effect model is a significant improvement over cross-sectional fixed effect models (R-squared equal to 0.673 vs. 0.0338). We conclude that high inter-annual variability of climatic variables cause high variability of NDVI, and thus, a shift in the rice crop calendar. Moreover, inter-annual (temporal) variability of the rice crop calendar is high compared to the inter-village (spatial) variability. We suggest the local rice farmers to adapt this change in the rice crop calendar.

Keywords: Landsat NDVI, panel models, temperature, rainfall.

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VERMICOMPOSTING OF TEXTILE INDUSTRIES' DYEING SLUDGE BY USING EISENIA FOETIDA

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Civil Engineering Department, India

Abstract:
Surat City in India is famous for textile and dyeing industries which generate textile sludge in huge quantity. Textile sludge contains harmful chemicals which are poisonous and carcinogenic. The safe disposal and reuse of textile dyeing sludge are challenging for owner of textile industries and government of the state. The aim of present study was the vermicomposting of textile industries dyeing sludge with cow dung and Eisenia foetida as earthworm spices. The vermicompost reactor of 0.3 m3 capacity was used for vermicomposting. Textile dyeing sludge was mixed with cow dung in different proportion, i.e., 0:100 (C1), 10:90 (C2), 20:80 (C3), 30:70 (C4). Vermicomposting duration was 120 days. All the combinations of the feed mixture, the pH was increased to a range 7.45-7.78, percentage of total organic carbon was decreased to a range of 31-33.3%, total nitrogen was decreased to a range of 1.15-1.32%, total phosphorus was increased in the range of 6.2-7.9 (g/kg).

Keywords: Cow dung, Eisenia foetida, textile sludge, vermicompost.

A SIMULATION MODEL AND PARAMETRIC STUDY OF TRIPLE-EFFECT DESALINATION PLANT

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Abstract:

A steady-state analysis of triple-effect thermal vapor compressor desalination unit was performed. A mathematical model based on mass, salinity and energy balances is developed. The purpose of this paper is to develop a connection between process simulator and process optimizer in order to study the influence of several operating variables on the performance and the produced water cost of the unit. A MATLAB program is used to solve the model equations, and Aspen HYSYS is used to model the plant. The model validity is examined against a commercial plant and showed a good agreement between industrial data and simulations results. Results show that the pressures of the last effect and the compressed vapor have an important influence on the produced cost, and the increase of the difference temperature in the condenser decreases the specific heat area about 22%.

Keywords: Steady-state, triple effect, thermal vapor compressor, MATLAB, Aspen HYSYS.

INVESTIGATION OF GRID SUPPLY HARMONIC EFFECTS IN WOUND ROTOR INDUCTION MACHINES

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Abstract:

This paper presents an in-depth investigation of the effects of several grid supply harmonic voltages on the stator currents of an example wound rotor induction machine. The observed effects of higher order grid supply harmonics are identified using a finite element time stepping transient model, as well as a time-stepping electromagnetic model. In addition, a number of analytical equations to calculate the spectral content of the stator currents are presented in the paper. The presented equations are validated through comparison with the obtained spectra predicted using the finite element and electromagnetic models. The presented study provides a better understanding of the origin of supply harmonic effects identified in the stator currents of the example wound rotor induction machine. Furthermore, the study helps to understand the effects of higher order supply harmonics on the harmonic emissions of the wound rotor induction machine.

Keywords: Wound rotor induction machine, supply harmonics, current spectrum, power spectrum, power quality, harmonic emissions, finite element analysis.

A MULTIOBJECTIVE DAMPING FUNCTION FOR COORDINATED CONTROL OF POWER SYSTEM STABILIZER AND POWER OSCILLATION DAMPING

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Abstract:

This paper deals with the coordinated tuning of the Power System Stabilizer (PSS) controller and Power Oscillation Damping (POD) Controller of Flexible AC Transmission System (FACTS) in a multi-machine power systems. The coordinated tuning is based on the critical eigenvalues of the power system and a model reduction technique where the Hankel Singular Value method is applied. Through the linearized system model and the parameter-constrained nonlinear optimization algorithm, it can compute the parameters of both controllers. Moreover, the parameters are optimized simultaneously obtaining the gains of both controllers. Then, the nonlinear simulation to observe the time response of the controller is performed.

Keywords: Balanced realization, controllability Grammian, electromechanical oscillations, FACTS, Hankel singular values, observability Grammian, POD, PSS.

EXERGY BASED PERFORMANCE ANALYSIS OF A GAS TURBINE UNIT AT VARIOUS AMBIENT CONDITIONS

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Abstract:

This paper studies the effect of ambient conditions on the performance of a 285 MW gas turbine unit using the exergy concept. Based on the available exergy balance models developed, a computer program has been constructed to investigate the performance of the power plant under varying ambient temperature and relative humidity conditions. The variations of ambient temperature range from zero to 50 ºC and the relative humidity ranges from zero to 100%, while the unit load kept constant at 100% of the design load. The exergy destruction ratio and exergy efficiency are determined for each component and for the entire plant. The results show a moderate increase in the total exergy destruction ratio of the plant from 62.05% to 65.20%, while the overall exergy efficiency decrease from 38.2% to 34.8% as the ambient temperature increases from zero to 50 ºC at all relative humidity values. Furthermore, an increase of 1 ºC in ambient temperature leads to 0.063% increase in the total exergy destruction ratio and 0.07% decrease in the overall exergy efficiency. The relative humidity has a remarkable influence at higher ambient temperature values on the exergy destruction ratio of combustion chamber and on exergy loss ratio of the exhaust gas but almost no effect on the total exergy destruction ratio and overall exergy efficiency. At 50 ºC ambient temperature, the exergy destruction ratio of the combustion chamber increases from 30% to 52% while the exergy loss ratio of the exhaust gas decreases from 28% to 8% as the relative humidity increases from zero to 100%. In addition, exergy analysis reveals that the combustion chamber and exhaust gas are the main source of irreversibility in the gas turbine unit. It is also identified that the exergy efficiency and exergy destruction ratio are considerably dependent on the variations in the ambient air temperature and relative humidity. Therefore, the incorporation of the existing gas turbine plant with inlet air cooling and humidifier technologies should be considered seriously.

Keywords: Destruction, exergy, gas turbine, irreversibility, performance.

STUDYING THE POSSIBILITY TO WELD AA1100 ALUMINUM ALLOY BY FRICTION STIR SPOT WELDING

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Abstract:

Friction stir welding is a modern and an environmentally friendly solid state joining process used to joint relatively lighter family of materials. Recently, friction stir spot welding has been used instead of resistance spot welding which has received considerable attention from the automotive industry. It is environmentally friendly process that eliminated heat and pollution. In this research, friction stir spot welding has been used to study the possibility to weld AA1100 aluminum alloy sheet with 3 mm thickness by overlapping the edges of sheet as lap joint. The process was done using a drilling machine instead of milling machine. Different tool rotational speeds of 760, 1065, 1445, and 2000 RPM have been applied with manual and automatic compression to study their effect on the quality of welded joints. Heat generation, pressure applied, and depth of tool penetration have been measured during the welding process. The result shows that there is a possibility to weld AA1100 sheets; however, there is some surface defect that happened due to insufficient condition of welding. Moreover, the relationship between rotational speed, pressure, heat generation and tool depth penetration was created.

Keywords: Friction, spot, stir, environmental, sustainable, AA1100 aluminum alloy.

DETERMINATION OF THE OPTIMAL DG PV INTERCONNECTION LOCATION USING LOSSES AND VOLTAGE REGULATION AS ASSESSMENT INDICATORS CASE STUDY: ECG 33 KV SUB-TRANSMISSION NETWORK

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Abstract:

In this paper, CYME Distribution software has been used to assess the impacts of solar Photovoltaic (PV) distributed generation (DG) plant on the Electricity Company of Ghana (ECG) 33 kV sub-transmission network at different PV penetration levels. As ECG begins to encourage DG PV interconnections within its network, there has been the need to assess the impacts on the sub-transmission losses and voltage contribution. In Tema, a city in Accra - Ghana, ECG has a 33 kV sub-transmission network made up of 20 No. 33 kV buses that was modeled. Three different locations were chosen: The source bus, a bus along the sub-transmission radial network and a bus at the tail end to determine the optimal location for DG PV interconnection. The optimal location was determined based on sub-transmission technical losses and voltage impact. PV capacities at different penetration levels were modeled at each location and simulations performed to determine the optimal PV penetration level. Interconnection at a bus along (or in the middle of) the sub-transmission network offered the highest benefits at an optimal PV penetration level of 80%. At that location, the maximum voltage improvement of 0.789% on the neighboring 33 kV buses and maximum loss reduction of 6.033% over the base case scenario were recorded. Hence, the optimal location for DG PV integration within the 33 kV sub-transmission utility network is at a bus along the sub-transmission radial network.

Keywords: Distributed generation photovoltaic, DG PV, optimal location, penetration level, sub-transmission network.

MULTIMACHINE POWER SYSTEM STABILIZERS DESIGN USING PSO ALGORITHM

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Abstract:

In this paper, multiobjective design of multi-machine Power System Stabilizers (PSSs) using Particle Swarm Optimization (PSO) is presented. The stabilizers are tuned to simultaneously shift the lightly damped and undamped electro-mechanical modes of all machines to a prescribed zone in the s-plane. A multiobjective problem is formulated to optimize a composite set of objective functions comprising the damping factor, and the damping ratio of the lightly damped electromechanical modes. The PSSs parameters tuning problem is converted to an optimization problem which is solved by PSO with the eigenvalue-based multiobjective function. The proposed PSO based PSSs is tested on a multimachine power system under different operating conditions and disturbances through eigenvalue analysis and some performance indices to illustrate its robust performance.

Keywords: PSS Design, Particle Swarm Optimization, Dynamic Stability, Multiobjective Optimization.

Simulation of Reflection Loss for Carbon and Nickel-Carbon Thin Films

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Abstract:

Maximal radar wave absorbing cannot be achieved by shaping alone. We have to focus on the parameters of absorbing materials such as permittivity, permeability, and thickness so that best absorbing according to our necessity can happen. The real and imaginary parts of the relative complex permittivity (ε_r' and ε_r'') and permeability (μ_r' and μ_r'') were obtained by simulation. The microwave absorbing property of carbon and Ni(C) is simulated in this study by MATLAB software; the simulation was in the frequency range between 2 to 12 GHz for carbon black (C), and carbon coated nickel (Ni(C)) with different thicknesses. In fact, we draw reflection loss (RL) for C and Ni-C via frequency. We have compared their absorption for 3-mm thickness and predicted for other thicknesses by using of electromagnetic wave transmission theory. The results showed that reflection loss position changes in low frequency with increasing of thickness. We found out that, in all cases, using nanocomposites as absorbance cannot get better results relative to pure nanoparticles. The frequency where absorption is maximum can determine the best choice between nanocomposites and pure nanoparticles. Also, we could find an optimal thickness for long wavelength absorbing in order to utilize them in protecting shields and covering.

Keywords: Absorbing, carbon, carbon nickel, frequency, thicknesses.

Treatment of Low-Grade Iron Ore Using Two Stage Wet High-Intensity Magnetic Separation Technique

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Abstract:

This study investigates the removal of silica, alumina and phosphorus as impurities from Sanje iron ore using wet high-intensity magnetic separation (WHIMS). Sanje iron ore contains low-grade hematite ore found in Nampundwe area of Zambia from which iron is to be used as the feed in the steelmaking process. The chemical composition analysis using X-ray Florence spectrometer showed that Sanje low-grade ore contains 48.90 mass% of hematite (Fe_2O_3) with 34.18 mass% as an iron grade. The ore also contains silica (SiO_2) and alumina (Al_2O_3) of 31.10 mass% and 7.65 mass% respectively. The mineralogical analysis using X-ray diffraction spectrometer showed hematite and silica as the major mineral components of the ore while magnetite and alumina exist as minor mineral components. Mineral particle distribution analysis was done using scanning electron microscope with an X-ray energy dispersion spectrometry (SEM-EDS) and images showed that the average mineral size distribution of alumina-silicate gangue particles is in order of 100 µm and exists as iron-bearing interlocked particles. Magnetic separation was done using series L model 4 Magnetic Separator. The effect of various magnetic separation parameters such as magnetic flux density, particle size, and pulp density of the feed was studied during magnetic separation experiments. The ore with average particle size of 25 µm and pulp density of 2.5% was concentrated using pulp flow of 7 L/min. The results showed that 10 T was optimal magnetic flux density which enhanced the recovery of 93.08% of iron with 53.22 mass% grade. The gangue mineral particles containing 12 mass% silica and 3.94 mass% alumna remained in the concentrate, therefore the concentrate was further treated in the second stage WHIMS using the same parameters from the first stage. The second stage process recovered 83.41% of iron with 67.07 mass% grade. Silica was reduced to 2.14 mass% and alumina to 1.30 mass%. Accordingly, phosphorus was also reduced to 0.02 mass%. Therefore, the two stage magnetic separation process was established using these results.

Keywords: Sanje iron ore, magnetic separation, silica, alumina, recovery.

Hot Deformability of Si-Steel Strips Containing Al

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Abstract:

The present work is dealing with 2% Si-steel alloy. The alloy contains 0.05% C as well as 0.85% Al. The alloy under investigation would be used for electrical transformation purposes. A heating (expansion) - cooling (contraction) dilation investigation was executed to detect the a, a+g, and g transformation temperatures at the inflection points of the dilation curve. On heating, primary a was detected at a temperature range between room temperature and 687 ^{o}C. The domain of a+g was detected in the range between 687 ^{o}C and 746 ^{o}C. g phase exists in the closed g region at the range between 746 ^{o}C and 1043 ^{o}C. The domain of a phase appears again at a temperature range between 1043 and 1105 ^{o}C, and followed by secondary a at temperature higher than 1105 ^{o}C. A physical simulation of thermo-mechanical processing on the as-cast alloy was carried out. The simulation process took into consideration the hot flat rolling pilot plant parameters. The process was executed on the thermo-mechanical simulator (Gleeble 3500). The process was designed to include seven consecutive passes. The 1st pass represents the roughing stage, while the remaining six passes represent finish rolling stage. The whole process was executed at the temperature range from 1100 ^{o}C to 900 ^{o}C. The amount of strain starts with 23.5% at the roughing pass and decreases continuously to reach 7.5 % at the last finishing pass. The flow curve of the alloy can be abstracted from the stress-strain curves representing simulated passes. It shows alloy hardening from a pass to the other up to pass no. 6, as a result of decreasing the deformation temperature and increasing of cumulative strain. After pass no. 6, the deformation process enhances the dynamic recrystallization phenomena to appear, where the z-parameter would be high.

Keywords: Si-steel, hot deformability, critical transformation temperature, physical simulation, thermo-mechanical processing, flow curve, dynamic softening.

Material Concepts and Processing Methods for Electrical Insulation

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Abstract:

Epoxy composites are broadly used as an electrical insulation for the high voltage applications since only such materials can fulfill particular mechanical, thermal, and dielectric requirements. However, properties of the final product are strongly dependent on proper manufacturing process with minimized material failures, as too large shrinkage, voids and cracks. Therefore, application of proper materials (epoxy, hardener, and filler) and process parameters (mold temperature, filling time, filling velocity, initial temperature of internal parts, gelation time), as well as design and geometric parameters are essential features for final quality of the produced components. In this paper, an approach for three-dimensional modeling of all molding stages, namely filling, curing and post-curing is presented. The reactive molding simulation tool is based on a commercial CFD package, and include dedicated models describing viscosity and reaction kinetics that have been successfully implemented to simulate the reactive nature of the system with exothermic effect. Also a dedicated simulation procedure for stress and shrinkage calculations, as well as simulation results are presented in the paper. Second part of the paper is dedicated to recent developments on formulations of functional composites for electrical insulation applications, focusing on thermally conductive materials. Concepts based on filler modifications for epoxy electrical composites have been presented, including the results of the obtained properties. Finally, having in mind tough environmental regulations, in addition to current process and design aspects, an approach for product re-design has been presented focusing on replacement of epoxy material with the thermoplastic one. Such “design-for-recycling” method is one of new directions associated with development of new material and processing concepts of electrical products and brings a lot of additional research challenges. For that, one of the successful products has been presented to illustrate the presented methodology.

Keywords: Curing, epoxy insulation, numerical simulations, recycling.

PERFORMANCE ASSESSMENT OF CARBON NANO TUBE BASED CUTTING FLUID IN MACHINING PROCESS

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Abstract:

In machining, there is always a problem with heat generation and friction produced during the process as they consequently affect tool wear and surface finish. An instant heat transfer mechanism could protect the cutting tool edge and enhance the tool life by cooling the cutting edge of the tool. In the present work, carbon nanotube (CNT) based nano-cutting fluid is proposed for machining a hard-to-cut material. Tool wear and surface roughness are considered for the evaluation of the nano-cutting fluid in turning process. The performance of nanocoolant is assessed against the conventional coolant and dry machining conditions and it is observed that the proposed nanocoolant has produced better performance than the conventional coolant.

Keywords: CNT based nanocoolant, turning, tool wear, surface roughness.

AN IMPLICIT METHODOLOGY FOR THE NUMERICAL MODELING OF LOCALLY INEXTENSIBLE MEMBRANES

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Abstract:

We present in this paper a fully implicit finite element method tailored for the numerical modeling of inextensible fluidic membranes in a surrounding Newtonian fluid. We consider a highly simplified version of the Canham-Helfrich model for phospholipid membranes, in which the bending force and spontaneous curvature are disregarded. The coupled problem is formulated in a fully Eulerian framework and the membrane motion is tracked using the level set method. The resulting nonlinear problem is solved by a Newton-Raphson strategy, featuring a quadratic convergence behavior. A monolithic solver is implemented, and we report several numerical experiments aimed at model validation and illustrating the accuracy of the proposed method. We show that stability is maintained for significantly larger time steps with respect to an explicit decoupling method.

Keywords: Finite element method, Newton method, level set, Navier-Stokes, inextensible membrane, liquid drop.

Microstrip Patch Antenna Enhancement Techniques

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Abstract:

Microstrip patch antennas are widely used in many wireless communication applications because of their various advantages such as light weight, compact size, inexpensive, ease of fabrication and high reliability. However, narrow bandwidth and low gain are the major drawbacks of microstrip antennas. The radiation properties of microstrip antenna is affected by many designing factors like feeding techniques, manufacturing substrate, patch and ground structure. This manuscript presents a review of the most popular gain and bandwidth enhancement methods of microstrip antenna and reports a brief description of its feeding techniques.

Keywords: Gain and bandwidth enhancement, slotted patch, parasitic patch, electromagnetic band gap, defected ground, feeding techniques.

EMAIL BASED GLOBAL AUTOMATION WITH RASPBERRY PI AND CONTROL CIRCUIT MODULE: DEVELOPMENT OF SMART HOME APPLICATION

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Abstract:

Global Automation is an emerging technology of today's era and is based on Internet of Things (IoT). Global automation deals with the controlling of electrical appliances throughout the world. The fabrication of this system has been carried out with interfacing an electrical control system module to Raspberry Pi. An electrical control system module includes a relay driver mechanism through which appliances are controlled automatically in respective condition. In this research project, one email ID has been assigned to Raspberry Pi, and the users from different location having different email ID can mail to Raspberry Pi on assigned email address "raspberrypilochan96@gmail.com" with subject heading "Device Control" with predefined command on compose email line. Also, a notification regarding current working condition of this system has been updated on respective user email ID. This approach is an innovative way of implementing smart automation system through which a user can control their electrical appliances like light, fan, television, refrigerator, etc. in their home with the use of email facility. The development of this project helps to enhance the concept of smart home application as well as industrial automation.

Keywords: Control circuit, email, global automation, internet of things, Raspberry Pi.

PRODUCTIVITY EFFECT OF UREA DEEP PLACEMENT TECHNOLOGY: AN EMPIRICAL ANALYSIS FROM IRRIGATION RICE FARMERS IN THE NORTHERN REGION OF GHANA

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Abstract:

This study examined the effect of Urea Deep Placement (UDP) technology on the output of irrigated rice farmers in the northern region of Ghana. Multi-stage sampling technique was used to select 142 rice farmers from the Golinga and Bontanga irrigation schemes, around Tamale. A treatment effect model was estimated at two stages; firstly, to determine the factors that influenced farmers' decision to adopt the UDP technology and secondly, to determine the effect of the adoption of the UDP technology on the output of rice farmers. The significant variables that influenced rice farmers' adoption of the UPD technology were sex of the farmer, land ownership, off-farm activity, extension service, farmer group participation and training. The results also revealed that farm size and the adoption of UDP technology significantly influenced the output of rice farmers in the northern region of Ghana. In addition to the potential of the technology to improve yields, it also presents an employment opportunity for women and youth, who are engaged in the deep placement of Urea Super Granules (USG), as well as in the transplantation of rice. It is recommended that the government of Ghana work closely with the IFDC to embed the UDP technology in the national agricultural programmes and policies. The study also recommends an effective collaboration between the government, through the Ministry of Food and Agriculture (MoFA) and the International Fertilizer Development Center (IFDC) to train agricultural extension agents on UDP technology in the rice producing areas of the country.

Keywords: Northern Ghana, output, irrigation rice farmers, treatment effect model, urea deep placement.

STRATEGY IN CONTROLLING RICE-FIELD CONVERSION IN PANGKEP REGENCY, SOUTH SULAWESI, INDONESIA

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[1,2] Indonesian Moslem University

Abstract:

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

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

COMPARATIVE ANALYSIS OF SOIL ENZYME ACTIVITIES BETWEEN LAUREL-LEAVED AND CRYPTOMERIA JAPONICA FORESTS

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Abstract:

Soil enzyme activities in Kasuga-yama Hill Primeval Forest (Nara, Japan) were examined to determine levels of mineralization and metabolism. Samples were selected from the soil surrounding laurel-leaved (B_{B-1}) and Carpinus japonica (B_{B-2} and P_w) trees for analysis. Cellulase, β-xylosidase, and protease activities were higher in B_{B-1} samples those in B_{B-2} samples. These activity levels corresponded to the distribution of cellulose and hemicellulose in the soil horizons. Cellulase, β-xylosidase, and chymotrypsin activities were higher in soil from the P_w forest than in that from the B_{B-2} forest. The relationships between the soil enzymes calculated by Spearman's rank correlation indicate that the interactions between enzymes in B_{B-2} samples were more complex than those in P_w samples.

Keywords: Comparative analysis, enzyme activities, forest soil, Spearman's rank correlation.

ELECTROCHEMICAL CORROSION OF STEELS IN DISTILLERY EFFLUENT

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Abstract:

The present work relates to the corrosivity of distillery effluent and corrosion performance of mild steel and stainless steels SS304L, SS316L, and 2205. The report presents the results and conclusions drawn on the basis of (i) electrochemical polarization tests performed in distillery effluent and laboratory prepared solutions having composition similar to that of the effluent (ii) the surface examination by scanning electron microscope (SEM) of the corroded steel samples. It is observed that pH and presence of chloride, phosphate, calcium, nitrite and nitrate in distillery effluent enhance corrosion, whereas presence of sulphate and potassium inhibits corrosion. Among the materials tested, mild steel is observed to experience maximum corrosion followed by stainless steels SS304L, SS316L, and 2205.

Keywords—Steel, distillery effluent, electrochemical polarization, corrosion

FLEXURAL PROPERTIES OF HALLOYSITE NANOTUBES- POLYESTER NANOCOMPOSITES EXPOSED TO AGGRESSIVE ENVIRONMENT

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Abstract

This study aimed to investigate the effect of aggressive environment on the flexural properties of halloysite nanotubes-polyester nanocomposites. Results showed that the addition of halloysite nanotubes into polyester matrix was found to improve flexural properties of the nanocomposites in dry condition and after water-methanol exposure. Significant increase in surface roughness was also observed and measured by Alicona Infinite Focus optical microscope.

Keywords—Halloysite nanotubes, polymer degradation, flexural properties, surface roughness

THE MANUFACTURING OF METALLURGICAL GRADE SILICON FROM DIATOMACEOUS SILICA BY AN INDUCTION FURNACE

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Abstract:

The metallurgical grade silicon (MG-Si) is obtained from the reduction of silica (SiO_2) in an induction furnace or an electric arc furnace. Impurities inherent in reduction process also depend on the quality of the raw material used. Among the applications of the silicon, it is used as a substrate for the photovoltaic conversion of solar energy and this conversion is wider as the purity of the substrate is important. Research is being done where the purpose is looking for new methods of manufacturing and purification of silicon, as well as new materials that can be used as substrates for the photovoltaic conversion of light energy. In this research, the technique of production of silicon in an induction furnace, using a high vacuum for fusion. Diatomaceous Silica (SiO2) used is 99 mass% initial purities, the carbon used is 6N of purity and the particle size of 63µm as starting materials. The final achieved purity of the material was above 50% by mass. These results demonstrate that this method is a technically reliable, and allows obtaining a better return on the amount 50% of silicon.

Keywords : Induction - Amorphus Silica - Carbopn microstructure – Silicon.

TWO AND THREE LAYER LAMINATION OF NANOFIBER

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Abstract:

For their exceptional properties nanofibers, respectively, nanofiber layers are achieving an increasingly wider range of uses. Nowadays nanofibers are used mainly in the field of air filtration where they are removing submicron particles, bacteria, and viruses. Their efficiency is not changed in time, and the power consumption is much lower than that of electrically charged filters. Nanofibers are primarily used for converting and storage of energy in both air and liquid filtration, in food and packaging, protecting the environment, but also in health care which is made possible by their newly discovered properties. However, a major problem of the nanofiber layer is practically zero abrasion resistance; it is, therefore, necessary to laminate the nanofiber layer with another suitable material. Unfortunately, lamination of nanofiber layers is a major problem since the nanofiber layer contains small pores through which it is very difficult for adhesion to pass through. Therefore, there is still only a small percentage of products with these unique fibers 5.

Keywords :nanofiber Layer – nanomebrane – Lamination – Electrospininig

EFFECT OF DIFFERENT TYPES OF NANO/MICRO FILLERS ON THE INTERFACIAL SHEAR PROPERTIES OF POLYAMIDE 6 WITH DE-SIZED CARBON FIBER

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Abstract:

The current study aims to investigate the effect of fillers with different geometries and sizes on the interfacial shear properties of PA6 composites with de-sized carbon fiber. The fillers which have been investigated are namely; nano-layer silicates (nanoclay), sub-micro aluminum titanium (ALTi) particles, and multiwall carbon nanotube (MWCNT). By means of X-ray photoelectron spectroscopy (XPS), epoxide group which defined as a sizing agent, has been removed. Sizing removal can reduce the acid parameter of carbon fibers surface promoting bonding strength at the fiber/matrix interface which is a desirable property for the carbon fiber composites. Microdroplet test showed that the interfacial shear strength (IFSS) has been enhanced with the addition of 10wt% ALTi by about 23% comparing with neat PA6. However, with including other types of fillers into PA6, the results did not show enhancement of IFSS.

Keywords—Sub-micro-filler, nano-composites, interfacial shear strength, polyamide.

STRUCTURAL AND ELECTRICAL CHARACTERIZATION OF POLYPYRROLE AND COBALT ALUMINUM OXIDE NANOCOMPOSITES

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Abstract:

To investigate electrical properties of conducting polypyrrole (PPy) and cobalt aluminum oxide (CAO) nanocomposites, impedance analyzer in frequency range of 100 Hz to 5 MHz is used. In this work, PPy/CAO nanocomposites were synthesized by chemical oxidation polymerization method in different weight percent of CAO in PPy. The dielectric properties and AC conductivity studies were carried out for different nanocomposites in temperature range of room temperature to 180 °C. With the increase in frequency, the dielectric constant for all the nanocomposites was observed to decrease. AC conductivity of PPy was improved by addition of CAO nanopowder.

Keywords :polypyrrole – Dielectric Constant – Dielectric lose – AC conductivity.

POLYMER MEDIATED INTERACTION BETWEEN GRAFTED NANOSHEETS

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Abstract:

Polymer-particle interactions can be effectively utilized to produce composites that possess physicochemical properties superior to that of neat polymer. The incorporation of fillers with dimensions comparable to polymer chain size produces composites with extra-ordinary properties owing to very high surface to volume ratio. The dispersion of nanoparticles is achieved by inducing steric repulsion realized by grafting particles with polymeric chains. A comprehensive understanding of the interparticle interaction between these functionalized nanoparticles plays an important role in the synthesis of a stable polymer nanocomposite. With the focus on incorporation of clay sheets in a polymer matrix, we theoretically construct the polymer mediated interparticle potential for two nanosheets grafted with polymeric chains. The self-consistent field theory (SCFT) is employed to obtain the inhomogeneous composition field under equilibrium. Unlike the continuum models, SCFT is built from the microscopic description taking in to account the molecular interactions contributed by both intra- and inter-chain potentials. We present the results of SCFT calculations of the interaction potential curve for two grafted nanosheets immersed in the matrix of polymeric chains of dissimilar chemistry to that of the grafted chains. The interaction potential is repulsive at short separation and shows depletion attraction for moderate separations induced by high grafting density. It is found that the strength of attraction well can be tuned by altering the compatibility between the grafted and the mobile chains. Further, we construct the interaction potential between two nanosheets grafted with diblock copolymers with one of the blocks being chemically identical to the free polymeric chains. The interplay between the enthalpic interaction between the dissimilar species and the entropy of the free chains gives rise to a rich behavior in interaction potential curve obtained for two separate cases of free chains being chemically similar to either the grafted block or the free block of the grafted diblock chains.

Keywords—Clay nanosheets, polymer brush, polymer nanocomposites, self-consistent field theory

ALT-OR-MAT KÖPRÜSÜ

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ÖZET

2021 yılında ülkemizin Karadeniz bölgesinde meydana gelen aşırı yağış; sel ve su baskınlarına sebep olmuş, 82 kişi yaşamını yitirirken 288 kişi yaralanmış ve 16 kayıp başvurusu yapılmıştır. Tarihinin en büyük doğal afetlerinden birini yaşayan ülkemizin Kastamonu ve Bartın illerinde bulunan tarihi köprüler zarar görmüş, aynı zamanda köprü ayaklarının suyla gelen birikintileri tutarak su taşkınlarına sebep olduğu da belirtilmiştir.

Çalışmamızın amacı, ülkemizde yaşanması muhtemel sel ve deprem gibi doğal afetlerde eskisine göre daha sağlam ve az malzeme ile daha ekonomik köprü ayakları ya da köprüler inşa etmek, aynı zamanda yaşanan doğal afetlerde köprü üzerindeki araç veya insanlara güvenli ve hızlı bir geçiş sağlamaktır.

Altın oran hesabıyla üst üste ve ortalı bir şekilde konulan küplerin oluşturduğu köprü ayaklarının hacimleri, silindir veya kare prizma olarak inşa edilen köprü ayaklarına göre daha küçük olduğu görülmüştür. Dolayısıyla kullanılacak malzeme az olacağından daha ekonomiktir.

Yine Alt-Or-Mat köprümüz, silindir veya kare prizma şeklindeki köprü ayaklarından hesaplamalarla daha dayanıklı olduğu görülmüştür.

Alt-Or-Mat Köprüsü ile ilgili mercilere danışılarak görüşler alınacaktır. Olumlu dönütler ile ülkemize ekonomik ve işlevsel ve daha dayanıklı köprüler yapma imkânı sunulmuş olacaktır.

Anahtar Kelimeler : Altın Oran, Silindir Hacmi ve Dayanıklığı, Küp Hacmi ve Dayanıklığı.

ZIT KENAR DİK ÜÇGEN

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ÖZET

Öğrencilerin matematik gelişimi yaşlarıyla, zihinsel düşünme becerileriyle, edinilen tecrübeyle ilgili olduğu kadar öğrencilerin bildiklerini uygulama ve somut detaylara oturtma becerisiyle de alakalı olduğu bilinmektedir.

Matematik öğretmenlerinin görüşlerine göre, ortaokul 8. Sınıf Matematik dersi müfredatı içerisinde verilen Pisagor Bağıntısı konusu, soyut kavramların yer aldığı, öğrencilerin ezber yapma gücünü sınadığı bir konu olarak değerlendirilmektedir.

Biz de bu çalışmayla farklı bir bakış açısı geliştirerek Pisagor bağıntısının kenarları arasında ilginç bir tespit yapıp, konuyu öğrenciler için ilgi çekici hale getirerek algılarını yüksek düzeye çıkarma arzusundayız.

Kenar uzunlukları tam sayı ve benzerlerinin en küçüğü olan dik üçgenlerin dik kenarlarından birinin tek diğerinin çift olması gerektiğini ortaya koyuyoruz.

Matematikte olmayana ergi ispat yöntemini kullanarak her iki dik kenarın tek ve her iki dik kenarın çift olma durumu incelendiğinde elde edilen sonuçların çelişki oldukları anlaşılmıştır. Burada seçimlerin yanlış olduğu yani dik kenarlardan birinin tek diğerinin çift olması gerektiği görülmüştür.

Bu çalışmanın sonucunda öğrencilerin konuyla ilgili ilginç detaylar öğrenmesi konuya bakış açısını olumlu yönde değiştireceği anlaşılmıştır.

Anahtar Kelimeler: Dik Üçgen, Pisagor Bağıntısı, Cebirsel ifadeler.

SOME NEW RESULTS ON PYTHAGOREAN NEUTROSOPHIC SOFT TOPOLOGICAL SPACES

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ABSTRACT

In real-world problems such as engineering, social, economic, computer science, medical science, and so on. Because of the uncertainty or imprecision of the data, all real data are not necessarily crisp, precise, or deterministic. The majority of these problems were solved by various theories, first by the fuzzy set theory provided by Zadeh, and later by several researches presenting a number of results using different directions of fuzzy set such as: interval fuzzy set, intuitionistic fuzzy set by Atanassov. All of these are successful to some extent in dealing with problems arising from the vagueness present in the real world, but there are cases where these theories failed to provide satisfactory results, possibly due to indeterminate and inconsistent information present in the belif system, so in 1995, Smarandache initiated the theory of neutrosophic as a new mathematical tool for dealing with problems involving imprecise, indeterminacy, and uncertainty. Using the concept of neutrosophic set and soft set, Maji introduced neutrosophic soft set for the first time, establishing its application in decision making, The Pythagorean Neutrosophic soft set (PNSS) is a novel concept that combines the Pythagorean fuzzy set and the Neutrosophic set with dependent components membership and non-membership, as well as an independent component indeterminacy. In this study, we investigated dense sets and boundary on pyhagorean neutrosophic soft (PNS) topological spaces. Also some important properties of these structures are presented.

Key Words : Pythagorean neutrosophic Soft Sets, PNS Topological spaces, Dense set, Boundary

SOME OPERATIONS ON PYTHAGOREAN NEUTROSOPHİC SOFT TOPOLOGICAL SPACES

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ABSTRACT

In a wide range of real-world problems, including engineering, social, economic, computer science, and medical science. All real data are not necessarily crisp, precise, or deterministic due to data uncertainty or imprecision. The majority of these problems were solved by various theories, first by Zadeh's fuzzy set theory, and later by several studies presenting a variety of results using different directions of fuzzy set, such as interval fuzzy set and Atanassov's intuitionistic fuzzy set.. There are cases where these theories did not produce satisfactory results, possibly because of the ambiguous and inconsistent information present in the belief system. As a result, in 1995, Smarandache introduced the theory of neutrosophic as a new mathematical tool for dealing with problems involving imprecision, indeterminacy, and uncertainty. All of these are successful to some extent in dealing with problems arising from the ambiguity present in the real world. Maji first introduced neutrosophic soft set and established its use in decision-making by combining the ideas of neutrosophic set and soft set., The Pythagorean Neutrosophic soft set (PNSS) is a novel concept that combines the Pythagorean fuzzy set and the Neutrosophic set with dependent components membership and non-membership, as well as an independent component indeterminacy. In this study, we introduces basis and subspace topology on pyhagorean neutrosophic soft (PNS) topological spaces. Also some important theorems are investigated.

Key Words : Pythagorean neutrosophic Soft Sets, PNS Topological spaces, subspace topology, basis

THE NARAYANA-PADOVAN SEQUENCE MODULO *m*

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ABSTRACT

The linear recurrence sequences appear in modern research in many fields from mathematics, physics, computer, and architecture to nature and art. The study of recurrence sequences in groups first began with Fibonacci sequences and the ordinary Fibonacci sequences in cyclic groups were investigated. Several authors have also obtained the cyclic groups via some special matrices. In addition, many studies have reached that the periods of the sequences obtained by reducing according to modulo *m* are equal to the order of the cyclic groups obtained, and then many studies in the literature obtained the rules for the orders of the cyclic groups generated by reducing the generating matrix of the sequence when read modulo *m*. In this study, we consider the Narayana-Padovan sequence. In this sense, we examine the Narayana-Padovan sequence according to modulo *m*. Then we consider the generating matrix of the Narayana-Padovan sequence called the Narayana-Padovan matrix. Furthermore, we produce the cyclic groups which are generated by the multiplicative orders of the Narayana-Padovan matrix when read modulo *m*. Finally, we derive the relationship between the order of the cyclic groups obtained and the periods of the Narayana-Padovan sequence when read modulo *m*.

Keywords: The Narayana-Padovan sequence, Modulo, Group.

THE REPRESENTATIONS AND FINITE SUMS OF THE NARAYANA-PADOVAN NUMBERS

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ABSTRACT

As it is known, it is a frequently encountered situation in modern science that homogeneous linear recurrence sequences are used to solve some problems in different disciplines or that various problems in different scientific disciplines are directly constructed by considering the structural features of these sequences. Several authors have defined some linear recurrence sequences and given their various properties by matrix methods. Many authors have also obtained various structural properties of these sequences such as exponential, permanental, determinantal and combinational representations, and finite sums by using the generating matrix and generating function of recurrence sequences in an algebraic sense, and such studies are still up to date. In this study, we consider the Narayana-Padovan numbers. Furthermore, we derive the permanental and the determinantal representations of the Narayana-Padovan numbers by using certain matrices which are obtained from the generating matrix of the Narayana-Padovan sequence. Finally, we obtain the combinatorial and exponential representations and the finite sums of the Narayana-Padovan numbers by the aid of the generating function and the generating matrix of the Narayana-Padovan sequence.

Keywords: The Narayana-Padovan numbers, Matrix, Representation, Sum.

THE NARAYANA-JACOBSTHAL SEQUENCE MODULO *m*

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ABSTRACT

Many authors have studied some special linear recurrence sequences in algebraic structures. The study of recurrence sequences in groups first began with Fibonacci sequences and the ordinary Fibonacci sequences in cyclic groups were investigated. Then, the concept was extended to some special linear recurrence sequences by many studies. Again in this sense, many studies in the literature obtained the rules for the orders of the cyclic groups generated by reducing the generating matrix of the sequence according to modulo m. Given an integer matrix $A=\left[a_{ij}\right]$, $A(modm)$ means that all entries of A are modulo m, that is $A(modm)=\left(a_{ij}\left(modm\right)\right)$. Since consider the set $\langle A\rangle_m=\left\{A^i\left(\mathrm{mod}\, m\right)\middle|\ i\geq 0\right\}$, if $\gcd\left(m,\det A\right)=1$, then the set $\langle A\rangle_m$ is a cyclic group; if $\gcd\left(m,\det A\right)\neq 1$, then the set $\langle A\rangle_m$ is a semigroup. In this study, we consider the Narayana-Jacobsthal sequence and then, we study the Narayana-Jacobsthal matrix, which is the generating matrix of the Narayana-Jacobsthal sequence. Furthermore, we obtain the semigroups which are generated by the multiplicative orders of the Narayana-Jacobsthal matrix when read modulo m. Then, we study the Narayana-Jacobsthal sequence according to modulo m and we obtain the periods of the Narayana-Jacobsthal sequence when read modulo m. Finally, we derive the relationship between the order of the semigroups obtained and the periods of the Narayana-Jacobsthal sequence according to modulo m.

Keywords: The Narayana-Jacobsthal number, Representation, Sum.

THE REPRESENTATIONS AND FINITE SUMS OF THE NARAYANA-JACOBSTHAL NUMBERS

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ABSTRACT

Number theoretic properties such as these obtained from homogeneous linear recurrence relations relevant to this paper have been studied by many authors. It is defined some linear recurrence sequences and given their various properties by matrix methods in many works. Many scientists have also obtained various structural properties of these sequences such as the Binet formula, exponential, permanental, and combinational representations by using the generator matrix and generator function of the algebraic reduction sequences. In this study, we consider the Narayana-Jacobsthal matrix, which is the generating matrix of the Narayana-Jacobsthal numbers. Firstly, we give relationships among the Narayana-Jacobsthal numbers and the permanents and the determinants of certain matrices which are produced by using the generating matrices of the Narayana-Jacobsthal sequence. Also, we obtain the generating function of the Narayana-Jacobsthal numbers. Then, we derive the exponential representation for these numbers using obtained the generating function. Finally, we obtain the combinatorial representations and the finite sums of the Narayana-Jacobsthal numbers with the aid of the generating function and the generating matrix of the Narayana-Jacobsthal sequence.

Keywords: The Narayana-Jacobsthal number, Representation, Sum.

VOLUMETRIC LIGHTING IN ARCHITECTURAL DESIGN

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ABSTRACT

In order to provide the amount of light required for lighting, the sun and the light created by sunlight should be used together. Volumetric lighting is a term used to describe the effect that light can have by taking the shape of a cone or beam and increasing the sense of volume in a given space. More simply, this illumination is the appearance of light beams in which the space between a light source and its destination is also illuminated. Volumetric lighting, also known as "god rays", creates spiritual effects in architectural works with its light effects. Current examples of volumetric lighting are sunbeams emitted when the sun is below the horizon, or sun rays shining through a window, also known as twilight rays. Volumetric lighting is used to create “god rays” or light beams by passing light through atmospheric environments such as fog or haze. Volumetric lighting is used to add depth, direct the eye and create an aesthetic feeling. When it comes to creating depth in architecture, the three-dimensional architectural space is made remarkable with the volumetric lighting technique used. Volumetric lighting contributes to the look and texture of the architectural work. By means of volumetric lighting, orientation is made to the targeted focal point. Light, which is an effective tool, is used to guide the eye. This illumination allows us to reveal certain details or subjects with light in architectural works.

Key words : Daylight, god rays, volumetric lighting

USE OF WHITE LIGHT IN LIVING SPACES

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ABSTRACT

White light used in homes, offices, and outdoors has negative effects due to the high blue light it contains and therefore disrupts sleep patterns. Prolonged exposure to white light causes toxic stress on the retina and worsens visual comfort. Blue light reaching the retina, which covers the back of the eye, affects the sleep rhythm negatively by inhibiting the secretion of the hormone melatonin. Therefore, prolonged exposure to white light causes structural and functional damage to the retina. As a result, it is known that the risk of breast, prostate, and colon cancers is higher in people who are exposed to high levels of white light during the night shift. White light also causes symptoms of fatigue, lack of attention, difficulty concentrating, and depressed mood. The harmful effects of white light are not limited to humans. White light causes damage to other living things in nature. High-brightness white light causes flying animal species to lose their migration route and therefore die. For this reason, optical materials should be used to soften and scatter high-brightness light to prevent negative effects on both humans and other living things. To reduce the level of direct radiation in indoor living spaces, indirect lighting systems, in which light is reflected from surfaces such as walls and ceilings, should be used instead of direct lighting. Staring at light sources for long periods, as well as computer, phone, and television screens, causes similar problems. Looking at the phone screen for a long time, especially at late hours, can prolong the transition to sleep and reduce sleep quality. Again, to prevent negative effects on wildlife, the use of yellow light should be increased, especially in the outdoor environment, or white light should be used proportionally.

Keywords: White light, blue light, yellow light, radiation

Prunus Armeniaca L. Ekstraktından Gümüş Nanopartiküllerin Sentezi ve Yapısının Aydınlatılması

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ÖZET

Nanopartiküller, malzeme biliminden biyonanoteknolojiye kadar bilim ve teknolojinin farklı alanlarında çok sık kullanılmaktadırlar. Nanopartiküllerinsentezi ve oluşumu, yüzey plazmon rezonansında renk değişikliğine bağlı olarak UV-görünür spektroskopisi xx nm'de belirgin pik verdiği doğrulanmıştır. Biyolojik kaynaklı yöntemle elde edilen gümüş nanoparçacıkların sentezi, düşük maliyetli, çevre dostu ve büyük ölçekte üretim kapasitesinden dolayı yeni bir araştırma alanını teşkil eder. Bu çalışmada, atık durumda olan *Prunus armeniaca L.* Yaprakları Iğdır tuzluca bölgesinde toplandı. Daha sonra özüt haline getirildi. Gümüş tuzu ve bitki ekstresi (7:3) oranında karıştırılarak 50 C'de reaksiyon ortamına bırakıldı ve gümüş nanopartiküller L. (PA-AgNP'ler) başarılı bir şekilde sentezlendi. Yeşil sentezlenmiş gümüş nanoparçacıkların karakterizasyonu için; X-ışını kırınımı (XRD), FE-SEM, Termal Gravimetrik analiz, Geçirimli elektron mikroskobu, UV-görünür spektroskopisi, Fourier dönüşümleri kızılötesi (FTIR) spektroskopisi ve atomik güç mikroskobu kullanılarak yapısı aydınlatılmıştır. Sentezlenen gümüş nanoparçacıkların XRD analizi sonucunda yapılarının kubik olduğu görüldü. TEM analizi ile elde edilen gümüş nanomalzemelerin boyutunun ortalama 12.6 nm olduğu belirlenmiştir.

Anahtar Kelimeler: AFM, FE-SEM, TEM,Prunus armeniaca L. ve XRD.

Synthesis and Structure elucidation of Silver Nanoparticles from Prunus Armeniaca L. Extract

ABSTRACT

Nanoparticles are frequently used in a variety of scientific and technological sectors, including bionanotechnology and materials science. Due to a color shift in surface plasmon resonance,

the synthesis and production of nanoparticles were proven to peak at xx nm in UV-visible spectroscopy. Due to its low cost, environmentally benign production process, and high production capacity, the synthesis of silver nanoparticles derived from biological sources represents a new study topic. Prunus armeniaca L. waste leaves were gathered in the Idr Tuzla region for this investigation. Then it was removed. Silver nanoparticles L. (PA-AgNPs) were effectively synthesized by combining silver salt with plant extract (7:3) in the reaction medium at 50 °C. X-ray diffraction (XRD), FE-SEM, Thermal Gravimetric analysis, transmissive electron microscopy, UV-visible spectroscopy, Fourier transform infrared (FTIR) spectroscopy, and atomic power microscopy were used to characterize the greenly produced silver nanoparticles. The XRD examination of the produced silver nanoparticles revealed that they have cubic shapes. The average size of the silver nanoparticles obtained by TEM examination was found to be 12.6 nm.

Keywords: AFM, FE-SEM, TEM, Prunus armeniaca L. and XRD.

The Urban Expansion vs. The Sustainability of Agri-Fishery in the Philippines: A Case Study of "Tahong" Industry in the Municipality of Jiabong, Samar

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ABSTRACT

As an archipelagic nation, the Philippines will have a significant and performance-enhancing edge in producing and benefitting from aquatic resources such as fish, shellfish, crustaceans, and cephalopods. This research intends to uncover the deep structure of the Philippine mussel industry. The sole commercially farmed mussel species in the Philippines is the green mussel, locally known as "tahong." The absence of seed stock is a problem that threatens the long-term viability of mussel farming. Producers of mussels rely mostly on wild-harvested seeds. On the other hand, mussel spats from natural beds are becoming limited due to natural and human reasons and can no longer meet producer demand. The Municipality of Jiabong in Region VIII is the largest supplier of mussels in the region and has the most area devoted to mussel cultivation and mussel culture, both of which are indicative of recreational activities. Hence, making it the "Tahong" capital of Samar/Eastern Visayas, and maybe the "Tahong" capital of the Philippines. However, the local economic driver of the past two decades is becoming increasingly weak. Therefore, the researchers performed a study to determine the cause and have chosen to examine the sustainability of the "tahong" business by analyzing the implementation and activities of the local government. The research was undertaken to considerably ease and clarify the status of Jiabong's economy for citizens and the local administration. This study indicated that most green mussel farmers in Samar are elementary school graduates or above, and that two-thirds of them have not received training in green mussel farming. This is due to the absence of initiatives that improve the industry's profitability. Adoption of certified green mussel farming technology is insufficient; farmers prefer simpler or traditional farming methods, despite being aware that these methods have long-term negative environmental effects. Simply put, there isn't enough improvement and promotion of potential mussel farmers and the mussel business as a whole.

Keywords: Agri-Fishery Industry, Local Farmers, Mussel Industry, Tahong, Urbanization

TOWARDS THE ECONOMIC DEVELOPMENT OF THE PHILIPPINES: ACHIEVING SUSTAINABLE DEVELOPMENT AND FOOD SECURITY THROUGH URBAN AGRICULTURE

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ABSTRACT

The issue with food security arises as population and urbanization grow. The threats have increased even more with the existence of the pandemic. Urban agriculture is a community-based food production activity within urban areas that would help its pursuit of food security and sustainable development. In this paper, the researchers analyzed and evaluated the effectiveness of urban agriculture in food security and sustainability and its impact on the Philippines' economic development by responding to these key questions: (1) What measures were undertaken by the Philippines to ensure the availability, access, stability, and utilization of food from the Urban Agriculture program, and (2) How effective is the implementation and promotion of the Urban Agriculture in the Philippines in terms of (a) Economic Stability, (b) Food Security and Sustainability, and (c) Agri-Input Production. The study shows that urban populations rely on goods being consistently available, at reasonable prices, and with easy access. The lack of awareness and accessible data however contributes to the slow progress of Urban Agriculture. The Philippine legislators crafted and approved bills that promote and institutionalize urban agriculture in highly urbanized cities and municipalities nationwide. The main goal is to achieve self-sufficiency and sustainability in food security. These measures affirm that every person is free from hunger. There are also initiatives from local government units to develop and expand urban agriculture programs with the aim to create new food supply chains, restoring ecosystem functions, encouraging business, and addressing urban poverty. This paper uses various research that might contribute to the development and effectiveness of urban agriculture. The main aim of this study is to determine the effectiveness of Urban Agriculture programs in food security and sustainability and their impact on the economic development of Quezon City. Since urbanization and population are rapidly growing, the threats to food security heighten. People are now finding ways to create new food supply chains and secure food stability in these modern times.

Keywords: Economic Development, Food Security, Sustainability, Urban Agriculture

HACİKENT ORMANLARINDA ANTROPOJENİK DEĞİŞİMLER VE RESTORASYON SORUNLARI

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Son zamanlarda tüm dünyada ormanlık alanların hızla azalması görülmektedir. Bu soruna esas sebeplerden biri orman yangınları ile birlikte antropojenik etkilerin neden olmasıdır. Azerbaycan seyrek ormanlık bölgelerden biri olarak kabul edilmektedir.Burada orman örtüsünün yüzdesi % 11.8'e eşittir. Orman alanlarının yeniden ağaçlandırma ve orman dikimi ile sabit tutulması çok zor bir ekonomik problemdir. Son 20 yılda, Hacıkent yerleşimi de dahil olmak üzere Azerbaycan'ın batı bölgesindeki ormanların sistematik olmayan bir şekilde kesilmesi ve ağırlıklı olarak yakıt olarak kullanılması, toprakla birlikte değerli kayın, meşe, ceviz ve diğer ağaç türlerinin yok olmasına neden olmuştur. Geniş alanlarda dağ yamaçlarında erozyon ve ormansızlaşma süreçlerini hızlandırmıştır.

Yürütülen araştırma çalışmaları, söz konusu orman masiflerinde ilgili orman yapı belgeleri incelenerek ve arazi kameral çalışmaları ile hesaplamalar yapılarak gerçekleştirilmiştir.

Anahtar kelimeler: İber meşesi, ormansızlaşma, ağaçlandırma, orman yönetimi, orman ölçümleri.

ANTHROPOGENIC CHANGES AND RESTORATION PROBLEMS IN HAJIKAND FORESTS.

Recently, it has been observed that forest areas are rapidly decreasing all over the world. One of the main reasons for this problem is that it is caused by anthropogenic effects together with forest fires. Azerbaijan is recognized as one of the sparsely forested regions. Here the percentage of forest cover is equal to 11.8%. Keeping the area of forests stable with afforestation and forest planting is a very difficult economic problem. In the last 20 years, the unsystematic felling of forests in the western part of Azerbaijan, including the Hajikent settlement, and their predominantly use as fuel, have resulted in the destruction of valuable beech, oak, walnut, and other tree species along with the soil. It has accelerated erosion and deforestation processes on mountain slopes in large areas. The research work was carried out by analyzing relevant forest structure documents and making calculations along with field camera work in the mentioned forest massifs.

Key words: Iberian oak, deforestation, afforestation, forest management, forest measurements.

Phosphite Treatments to Control Tomato Bacterial Canker and Wilt

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ABSTRACT

Tomato bacterial canker and wilt caused by seed transmitted bacterial pathogen *Clavibacter michiganensis* subsp. *michiganensis* (*Cmm*) is an economically important and one of the most destructive diseases of tomato worldwide. The disease occurs in many countries on tomatoes in regions characterized by rainy and humid areas. Since the pathogen colonizes tomato (*Solanum lycopersicum*) vascular tissues, control of the disease is a challenge. Sources of resistance are available but have not yet been introduced into commercial cultivars.Thus, alternative control strategies are needed. Recently, Phosphite (Phi)-containing products are marketed for their antimicrobial and nutritional value. In this study, spray efficacies of five individual phosphites (copper phosphite, zinc/manganes phosphite, calcium phosphite, magnesium phosphite and potassium phosphite) and a plant activator, Fosetyl-Al, on tomato bacterial canker and wilt disease development, tomato plant chlorophyll content, dry weight and stem diameter were tested under controlled greenhouse conditions twice. Phi were inhibited the growth of *Clavibacter michiganensis* subsp. *michiganensis* between 44.68% to 66.47% and between 66.26% to 74.37% in the first and second trials, respectively. The raise in chlorophyll content of tomato plants were ranged from 2.86% to 29.95% in phosphite sprayed plants. Zn/Mn phosphite increased the stem diameter up to 6.47%, however, no difference statistically recorded in dry weight of tomato plants comparing to control. The study concluded that phosphites have potential to combat with *Cmm* and to be included in integrated disease management strategies. This study supported by ERU Scientific Research Projects Unit (ID: FYL-2020-10475).

Keywords: bacterial, control, *Clavibacter*, tomato, phosphite, wilt

OFLAK DAĞI (KAYNARCA) VE ÇEVRESİNİN FLORASINA KATKILAR

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ÖZET
Bu çalışmanın ana materyalini Oflak Dağı ve çevresi üzerinde yapılan flora çalışmasına ait bitki örnekleri oluşturmaktadır. Oflak Dağı ve çevresindeki çalışmalar sonucunda şuana kadarki süreçte bölgedeki familya, cins, tür ve türaltı takson sayısı belirlenmiştir. Yapılan araştırmalar sonucunda 51 familyaya ait 145 cins, 218 tür ve türaltı seviyede takson belirlenmiştir. Bu taksonlardan 50 tür (%23) Avrupa-Sibirya, 32 tür (%15) Akdeniz, 136 tür de çok bölgeli veya bilinmeyenlerden oluşmuştur.
Anahtar Kelimeler: Flora, Oflak Dağı, Kaynarca

IN VITRO KOŞULLARDA BAZI AĞIR METAL UYGULAMALARININ BEYAZ BAŞ LAHANA (*Brassica oleracea* var. *capitata f. alba*) ÜZERİNE ETKİLERİNİN SAPTANMASI

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ÖZET

In vitro koşullarda yürütülen bu çalışmada beyaz baş lahana yetiştiriciliğinde ağır metallerin bitki gelişimi üzerine etkilerinin belirlenmesi amaçlanmıştır. Araştırmada ağır metal olarak; nikel, kobalt, bakır, krom, alüminyum, kurşun ve kadmiyum kullanılmıştır. Bu ağır metallerin kontrol (0 µM), 100 µM, 200 µM, 300 µM, 400 µM ve 500 µM konsantrasyonları, MS (Murashige ve Skoog 1962) besin ortamına eklenmiş ve *in vitro* koşullarda beyaz baş lahana tohumlarının ekimi yapılmıştır. Çalışma sonunda alınan bitki örneklerinde kök sayısı, yaprak sayısı, kök uzunluğu, yaprak uzunluğu, tohumlarda ise çimlenme ve kotiledon oranları belirlenmiştir. Elde edilen sonuçlara göre; kurşunun kontrol ve 300 µM, bakırın kontrol, alüminyumun 500 µM, kobaltın kontrol ve 100 µM, nikelin 300 µM, kromun 500 µM, kadmiyumun kontrol ve 500 µM konsantrasyonları çimlenme oranı üzerine olumlu etkide bulunmuştur. Kotiledon oluşum oranı üzerine, nikel, kurşun ve alüminyumun 300 µM, bakır ve kadmiyumun kontrol uygulaması, kobaltın 100 µM ve kromun 400 µM uygulamasının en yüksek değerleri oluşturduğu dikkat çekmiştir. Bitkiler kök uzunluğu açısından değerlendirildiğinde en uzun köklü bitkiler; bakırın kontrol ve 200 µM, kobalt ve kadmiyumun 100 µM, nikelin 200 µM, alüminyumun 300 µM uygulamalarından elde edilmiştir. Kurşun ve krom ağır metallerinin ise beyaz baş lahananın kök uzunluğu üzerine azaltıcı veya arttırıcı etkisinin bulunmadığı saptanmıştır. Kullanılan ağır metallerin genel olarak artan konsantrasyonlarının beyaz baş lahana bitkisinde sürgün gelişimi üzerine etkisinin olumsuz olduğu gözlenmiştir. Konsantrasyon arttıkça özellikle 300 µM üzerinde sürgün uzunluğunun azaldığı dikkat çekmiştir. Kök sayısı üzerine ağır metallerin etkisi incelendiğinde, kobalt ve kadmiyumun farklı konsantrasyonlarının etkisinin önemli olmadığı saptanmıştır. Kök sayısı en fazla olan bitkiler nikelin kontrol, bakırın kontrol ve 200 µM, kurşunun ise 200 ve 300 µM uygulamalarından elde edilmiştir. Genel olarak alüminyum ve kromun farklı konsantrasyonlarının kök sayısını arttırıcı etkide olduğu tespit edilmiştir. Kurşun, krom, bakır, nikel, kadmiyum ağır metallerinde en fazla kök sayısı kontrol ve 100 µM uygulamalarından elde edilirken, kobaltta 300 µM konsantrasyonundan elde edilmiştir. Alüminyum, nikel, krom ve kurşun ağır metallerinin yaprak sayısı üzerine azaltıcı veya arttırıcı etkisinin bulunmadığı saptanmıştır. Bakır, kobalt ve kadmiyumun etkisinin yaprak sayısı üzerinde önemli olduğu ve artan konsantrasyonlarının yaprak oluşumunu azalttığı tespit edilmiştir.

Anahtar Kelimeler : *In vitro,* Ağır metal, Beyaz baş lahana

DETERMINING THE EFFECTS OF SOME HEAVY METAL APPLICATIONS ON WHITE CABBAGE (*Brassica oleracea var. capitata f. alba*) IN *IN VITRO* CONDITIONS

ABSTRACT

In this study carried out *in vitro* conditions, it was aimed to determine the effects of heavy metals on plant growth in white cabbage cultivation. As heavy metal in the research; Nickel, cobalt, copper, chromium, aluminum, lead and cadmium were used. Control (0 µM), 100 µM, 200 µM, 300 µM, 400 µM and 500 µM concentrations of these heavy metals were added to the MS (Murashige and Skoog 1962) nutrient medium and white cabbage seeds were cultivated under *in vitro* conditions. In the results of working, the number of roots, number of leaves, root length, leaf length, germination and cotyledon rates in seeds were determined in the plant samples taken. According to the results obtained; Concentrations of lead and 300 µM, copper control, aluminum 500 µM, cobalt control and 100 µM, nickel 300 µM, chromium 500 µM, cadmium control and 500 µM have positive effects on germination rate. On the cotyledon formation rate, it was noted that the highest data were observed in the control application of nickel, lead and aluminum, 300 µM, copper and cadmium, 100 µM of cobalt and 400 µM of chromium. When the plants are evaluated in terms of root length, the plants with the longest roots are; obtained from control and 200 µM applications of copper, 100 µM of cobalt and cadmium, 200 µM of nickel, and 300 µM of aluminum. It was determined that lead and chromium heavy metals did not have a reducing or increasing effect on the root length of white cabbage. It was observed that the generally increasing concentrations of the heavy metals used had a negative effect on shoot growth in white cabbage plant. It was noted that as the concentration increased, the shoot length decreased especially above 300 µM. When the effect of heavy metals on root number was examined, effect was found to be different concentrations of cobalt and cadmium was not significant. The plants with the highest number of roots were obtained from control of nickel, control and 200 µM of copper, and 200 and 300 µM of lead. In general, it has been determined that different concentrations of aluminum and chromium have an influence on increasing the number of roots. While the highest root number was obtained from control and 100 µM applications in lead, chromium, copper, nickel, cadmium heavy metals, it was obtained from 300 µM concentration in cobalt. It was determined that aluminum, nickel, chromium and lead heavy metals did not have a reducing or increasing impect on the number of leaves. It has been determined that the effect of copper, cobalt and cadmium is significant on the number of leaves and their increasing concentrations reduce leaf formation.

Keywords: Heavy Metal, *In vitro*, *Brassica oleracea var. capitata f. rubra*

KENTSEL ATIKSUDAKİ NİKEL VE ÇİNKONUN CERATOPHLLYUM DEMERSİUM L. İLE GİDERİMİ

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ÖZET

Atıksularda bulunan ağır metallerin gideriminde kullanılan fiziko-kimyasal yöntemler enerji ihtiyacının yüksek olması ve toksik çamur oluşumu sebebiyle günümüzde yerini bitki esaslı doğal arıtım sistemlerinin kullanılması büyük avantajlar sağlamaktadır. Bu amaçla çalışma kapsamında kentsel atıksuda bulunan nikel ve çinkonun *Ceratophyllum demersum L.* su bitkisi ile giderimi için çalışma şartları optimize edilmiştir. Safsu içerisine spike yapılan nikel ve çinko metalleri ile farklı bitki miktarları (2-7.5 g/L) ve farklı maruziyet süreleri (6-48 sa) ile optimum koşular belirlendikten sonra Konya kentsel atıksu arıtma tesisi (AAT) giriş ve çıkışından alınan atıksu örneklerinde matriksin giderim üzerine etkisi araştırılmıştır. Farklı bitki konsantrasyonlarında ve maruz bırakılma süreleri sonunda bitkilerin fresh ve kuru ağırlıkları, atıksuda kalan ve bitki bünyesine alınan ağır metal miktarları, atıksu pH değişimleri, biyokonsantrasyon faktörü (BKF) ve ağır metal giderim verimleri analiz edilmiştir. Atıksu ve bitki bünyesine alınan ağır metal konsantrasyonu alevli atomik absorpsiyon spektrofotometresi (AAS-800) ile tespit edilmiştir. Deneysel çalışmalar sonucunda bitki konsantrasyonu ve maruz kalma süresi arttıkça nikel ve çinko giderim verminin arttığı gözlenmiştir. 7.5 g/L bitki kullanımı ile 48 sa maruz kalma süresi sonunda çinko için %85, nikel içinse %100 giderim verimi elde edilmiştir. Aynı şartlarda BKF değeri çinko için 1260 L/kg, nikel içinse 1902 L/kg olarak tespit edilmiştir. Nikel ve çinkonun birlikte gideriminin gerçekleştirildiği çalışma sonucunda ise 0.5 mg/L metal konsantrasyonları için nikel gideriminin %70, çinko giderimin ise %80 olduğu görülmüştür. Konya kentsel AAT giriş ve çıkış atıksuyunda nikel ve çinko giderim sonuçları değerlendirildiğinde ise her iki atıksuda da nikel ve çinko için yaklaşık olarak %70 giderim verimi elde edilmiştir. Farklı koşullarda optimize edilen, iyi bir biyobelirteç ve metal akümüle edebilme yeteneği olan *Ceratophyllum demersum L.* bitkisinin fitoremediasyon yöntemiyle nikel ve çinko ile kirlenmiş suların arıtımı için etkin bir şekilde kullanılabileceğini görülmüştür.

Anahtar Kelimeler: Atıksu, ağır metal, *Ceratophyllum demersum L.*, fitoremediasyon, nikel, çinko.

YERÜSTÜ SULARINDA MİKROPLASTİKLER VE MİKROPLASTİKLERE İLİNTİLİ KLORLU VE FOSFORLU PESTİSİTLER

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ÖZET

Günümüzde yaygın olarak karşılaşılan plastik kirliliği yerüstü sularında da mikroplastik kirliliği olarak karşımıza çıkmaktadır. Mikroplastik kirliliğininin çevresel zararlarını artıran bir başka neden ise su ortamında bulunan yapısına adsorplanabilen organik kirleticilerdir. Bu nedenle çalışma kapsamında Konya Kapalı Havzası yerüstü sularından örnekler alınarak mikroplastik miktarı, mikroplastik türü ve mikroplastiklere ilintili klorlu pestisitler (OCP) ve fosforlu pestisitlerin (OPP) konsantrasyonları tespit edilmiştir. Deneysel çalışmalar sonucunda mikroplastik miktarı 1.9-24.5 MP/L arasında tespit edilmiştir. En baskın mikroplastik türü fragment olup en yaygın görülen renk ise şeffaf renk olmuştur. Mikroplastiklere ilintili pestisitlerin tespiti için yapılan çalışmaların sonucunda Σ20-OCP konsantrasyonlarının 0.115-117.42 µg/g, Σ6-OPP konsantrasyonlarının ise 0.143-76.526 µg/g arasında değiştiği gözlemlenmiştir. OCP bileşikleri içerisinde en baskın türü ΣHCH bileşikleri oluştururken, OPP bileşiklerinde malathion baskın olarak tespit edilmiştir. Tespit edilen MP konsantrasyonu ile organik kirleticiler arasındaki korelasyon değerlendirildiğinde MP konsantrasyonu ile OCP konsantrasyonu arasında bir korelasyon (R^2=0.75) tespit edilirken, OPP bileşikleri ile arasında bir korelasyon (R^2=0.29) görülmemiştir. Yerüstü sularında tespit edilen MP kirliliğinin en önemli sebepleri su kaynaklarının yakınındaki yerleşim yerlerinden kaynaklanan evsel atıksular olarak belirlenmiştir. Mikroplastiklere bağlı tespit edilen yüksek klorlu ve fosforlu pestisit konsantrasyonunun sebebi ise Konya havzasında kullanılan yoğun tarımsal faaliyetler sebebiyle gerçekleşen tarımsal mücadele faaliyetleri olarak değerlendirilmiştir. Elde edilen klorlu pestisit sonuçları geçmişte kullanılan ve çevrede kalıcılığı yüksek olan pestisitlerin günümüze ulaştığını göstermiştir. Kullanımı yasal olmayan pestisitlerin tespit edilmesi yasal olmayan kullanımların devamını göstermektedir. Plastik ve pestisit kullanımları konusunda bilinçli kullanımı sağlanmalıdır. Ayrıca yerüstü sularında mikroplastikler ve mikroplastiklere ilintili çeşitli organik kirleticilerin izlenmesi ve kontrolü ile ilgili standartlara yer verilmelidir.

Anahtar Kelimeler: Konya Kapalı Havzası, yerüstü suları, mikroplastik, klorlu pestisitler, fosforlu pestisitler.

TOPRAKTA NADİR TOPRAK ELEMENTLERİ (NTE) ve KİMYASAL DAVRANIŞLARI

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ÖZET

Nadir toprak elementleri (NTE), kimyasal ve fiziksel özellikleri birbirine benzer 17 elementin bir grubudur. Bu elementler, seramik ve cam sanayinden, lazer üretimine, elektronik cihazların üretiminden petrol katalizörlüğüne kadar geniş bir endüstriyel kullanım alanına sahiptir. Nadir toprak elementleri tarımsal faaliyetlerde ürünlerin büyümesini iyileştirmek amacıyla gübre olarak da kullanılmakta bu durum da topraktaki konsantrasyonlarının artışını hızlandırmaktadır. Bunun yanı sıra kesme, işleme, patlatma, delme gibi madencilik faaliyetleri sonucunda toksik kimyasallar, nadir toprak elementi içeren tozların toprağı ve bitki örtüsünü ve vahşi yaşamı olumsuz yönde etkilediği bilinmektedir. Nadir toprak elementleri toprakta jeolojik ana materyallerden de kaynaklanabilmektedir. Nadir toprak elementi madenciliği uygunsuz hava şartları da göz önüne alındığında sadece toprağı kirletmekle kalmayıp, havayı, suyu ve insan sağlığını da tehlikeye atmaktadır. Bu elementlerin topraktaki çevresel davranışlarının düşük çözünürlükleri nedeniyle daha baskın olduğu yapılan araştırmalarda görülmüştür. Nadir toprak elementlerinin, toprakta fosfatlar, florokarbonlar, oksidazlar ve silikat minerallerinde yoğunlaştığı görülmektedir. Düşük çözünürlüğe sahip olan nadir toprak elementleri bu minerallerle kompleks oluşturabilir bu durum da ekosistemlerde, özellikle sulu fazında düşük çözünmüş konsantrasyonlara neden olabilir. Toprak, insan hayatının bütün alanlarında, sürdürülebilirlik ve ekonomik gelişme için en önemli kaynaklardan birisini oluşturmaktadır. Sanayi devrimi ile birlikte, endüstriyel gelişmeler artmış, insan faaliyetleri sonucu bertaraf edilemeyen veya standartlara uygun olarak arıtılamayan atıklar alıcı ortamlara ve toprağa deşarj edilmiştir. Bu durum toprağın yapısı bozulmakla kalmamış, insan sağlığı ve çevre kalitesini de olumsuz yönde etkilemiştir. Salgın hastalıklar artmış, insanoğlu çok büyük çevre sorunlarıyla karşı karşıya kalmıştır. Bu bildirinin amacı, toprakta bulunan nadir toprak elementlerinin kimyasal davranışlarını çevresel faktörler göz önüne alınarak incelemektir. Bildiride nadir toprak elementlerinin topraktaki dağılımı, birikimi, çevresel kalite açısından etkileri ve gelecekte yapılabilecek çalışmalar anlatılmıştır.

Anahtar Kelimeler: Çevre, nadir toprak elementleri, kimyasal davranış.

ABSTRACT: Rare earth elements (REE) are a group of 17 elements with similar chemical and physical properties. These elements have a wide range of industrial uses, from the ceramic and glass industry, to laser production, from the manufacture of electronic devices to petroleum catalyst. Rare earth elements are also used as fertilizers to improve the growth of crops in agricultural activities, which accelerates the increase in their concentration in the soil. In addition, it is known that as a result of mining activities such as cutting, processing, blasting and drilling, toxic chemicals and dust containing rare earth elements adversely affect the soil

and vegetation and wildlife. Rare earth elements can also originate from geological parent materials in the soil. Rare earth element mining not only pollutes the soil, but also endangers the air, water and human health, given the unfavorable weather conditions. Studies have shown that the environmental behavior of these elements in the soil is more dominant due to their low solubility. Rare earth elements appear to be concentrated in phosphates, fluorocarbons, oxidases and silicate minerals in the soil. Rare earth elements with low solubility can form complexes with these minerals, resulting in low dissolved concentrations in ecosystems, especially in the aqueous phase. Soil is one of the most important resources for sustainability and economic development in all areas of human life. With the industrial revolution, industrial developments increased, and the wastes that could not be disposed of as a result of human activities or treated in accordance with the standards were discharged to the receiving environment and soil. This situation not only deteriorated the structure of the soil, but also negatively affected human health and environmental quality. Epidemics have increased, and humankind has faced enormous environmental problems. The aim of this paper is to examine the chemical behavior of rare earth elements in the soil by considering environmental factors. In the paper, the distribution of rare earth elements in the soil, their accumulation, their effects in terms of environmental quality and future studies are explained.

Keywords: Environment, rare earth elements, chemical behavior.

NADİR TOPRAK ELEMENTLERİNİN (NTE) İNSANLAR ÜZERİNDEKİ ETKİSİ

THE EFFECT OF RARE EARTH ELEMENTS (REE) ON PEOPLE

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ÖZET

Skandiyumdan itriyuma ve lantandan lutetiyuma kadar lantanitlerde dahil nadir toprak elementler (NTE'ler), benzer fiziksel ve kimyasal özelliklere sahiptir. NTE'ler düşük hareketliliği nedeniyle antropojenik kirlilik olarak toprakta, bitkide, suda ve atmosferde düşük konsantrasyonlarda bulunurlar. NTE'leri, günümüz teknolojisinde önemli metallerdir. Bu metalleri içeren atıklar, NTE içeren fosfatlı gübrelerin kullanılması ve madencilik, suların kirlenme olasılığını artırabilir ve bunların çevredeki ekosistemlere salınmasına katkıda bulunabilir. NTE kaynaklarının işletme faaliyetlerinin büyük ölçekli ve hızlı artışları, maden sahası çevresindeki toprak ve suyun kirlenme seviyelerinde önemli artışlara neden olmaktadır. Bu nedenle, topraklarda ve sularda aşırı NTE içeriğinin bulunması, tarımsal verimliliğe, yeraltı suyuna, doğal ekosisteme ve insan sağlığına ciddi zararlar verebilir. Bu koşullar altında, topraktaki ve sudaki NTE'ler serbest kalırsa, özellikle gıdalarda olmak üzere, insan vücuduna girerler. NTE'lerin insan sağlığı üzerindeki potansiyel riskini araştırmak için, günlük sebze, et ve tahıllardaki konsantrasyon seviyelerinin bilinmesi gerekir. Gıda zinciri yoluyla düşük seviyelerde NTE'lere sürekli maruz kalmanın insan sağlığı üzerindeki etkilerine ilişkin potansiyel hastalıklar, insan vücuduna girdikten sonra kan, beyin ve kemikte biriktiği üzerine çalışmalar bulunmaktadır. NTE ile kontamine olmuş gıdaların uzun süreli tüketimi kronik zehirlenmeye neden olabilir. Ayrıca, NTE'ler yutma, soluma ve deri teması ile insan organlarında birikebilir ve bu da bazı hastalıkları tetikleyebilir. Ortamdan uzun süreli düşük dozda NTE alımında ise, kemik yapısında NTE birikimine neden olabilir. Bu, kemik dokusunu değiştirebilir. Ayrıca, kemikte biriken NTE, kemik iliği hücresinde genetik toksisite oluşumunu da tetikleyebilir. NTE'lerin geniş bir endüstriyel süreçler dizisinde (elektronik, otomobil, seramik, cam ve nükleer endüstrilerde) kullanımı, son yıllarda NTE'leri bir dizi teknolojik uygulamada vazgeçilmez metaller haline getirmiştir. Bu nedenle, NTE kullanımı, madencilik ve üretimi konusunda hem insan hem de çevre sağlığı endişesini ortaya çıkarmıştır.

Anahtar kelimeler: Nadir toprak elementler (NTE), maden, çevre, insan sağlığı

ABSTRACT

Rare earth elements (REEs), including the lanthanides, from scandium to yttrium and lanthanum to lutetium, have similar physical and chemical properties. REEs are found in low concentrations in soil, vegetation, water and atmosphere as anthropogenic pollution due to their low mobility. REEs are important metals in today's technology. Waste containing these metals, use of phosphate fertilizers containing REE, and mining can increase the likelihood of water contamination and contribute to their release into surrounding ecosystems. Large-scale and rapid increases in the operating activities of REE resources cause significant increases in the pollution levels of soil and water around the mine site. Therefore, the presence of excessive REE content in soils and waters can cause serious damage to agricultural productivity, groundwater, natural ecosystem and human health. Under these conditions, if REEs in soil and water are released, they enter the human body, especially in food. To investigate the potential risk of REEs on human health, it is necessary to know the concentration levels in daily vegetables, meats and grains. There are studies on the human health effects of continued exposure to low levels of REEs through the food chain, potentially accumulating in the blood, brain, and bone after entering the human body. Long-term consumption of REE-contaminated foods can cause chronic poisoning. In addition, REEs can accumulate in human organs through ingestion, inhalation, and skin contact, which may trigger some diseases. Long-term low-dose REE intake from the environment may cause REE accumulation in the bone structure. This can change the bone tissue. In addition, REE accumulated in the bone may trigger genetic toxicity in the bone marrow cell. The use of REEs in a wide array of industrial processes (in the electronics, automobile, ceramics, glass and nuclear industries) has made REEs indispensable metals in a range of technological applications in recent years. Therefore, the use of REE has raised both human and environmental health concerns regarding mining and production.

Keywords: Rare earth elements (REE), mining, environment, human health

CYTOTOXIC EFFECT OF *ORIGANUM SYRIACUM* METHANOL EXTRACT ON VARIOUS CELL LINES

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ABSTRACT

Cancer is one of the most dangerous deadly diseases worldwide. The World Health Organization stated that the number of new cancer patients could reach 24 million by 2032. Considering the increasing incidence of cancer, new and effective drugs must be developed to control and treat tumor cell proliferation. Currently, chemotherapeutic drugs still play an important role in cancer treatment. However, drugs on the market have strong toxicity and side effects. Natural products have made significant progress in cancer drug development in recent years. *Origanum* species are one of the most frequently and heavily consumed dietary condiments worldwide. *Origanum* species have been used as a folk medicine as well as additives, flavoring agents, and disinfectants for food products. Studies have shown that *Origanum* species have significant effects on the treatment of a variety of health problems, including viral infections, stomach, respiratory, and urinary tract disorders, dermatological diseases, and cancer. Moreover, *Origanum syriacum* is known to have valuable functionality, including anticancer, antioxidant, antimicrobial, and other activities. In this study, the cytotoxic effect of *O. syriacum* methanol extract on mouse fibroblasts (L929), human breast cancer cell line (MDA-MB-231), and human colorectal cancer cell line (DIFI) was investigated using MTT assay. The methanol extract of *O. syriacum* was found to have a cytotoxic effect on DIFI cell lines. However, this extract was detected to damage L929 normal cells as well. Consequently, due to the bioactive compound contents of *O. syriacum*, it could be a promising anticancer agent for drug development.

Keywords: Anticancer effect, *Origanum syriacum*, natural product

EL DEZENFEKTANI ENDÜSTRİSİ ATIK SUYUNUN NANOFİLTRASYON YÖNTEMİ İLE KOİ GİDERİM VERİMİNİN İNCELENMESİ

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ÖZET

Kimyasal oksijen ihtiyacı (KOİ) endüstriyel atık sularda kirletici parametrelerin başında gelmektedir. Bu çalışmanın amacı el dezenfektanı atık suyunun basınç sürücülü membran sistemle KOİ giderim veriminin incelenmesidir. Çalışmada Ankara'da bulunan bir el dezenfektanı üretim tesisinden elde edilen atık su incelendi. Atık su NF 270 ticari isimli nanofiltrasyon membranı ile arıtıldı. Arıtım aşamalarında alınan numunelerin KOİ ölçümleri kaydedildi. Kaydedilen ölçüm değerleri kullanılarak KOİ giderim verimleri hesaplandı. Hesaplanan KOİ giderim verimleri kıyaslanarak el dezenfektanı atık suyunun arıtımında NF 270 için optimum çalışma parametrelerinin belirlenmesi hedeflendi. Membran modülüne gönderilen atık suyun membrandan geçme miktarı (membran akısı), suyun membrana gönderilme basıncı (6 bar, 12 bar ve 18 bar) ve sıcaklık (25°C, 35°C ve 45°C) ile ilişkiliydi. Sıcaklık ve basınç parametrelerinin artmasıyla membran geçirgenliğinde beklenen artışa bağlı olarak KOİ gideriminin değişeceği tahmin edilmekteydi. El dezenfektanı atık suyu için uygulanan sıcaklık parametreleri incelendiğinde akı değerinin basıncın yükselmesi ile arttığı görülmüştür. El dezenfektanı atık suyuna uygulanan parametreler incelendiğinde %82,3 ile en yüksek KOİ giderim veriminin 6 bar basınç ve 25°C sıcaklıkta elde edildiği tespit edilmiştir. Kimyasal oksijen ihtiyacı yüksek olan endüstriyel atık suların arıtımı çalışmalarında NF 270 membranının atık suya uygun ön arıtımla kullanımı daha yüksek verimlilik sağlayabilir.

Anahtar Kelime: Atıksu arıtımı, Nanofiltrasyon, NF270 membran, El dezenfektanı atıksuyu, KOİ

INVESTIGATION OF COD REMOVAL EFFICIENCY OF HAND DISINFECTANT INDUSTRY WASTE WATER BY NANOFILTRATION METHOD

ABSTRACT

Chemical oxygen demand (COD) is one of the polluting parameters in industrial wastewater. The aim of this study is to examine the COD removal efficiency of hand disinfectant waste water with a pressure driven membrane system. In the study, wastewater obtained from a hand sanitizer production facility in Ankara was examined. Waste water was purified with the nanofiltration membrane with the commercial name NF 270. The COD measurements of the samples taken during the treatment stages were recorded. COD removal efficiencies were calculated using the recorded measurement values. By comparing the calculated COD removal efficiencies, it was aimed to determine the optimum operating parameters for NF 270 in the treatment of hand disinfectant waste water. The amount of wastewater sent to the membrane module to pass through the membrane (membrane flux), the pressure to send the water to the membrane (6 bar, 12 bar and 18 bar) and temperature (25°C, 35°C and 45°C) were related. It was estimated that COD removal would change depending on the expected increase in membrane permeability with the increase of temperature and pressure parameters. When the temperature parameters applied for the hand disinfectant waste water were examined, it was observed that the flux value increased with the increase in pressure. When the parameters applied to the hand disinfectant waste water were examined, it was determined that the highest COD removal efficiency with 82.3% was obtained at 6 bar pressure and 25°C temperature. In the treatment of industrial wastewater with high chemical oxygen demand, the use of NF 270 membrane with appropriate pre-treatment for wastewater can provide higher efficiency.

Keywords: Wastewater treatment, Nanofiltration, NF270 membrane, Hand disinfectant waste water, COD

TIBBi MASKE ENDÜSTRİSİ ATIK SUYUNUN NANOFİLTRASYON YÖNTEMİ İLE RENK GİDERİM VERİMİNİN İNCELENMESİ

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ÖZET

Endüstriyel atık sularda renk kirliliği çok yaygın bir sorundur. Bu çalışmanın amacı boya içeren tıbbi maske atık suyunun basınç sürücülü membran sistemle renk giderim veriminin incelenmesidir. Çalışmada Tekirdağ'da bulunan bir tıbbi maske üretim tesisinde elde edilen atık su incelendi. Atık su NF 270 ticari isimli nanofiltrasyon membranı ile arıtıldı. Arıtım aşamalarında alınan numunelerin UV ölçümleri kaydedildi. Kaydedilen ölçüm değerleri kullanılarak giderim verimleri hesaplandı. Hesaplanan giderim verimleri kıyaslanarak tıbbi maske atık suyunun arıtımında NF 270 için optimum çalışma parametrelerinin belirlenmesi hedeflendi. Membran modülüne gönderilen atık suyun membrandan geçme miktarı (membran akısı), suyun membrana gönderilme basıncı (6 bar, 12 bar ve 18 bar) ve sıcaklık (25°C, 35°C ve 45°C) ile ilişkiliydi. Sıcaklık ve basınç parametrelerinin artmasıyla membran geçirgenliğinde beklenen artışa bağlı olarak renk giderim veriminin değişeceği tahmin edilmekteydi. Tıbbi maske atık suyuna uygulanan parametreler incelendiğinde %99,49 ile en yüksek renk giderim veriminin 18 bar basınç ve 25°C sıcaklıkta elde edildiği tespit edilmiştir. Boya içeren endüstriyel atık suların arıtımı çalışmalarında NF 270 membranının atık suya uygun ön arıtımla kullanımı daha düşük sıcaklıklarda daha yüksek verimlilik sağlayabilir.

Anahtar Kelime: Atıksu arıtımı, Nanofiltrasyon, NF270 membran, Tıbbi maske atıksuyu

INVESTIGATION OF COLOR REMOVAL EFFICIENCY OF MEDICAL MASK INDUSTRY WASTE WATER BY NANOFILTRATION METHOD

ABSTRACT

Color pollution in industrial wastewater is a very common problem. The aim of this study is to examine the color removal efficiency of the dye-containing medical mask wastewater with a pressure-driven membrane system. In the study, wastewater obtained from a medical mask production facility in Tekirdağ was examined. Waste water was purified with the nanofiltration

membrane with the commercial name NF 270. UV measurements of the samples taken during the treatment stages were recorded. Removal efficiencies were calculated using the recorded measurement values. By comparing the calculated removal efficiencies, it was aimed to determine the optimum operating parameters for NF 270 in the treatment of medical mask waste water. The amount of wastewater sent to the membrane module to pass through the membrane (membrane flux), the pressure to send the water to the membrane (6 bar, 12 bar and 18 bar) and temperature (25°C, 35°C and 45°C) were related. It was estimated that the color removal efficiency would change depending on the expected increase in membrane permeability with the increase of temperature and pressure parameters. When the parameters applied to the medical mask waste water were examined, it was determined that the highest color removal efficiency with 99.49% was obtained at 18 bar pressure and 25°C temperature. In the treatment of industrial wastewater containing dyes, the use of NF 270 membrane with appropriate pre-treatment for wastewater can provide higher efficiency at lower temperatures.

Keywords: Wastewater treatment, Nanofiltration, NF270 membrane, Medical mask wastewater

THE EFFECTS OF ELECTRICAL MUSCLE STIMULATION (EMS) TOWARDS MALE SKELETAL MUSCLE MASS

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Abstract:

Electrical Muscle Stimulation (EMS) has been introduced and globally gained increasing attention on its usefulness. Continuous application of EMS may lead to the increment of muscle mass and indirectly will increase the strength. This study can be used as an alternative to help people especially those living a sedentary lifestyle to improve their muscle activity without having to go through a heavy workout session. Therefore, this study intended to investigate the effectiveness of EMS training program in 5 weeks interventions towards male body composition. It was a quasiexperimental design, held at the Impulse Studio Bangsar, which examined the effects of EMS training towards skeletal muscle mass among the subjects. Fifteen subjects (n = 15) were selected to assist in this study. The demographic data showed that, the average age of the subjects was 43.07 years old ± 9.90, height (173.4 cm ± 9.09) and weight was (85.79 kg ± 18.07). Results showed that there was a significant difference on the skeletal muscle mass ($p = 0.01 < 0.05$), upper body ($p = 0.01 < 0.05$) and lower body ($p = 0.00 < 0.05$). Therefore, the null hypothesis has been rejected in this study. As a conclusion, the application of EMS towards body composition can increase the muscle size and strength. This method has been proven to be able to improve athlete strength and thus, may be implemented in the sports science area of knowledge.

Keywords: Body composition, EMS, skeletal muscle mass, strength.

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Psychological Variables of Sport Participation and Involvement among Student-Athletes of Tertiary Institutions in South-West, Nigeria

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Abstract:

This study was conducted to investigate the psychological variables motivating sport participation and involvement among student-athletes of tertiary institutions in southwest Nigeria. One thousand three hundred and fifty (N-1350) studentathletes were randomly selected in all sports from nine tertiary institutions in south-west Nigeria. These tertiary institutions include University of Lagos, Lagos State University, Obafemi Awolowo University, Osun State University, University of Ibadan, University of Agriculture Abeokuta, Federal University of Technology Akungba, University of Ilorin, and Kwara State University. The descriptive survey research method was adopted while a self developed validated Likert type questionnaire named Sport Participation Scale (SPS) was used to elicit opinion from respondents. The test-retest reliability value obtained for the instrument, using Pearson Product Moment Correlation Co-efficient was 0.96. Out of the one thousand three hundred and fifty (N-1350) questionnaire administered, only one thousand two hundred and five (N-1286) were correctly filled, coded and analysed using inferential statistics of Chi-Square (X2) while all the tested hypotheses were set at. 05 alpha level. Based on the findings of this study, the result revealed that several psychological factors influence student athletes to continue participation in sport one which includes love for the game, famous athletes as role model and family support. However, the analysis further revealed that the stipends the student-athletes get from their universities have no influence on their participation and involvement in sport.

Keywords: Family support, peer, role model, sport participation, student-athletes.

THE RELATIONSHIP BETWEEN MOTIVATION FOR PHYSICAL ACTIVITY AND LEVEL OF PHYSICAL ACTIVITY OVER TIME

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Abstract:

In recent years, there has been a decline in physical activity among adults. Motivation has been shown to be a crucial factor in maintaining physical activity. The purpose of this study was to whether PA motives measured by the Physical Activity and Leisure Motivation Scale PALMS predicted the actual amount of PA at a later time to provide evidence for the construct validity of the PALMS. A quantitative, cross-sectional descriptive research design was employed. The Demographic Form, PALMS, and International Physical Activity Questionnaire Short form (IPAQ-S) questionnaires were used to assess motives and amount for physical activity in adults on two occasions. A sample of 489 male undergraduate students aged 18 to 25 years (mean ±SD; 22.30±8.13 years) took part in the study. Participants were divided into three types of activities, namely exercise, racquet sport, and team sports and female participants only took part in one type of activity, namely team sports. After 14 weeks, all 489 undergraduate students who had filled in the initial questionnaire (Occasion 1) received the questionnaire via email (Occasion 2). Of the 489 students, 378 males emailed back the completed questionnaire. The results showed that not only were pertinent sub-scales of PALMS positively related to amount of physical activity, but separate regression analyses showed the positive predictive effect of PALMS motives for amount of physical activity for each type of physical activity among participants. This study supported the construct validity of the PALMS by showing that the motives measured by PALMS did predict amount of PA. This information can be obtained to match people with specific sport or activity which in turn could potentially promote longer adherence to the specific activity.

Keywords: Physical activity, motivation, the level of physical activity, types of physical activities.

Interdisciplinary Integrated Physical Education Program Using a Philosophical Approach

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Abstract:

The purpose of this presentation is to describe an interdisciplinary teaching program that integrates physical education concepts using a philosophical approach. The presentation includes a review of: a) the philosophy of American education, b) the philosophy of sports and physical education, c) the interdisciplinary physical education program, d) professional development programs, (e) the Success of this physical education program, f) future of physical education. This unique interdisciplinary program has been implemented in an urban school physical education discipline in East Orange, New Jersey for over 10 years.

During the program the students realize that the bodies go through different experiences. The body becomes a place where a child can recognize in an enjoyable way to express and perceive particular feelings or mental states. Children may distinguish themselves to have high abilities in the social or other domains but low abilities in the field of athletics.

The goal of this program for the individuals is to discover new skills, develop and demonstrate age appropriate mastery level at different tasks, therefore the program consists of 9 to 12 sports, including many game. Each successful experience increases the awareness ability. Engaging in sports and physical activities are social movements involving groups of children in situations such as teams, friends, and recreational settings, which serve as a primary socializing agent for teaching interpersonal skills. As a result of this presentation the audience will reflect and explore how to structure a physical education program to integrate interdisciplinary subjects with philosophical concepts.

Keywords: Interdisciplinary disciplines, philosophical concepts, physical education.

Repercussions of Ritual Dances to Personal Adjustment - A Perspicacious Study among School Children

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Abstract:

Reflecting the concepts of the development of the whole child, it is claimed that, purposeful engagement in Physical activities or exercise involved ritual dances has the potential to engender in young people, The purpose of the present study was to analyze school children and their personal adjustment based on Ritual dance participation. For the purpose, two thousand and three hundred school children of Kerala were analyzed. AISS manual of A.K.P Sinha and R.P Singh was used to collect the data for adjustments. The adjustment qualities classifies as Excellent, Good, Average, Unsatisfactory and Very unsatisfactory. The total performance denotes the state of adjustment based on the classifications. Findings of the study were subjected to percentages and 't' ratio. The study enlightened that, the emotional, social and overall adjustments are better than non-athletes. But the study elucidated that, there is no difference in educational adjustment of school athletes and non athletes among school children.

Keywords: Ritual dances, Emotional adjustment, Poorakkali, Kolkali, Margamkali.

Changes of Power-Velocity Relationship in Female Volleyball Players during an Annual Training Cycle

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Abstract:

The aim of the study was to follow changes of powervelocity relationship in female volleyball players during an annual training cycle. The study was conducted on eleven female volleyball players: age 21.6±1.7 years, body height 177.9±4.7 cm, body mass 71.3±6.6 kg and training experience 8.6±3.3 years. Power–velocity relationship was determined from five maximal 10-second cycloergometer efforts with external loads equal: 2.5, 5.0, 7.5, 10.0 and 12.5% of body weight (BW) before (I) and after (II) the preparatory period, after the first (III) and second (IV) competitive season. The maximal power output increased from 9.30±0.85 W•kg–1 (I) to 9.50±0.96 W•kg–1 (II), 9.77±0.96 W•kg–1 (III) and 9.95±1.13 W•kg–1 (IV, $p<0,05$). The power output at the load of 2.5, 5.0, 7.5, 10.0% BW were statistically significant increased after the first and second competitive season. Power output at load of 12.5% BW was insignificant increased.

Keywords: Female, Force-velocity relationship, Power output, Volleyball

Objectivity, Reliability and Validity of the 90º Push-Ups Test Protocol Among Male and Female Students of Sports Science Program

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Abstract:

This study was conducted to determine the objectivity, reliability and validity of the 90º push-ups test protocol among male and female students of Sports Science Program, Faculty of Sports Science and Coaching Sultan Idris University of Education. Samples (n = 300), consisted of males (n = 168) and females (n = 132) students were randomly selected for this study. Researchers tested the 90º push-ups on the sample twice in a single trial, test and re-test protocol in the bench press test. Pearson-Product Moment Correlation method's was used to determine the value of objectivity, reliability and validity testing. The findings showed that the 900 pushups test protocol showed high consistency between the two testers with a value of r = .99. Likewise, The reliability value between test and re-test for the 90º push-ups test for the male (r=.93) and female (r=.93) students was also high. The results showed a correlation between 90º push-ups test and bench press test for boys was r = .64 and girls was r = .28. This finding indicates that the use of the 90º push-ups to test muscular strength and endurance in the upper body of males has a higher validity values than female students.

Keywords: Arm and shoulder girdle strength and endurance, 900 push-ups, bench press

Social Media as a 'Service' for Value Co-Creation by Integrating Sponsoring Companies, Sports Entities and Fans

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Abstract:

Social media has changed the ways we communicate, collaborate and connect with each other. It has also influenced our habits of consuming sports. Social media has allowed direct interaction between sponsoring companies, athletes/players and fans. Drawing on the service dominant logic of value co-creation, the conceptual paper identifies three operant resources which are beneficial for value co-creation: i) social identity and sense of community, ii) congruence and brand personality, and iii) participatory culture and fan activation. The paper contributes to the theoretical discussion on how social can be media used for value co-creation purposes in the sports industry.

Keywords: Sport, value co-creation, social media, service.

CHILD SEXUAL ABUSE PREVENTION: EVALUATION OF THE PROGRAM "SHARING MOUTH TO MOUTH: MY BODY, NOBODY CAN TOUCH IT"

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Abstract

Sexual violence, and particularly child sexual abuse, is a serious problem all over the world, México included. Given its importance, there are several preventive and care programs done by the government and the civil society all over the country but most of them are developed in urban areas even though these problems are especially serious in rural areas. Yucatán, a state in southern México, occupies one of the first places in child sexual abuse. Considering the above, the University Unit of Clinical Research and Victimological Attention (UNIVICT) of the Autonomous University of Yucatan, designed, implemented and is currently evaluating the program named “Sharing Mouth to Mouth: My Body, Nobody Can Touch It”, a program to prevent child sexual abuse in rural communities of Yucatán, México. Its aim was to develop skills for the detection of risk situations, providing protection strategies and mechanisms for prevention through culturally relevant psycho-educative strategies to increase personal resources in children, in collaboration with parents, teachers, police and municipal authorities. The diagnosis identified that a particularly vulnerable population were children between 4 and 10 years. The program run during 2015 in primary schools in the municipality whose inhabitants are mostly Mayan. The aim of this paper is to present its evaluation in terms of its effectiveness and efficiency. This evaluation included documental analysis of the work done in the field, psycho-educational and recreational activities with children, evaluation of knowledge by participating children and interviews with parents and teachers. The results show high efficiency in fulfilling the tasks and achieving primary objectives. The efficiency shows satisfactory results but also opportunity areas that can be resolved with minor adjustments to the program. The results also show the importance of including culturally relevant strategies and activities otherwise it minimizes possible achievements. Another highlight is the importance of participatory action research in preventive approaches to child sexual abuse since by becoming aware of the importance of the subject people participate more actively; in addition to design culturally appropriate strategies and measures so that the proposal may not be distant to the people. Discussion emphasizes the methodological implications of prevention programs (convenience of using participatory action research (PAR), importance of monitoring and mediation during implementation, developing detection skills tools in creative ways using psycho-educational interactive techniques and working assessment issued by the participants themselves). As well, it is important to consider the holistic character this type of program should have, in terms of incorporating social and culturally relevant characteristics, according to the community individuality and uniqueness, consider type of communication to be used and

children' language skills considering that there should be variations strongly linked to a specific cultural context.

Keywords : Child sexual abuse – Evaluation – PAR , Prevention

AKILLI ŞEBEKELERE YENİLENEBİLİR ENERJİ KAYNAKLARININ ENTEGRASYONUNUN ÇEVRE AÇISINDAN İNCELENMESİ

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ÖZET

Tez çalışmasında, mevcut elektrik iletim ve dağıtım şebekeleri ve akıllı şebeke sistemleri ayrı ayrı incelenip akıllı şebeke sistemlerinin mevcut elektrik şebekelerine göre üstünlükleri ve akıllı şebeke sistemini mevcut elektrik iletim ve dağıtım şebekelerinde kullanmaya başlayan ülkelerin ne gibi çalışmalar yaptıkları incelenip Türkiye'nin bu konudaki çalışmaları değerlendirilecektir. Akıllı şebeke sistemlerine güneş ve rüzgâr gibi yenilenebilir enerji kaynaklarının entegre edilmesinin çevre açısından ne gibi faydaları olacağı ortaya konacaktır. Akıllı şebeke sisteminin çift yönlü veri akışı sağlaması sayesinde üretici-tüketici modelinin tüketiciye olan faydalarından bahsedilecektir. Literatürde akıllı şebeke sistemlerine yenilenebilir enerji kaynaklarının entegre edilmesi konusu incelenmesine karşın çevre açısından ne gibi katkılar sağlayacağı konusundaki bilgiler yetersizdir. Çalışmada akıllı şebeke sistemlerine yenilenebilir enerji kaynaklarının entegre edilmesinin çevre açısından sağlayacağı faydalar açıklanmaya çalışılacaktır. Nitel araştırma yöntemlerinden biri olan doküman analizi yönteminden yararlanılacaktır. Yazılı kaynakların incelenmesi sonucu bilgi havuzu oluşturulacak ve elde edilen bilgiler niteliksel çözümleme yöntemiyle analiz edilecektir. Araştırmayla alakalı ilk ve temel bilgilere ulaşmak ve farklı görüş ve fikirleri karşılaştırmalı olarak analiz edebilmek amacıyla kitaplar, dergiler, bültenler, gazeteler, belgeler, bilimsel araştırma raporları, online veri tabanları, e-kitaplar ve e-dergiler olmak üzere basit kaynak incelemesi yöntemiyle detaylı bir literatür taraması gerçekleştirilecektir. Çalışmada öncelikli olarak ulusal ve uluslararası literatür taraması yapılacak ve Dünya'da yapılan çalışmalar detaylı olarak incelenecektir.

Anahtar Kelimeler : Akıllı Şebeke, Yenilenebilir Enerji, Çevre