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Lüleburgaz / KIRKLARELİ

26-28 September 2018

International Congress on Entrepreneurship Technology Innovation and Design

Abstract Book

International Congress on Entrepreneurship Technology Innovation and Design

The Book of Abstracts

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International Congress on Entrepreneurship, Technology, Innovation and Design

26 - 28 September 2018

Lüleburgaz Stars Women Academy

Lüleburgaz/Kırklareli

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Congress Programme

Day 1 Wednesday September 26, 2018

09:00-10:00 Registration

10:00-11:00 Opening Ceremony

11:00-12:00 Invited Talks

Maciej Mitrega, University of Economics in Katowice, Poland

Deniz Mertkan Gezgin, Trakya University

12:00-13:30 Lunch

13:30 -14:30 1st Session *(Chair: Fatma Suna Balcı)*

- NESNELERİN İNTERNETİ TABANLI BİR SERA OTOMASYON SİSTEMİ
  Kenan Baysal, Murat Olcay Özcan, Fatma Funda Özdüven, Burak Beynek
- INDUSTRY 4 AND INNOVATION IN PROCESS SAFETY OF SMART FACTORIES
  Fatma Suna Balcı
- VERBEEK 'S THEORY OF TECHNICAL MEDIATION AND ITS APPLICATIONS TO INDUSTRIAL DESIGN
  Fazıl Akın
- ENDÜSTRİ 4.0 VE ÇALIŞMANIN GELECEĞİ
  Nisan Nur Çakır

14:30-14:45 Coffee Break

14:45-15:45 2nd Session *(Chair: Doğan Ünal)*

- 3D MICROFABRICATION AND MIXING PHENOMENA IN MICROFLUIDICS
  Ecem Saygılı, Özlem Yeşil Celıktaş
- 3D PRINTING TECHNOLOGY: METHODS AND MATERIALS
  Esra KOÇ, Cihan GÖKÇÖL
- THE EFFECTS OF PERCEIVED BARRIERS AND PERCEIVED ENJOYMENT ON USERS' INTENTION TO USE 3D PRINTER TECHNOLOGY
  Levent Çallı, Nihal Sütütemiz, Büşra Alma Çallı
- ADDITIVE MANUFACTURING (3D PRINTING) APPLICATIONS IN AUTOMOTIVE SECTOR
  Esra Koç, Cihan Gökçöl
- LOW-COST 3 AXIS ROBOTIC ARM DESIGN
  Hakan Üstünel, İlkay Kaya, Doğan Ünal, Fatih Bal
- AHP-TOPSIS TEKNİKLERİYLE KURULUŞ YERİ SEÇİMİ PROBLEMİNİN ÇÖZÜMÜ: BARIŞI DESTEKLEME HAREKATI ÖRNEĞİ
  Uğur Emre, Gülşen Akman

15:45-16:00 Coffee Break

16:00-17:00 3rd Session *(Chair: Sabria Terkhi)*

- COMPETITIVE ADSORPTION STUDY OF TEXTILE DYES ON MODIFED DOLOMITE ENVIRONMENTALLY FRIENDLY IN BINARY SYSTEM
  Samira Ziane, Amine Khelifa
- SIMULATION-BASED STUDY OF ELECTRONIC AND ELASTIC PROPERTIES OF CLUORO-PEROVSKITE CsMnCl3
  Yamina Sefir, Zoubir Aziz, Sabria Terkhi, Ali Zitouni, Tayeb Lantri, Bouabdellah Bouadjemi, Samir Bentata
- FIRST PRINCIPLE PREDICTION OF HALF-METALLIC FERROMAGNETIC IN CUBIC GdCrO3 PEROVSKITE
  Terkhi Sabria, Bentata Samir, Lantri Tayeb, Aziz Zoubir, Sefir Yamina, Cherid Samira, Bendahma Fatima
- A REFINED SHEAR DEFORMATION PLATE THEORY FOR STATIC AND FREE VIBRATION ANALYSIS OF FUNCTIONALLY GRADED PLATES
  Hamidi Ahmed, Zidour Mohamed, Sadoune Mohamed

19:00 Gala Dinner

Day 2 Thursday September 27, 2018

09:00-10:00 1st Session *(Chair: Bahadır Karasulu)*

- MACBETH YÖNTEMİ İLE EĞİTİM KURUMLARINDA ÖDÜL ALACAK ÖĞRENCİLERİN TESPİT EDİLMESİ
  Hakan Murat Arslan, Adem Köse, İsmail Durak
- BENZETİMLİ TAVLAMA TEKNİĞİNİ KULLANAN ENİYİLENMİŞ GÖRÜNTÜ VE VİDEO İŞLEME ÜZERİNE KISA BİR LİTERATÜR ARAŞTIRMASI
  Bahadır KARASULU
- LATi, KERANJİ, TUALANG, VİCTORİAN ASH VE CASTELO BOXWOOD ODUNLARINDA BAZI YÜZEY ÖZELLİKLERİ ÜZERİNE ISIL İŞLEMİN (SİLVAPRO WOOD) ETKİSİ
  Vedat Çavuş, Ümit Ayata, Mutlu Türk, Marko Petric, Jure Žigon
- SİLVAPRO WOOD YÖNTEMİ İLE ISIL İŞLEM GÖRMÜŞ MANİO, MİNDİ, TOONA, CUTA VE WACAPOU AĞAÇ TÜRLERİNDE PARLAKLIK VE RENK DEĞERLERİNİN BELİRLENMESİ
  Vedat Çavuş, Ümit Ayata, Mutlu Türk, Tuncer Dilik
- REAL TIME INTERNET-BASED TEMPERATURE AND HUMIDITY MONITORING
  Hakan Üstünel, Doğan Ünal, Burak Silleli
- BLOKZİNCİRİ TEKNOLOJİSİ VE UYGULAMA ALANLARI
  Kerem Ataşen, Bora Aslan, Deniz Taşkın

10:00-10:15 Coffee Break

10:15-11:15 2nd Session *(Chair: Hakan Murat Arslan)*

- GRİ İLİŞKİSEL ANALİZ YÖNTEMİ İLE YALITIM SEKTÖRÜNDE EN ETKİN TAŞERON FİRMA SEÇİMİ
  Hakan Murat Arslan, Elif Uyanık
- A STATISTICAL FEATURE EXTRACTION IN WAVELET DOMAIN FOR MOVEMENT CLASSIFICATION: A CASE STUDY FOR EYES OPEN, EYES CLOSED, AND OPEN/CLOSED FIST TASKS
  Şükriye Kara, Semih Ergin
- DESIGN OF THE DIRECT CURRENT MOTOR SPEED CONTROLLER WITH EMBEDDED SYSTEM USING FUZZY LOGIC
  Ahmet Kayabaşı, Berat Yıldız
- BAYESIAN NETWORK STRUCTURE LEARNING USING HYBRID BEE OPTIMIZATION AND GREEDY SEARCH
  Shahab Wahhab Kareem, Mehmet Cudi Okur
- PATENT PRE-RESEARCH AND COMPETITOR MONITORING ACTIVITIES IN THE TRAILER SECTOR
  Hakan Özcan, Merve Özcan
- TREYLER SEKTÖRÜNDEKİ ENDÜSTRİ 4.0 GELİŞMELERİ İLE NESNELERİN İNTERNETİNE DAYANAN NAKLİYE ÇÖZÜMLERİNİN LOJİSTİK SEKTÖRÜNE ETKİLERİ
  Gizem Bacak, Ferhat Yiğit, Erkan Çakıroğlu

11:15-11:30 Coffee Break

11:30-12:30 3rd Session *(Chair: İsmet Tıkız)*

- INVESTIGATION AND OPTIMIZATION OF BUILDING THERMAL INSULATION SYSTEMS
  İsmet Tıkız, Hüseyin Pehlivan, Merve Mermer
- MAG KAYNAĞINDA KAYNAK YÖNÜ VE POZİSYONUNUN NÜFUZİYETE ETKİSİ
  Gökhan Özcan, Erkan Çakiroğlu, Kadir Aydemir
- 'FOLD-KINETIC'; DEPLOYABLE DESIGN AS A PERFORMATIVE INTERFACE
  Fitnat Cimşit Koş, Mustafa Orkun Özüer, Merve Aydın
- NATUREgenerate: OPERATIONAL DESIGN PROCESS WITH BIO-GEOMETRIC PATTERNS
  Levent Arıdağ, Fitnat Cimşit Koş
- THE USAGE OF STATISTICAL FEATURES IN THE APPROXIMATION COMPONENTS OF WAVELET DECOMPOSITION FOR ECG CLASSIFICATION: A CASE STUDY FOR STANDING, WALKING AND SINGLE JUMP CONDITIONS
  Makbule Hilal Mütevelli, Semih Ergin
- OVERVIEW OF STUDIES ON INNOVATIONS IN FIRE RESISTANCE OF TIMBER STRUCTURES FROM THE PERSPECTIVE OF SUSTAINABILITY

Hamdi Tekin, Ismail Cengiz Yılmaz

- ANALYSIS OF SELLECTED GRID CODE SPECIFICATIONS FOR OFF-SHORE WIND FARM
  Gül Kurt

12:30-13:30 Lunch

13:30-14:30 4th Session *(Chair: Aysun Eyüboğlu Erşen)*

- MİMARİYİ SES İLE TASARLAMAK ÜZERİNE ÖĞRENCİ İZLENİMLERİ
  Dilara Demir, Nurgün Bayazıt
- MİMARLIK VE TASARIM EĞİTİMİ ÜZERİNE
  Aysun Eyüboğlu Erşen
- USER'S AFFECTING POTENTIAL OF THREE DIMENSIONAL PRESENTATION TECHNIQUES IN ARCHITECTURAL DESIGN
  Gökhan Umaroğulları, Murat Berk Evren
- THE IMPORTANCE OF PERCEPTION IN ARCHITECTURAL DESIGN
  Riyad Şihab
- KUMAŞ BASKI TASARIMINDA YENİLİKÇİ YAKLAŞIMLAR
  Ayşe Başak, Zeynep Saygı, Aylin Sapmaz
- MODA TASARIMINDA TİPOGRAFİNİN KULLANIMI ve BİR ÖNERİ OLARAK ALFABE KOLLEKSİYONU
  Mehmet Erol ÇOPUR

14:30-14:45 Coffee Break

14:45-15:45 5th Session *(Chair: Tawfiq Boudjenane)*

- KİŞİLİK ÖZELLİKLERİ VE GİRİŞİMCİ KİŞİLİK BOYUTLARININ GİRİŞİMCİLİK NİYETİ ÜZERİNDEKİ ETKİLERİ: TRAKYA ÖRNEĞİ
  Yasin Akkuş, Çağatay Akdoğan, Ayşe Akyol
- EXPLORING THE ESSENCE OF ENTREPRENEURSHIP THROUGH THE ENTREPRENEURIAL EDUCATION AND ACCOMPANYING PROGRAM IN ALGERIA
  Tawfiq Boudjenane, Nassira Obakhti, Mohamed Lebad
- EMPOWERING WOMEN THROUGH ENTREPRENEURSHIP EDUCATION IN ALGERIA
  Tawfiq Boudjenane, Mohamed Lebad, Nassira Oubakti
- THE ROLE OF PRODUCT DESIGN IN FACING COMPETITIVE EXPORT MARKET: A CHALLENGE AND A NEW PARADIGM IN CREATIVE INDUSTRIES CENTER IN WEST JAVA AND PAPUA PROVINCE
  Henry Loupias, Ida Hindarsah, Prety Diawati
- ECONOMIC DETERMINANT OF SELF EMPLOYMENT IN A DEVELOPING NATION: THE NIGERIA EXPERIENCE
  Musbau Kadir, Damilola Uthman
- PROMOTING WOMEN ENTREPRENEURSHIP AND EMPOWERMENT IN ALGERIA
  Tawfiq Boudjenane, Mohamed Lebad, Nassira Oubakti

15:45-16:00 Coffee Break

16:00-17:00 6th Session and Giving Awards *(Chair: Seda Balkan)*

- LÜLEBURGAZ BELEDİYESİ 2018 İNOVASYON VE TASARIM YILINDA YEREL HALKLA BERABER ÖRNEK BİR ÇALIŞMA: HERKES İÇİN TASARIM EĞİTİMLERİ
  İbrahim Kösemehmetoğlu
- CONTROL METHODS OF THE VSC-HVDC CONNECTED OFFSHORE WIND POWER PLANTS FOR FULFILLING; LVRT AND FREQUENCY REGULATION SUPPORT
  Gül Kurt
- SAĞLIK HİZMETLERİNDE SÜRDÜRÜLEBİLİRLİK BAĞLAMINDA İNOVATİF BİR UYGULAMA: YEŞİL HASTANELER
  Pınar Özdemir Karaca, Emre Atılgan, Aysu Zekioğlu
- EVALUATION OF EINKORN BRAN AS SUBSTRATE FOR SYNTHESIS OF ALPHA AMYLASE FROM PENICILLIUM HERQUEI IN SOLID STATE FERMENTATION PROCESS
  Seda Balkan
- MOBİL UYGULAMA GELİŞTİRME SÜRECİ ANALİZİ: KIRKLARELİ ÜNİVERSİTESİ ÖRNEĞİ

Bora Aslan, Emre Yıldırım, Veli Özcan Budak, Gökhan Doğan, Edip Serdar Güner, Füsun Yavuzer Aslan

- THE ASSOCIATION BETWEEN ENTREPRENEURSHIP AND REGIONAL ECONOMIC DEVELOPMENT AND GROWTH: AN INVESTIGATION ON NUTS III REGIONS OF TURKEY
  İsmail Demirdağ

19:00 Dinner

Day 3 Friday September 28, 2018

10:00 Tour to Dupnisa Cave and İğneada

AHP-TOPSIS TEKNİKLERİYLE KURULUŞ YERİ SEÇİMİ PROBLEMİNİN ÇÖZÜMÜ: BARIŞI DESTEKLEME HAREKATI ÖRNEĞİ*

Uğur Emre[1], Gülşen Akman[2]

ÖZET

Çok Kriterli Karar verme (ÇKKV) yöntemleri karar vericilere analitik bir şekilde alternatifleri değerlendirebilmesine imkan vermektedir. Stratejik kararların alınması işletmelerin yanı sıra kamu kuruluşları ve uluslararası örgütler gibi kar amacı gütmeyen hükümet dışı aktörleri de ilgilendirmektedir. Çok uluslu ve çok kültürlü bir örgüt olarak Birleşmiş Milletler (BM) ve alt organlarından biri olan BM Güvenlik Konseyi (BMGK) dünya barışının idamesinde en büyük rolü oynamaktadır. Bu çalışmada BMGK tarafından bölgesel boyutta barışın idamesi maksadıyla oluşturulan çok uluslu bir Barış Gücü'nün bölgesel barışın sağlanması adına icra edeceği bir Barışı Destekleme Harekatı (BDH) kapsamında, harekatı etkinlikle sevk ve idare edebileceği bir ana üs karargah yerleşkesinin hangi kriterler altında ve hangi bölgede kurulması gerektiği sorusuna cevap aranmıştır. Çalışmada ilk olarak ÇKKV yaklaşımı ve AHP ile TOPSIS yöntemlerinin teorik alt yapısından bahsedilmiştir. Daha sonra kuruluş yeri seçimi problemleri için ÇKKV yöntemlerini kullanan akademik çalışmalara yönelik literatür taraması yapılmış ve kurgusal bir senaryo temel alınarak, uzman görüşleri ile belirlenen kriter ve alt kriterlerin AHP yöntemi ile ağırlıkları elde edilmiştir. Son olarak TOPSIS yöntemi ile alternatiflerin öncelik sıralaması yapılmıştır.

Anahtar Kelimeler: Analitik Hiyerarşi Prosesi, TOPSIS, Barışı Destekleme Harekatı.

ABSTRACT

Multi-Criteria Decision Making (MCDM) methods allowed decison makers to evaluate the alternatives analytically. Beside profitable organizations, making strategic decisions are also concerns of govermental and non-govermental actors such as non-profit international organizations. As a multi-national and multi-cultural organization, United Nations (UN) and its sub-organ United Nations Security Council (UNSC) play the biggest role for sustaining world peace. In this study, it is inquired that in which criterias and in which region a headquarter of a multi-national Peace Force, which is established by UNSC in order to sustain regional peace with in the scope of Peacekeeping Opreations (PKO), should settle down to conduct the operation effectively. First, it was mentioned about MCDM approach and theoric infrastucture of AHP-TOPSIS methods. Then, a literature review regarding academic works which contain MCDM methods for site selection problems was conducted and based on a fictional scenario, taking in account the criterias and the sub-criterias which are determined by subject matter experts, the weights of the criterias and the sub-criterias were obtained using AHP method. Finally a priority ranking of the alternatives was made using TOPSIS method.

Key Words: Analytical Hierarchy Process, TOPSIS, Peacekeeping Operation

*Bu çalışma "Kuruluş Yeri Seçimi Problemlerinde Çok Kriterli Karar Verme Tekniklerinin Kullanılması: Barışı Destekleme Harekatı Örneği" başlıklı yüksek lisans tezinden üretilmiştir.

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COMPETITIVE ADSORPTION STUDY OF TEXTILE DYES ON MODIFED DOLOMITE ENVIRONMENTALLY FRIENDLY IN BINARY SYSTEM

Samira Ziane[1], Amine Khelifa[2]

ABSTRACT

Raw dolomite employed in this study was obtained from the deposit Algeria. It is applied in the manufacture of the painting, glass fiber, plasturgie, electrometallurgy and water treatments. two azo dyes, reactive black 5 (RB5) and Congo red (CR), was used for the removal the Algerian dolomite treated at 900 °C (D900) from synthetic solutions in single and binary solutions. The effects of initial concentration, contact time, and temperature were assessed. A comparison between single and binary systems achieved. A comparison between these dyes, at equilibrium, shows that CR is more strongly coadsorbed than RB5, viz. 229.18 against 72.37 mg g^{-1} at 40 °C, respectively. Chemical interaction would be explained through the implication of amine function of RB5 at the D900 surface. The fact that CR contains two amine functions would explain why it is more adsorbed than RB5. However, its adsorption is much more prevented than that of RB5 in relation to their uptake in monosolute mode. Extended Langmuir equation gives a good estimation of our binary data. A comparison thermodynamic study between single and binary systems shows that when RB5 competes with CR for filling of adsorption sites, the endothermic character decreases whilst non-spontaneity becomes increasingly marked. This could be explained by the antagonism that exists between tow dyes during their coadsorption.

Keywords: Dolomite, Azo Dyes, Binary Adsorption, Extended Langmuir, Thermodynamic

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EXPLORING THE ESSENCE OF ENTREPRENEURSHIP THROUGH THE ENTREPRENEURIAL EDUCATION AND ACCOMPANYING PROGRAM IN ALGERIA

Tawfiq Boudjenane[1], Nassira Obakhti[2], Mohamed Lebad[3]

ABSTRACT

The study aims to analyze the efficacy of accompanying programs Entrepreneurship in Algeria, and reveal the main traits of entrepreneurial spirit among Algerian Entrepreneurs university students,such as creativity,innovation , and self -confidence, independency and responsibility as well as risk taking propensity and initiativeness , and its effects on the creation and success of small and medium business in Algeria.

To achieve the study objectives, a questionnaire was designed and distributed to a sample of (170) of students who are studying Entrepreneurial Education at several universities in Algeria.

Keywords: Accompanying Programs Entrepreneurship, Entrepreneurs University Students, Entrepreneurial Education

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SIMULATION-BASED STUDY OF ELECTRONIC AND ELASTIC PROPERTIES OF CLUORO-PEROVSKITE CsMnCl3

Yamina Sefir[1], Zoubir Aziz[2], Sabria Terkhi[3], Ali Zitouni[4], Tayeb Lantri[5], Bouabdellah Bouadjemi[6], Samir Bentata[7]

ABSTRACT

The compound which adopts the cluoro-perovskite structures ABCl3, where A is alkali metal and B is alkaline earth or transition metals are very interesting materials. This class of compounds used in many technological devices such as a lens material, electro-optical application, sensors and catalysts, the crystal structure of CsMnCl3 is cubic and belongs to the space group Pm3m. In this paper, we present a first-principles study of electronic and elastic properties of cluoro-perovskite CsMnCl3 using potential linearized augmented plane wave(FP-LAPW) to the density functional theory (DFT) within GGA, GGA+U and modified Becke-Johnson mBj-GGA approaches. Our calculated the equilibrium lattice constants, bulk modulus, the results show metallic antiferromagnetic (AFM) in the three approximation methods, the calculated total energy difference ΔE= ΔEAFM-ΔEFM is negative, so, our compound is stable in AFM phase via the double exchange mechanism. Furthermore, we have computed elastic properties of CsMnCl3.

Keywords: Space Group Pm3m, Cubic Anti-Ferromagnetic Perovskite, FP-LAPW Method, Electronic Structure, Elastic Properties.

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GRİ İLİŞKİSEL ANALİZ YÖNTEMİ İLE YALITIM SEKTÖRÜNDE EN ETKİN TAŞERON FİRMA SEÇİMİ

Hakan Murat Arslan[1], Elif Uyanık[2]

ÖZET

Günümüz rekabet koşullarında işletmelerin özellikle yönetim boyutunda yüz yüze geldiği çok değişkenli karar problemleri daha karmaşık hâl almaktadır. Bu denli girift hale gelen karar problemlerinin çok kriterli karar verme (ÇKKV) yöntemleri ile çözülmesi gerekli duruma gelmiştir. Bu çalışmada amaç, yalıtım sektörü işletmelerinin karşılaştığı karar problemlerinin çözümü ve değerlendirilmesinde ÇKKV yöntemlerinin kullanılabilirliğini göstermektir. Literatürde tedarikçi seçimine yönelik birçok çalışma olmasına rağmen yalıtım sektöründe en etkin taşeron firma seçimine yönelik çalışmaya rastlanmadığından akademik açıdan bu boşluğun doldurulması amaçlanmıştır. Çalışmanın uygulama kısmında Düzce ilinde yalıtım sektöründe faaliyet gösteren bir işletme için ihtiyacı olan bir konuda en etkin taşeron firmanın seçiminde gri ilişkisel analiz (GİA) yöntemi kullanılmıştır. İlgili veriler söz konusu işletmenin yöneticilerinden sağlanmıştır. Bu kişiler aynı zamanda karar vericiler olarak kabul edilmişlerdir. Oluşturulan çözüm modelinin alternatif ve kriterleri ilgili literatür ve karar vericilerin görüşleri doğrultusunda belirlenmiştir. Gerçekleştirilen karar analizleri neticesinde; en etkin taşeron firma A5 (Hedef Metal) olmuştur. Sırası ile ikinci A4 (Özdoğan Metal) ve üçüncü A3 (Hakoğlu) çıkmıştır. Söz konusu işletme belirleyeceği taşeron firma için maliyet ve temin süresi gibi kriterlere dikkat etmektedir. Elde edilen analiz sonuçları söz konusu işletmenin yetkilileri ile paylaşılmıştır. Bu konuda ileride yapılacak çalışmalar için güncel metotlar ve hibrit yöntemlerin kullanılması mümkündür.

Anahtar Kelimeler: Çok Kriterli Karar Verme Yöntemleri, Gri İlişkisel Analiz, Yalıtım Sektörü İşletmeleri

THE MOST EFFECTIVE SUBCONTRACTOR COMPANY SELECTION IN INSULATION INDUSTRY WITH GRAY RELATED ANALYSIS METHOD

ABSTRACT

In today's competitive environment, the multi variable decision problems faced by businesses in the management dimension are becoming more complex. It has become necessary to solve such intricate decision problems by means of multi criteria decision making (MCDM) methods. The purpose of this study is to demonstrate the applicability of the MCDM methods in solving and evaluating the decision problems faced by the insulation industry. Despite the fact that there are many studies in the literature regarding the selection of suppliers, it is aimed to fill this gap from the academic point of view since it is not found to work for the most effective selection of subcontractors in the insulation sector. In the application part of the study, gray relational analysis (GRA) method was used in the selection of the most efficient subcontractor for a company that operates in insulation sector in Düzce. The required data was obtained from the managers of the relevant business. These managers were also accepted as decision makers at the same time. The alternatives and criteria of the solution model were determined according to the related literature and opinions of decision makers. As a result of the decision analysis; the most active subcontractor company A5 (Hedef Metal) has become. The second A4 (Özdoğan Metal) and the third A3 (Hakoğlu) came out. The business pays attention to the determined criteria for the subcontractor company such as cost and duration of supply. The results of

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the analysis are shared with the authorities of the relevant business. It is possible to use actual methods and hybrid methods for future work in this regard.

Keywords: Multiple Criteria Decision Making Methods, Gray Relational Analysis, Insulation Sector Businesses

MACBETH YÖNTEMİ İLE EĞİTİM KURUMLARINDA ÖDÜL ALACAK ÖĞRENCİLERİN TESPİT EDİLMESİ

Hakan Murat Arslan[1], Adem Köse[2], İsmail Durak[3]

ÖZET

Günümüzde eğitim kurumlarının karşılaştıkları karar problemleri oldukça karmaşık hale gelmiştir. Kurumlar arası rekabet koşulları altında bu karmaşık karar problemlerinin nicel karar analizi yöntemleri ile çözümlenmesi gerekli görülmektedir. Bu sebeple son zamanlarda yöneylem araştırmaları temelli çok kriterli karar verme (ÇKKV) yöntemleri sık kullanılmaktadır. Bu çalışmada amaç, eğitim kurumları yöneticilerinin karşılaştıkları karar problemlerinde ÇKKV yöntemlerinin kullanılabilirliğini göstermek ve bu konuda çalışan araştırmacılar nezdinde farkındalık oluşturmak çalışmanın başlıca amacıdır. Literatürde eğitim kurumlarının değişik karar problemlerini ÇKKV yöntemleri ile çözümlediği açıktır. Ancak ödül alacak öğrencilerin seçiminde karar analizi yöntemlerini kullanan çalışma yok denecek azdır. Literatürde ki bu boşluğun doldurulması çalışmanın diğer amaçları arasındadır. Çalışmanın uygulama kısmında, Düzce de faaliyet gösteren bir ortaöğretim kurumunda ödül alacak öğrencilerin tespiti probleminin MACBETH (Measuring Attractiveness by a Categorical Based Evaluation Technique) yöntemi ile değerlendirilmesi yer almaktadır. Analiz için gerekli tüm veriler ilgili eğitim kurumun yetkililerinden alınmıştır. Bu yetkililer aynı zamanda karar vericiler olarak kabul edilmiştir. Oluşturulan çözüm modelinin kriter ve alternatifleri karar vericilerin görüşleri ve ilgili literatür taranarak belirlenmiştir. Yapılan analizler sonucunda; birinci sırada A1 (Yasin), ikinci sırada A2 (Nazar) ve üçüncü sırada A3 (Sude) çıkmıştır. Çalışmada adil bir seçim yapısının belirlenmesi için MACBETH yöntemi kullanılmıştır. Bu konuda sonradan yapılacak çalışmalarda yapay zekâ veya hibrit yöntemlerin kullanılması tavsiye edilmektedir.

Anahtar Kelimeler: Çok Kriterli Karar Verme Yöntemleri, MACBETH Yöntemi, Eğitim Kurumları

DETERMINATION OF STUDENTS WHO WILL BE AWARDED IN THE EDUCATION INSTITUTIONS BY MACBETH METHOD

ABSTRACT

Today, the decision problems faced by educational institutions have become quite complex. Under complex competition conditions, it is necessary to solve these complex decision problems with quantitative decision analysis methods. Recently for this reason multi criteria decision making (MCDM) methods based on operations research have been frequently used.

The aim of this study is to demonstrate the usability of the MCDM methods in the decision problems faced by the administrators of the educational institutions and to raise awareness among the researchers working on this subject. It is clear in the literature that educational institutions solve different decision problems by using MCDM methods. However, there are few studies that use decision analysis methods in the selection of students who will receive awards. The filling of this gap in the literature is among the other purposes of the study. In the application part of the study, the problem of detection of the students who will be awarded in a secondary school operating in Düzce was evaluated by MACBETH (Measuring Attractiveness by a Categorical Based Evaluation Technique)

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method. All required data for the analysis were obtained from the managers of the relevant educational institution. These managers were also accepted as decision makers at the same time. Criteria and alternatives of the solution model created by the opinions of decision makers and related literature. As a result of the analyzes, A1 (Yasin) the first, A2 (Nazar) the second and A3 (Sude) the third was become. The MACBETH method was used to determine a fair choice structure in the study. The use of artificial intelligence or hybrid methods is recommended in subsequent studies.

Keywords: Multi Criteria Decision Making Methods, MACBETH Method, Educational Institutions

FIRST PRINCIPLE PREDICTION OF HALF-METALLIC FERROMAGNETIC IN CUBIC GdCrO3 PEROVSKITE

Terkhi Sabria[1], Bentata Samir[2], Lantri Tayeb[3], Aziz Zoubir[4], Sefir Yamina[5], Cherid Samira[6], Bendahma Fatima[7]

ABSTRACT

Cubic perovskites GdCrO3 compound is studied using the full potential linearized augmented plane wave (FP-LAPW) method within the frame work of density functional theory (DFT). The structural, elastic, electronic and magnetic properties are calculated by using the Generalized Gradient Approximation (GGA) and GGA+U method where U is on-site Coulomb interaction correction. The calculated lattice parameters agree well with the experimental measurements. The elastic constants results and their related parameters (Young modulus, shear modulus, Poisson ratio, Zener anisotropy) show clearly that the GdCrO3 perovskite is a ductile, stiff and anisotropic material. Density of States and band structure results reveal a metallic ferromagnetic characteris of GdCrO3 using GGA method whereas half-metallic ferromagnetic ground state is obtained when using GGA+U approximation. The integer value of the total magnetic moment of 10,00 µB confirms the half metallicity for our compound. These results make GdCrO3 a promising candidate for spintronic applications.

Keywords: FP-LAPW Method, Elastic Properties, Magnetic Moment, Half-metallic Ferromagnetic, Spintronic.

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EMPOWERING WOMEN THROUGH ENTREPRENEURSHIP EDUCATION IN ALGERIA

Tawfiq Boudjenane[1], Mohamed Lebad[2], Nassira Oubakti[3]

ABSTRACT

Over the past decades, The World Bank recognised an increase over the female's participation workforce at a rate of 0.17percent per year,with only 25 percent of Arab women participating actively in the labour market.

Nevertheless,the fight for equal employment rights and improved female participation in the labor market remains an ongoing struggle;statistics rely this latter to the fact that male's and female's gap is significant in terms of pay and participation rate. Thus,this research paper attempts at highlighting the role of women's entrepreneurship play in the development of economical growth,beside the increase of women's empowerment and participation in business life between the years of 2015-2018,in addition to the strategies which can make a difference to promote women entrepreneurship in trough the entrepreneurial education in Algeria.

Keywords: Women's Entrepreneurship , Women's Empowerment, Economical Growth

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BENZETİMLİ TAVLAMA TEKNİĞİNİ KULLANAN ENİYİLENMİŞ GÖRÜNTÜ VE VİDEO İŞLEME ÜZERİNE KISA BİR LİTERATÜR ARAŞTIRMASI

Bahadır KARASULU[1]

ÖZET

Günümüzde benzetimli tavlama (simulated annealing) tekniği popüler bir teknik olarak eniyileme için yapay zekâ alanında sıklıkla kullanılmaktadır. Bu tekniğin; görüntü işleme, video işleme, yazılım ve diğer alanlarda ele alınan problemlerin daha kısa sürede en uygun sonuçla (optimal) çözümünde gösterdiği önemli başarı nedeniyle geçtiğimiz yıllar içerisinde literatürdeki çalışmalarda tercih edilme ve kullanım oranı artmıştır. Çalışmamızda 2010 ilâ 2018 yılları arasında yayınlanmış görüntü ve video işleme problemlerinin ele alındığı 10 adet yayın incelenerek literatürde gelinen en son durum sistematik bir biçimde ortaya konularak bulgular üzerinden yorumlanmıştır. Buna göre benzetimli tavlama tekniği ve bununla melezleme yoluyla oluşturulan yaklaşımlar kombinasyonel eniyileme problemlerinin daha uygun sonuçlarla daha kısa sürede ve yüksek başarımlı olarak çözülebilmesine olanak sunmaktadır.

Anahtar Kelimeler: Görüntü işleme, yapay zekâ, makine öğrenmesi, eniyileme, yazılım.

A BRIEF LITERATURE REVIEW ON OPTIMIZED IMAGE AND VIDEO PROCESSING USING SIMULATED ANNEALING TECHNIQUE

ABSTRACT

Nowadays, the simulated annealing is often used as a popular technique in the field of artificial intelligence for optimization. This technique achieves a significant success for solving the problems in the field of image processing, video processing, software, and others that its solution is optimally obtained in a shorter time. In the last years due to its success, its rate of preference has increased. In our study, 10 publications dealing with image and video processing problems published between 2010 and 2018 were examined, thus, the latest state in the literature was introduced in a systematic way and interpreted through findings. Accordingly, the combination of the simulated annealing technique and hybrid approaches allow the optimization problems to be solved in a shorter time and with higher efficiency with more appropriate results.

Keywords: Image Processing, Artificial Intelligence, Machine Learning, Optimization, Software.

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PROMOTING WOMEN ENTREPRENEURSHIP AND EMPOWERMENT IN ALGERIA

Tawfiq Boudjenane[1], Mohamed Lebad[2], Nassira Oubakti[3]

ABSTRACT

Over the past decades, The World Bank recognised an increase over the female's participation workforce at a rate of 0.17percent per year,with only 25 percent of Arab women participating actively in the labour market.

Nevertheless,the fight for equal employment rights and improved female participation in the labor market remains an ongoing struggle;statistics rely this latter to the fact that male's and female's gap is significant in terms of pay and participation rate. Thus,this research paper attempts at highlighting the role of women's entrepreneurship play in the development of economical growth,beside the increase of women's participation and empowerment in business life between the years of 2015-2018,in addition to the strategies which can make a difference to promote women entrepreneurship in Algeria.

Keyswords: Female participation and empowerment , women entrepreneurs, economic growth

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VERBEEK 'S THEORY OF TECHNICAL MEDIATION AND ITS APPLICATIONS TO INDUSTRIAL DESIGN

Fazıl Akın[1]

ABSTRACT

Philosophy of Technology deals with the effect of technical developments to humankind. As one of the key distinctions of humans are that they are able to produce and use tools. Although we may think that we are shaping the tools, the technical objects are also shaping us.

Phenomenology is a field that deals with the notion of how we build our perception of the world through the phenomena we encounter. Edmund Husserl and Martin Heidegger could be seen the main figures on this subject. Post-Phenomenology is rather a new reflection on phenomenological approach. As in most writings of Heidegger there exist a single term as 'technology', post-phenomenologists like Don Ihde and Peter-Paul Verbeek argue that there are different kinds of technology and therefore they need to be examined separately. Such kind of perception through technology makes it a useful perspective for designers that are part of the technology-creating activity.

As being a philosopher of technology Peter-Paul Verbeek is leading a research group in University of Twente called 'Design Lab' makes his theory of mediation an interesting subject for industrial designers. Verbeek himself gives the example of a speed bump that would make cars slow down to show how we can design things that would affect the lives of its users. Recently graduate students of design are dealing with the issue of technical mediation in design.

The work of Sabrina Hauser (Simon Fraser University) and Holly Robins (Delft University of Technology) which can be seen in this perspective will be examined in this paper. Robbin's gesture-controlled sink and Hauser's moving table show how different the applications may. The paper will argue also that philosophical approaches could encourage designers think more deeply how the results of their work could affect daily life.

Keywords: Industrial Design, Philosophy of Technology, Technical Mediation, Research Through Design

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THE ROLE OF PRODUCT DESIGN IN FACING COMPETITIVE EXPORT MARKET: A CHALLENGE AND A NEW PARADIGM IN CREATIVE INDUSTRIES CENTER IN WEST JAVA AND PAPUA PROVINCE

Henry Loupias[1], Ida Hindarsah[2], Prety Diawati[3]

ABSTRACT

There are many centers of creative industries in Indonesia. The industry is one of the vital sectors, mainly the export of handicraft products, in improving the Indonesian economy. In 2017 the export value of the handicraft sector amounted to USD 776. There is an increase from the previous year, which is about 3.8%.

One of the obstacles to the development of the handicraft sector is the design. Most handicraft products produce old designs, buyer's designs or previous products, and this leads to minimal product diversification. While the export market is very competitive, it requires creative and innovative products. The primary factor is that most handicraft entrepreneurs do not understand design, new designs face little response from the market or consumer, and craftsmen are not creative and innovative.

The purpose of this research is to know the practice of designing in several creative industries in Indonesia. The study used a survey method. The object of research is 1) Crafts center in Cipacing Village, West Java Province; 2) Craftsmen of wooden animal figurines in Subang Regency, West Java Province; 3) Wooden sculpture craftsmen in Biak Numfor Regency, Papua Province. The research results showed that the process of handicraft production is as follows: 1) Imitate; 2) Modification; 3) Produce a design or model of the buyer.

Keywords: Creative Industry, Craftsman, Design, Handicraft, Innovative

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ECONOMIC DETERMINANT OF SELF EMPLOYMENT IN A DEVELOPING NATION: THE NIGERIA EXPERIENCE

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ABSTRACT

This study investigated the economic determinant of that affect the number of self employed in a developing country, a case study of Nigeria. The findings provide answers to various research questions like, What are the economic factors that affect self-owned business (private business) in Nigeria?, What are the effects of these economic variables on self-owned business (private business) in Nigeria?, How can these variables be controlled to improve self-owned business performance in Nigeria?. To investigate through this survey, data were collected from secondary source, world bank statistics on indicators such as unemployment, credit availability, inflation rate, interest rate and exchange rate. These were considered has the variables with the most effect, which was later proved in the study. Ordinary Least Square (OLS) formed the basis for the estimation.

The study found that exchange rate and interest rate have negative relationship with Number of self owned enterprises. While inflation rate, credit availability and unemployment has a positive effects on number of self owned enterprises. The effects of these indicators are propulsive, if they are well monitored and stabilized in the right way with good economy policies.

Keyword: Self-owned business, SMEs, Unemployment, and Economic performance Determinant

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NESNELERİN İNTERNETİ TABANLI BİR SERA OTOMASYON SİSTEMİ

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ÖZET

Seralarda verimli üretim yapılabilmesi için ortam değerlerinin ölçülmesi, değerlendirilmesi ve yetiştirilen ürüne göre şartların uygun hale getirilmesi gerekmektedir. Ortam verilerinin ölçülmesi ve değerlendirilmesi, kontrollü ürün yetiştiren sera ortamında önemli bir yer tutmaktadır. Anlık yapılan ölçüm kayıtlarının bilgisayar ortamında tutulması ve geniş bir zaman aralığında bu değerlerin gözlemlenebilmesi, ürünün değişik ortam şartlarındaki veriminin değerlendirilmesini kolaylaştırmaktadır.

Bu çalışmada, düşük maliyetli Raspberry Pi tek kart bilgisayar ve esp8266 wi-fi modülleri ile nesnelerin interneti tabanlı bir sistem geliştirilmiştir. Geliştirilen sistem sayesinde, kablosuz sensörlerden alınan seraya ait iç ve dış sıcaklık ve nem değerleri, toprak nemi, hava kalitesi ve ışık değerleri kayıt altına alınmakta ve uzaktan erişimle grafiksel olarak takip edilebilmektedir.

Anahtar Kelimeler: Nesnelerin İnterneti, Sera, Ziraat, esp8266, Raspberry Pi, Otomasyon

AN INTERNET OF THINGS BASED GREENHOUSE AUTOMATION SYSTEM

In order to make efficient producing in greenhouses, it is necessary to measure and evaluate the environmental values and to adapt the ambient conditions according to the product grown. The measurement and evaluation of the ambient parameters are an important part of the controlled greenhouse environment. The fact that the instantaneous measurement records are kept in the computer environment and these values can be observed over a wide time period makes it easier to evaluate the efficiency of the product in different ambient conditions.

In this study, an internet of things based system was developed, with low-cost Raspberry Pi single board computer and esp8266 wi-fi modules. With the developed system, the indoor and outdoor temperature and humidity values, soil moisture, air quality and light values of the greenhouse taken from wireless sensors are recorded and can be monitored graphically with remote access.

Keywords: internet of things, greenhouse, agriculture, esp8266, raspberry pi, automation

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LÜLEBURGAZ BELEDİYESİ 2018 İNOVASYON VE TASARIM YILINDA YEREL HALKLA BERABER ÖRNEK BİR ÇALIŞMA: HERKES İÇİN TASARIM EĞİTİMLERİ

İbrahim Kösemehmetoğlu[1]

ÖZET

Bu bildiride amaçlanan Lüleburgaz Belediye'sinin 2018 yılı için belirlediği Inovasyon ve Tasarım temaları arasındaki Tasarım konusunda özellikle yerel kent halkının katılımı ile gerçekleştirilen bir dizi eğitim etkinlik süreci hakkında bilgi sunarak bu tarz belediye (kamu) ve halk arasındaki çalışma ve etkinliklerin yine halktan kişilerin de bilfiil eğitici olarak yer alabilmelerine- bir örnek oluşturmasını sağlamasıdır.

Anahtar Kelimeler: Tasarım, Biyomimikri, Gelecek, Inovasyon.

A CASE STUDY WITH LOCAL PEOPLE OF LULEBURGAZ AT INNOVATION AND DESIGN YEAR OF LÜLEBURGAZ MUNICIPALITY 2018: DESIGN TRAININGS FOR EVERYONE

ABSTRACT

The purpose of this paper is to provide information about the Design items on a series educational activities in the name of the Lüleburgaz Municipality Innovation and Design year 2018, especially with the participation of local residents of Lüleburgaz and also to be able to take part people from citizens at that kind of activities between citizens and municipality as a trainer as a good sample.

Keywords: Design, Biomimicri, Future, Innovation.

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'FOLD-KINETIC'; DEPLOYABLE DESIGN AS A PERFORMATIVE INTERFACE

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ABSTRACT

Formation based methods are current contemporary approaches in design. This formation opens a new discussion for new tectonics in case of new technologies and new ways of production. Contemporary formation motivated by process tools which explore dimensional and situational changes as well as perceptual and visual changes. Nothing stays constant anymore and have possibilities to create performative commons. This study aims to explore deployable construction possibilities through the experiences of Studio FOLDKinetic which is a First Year Industrial Design Studio in Beykent University, Istanbul. These deployable constructions designed for interactive and performative separators and interfaces. These responsive mechanisms provide the integration of geometry with construction. Responsive act is more than a form and create a responsive formation based on an interactive geometry. Due to these senses, each student tried to explore a deployable interface in a specific context which is responsive and kinetic. As Vogt, M.-M., Schaeffer, O., Schumacher, M., Schumacher, A., (2010) mentioned; 'The way in which movements take place can be divided into two fundamentally different types, depending on whether the movement effects a change of state from A to B or whether the movement is itself the intention'. Studio FOLDKinetic searches for both actions and intentions.

Performative interfaces as flexible modifiers create a new dynamic integration with human and space. They have fluidity, hybridization, complexity and morphogenesis. As Vincent (2014) emphasizes deployment is a basic attribute of living organisms, whether as growth (deployment of cells) or movement (stretch out your arm-you are deploying it!). Inert mechanisms and objects become live and moving and responsive to all affects. From this point of view, kinetic design has been used throughout history in various techniques and processing's. But contemporary design issues mainly focus on an emergence which is integrated by responsive and performative constructions. As Jens (2006) mentioned in his thesis, 'the research on dynamic architecture not only through dynamic planning processes, but especially through the configuration of a dynamic "result" in constant process. It established a system that does not define a static (dynamically formalized and solidified space) but rather a dynamically functioning and behaving space. A smart architecture, that once configured, could develop the process in dialogue with the inhabitant and allowed the system to keep the dynamic qualities of constant adaptation.' Studio FOLDKinetic searched for these adaptive and performative constructions by folded configurations in different materials. Fragmented actions of interfaces are designed by creating emergence geometries. These folded geometries were designed both with self-organizing patterns or co-operated with supporting elements. As Chiarella (2015) mentioned, 'folded compositions possess some of the form-related characteristics: geometric surface development, transformation of planes and edges, modulation, fragmentation, curvature, etc'. For that purpose, each design in the studio were improved with both modelling, drawings, time-lapse photo shootings, videos and collages including all potentials of transformations within their configurations.

Keywords: Deployable Design, Design Education, Performative Design

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NATUREgenerate: OPERATIONAL DESIGN PROCESS WITH BIO-GEOMETRIC PATTERNS

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ABSTRACT

The aim of this article is to explain contemporary operational design process, fiction and thought by bio-geometric patterns which were produced in first-year basic design studios in Gebze Technical University Department of Architecture. This process takes reference from the body structures in nature and set the system by transformation and becoming which are independent of the idealized form and limits. The NATUREgenerate (Ng) process is consists of three phases. The first phase is searching patterns with key bio-model and diagrams of self-organizing pattern relationally multiplying techniques. The second phase is bio-modeling studies which search the becoming and transforming possibilities of a body from nature with a bio-geometric representation. The last phase is an operational process which searches a re-productive constructional model with the reference of diagrams and previous structural model. The conceptual discussion of the article is based on abstract meaning, diagrammatic and evolutionary information, rather than minimalized information.

The formation (form + information) requires the development of operational strategies and associated design methods. At this point, the diagram reveals the abstract properties that make up the model instead of the model representing the mind. Organizing the thought represented in design into a cartographic structure reveals the complex structure of the design. The effective role of design in the context of representation in design and the simultaneous formation of both real and process; design as dynamic, productive, operational tools. Mapping is the process of recreation. It addresses a type of research derived from natural reality. It constructs the reality not reproduce. It is natural modeling and open, generative and connectable in every dimension. It operates the information about nature with natural forces and coordinates. However, it has no time-space relations. It is bio-geometric pattern and interface. This interface makes it possible to relate part to part, which can penetrate all parts of the whole state rather than the whole relation. In this research studio, not all outcomes are representing forms of spaces but open a discussion on all potential of such cartographic geometries and constructions. The design tool used in this research is a way of exploring both common and unique constructional systems, which refers to nature. In contemporary design environment, such parametric tools need a discussion on formation-based organizations. These contemporary systems should have responsive and adaptive interfaces. Nature is a common reference to explore such interfaces.

Keywords: Nature Model, Fractal Geometry, Topology, Operational Design, Diagram

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ANALYSIS OF SELLECTED GRID CODE SPECIFICATIONS FOR OFF-SHORE WIND FARM

Gül Kurt[1]

ABSTRACT

The importance of grid impact studies of wind power integration rises with the rapid increase in the installed wind power capacity. Offshore wind power technology offers concentrated high wind power generation in high wind speed regions away from residential areas and land restrictions. Transferring a high amount of power for long distances requires a robust transmission system which can ensure stable operation with minimal possible losses. Voltage source converter - high voltage direct current (VSC-HVDC) technology has proved to be a promising solution for the connection of large offshore wind farms This paper presents and gives comparison the grid code requirements to support VSC-HVDC connected offshore wind farms for different countries.

Keywords: Off-shore wind farm, grid codes, VSC-HVDC

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A REFINED SHEAR DEFORMATION PLATE THEORY FOR STATIC AND FREE VIBRATION ANALYSIS OF FUNCTIONALLY GRADED PLATES

Hamidi Ahmed[1], Zidour Mohamed[2], Sadoune Mohamed[3]

ABSTRACT

In this research, an efficient shear deformation plate theory for a functionally graded plate has been investigated by the use of the new four variable refined plate theory. Unlike any other theory, the number of unknown functions involved is only four, as against five in case of other shear deformation theories. The theory account for higher-order variation of transverse shear strain through the depth of the plate and satisfies the zero traction boundary conditions on the surfaces of the plate without using shear correction factors. Based on the present higher-order shear deformation plate theory, the equations of the motion are derived from Hamilton's principal. The plate faces are assumed to have isotropic, two-constituent material distribution through the thickness, and the modulus of elasticity, Poisson's ratio of the faces, and thermal expansion coefficients are assumed to vary according to a power law distribution in terms of the volume fractions of the constituents. The validity of the present theory is investigated by comparing some of the present results with those of the classical, the first-order and the other higher-order theories. The influences played by the transverse shear deformation, aspect ratio, side-to-thickness ratio, and volume fraction distribution are studied. Numerical results for deflections and stresses of functionally graded plate are investigated.

Keywords: Functionally graded material, Static Analysis, Vibration Analysis, Modeling, Bending.

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BAYESIAN NETWORK STRUCTURE LEARNING USING HYBRID BEE OPTIMIZATION AND GREEDY SEARCH

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ABSTRACT

Bayesian networks structure learning is known to be computationally challenging, essentially because the number of applicant graphs is super-exponential in the number of variables. Many heuristic searching methods have been proposed to get better network structure. In this paper, we show two approaches for improving structure learning of Bayesian network applying search optimization. This approach utilizes a hybrid approach between Bee optimization algorithms and Greedy search. In this proposed approach we use two techniques for search. The first technique uses Bee optimization as a local search and Greedy as a global search (BLGG). The second technique uses Greedy as local search and Bee algorithms as global search (GLBG). In the proposed approaches BDe (Bayesian Dirichlet "e" for likelihood-equivalence) metric is used as score function. The results show the efficiency of the proposed methods based on different criteria by using different networks like Alarm, Asia, Andes2, Hepar2, Hail finder, etc.

Keywords: Structure learning, Bayesian network, score function, bee optimization, greedy search.

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DESIGN OF THE DIRECT CURRENT MOTOR SPEED CONTROLLER WITH EMBEDDED SYSTEM USING FUZZY LOGIC

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ABSTRACT

The development of automatic control processes has played a vital role in the recent engineering applications. Nowadays, traditional control techniques such as proportional integral differential (PID) are very commonly utilized for speed control of electrical motors. However, it is observed that the classical control techniques do not have an adequate performance in the case of nonlinear systems. Because of the simple and continuous control characteristics, the direct current (DC) motors have been widely used in many industrial applications such as robotic manipulators, electric vehicles, steel mills, electric cranes and much more. In this paper, the DC motor speed controller with an embedded system is designed and the speed of DC motor is controlled using a fuzzy logic control (FLC) technique. The controller-based on FLC is investigated with the help of Matlab/Simulink package program. Firstly, the controller is simulated and designed using the Proteus program and then it is implemented with the embedded system using Arduino. The results show that FLC can be successfully used to control the speed of the DC motor with an embedded system.

Keyword: Direct current (DC) motors, Fuzzy Logic Control (FLC), Embedded system, Arduino.

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A STATISTICAL FEATURE EXTRACTION IN WAVELET DOMAIN FOR MOVEMENT CLASSIFICATION: A CASE STUDY FOR EYES OPEN, EYES CLOSED, AND OPEN/CLOSED FIST TASKS

Şükriye Kara[1], Semih Ergin[2]

ABSTRACT

Analysis of brain signals constitute an importance, especially for paralyzed people or people suffer from motor disabilities. For this aim, some studies have been evaluated to measure signals from the scalp to provide non-muscle control arguments. Brain-Computer Interface Systems turns these signals into device signals that are controllable at the level of thought. In this paper, we classify diverse tasks according to EEG (electroencephalogram) signals. Then pre-processing, feature extraction and classification steps are hold. For classification, we use FLDA, Linear SVM, Quadratic SVM, PCA, and k-NN methods. The best result is obtained by using k-NN.

Keywords: EEG, electroencephalogram, wavelet transform, feature extraction, classification.

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THE USAGE OF STATISTICAL FEATURES IN THE APPROXIMATION COMPONENTS OF WAVELET DECOMPOSITION FOR ECG CLASSIFICATION: A CASE STUDY FOR STANDING, WALKING AND SINGLE JUMP CONDITIONS

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ABSTRACT

The purpose of this study is to classify electrocardiogram (ECG) signals with a high accuracy rate. The ECG signals used are obtained from the Physiobank archive. These signals are preprocessed to remove noise. Features with distinctiveness in classification are obtained both in the time domain and the frequency domain. The Discrete Wavelet Transform method is used for feature extraction in frequency domain. ECG signals are classified by the Naive Bayes method after the required features are extracted.

Keywords: ECG, statistical feature extraction, discrete wavelet transform, ECG classification

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INVESTIGATION AND OPTIMIZATION OF BUILDING THERMAL INSULATION SYSTEMS

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ABSTRACT

Considering that 35% of the energy in our country is consumed in the buildings and 80% of the energy consumed in the buildings is used for heating purposes, it is very important that more efficient heating systems to be installed in the building as well as great heat saving with appropriate heat insulation to be applied to the building. Since heat loss is prevented by thermal insulation, heating and cooling costs are reduced and energy saving is ensured. Today in our country, "EU Negotiation Process and Techniques" under various meetings and seminars are organized, positive or negative developments will contribute to Turkey joining the EU are discussed. The EU's sensitivity to environmental pollution and energy saving is known. EU membership process, Turkey's agriculture, environment, health as well as areas of the construction sector will also be effective in positive development. Ireland's technology transfer fund received during the 12 years of negotiations in these areas is the nature of the development process showed a positive example for Turkey. All institutions and organizations involved in the construction sector, which will contribute to this development, should review the standards published by the European Union and be prepared to work in such a way as to achieve these standards. The provision of this will be possible by the correct regulation and implementation of the regulations of the construction and insulation sector in our country. Thermal insulation on the buildings is an application that must be done in order to save energy, to reduce air pollution, to provide comfortable and comfortable living environments and to avoid negative physical problems caused by heat losses. The levels that heat losses should have in buildings are determined by TS 825, Thermal Insulation Regulation in Buildings and it is a legal obligation to comply with these levels. With the rapid development in material technology, the transition from thick and heavy materials to delicate-to-fine light materials is accelerated. In addition to the many benefits that this transition has provided, the need to be more careful in building physics and thermal insulation issues has come to the fore. Thermal insulation of buildings; it should be considered that the structures will be able to safely meet the external conditions that will be exposed both in the winter months and in the summer months. Another purpose of insulation of the building against heat effects is; build up harmful dimensions seen during heat flux and the end result of vapor condensation; frost damage, moisture damage, mold, deterioration, rotting and corrosion of the iron fittings. Another aim is the purpose of heat insulation; to limit maintenance costs, to increase the durability of construction, to contribute to the family and national economy by saving in winter heating, summer cooling energy.

All the measures taken in the construction to maintain the internal temperatures of the indoor spaces to the desired level, to save the energy used in the heating-cooling processes against the external climatic conditions, to attain the thermal comfort and to reduce the air pollution are all Thermal insulation. Thermal insulation on the buildings is an application that must be done in order to save energy, to reduce air pollution, to provide comfortable and comfortable living environments and to avoid negative physical problems caused by heat losses.

Keywords: Thermal camera, thermal insulation, heat loss, temperature, energy saving

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REAL TIME INTERNET-BASED TEMPERATURE AND HUMIDITY MONITORING

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ABSTRACT

Nowadays, multidisciplinary applications are increasingly seen in the working areas and modules they interact with. This dynamic structure simultaneously diversifies needs and increases the number of situations that need to be solved. The concept of Human Computer Interaction (HCI) is confronted with the formation of an interface for multidisciplinary applications and the integration of modules. The Internet of Things (IOT) corresponds to the concept of controlling all or part of applications remotely (with certain protocols) over the internet. These two concepts increase productivity and controllability in applications.

In this study, real-time monitoring of temperature and humidity information from a specific environment was conducted over the internet. For this purpose, an interface design has been realized. In the designed circuit, ethernet shield, microcontroller card, heat and humidity sensors are used. Momentary heat and humidity data can be monitored on a designed web page.

Subsequent studies can provide sensor diversity for multi-directional analysis of received data. New modules can also be added to the circuit in the environment where the measurement is made. Some new functions such as heating, cooling, humidifying and drying can be added to the current circuit.

Keywords: Embedded systems, human computer interaction, IOT

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MİMARİYİ SES İLE TASARLAMAK ÜZERİNE ÖĞRENCİ İZLENİMLERİ

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ÖZET

Mevcut mimarlık eğitiminde öğrencilerin tasarım aşamasında işitsel ortam gereksinimlerini yeterince dikkate almadığı görülmüştür. Eğitim sürecinin iki aktörünün akademisyenler ve öğrenciler olduğu düşünülürse, öğrencilerle oluşturulacak diyalog ve tartışma ortamına paralel olarak, öğrencilerden alınacak geribildirimler işitsel çevre tasarımına dikkat çekmek açısından önemlidir. Bu çalışmada akustik ile ilgili seçme ders kapsamında dönem başında ve sonunda öğrencilerle yapılan anket çalışmaları sunulmuştur. Çalışmanın amacı, öğrencilerin işitsel farkındalıklarını ve mimarlık eğitimi ile ilgili görüşlerini alarak, gelecekte planlanacak eğitim modeli önerilerine ışık tutmaktır. Yöntem olarak, likert ölçekte ve ucu açık olarak hazırlanan anket soruları SPSS istatistik programı ile analiz edilmiştir. Bulgular arasında en dikkat çeken performans mekanları dışındaki mekanların işitsel koşullarının mimarlık eğitimi boyunca yeterince sorgulanmadığıdır. Sonuç olarak, işitsel çevre tasarımına da önem verilmesi noktasında proje ve ders yürütücülerine sorumluluk düşmektedir. Öğrencilerden alınan geribildirimlere göre farkındalığı artıracak yeni eğitim yaklaşımları değerlendirilerek geliştirilmelidir.

Anahtar Kelimeler: Yaratıcı Eğitim, Tasarım Eğitimi, Mimarlık Eğitimi

STUDENT IMPRESSIONS ON DESIGNING THE ARCHITECTURE WITH SOUND.

ABSTRACT

In the current architectural education, it was observed that students did not take into account the auditory space requirements adequately in the design phase. Considering that the two actors of the education process are academicians and students, in parallel with the dialogue and discussion with the students, the feedback from the students is important to draw attention to the aural environmental design. In this study, surveys conducted with students at the beginning and end of the semester are presented. The aim of the study is to shed light on the suggestions of the educational model to be planned in the future by taking students' views on auditory awareness and architectural education. As a method, questions, which were prepared on a Likert scale and an open-ended question, were analyzed with SPSS statistical program. Among the findings, the auditory conditions of the spaces other than the most remarkable performance spaces are not questioned sufficiently during the architectural education. As a result, responsibility is given to project and course executives in order to give importance to auditory environment design. According to the feedback from the students, new educational approaches to increase awareness should be developed and evaluated.

Keywords: Sound and space design, architectural education, survey, SPSS analysis.

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MİMARLIK VE TASARIM EĞİTİMİ ÜZERİNE

Aysun Eyüboğlu Erşen[1]

ÖZET

Dünyanın birçok ülkesinde ve Türkiye' de son yıllarda hızlanan inşaat sektörü; oluşturduğu yeni pazarlar ve zengin reklam sunuşlarıyla dikkat çekmektedir. Sektörü oluşturan ve besleyen meslek dalları da gün geçtikçe çeşitlenmekte ve giderek toplumda ilgi odağı haline gelmektedir. İnşaat sektörünün ana mesleklerinden olan mimarlığın "kimliği-varlığı", "yetkinliği", "meslek etiği"; toplumda artan ihtiyaçlara, küresel boyutta ve teknolojik gelişmelere bağlı olarak algısal değişimlere uğramaktadır. Mimarlık mesleğine olan ilgi ve yönelim de artmaktadır. Söz konusu ilginin ve gençlerin gelecek kurma düşlerinde mimarlık alanının önde gelmesinin bir sonucu da, "hızla artan mimarlık fakülteleri ve öğrenci sayısı" olarak görülebilir.

Çalışma; konuya literatür taraması ile yaklaşarak "Ülkede mimarlık ve tasarım eğitimi nereye gidiyor?" sorusuna cevap aramakta ve sonuçta bazı öneriler getirmektedir. Konuya "Giriş" bölümü yapıldıktan sonra 1. Bölümde; tasarım kavramı ve tasarım kavramının mimarlık mesleği ile ilişkileri irdelenmiştir. Aynı zamanda yaratıcılıktan söz edilmiş; "yaratıcı mimarlık" ile "tasarımcı mimarlık" ilişkisi vurgulanmıştır.

Çalışmanın 2. Bölümü "KLÜ Mimarlık Fakültesi 1. Sınıf Temel Tasarım Ders İçeriğinin İrdelenmesi, Öğrencilerin Başarı Durumları ve Ders Üzerine Gözlemler" başlığı ile hazırlanmıştır. Bu bölümde; dört yıllık bir geçmişe sahip Kırklareli Üniversitesinin Mimarlık Fakültesi Mimarlık Bölümünün 1. Sınıfında görülen "Temel Tasarım" dersinde öğrencilerin başarı durumları, mezun oldukları lise türleri tablo halinde verilmiştir. MEB kaynaklarından liselerde okutulan "Temel Tasarım" dersine en yakın bulunan "Görsel Sanatlar" dersinin içerikleri alınıp değerlendirmesi yapılmıştır. Mimarlık Bölümü 1. sınıf temel tasarım dersinin içeriği aktarılarak, dersin "tasarım" odaklı mimarlık eğitimindeki önemi vurgulanmıştır. Bu bölümde; öğrencilere 1. Yarıyılda verilen "Temel Tasarım" dersi ve içeriğine ilişkin öğrenci uygulamalarından örnekler verilmiş, gözlemler yapılmıştır.

Çalışmanın 3. Bölümü "Nasıl bir mimarlık eğitimi ?" başlığı ile kurgulanmıştır. Bu bölümde, güncel mimarlığın durumu, tasarım eğitimi, mimarlık eğitiminin süresi ve niteliği üzerinde durulmuştur. Sonuç bölümünde ise Türkiye'de sayısı 90 olan mimarlık fakülteleri ve sorunlarına ilişkin değinmelerle, küresel ölçekte hizmet verebilecek "mimarların" eğitimine ilişkin öneriler yer almaktadır.

Anahtar Kelimeler: Yaratıcı Eğitim, Tasarım Eğitimi, Mimarlık Eğitimi

ON ARCHITECTURE AND DESIGN EDUCATION

ABSTRACT

The construction sector, which has been accelerating in recent years, attracts attention by new markets and rich ad serving not just in Turkey, but also in the whole world. All the branches which form and enrich the sector are getting more diverse and attractive in the society. The identity of architecture, which is one of the main occupations of the construction industry, is "identity", "competence", "professional ethics"; is exposed to perceptual effect depending on increasing needs in society, global dimension and technological developments. The interest and orientation to the

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architecture profession are also increasing. This can be seen as a result of the rapidly increasing number of architectural faculty and students.

This study approaches the issue with literature review, seeks an answer to the question of “Where does architecture and design training go in the country?” and states some solutions in the end. After the introduction chapter, in chapter 1, the concept of design and the relation between the concept of design and the profession of architecture are examined. At the same time creativity is mentioned in the same chapter and the relation between "creative architecture" and "designer architecture" is emphasized.

The title of the second part of this study is "KLÜ Faculty of Architecture First Class Basic Design Course Content, Students' Achievement Status and Course Observations". In this chapter, the success status of the students ,who are from "Basic Design" course which is seen in the first grade of Architecture Department of the Faculty of Architecture of Kırklareli University with a four-year history, and the high school types they graduated are given in tabular form. The contents of the "Visual Arts" course, which is the closest one to the "Basic Design" course taught in the high school, is taken from MEB sources and evaluated. The content of the first grade basic design course of the architecture department was transferred and emphasized the importance of the course in architecture education focused on design. In this chapter, different examples and applications of "Basic Design" course are given.

The title of the third part of this study is "What kind of architectural education?". In this chapter, the current state of architecture, design education, the duration and quality of architectural education are emphasized. In the conclusion part, 90 faculties of architecture, which are in Turkey, and their problems; also the "architects" to serve on a global scale are mentioned.

Keywords: Creative education, Design Education, Architect’s education

INDUSTRY 4 AND INNOVATION IN PROCESS SAFETY OF SMART FACTORIES

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ABSTRACT

Developing technology leads to innovations in the field of industry, while information technology started Industrial 4, which is called Industrial Revolution. The biggest problem of Industry 4, which is rapidly integrating into mechanical production lines, is the cyber-attacks that threaten the information integrity. Smart Factory period has started with the transfer of control technology of Information technology which makes life easier to the chemical production processes. In smart factories, devices, systems, robots and all the objects in the network are communicated with each other by a certain protocol and carried out by the concept of Internet of Objects or Systems. Particularly in smart factories, it is inevitable to experience catastrophic accident by the operating parameters go out of control, as well as economic impacts by cyber-attacks. The healthy establishment of the security management of Smart Factories requires proper planning of the "Safety Instrumented System" design done next to the process design. This design can be carried out with remote secure access considering all possible risk combinations, and the establishment of accessing to system in when logical decisions can be necessary in complex situations.

Keywords: Industrial revolution, Internet of Objects, smart factories, cyber security, process security

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KUMAŞ BASKI TASARIMINDA YENİLİKÇİ YAKLAŞIMLAR

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ÖZET

2018 İlkbahar/Yaz sezon araştırmaları yapılmış ve sonucunda özel nakış tekniklerinin bir moda akımı olarak önemi saptanmıştır. Tekstil piyasasında, 'Broderie Anglaise' adı verilen nakış tekniğinin talep göreceği öngörülmüş ve Türkiye koşullarında pahalı ve üretimi zor, konfeksiyoncuların çoğunlukla uzun terminlerle ithal etmek durumunda kaldığı bu özel kumaşlara alternatifler, özel baskı teknikleriyle ve özel tasarımlarla geliştirilmiştir.

Özel baskı teknikleri araştırılmış, malzeme, uygulama ve kalite açısından işletmeye uygun olan 'Devore', 'Mat Weiss Baskı', 'Pigment Baskı' tekniklerine karar verilmiştir. Bu tekniklerle hayata geçirilecek olan tasarımlar moda akımları, sezon renk ve desen öngörüleri analiz edilerek çalışılmıştır ve uygulama yapılacak kumaş kalitelerine karar verilmiştir.

Çalışmanın sonucunda 8 adet desen tasarımdan oluşan, 5 renk, 14 parçalık 'Renkli Brodeler' ve 8 adet desen tasarımdan oluşan, tek renk, 8 parçalık 'Beyaza Beyaz' adı verilen gruplar tamamlanmış, nakışlı kumaşlara termin ve fiyat yönünden üreticiye avantaj sağlayacak alternatifler baskı yöntemleriyle üretilmiş ve çalışma başında hedeflenen 'Yenilikçi Tasarım' amacına ulaşılmıştır.

Anahtar Kelimeler: Yenilikçi Tasarım, Tasarım ve Ürün Geliştirme, Tekstil Baskı Teknikleri

INNOVATIVE APPROACHES IN FABRIC PRINT DESIGN

ABSTRACT

Spring/Summer 2018 season surveys were conducted and as a result, special embroidery techniques have been determined as a fashion trend. In the textile market, it is envisaged that the embroidery technique called 'Broderie Anglaise' will be a must have item. This item has expensive and difficult production conditions in Turkey, and most of the time, garment manufacturers needs to import this with long-terminus. Alternatives to these special fabrics has been developed with special printing techniques and special designs.

Printing techniques have been researched and 'Burn Out Printing', 'Mat Weiss Printing', 'Pigment Printing' techniques have been decided, which are suitable for operation in terms of material, application and quality. Designs that will be implemented have been studied by analyzing fashion trends, season colors & pattern predictions, and the fabric bases are decided.

As a result of this work, groups of 8 patterns with distribution of 6 colors, 18 pieces of 'Colored Embroidery' and 8 patterns single color, 8 pieces of 'White On White' groups were completed, printed alternatives for embroidered fabrics have been produced with advantage in terms of price & term to the manufacturer. 'Innovative Design' goal has been achieved as aimed in beginning of the work.

Key Words: Innovative Design, Design & Development, Textile Printing Techniques

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LOW-COST 3 AXIS ROBOTIC ARM DESIGN

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ABSTRACT

Robotics have become an important place in the manufacturing sector with the improvements in automation systems. Improved devices with these technologies often take their place that skilled or unskilled personnel do the their job faster, more efficient and can be performed with less fault tolerance. Robot arms are very common in the manufacturing sector. Depending on the work they are doing, they can be single-axis or multi-axis, also, the degrees of freedom vary.

In this study, low-cost 3-axis robot arm with 6 degrees of freedom was manufactured. The robot arm is controlled by a microcontroller card. The robot arm can hold and carry an object in specific weight ranges and shapes depending on the torque of the motor used. The robot arm can hold and carry an object in specific weight ranges and shapes depending on the torque of the motor used.

In the following studies, it is planned to determine the working space of the robot arm. It is also important to calculate the change in working space comparatively when the robot joint lengths are changed.

This is one of the plans to ensure the stable operation of the system by determining the axis calculations of the motors used in the robot arm developed at low cost. As a result of planned developments on the robot arm developed at a low cost, an alternative to more complex and costly similar robot arms will make an important contribution to the field of work.

Keywords: Embedded systems, microcontrollers, robotics

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USER'S AFFECTING POTENTIAL OF THREE DIMENSIONAL PRESENTATION TECHNIQUES IN ARCHITECTURAL DESIGN

Gökhan Umaroğulları[1], Murat Berk Evren[2]

ABSTRACT

Design and technology are the most important parameters that create the concept of innovation. Particularly in building production, as the user of the building, the desire of a person to raise the quality of life through the building is constantly leading the actors in innovations in architectural design, technology, marketing and presentation techniques. Nowadays, besides conventional expression techniques such as plan, elevation and section, three dimensional visuals and video images are also considered together with these techniques. The end user may not be able to readily understand some of the elements of the structure he wants to buy, such as the material, the structure, and especially the endings, from conventional presentation techniques. Here, it is aimed to make communication between the designer and the end user more understandable, easy and practical.

When the end user wants to buy a building / space, he / she is influenced by the advertisements and visuals originally prepared. According to widespread acceptance in the existing market structure, the architect can be regarded as successful in that measure if he can market the product of the employer. Marketing and presentation techniques are at the forefront in this context. If the end-user has not been trained, it is not easy to arrive at a conception of design through an architect or industry stakeholder perspective and conclusions from two-dimensional traditional architectural presentations. The designer needs different presentation techniques so that the end user can be more easily perceived, influenced and marketed more easily to the architectural product the employer wants to sell. Three-dimensional visuals, video presentations, professional models are instruments that have the potential to be effective here.

In this study, the effects of current presentation techniques on the user will be investigated. For this purpose, a questionnaire will be conducted on the subjects in Kırklareli province. In this way, architectural presentations will evaluate the possible effects of using the innovations provided by the technology on the end user. If the results obtained are positive, it is aimed that both the designers use more modern techniques in presentation techniques and that the orientation of architect students to computer aided work in the process of architectural education is increased and the application rate is increased.

Keywords: Innovation, Arcitectural Design, 3D Design

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3D MICROFABRICATION AND MIXING PHENOMENA IN MICROFLUIDICS

Ecem Saygılı[1], Özlem Yeşil Celıktaş[2]

ABSTRACT

Microfluidic devices are currently replacing their macroscopic counterparts in many applications. Controlling the mass transport in the microchannels mostly depends on the material used and channel geometry is the key parameter to improve flows speed, reaction sensitivity, and surface robustness. As the flow type in the microfluidic channels is laminar, micro-mixers have been using to provide semi-turbulent flow inside the microchannels. In this study, microfluidic molds were fabricated by using 3D printing method and mixing phenomena were observed in different microplatforms with micro-mixer and micro-mixer-free geometries to understand the underlying diffusion mechanism which causes to mixing phenomena in the microchannel.

Keywords: Microfluidics, Diffusion, Micromixer

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BLOKZİNCİRİ TEKNOLOJİSİ VE UYGULAMA ALANLARI

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ÖZET

İlk olarak Satoshi Nakamoto'nun Peer-to-Peer Electronic Cash System isimli makalesinde tanıttığı bitcoin ile ortaya çıkan blockchain, üzerinde gerçekleşen işlemleri şifreleyerek bloklarında tutan, ilk bloğu hariç her bir bloğu kendisinden bir önceki bloğun bir hash fonksiyonu ile şifrelenmiş bilgisini içeren, işlemlerin takibini sağlayan ve işlemlere müdahaleyi imkansız kılan, işlemlerin direkt taraflar arasına aracı olmadan yapılmasını sağlayan, şifrelenen bloklar sayesinde işlem ve kullanıcı bilgilerinin her uç noktada denk, gizli ve güvenli tutulmasını sağlayan, silinemeyen, merkeziyetçilikten uzak, hızlı dağıtık bir ağ veya kayıt sistemi olarak tanımlanabilir. Bu sistemde şifrelenmiş veri blockchain ağındaki tüm uçlara yani bilgisayarlara dağıtılır. Bu yaklaşıma dağıtık kayıt defteri denir ve dağıtılan bu veri tüm uç noktalarda aynı olmalıdır. Her blok bir önceki blokla ilişkili olduğu için bir bloğun değiştirilmesi peşinde gelen diğer blokların geçersiz olması demektir. Bu sayede bloklarda tutulan işlemlerin geçmişe dönük doğrulanması ve değiştirilememesi sağlanmıştır denilebilir. Bu çalışmada Blokzinciri teknolojisinin genel hatları tanıtılacak ve güncel kullanım alalarından bahsedilecektir.

Anahtar Kelimeler: blokzinciri, teknoloji, uygulama alanları

BLOCKCHAIN TECHNOLOGY AND APPLICATION AREAS

Blockchain, which is firstly come up with bitcoin in Satoshi Nakamoto's Peer-to-Peer Electronic Cash System article, is a distributed network or recording system which holds crypted transactions and hashed previous block information in blocks, keeps tracks of transactions, prevents manipulation of transactions, provides direct transactions between participants without any other third parties, keeps transactions and user informations equal, secret and safe in all nodes in blockchain thanks to encrypted blocks, can not be deleted, fast and decentralized. In this system, encrypted data is distributed to all end nodes. This approach is named distributed ledger system. Datas in all end nodes must be same. Since each block is associated with the previous block, changing one block means next blocks will be invalid. In this way, the transactions held on the blocks can be verified and can not be changed in the past. In this study, general outlines of blockchain technology will be introduced and current use areas will be mentioned.

Keywords: Blockchain, technology, application areas

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THE EFFECTS OF PERCEIVED BARRIERS AND PERCEIVED ENJOYMENT ON USERS' INTENTION TO USE 3D PRINTER TECHNOLOGY

Levent Çallı[1], Nihal Sütütemiz[2], Büşra Alma Çallı[3]

ABSTRACT

The main purpose of this study is to investigate the intention of consumers to use desktop 3D printers with taking into account the dimensions of perceived barriers and enjoyment. This study contributes to the early understanding of Turkish consumers' intention to use desktop 3D printers. According to the results of the research; the effect of the perceived enjoyment on intention to use of 3D Printer was positive and the effect of the perceived barrier on intention to use was negative. When the results are anticipated in terms of 3D Printer ownership; the perceived enjoyment in user group who have 3D Printer was lower than the group who do not have, whereas risk perceptions stems from barriers was higher for this group.

Keywords: 3D Printer, Perceived Barriers, Perceived Enjoyment, Additive Manufacturing, Third Industrial Revolution

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ADDITIVE MANUFACTURING (3D PRINTING) APPLICATIONS IN AUTOMOTIVE SECTOR

Esra Koç[1], Cihan Gökçöl[2]

ABSTRACT

The automotive sector is one of the sectors with high added value in terms of providing economic and social progress. The contribution of the sector to the country's economy is directly related to the followings: up-to-date technology, innovative production information and ability to design. In today's world, it is necessary to develop production systems that can adapt to rapidly changing technologies in order to reach targets such as producing competitive products and producing technology in the market. Additive manufacturing is a highly efficient and economical way to create customized car parts, prototype parts and components for small-sized vehicles. In this study, the following topics will be briefly discussed. These are (i) why the additive manufacturing technology is a promising method in the automotive sector, (ii) its suitability to the automotive sector, (iii) how to apply this technology to improve performance while reducing costs and (iv) its applications in this sector, and advantageous and disadvantageous of these applications.

Keywords: Additive manufacturing, 3D Printing, Automotive production

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EVALUATION OF EINKORN BRAN AS SUBSTRATE FOR SYNTHESIS OF ALPHA AMYLASE FROM *PENICILLIUM HERQUEI* IN SOLID STATE FERMENTATION PROCESS

Seda Balkan[1]

ABSTRACT

Solid State Fermentation (SSF) is a process defined as microorganisms growing on a solid substrate in the absence of water. It is similar to natural microbial processes such as composting and ensiling. This technique has been known for a long time and is used widely in the Far East. It can be also used in industrial applications such as Roquefort cheese, antibiotics, organic acids, plant growing agents, food additive materials and enzyme production. In this study, α-amylase production was done in SSF process from *Penicillium herquei*. Agricultural by-products such as wheat (*Triticum aestivum* L.) bran and einkorn (*Triticum monococcum* L.) bran have been tested for enzyme production, individually and as a mixture. The highest enzyme activity (602 U/g) was recorded in the SSF process where einkorn bran was used as the substrate. The process parameters such as initial moisture level and substrate amounts were optimized to determine their effects on enzyme synthesis from *P. herquei*.

Keywords: Solid State Fermentation, einkorn, *Penicillium herquei*, amylase

KATI SUBSTRAT FERMANTASYON PROSESİNDE *PENİCİLLİUM HERQUEİ*' DEN ALFA AMİLAZ SENTEZİ İÇİN SUBSTRAT OLARAK SİYEZ BUĞDAY KEPEĞİNİN DEĞERLENDİRİLMESİ

ÖZET

Katı Substrat Fermentasyonu (KSF), serbest suyun yokluğunda katı substrat üzerinde mikroorganizmaların büyümesi olarak tanımlanan bir prosestir. Çürüme ve silaj gibi doğal mikrobiyal prosese benzemektedir. Eski zamanlardan beri bilinen bu proses özellikle Uzakdoğu'da yaygın olarak kullanılmaktadır. Endüstriyel uygulamalarda örneğin, rokfor peyniri, antibiyotikler, organik asitler, bitki büyüme hormonları, yiyecek katkı maddeleri ve özellikle enzimlerin üretimi için kullanılabilmektedir. Bu çalışmada *Penicillium herquei* küfünden α-amilaz üretimi KSF prosesinde gerçekleştirildi. Ekmeklik buğday (*Triticum aestivum* L.) kepeği ve siyez buğday (*Triticum monococcum* L.) kepeği gibi tarımsal yan ürünler enzim üretimi için bireysel ve karışım şeklinde substrat olarak enzim üretimi için değerlendirildi. En yüksek enzim aktivitesi (602 U/g) substrat olarak siyez buğday kepeğinin kullanıldığı KSF prosesinde elde edildi. *P. herquei* küfünden α-amilaz üretimi üzerine etkilerini belirlemek için başlangıç nem düzeyi ve substrat miktarı gibi proses parametreleri optimize edildi.

Anahtar kelimeler: Katı Substrat Fermentasyonu, siyez buğdayı, *Penicillium herquei*, amilaz

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PATENT PRE-RESEARCH AND COMPETITOR MONITORING ACTIVITIES IN THE TRAILER SECTOR

Hakan Özcan[1], Merve Özcan[2]

ABSTRACT

Patent is a legal title that can be given for any invention that includes the 'invention step' having a technical characteristic provided that it is new and 'industrially feasible'. Patents contain 80% of the latest up-to-date technical information. Thanks to patent investigations, the most up-to-date technical information in our competitors and sectors can be reached. By following the patent movements of the competitors, it is possible to determine the patent strategy based on sector and competitor. Thanks to the data obtained from patent preliminary investigations, many innovation deductions and strategic determinations can be made and even trend forecasts can be made. Thanks to the data obtained from patent preliminary investigations, many innovation deductions, strategic determinations and even trend forecasts can be possible.

Besides, patents are intangible assets showing the economic and technological development levels of countries and institutions. The patents also encourage companies to invest in innovation, allocate more resources to R & D and spread innovation. In this study, rising success of the trailer market along with the growth in transportation business will make the data and the information to be obtained by means of patent application numbers of competitors, who are in development potential and competitive environment, will be made meaningful, and it might be used to formulate a strategy against the rivals in the market.

Keywords: Patent preliminary investigation, trailer patents, competitor tracking, patent strategy

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OVERVIEW OF STUDIES ON INNOVATIONS IN FIRE RESISTANCE OF TIMBER STRUCTURES FROM THE PERSPECTIVE OF SUSTAINABILITY

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ABSTRACT

The decline in natural resources, increasing environmental pollution and negative consequences of global warming have forced many authorities to pursue sustainable and environmentally-friendly policies and strategies all over the world. Construction sector is one of the most high-energy consuming sectors due to the fact that conventional high-energy consuming construction materials are commonly used in the sector. Ever increasing number of reinforced concrete buildings result in both high energy consumption and new hazards to the environment. In this sense, use of bio-based building products seems as a promising solution. Timber is undoubtly one of the most important sustainable product in construction industry, which gives many advantages such as high strength, lower construction time, less damage to environment. On the other hand, usage of timber structures is rather low worldwide because of high costs and less fire resistance of timber structures. Fire resistance problem is especially a challenge, which is seen as a limitation for constructing high-rise buildings. In this study, a variety of studies in litereture has been carried out to investigate innovations in fire resistance of timber structures from the sustainability perspective. In addition, the reports of various institutions and best practices have been examined following by interviews with various academicians and experts. It has been seen that there has been a considerable increase in the number of timber sturctures worldwide as a result of the recent developments in fire resistance and cross-laminated timber (CLT) technology in addition to incentives of many authorities. It has been also concluded that the design and the choice of true material play crucial role in providing needed fire resistance from timbers. It has been also seen that there is a variety of improving methods for fire resistance of timber structures, such as impregnation, encapsulation in different levels, vacuum methods and using fire retardant chemicals. Since one of the most important role of timber structure is its role on sustainability. However, using different kinds of chemicals to enhance the fire resistance is contrary to the idea of sustainability. Therefore, it is recommended to use water-based products instead of solvent-based ones in order to get higher fire resistance. Although some leading countries in construction sector are suspicious about high-rise timber buildings, the innovations in fire resistance of timber structures are very promising for both sustainabillity and environment.

Keywords: Fire Resistance, Timber Structures, Bio-based building materials, Environment, Sustainability

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CONTROL METHODS OF THE VSC-HVDC CONNECTED OFFSHORE WIND POWER PLANTS FOR FULFILLING; LVRT AND FREQUENCY REGULATION SUPPORT

Gül Kurt[1]

ABSTRACT

Grid integration of offshore wind farms could seriously impact the operation and stability of their interconnected power system. To assist in maintaining the power system stability when large disturbances occur in the grid, modern offshore wind farms consisting of variable-speed wind turbines are required to provide ancillary services such as voltage and frequency control. The focus is given on the control methods of the VSC-HVDC connected offshore wind power plants for fulfilling the grid code requirements; LVRT and frequency regulation support.

Keywords: Off-shore wind farm, Low Voltage Ride-Through, Frequency Regulation, VSC-HVDC

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LATi, KERANJİ, TUALANG, VİCTORİAN ASH VE CASTELO BOXWOOD ODUNLARINDA BAZI YÜZEY ÖZELLİKLERİ ÜZERİNE ISIL İŞLEMİN (SİLVAPRO WOOD) ETKİSİ

Vedat Çavuş[1], Ümit Ayata[2], Mutlu Türk[3], Marko Petric[4], Jure Žigon[5]

ÖZET

Bu çalışmada, ısıl işlemin (Silvapro Wood) keranji (Dialium cochinchinense), lati (Amphimas pterocarpoides), tualang (Koompassia excelsa), victorian ash (Eucalyptus regnans) ve castelo boxwood (Calycophyllum multiflorum) bazı yüzey özelliklerine etkileri araştırılmıştır. Örneklere 200°C'de 3 saat sürede işlem uygulanmıştır. Renk (ASTM D 2244-3, 2007) ve parlaklık (ISO 2813, 1994) testleri belirlenmiştir. Isıl işlem uygulandığında renk (L*, a* ve b*) ve parlaklık (20o, 60o, 85o paralel) değerleri azalmıştır. En yüksek ΔE* değeri castelo boxwood odununda (54.841) elde edilirken, bunu victorian ash (35.861), keranji (30.984), lati (28.453) ve tualang (25.541) ağaç türleri takip etmiştir.

Anahtar Kelimeler: Lati, Keranji, Tualang, Victorian Ash, Castelo Boxwood

EFFECT OF HEAT TREATMENT (SILVAPRO WOOD) ON SOME SURFACE PROPERTIES OF LATI, KERANJI, TUALANG, VICTORIAN ASH AND CASTELO BOXWOOD WOODS

ABSTRACT

In this study, the effects of heat treatment (Silvapro Wood) on some surface properties of keranji (Dialium cochinchinense), lati (Amphimas pterocarpoides), tualang (Koompassia excelsa), victorian ash (Eucalyptus regnans) and castelo boxwood (Calycophyllum multiflorum) were investigated. Specimens were exposed at 200 °C for 3 hours. Colour (ASTM D 2244-3, 2007) and glossiness (ISO 2813, 1994) were determined. Colour (L*, a* and b*) and glossiness (20o, 60o, 85o parallel) values of the specimens were diminished when heat treatment were applied. The highest ΔE* values were obtained castelo boxwood (54.841) wood type, followed by victorian ash (35.861), keranji (30.984), lati (28.453) and tualang (25.541) wood types.

Key words: Lati, Keranji, Tualang, Victorian Ash, Castelo Boxwood

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SİLVAPRO WOOD YÖNTEMİ İLE ISIL İŞLEM GÖRMÜŞ MANİO, MİNDİ, TOONA, CUTA VE WACAPOU AĞAÇ TÜRLERİNDE PARLAKLIK VE RENK DEĞERLERİNİN BELİRLENMESİ

Vedat Çavuş[1], Ümit Ayata[2], Mutlu Türk[3], Tuncer Dilik[4]

ÖZET

Bu çalışmanın amacı manio (Podocarpus nubigenus), mindi (Melia azedarach L.), toona (Toona ciliata), cuta (Phyllostylon rhamnoides) ve wacapou (Vouacapoua americana)'in 200°C'de 3 saat süreyle ısıl işlem (Silvapro Wood metot) sonrası renk (L*, a* ve b*) (ASTM D 2244-3, 2007) ve parlaklık (20o, 60o, 85o paralel) (ISO 2813, 1994) özelliklerini değerlendirmektir. Çalışma sonuçlarına göre; uygulanan ısıl işlem ile kırmızı renk tonu, ışıklılık değeri, sarı renk tonu ve 20o 60o ve 85o'de paralel parlaklık değerlerinin azaldığı görülmüştür. En yüksek ΔE* değeri manio (38.85) ağaç türünde belirlenirken, bunu cuta (29.20), toona (27.67), mindi (25.93) ve wacapou (16.07) odunları izlemiştir.

Anahtar Kelimeler: Wacapou, Manio, Mindi, Toona, Cuta

DETERMINATION OF GLOSSINESS AND COLOR VALUES IN SILVAPRO WOOD METHOD HEAT TREATED MANIO, MINDI, TOONA, CUTA AND WACAPOU WOOD SPECIES

ABSTRACT

The aim of this study was to evaluate colour (L*, a* and b*) (ASTM D 2244-3, 2007) and glossiness (20o, 60o, 85o parallel) (ISO 2813, 1994) properties of manio (Podocarpus nubigenus), mindi (Melia azedarach L.), toona (Toona ciliata), cuta (Phyllostylon rhamnoides) and wacapou (Vouacapoua americana) after heat treatment at 200°C for 3 h (Silvapro Wood method). According to the study results; heat treatment reduced red color tone, lightness value, yellow color tone, glossiness parallel to the grain at 20°, 60° and 85° angles. The highest ΔE* values were obtained manio (38.85) wood type, followed by cuta (29.20), toona (27.67), mindi (25.93) and wacapou (16.07).

Keywords: Wacapou, Manio, Mindi, Toona, Cuta

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MAG KAYNAĞINDA KAYNAK YÖNÜ VE POZİSYONUNUN NÜFUZİYETE ETKİSİ

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ÖZET

Kaynak parametreleri, kaynak işlemini ve elde edilen kaynaklı bağlantının kalitesini, verimliliğini ve maliyetini belirleyen en önemli unsurlardır. Optimum ark, bütün parametreler birbiriyle denge halinde olduğu zaman meydana gelir. Kaynak parametreleri; kaynak öncesi belirlenen, birinci dereceden ayarlanabilir ve ikinci dereceden ayarlanabilir parametreler olmak üzere üç grupta toplanabilir. Kaynak öncesi belirlenen ve kaynak süresince değiştirilmesi mümkün olmayan parametreler; tel elektrod çapı ve bileşimi, koruyucu gaz tipi gibi parametrelerdir. Birinci dereceden ayarlanabilir parametreler; kaynak akımı, ark gerilimi ve kaynak hızı gibi parametrelerdir. İkinci dereceden ayarlanabilir parametreler ise torç açısı, serbest tel uzunluğu, nozul mesafesi, kaynak yönü, pozisyon etkisi ve koruyucu gaz debisi gibi parametrelerdir.

Bu çalışmada MAG kaynağındaki ikinci dereceden ayarlanabilir parametrelerden olan farklı kaynak yönü ve pozisyonunun nüfuziyete etkisi araştırılmıştır.

Anahtar Kelimeler: Kaynak yönü ve pozisyonu, MAG kaynağı, nüfuziyet

THE EFFECT OF THE WELDING DIRECTION AND POSITION ON THE PENETRATION IN MAG WELDING

ABSTRACT

Welding parameters are the most important determinants of the welding process and the quality, efficiency and cost of the welded joint. Optimum arc occurs when all parameters are in equilibrium with one another. Welding parameters are three groups: pre-welding determined, first-order adjustable and second-order adjustable parameters. Pre-welding determined parameters and the ones which cannot be changed during the welding period are parameters such as the diameter and composition of the wire electrode and the shielding gas type. First-order adjustable parameters are parameters such as welding current, arc voltage and welding speed. Second-order adjustable parameters are parameters such as torch angle, free wire length, nozzle distance, welding direction, position effect and shielding gas flow rate.

In this study, the effect of the different welding direction and position - the second-order parameters in the MAG welding - on the penetration was investigated.

Keywords: Welding direction and position, MAG welding, penetration

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KİŞİLİK ÖZELLİKLERİ VE GİRİŞİMCİ KİŞİLİK BOYUTLARININ GİRİŞİMCİLİK NİYETİ ÜZERİNDEKİ ETKİLERİ: TRAKYA ÖRNEĞİ*

Yasin Akkuş[1], Çağatay Akdoğan[2], Ayşe Akyol[3]

ÖZET

Teknolojinin gelişmesi ve buna bağlı olarak yeni iş modellerinin ortaya çıkmasıyla girişimciliğin önemi hızla artmaktadır. Özellikle genç bireylerde teknolojik girişimcilik eğiliminin arttığı açıkça görülmektedir. Ancak girişimciliğin geliştirilmesi ve girişimcilik ekosisteminin oluşturulması için oluşturulan ulusal politikalar oldukça genel bir çerçevede hazırlanmaktadır. Girişimcilik politikalarının girişimcilik türüne uygun olarak hazırlanabilmesi için öncelikle hedeflenen girişimcilerin kişilik profillerinin ortaya konması gerekmektedir. Bu araştırma ile özellikle gençlerin; kişilik özelliklerinin ve girişimci kişiliğe dair boyutlarının girişimcilik eğilimleri üzerindeki etkisi araştırılmıştır. Araştırma, Trakya'da bulunan üç üniversitede öğrenim gören öğrenciler üzerinde yapılmıştır. Araştırma verileri Yapısal Eşitlik Modeli (YEM) aracılığı ile incelenmiştir. Sonuç olarak Dışa Dönüklük boyutunun, Girişimcilik Niyeti üzerinde Yenilikçilik boyutu aracılığıyla anlamlı bir etkisinin bulunduğu tespit edilmiştir.

Anahtar Kelimeler: Girişimcilik, Girişimcilik Niyeti, Yenilikçilik, Dışa Dönüklük, Eysenck Kişilik Anketi

EFFECTS OF PERSONALITY TRAITS AND ENTREPRENEUR PERSONALITY ASPECTS ON ENTREPRENEURSHIP INTENTION: A SAMPLE OF THRACE

ABSTRACT

Technology has developed and therefore new occupation models have arisen so the importance of entrepreneurship has been increasing. Especially, it is clearly observed that tendency to entrepreneurship among young individuals has increased. However, national policies for entrepreneurship to be enhanced and entrepreneurship ecosystem to be constituted are prepared within a quite general framework. First of all, personality profiles of the target entrepreneurs should be revealed for entrepreneurship policies to be prepared in compliance with the type of entrepreneurship. In this research, effects of personality traits and entrepreneur personality aspects on tendency to entrepreneurship were searched. The research was conducted on students who study in three universities in Thrace. Data of the research was examined through Structural Equation Model (SEM). In conclusion, it was detected that there is a significant influence of aspect of Extroversion on Entrepreneurship Intention through Innovativeness.

Keywords: Entrepreneurship, Entrepreneurship Intention, Innovativeness, Extroversion, Eysenck Personality Questionnaire

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THE ASSOCIATION BETWEEN ENTREPRENEURSHIP AND REGIONAL ECONOMIC DEVELOPMENT AND GROWTH: AN INVESTIGATION ON NUTS III REGIONS OF TURKEY

İsmail Demirdağ[1]

ABSTRACT

The relationship between entrepreneurship and regional economic development has drawn attention of many researchers and policy makers especially, since the seminal work of Schumpeter (1934), The Theory of Economic Development, who emphasizes the importance of the entrepreneur in economy. Schumpeter indicates that entrepreneurs play crucial roles during the process of creative destruction and are the engine of economic growth. The mainstream empirical studies on the effects of entrepreneurship on economic development and growth have demonstrated that entrepreneurship through creating new businesses which generate new capacities in the market, is an essential vehicle of new job and employment creation. In addition, it has been found that entrepreneurship contributes to the innovative activities of markets, plays significant roles in the evolution of new industries, increases productivity and competitiveness, and revitalizes stagnating industries (Van Stel, and Storey, 2008).

This paper, in this regard, aims to explore the contributions of entrepreneurship on regional economic development and growth across 81 NUTS III regions of Turkey. Based on economic literature, this study employs the regional economic growth models in investigating the relationship between entrepreneurship and regional economic development and growth. The study used multiple regression analysis for the estimation of empirical models.

The paper, firstly, analyze the association between entrepreneurship, measured as firm birth rate, and regional economic development level, measured as Gross Domestic Products per capita, for three different years, such as 1990, 2000, and 2011. The main expectation is that regions with greater firm birth rates are predicted to have higher economic development levels. The multiple regression results support the main hypothesis of the paper and indicate that there are positive and significant associations between firm birth rates and economic development levels for the three years. Secondly, the paper investigates the impact of reginal entrepreneurial activity on regional economic growth for two different periods: 1990-2000 and 2000-2011. The analyses show that contrary to expectation, the base-year firm birth rates have negative influences on regional economic growth rates in the both periods. However, while changes in firm birth rate has positive and significant relationship with economic growth rate in 1990-2000 period, it has negative association in the later period.

In addition to the entrepreneurship variables, the paper has used several variables which represent the human capital, financial capital, demographic and industrial structure of the regions. The evidence shows that the relationships between these variables and the level of regional economic development and growth rate are consistent with the main argument in the literature, with only a few minor exception.

Keywords: Entrepreneurship, Regional Economic Development, NUTS

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SAĞLIK HİZMETLERİNDE SÜRDÜRÜLEBİLİRLİK BAĞLAMINDA İNOVATİF BİR UYGULAMA: YEŞİL HASTANELER

Pınar Özdemir Karaca[1], Emre Atılgan[2], Aysu Zekioğlu[3]

ÖZET

Günümüzde artan ve hızla yaşlanan nüfusun, şehirleşmenin, endüstriyelleşmenin, yükselen eğitim seviyesinin, gelişen sağlık bilincinin, hızla gelişen tıp teknolojilerinin vb. etkenlerin sağlık hizmetlerine olan talebi artırmasıyla birlikte, sağlığa ayrılan kıt kaynakların etkin ve verimli şekilde kullanılması gerekliliği daha da önem kazanmıştır. Bu kıt kaynaklarla kaliteden ödün vermeden sağlık hizmetlerinin verimliliğini artırabilmek için sürdürülebilir inovatif uygulamaların hayata geçirilmesi, bu anlamda da yeşil hastanelerin gündeme gelmesi söz konusu olmuştur. Bu bağlamda, yerli ve yabancı alanyazın taranarak elde edilen veriler ışığında ”Sağlık hizmetlerinin sürdürülebilirliğinde yeşil hastanelerin önemi nedir?” sorusuna yanıt aranacaktır. Bu amaçla sürdürülebilir sağlık hizmetleri ve yeşil hastane kavramlarına açıklık getirilerek, bu iki kavram arasındaki ilişkiye değinilecektir.

Anahtar Kelimeler: Sağlık hizmetleri, sürdürülebilirlik, inovasyon, yeşil bina, yeşil hastane.

AN INNOVATION APPLICATION IN THE CONTEXT OF SUSTAINABILITY IN HEALTH SERVICES: GREEN HOSPİTALS

ABSTRACT

Today increasing and rapidly aging population, urbanization, industrialization, rising education level, developing health consciousness, rapidly developing medical technologies, etc. as the factors increased the demand for health services, the need for effective and efficient use of scarce resources has become even more important. In order to increase the efficiency of health services without sacrificing quality with these scarce resources, the implementation of sustainable innovative practices and the emergence of green hospitals in this sense has been in question. In this context, the answer will be sought in the light of the data obtained by scanning domestic and foreign literature on the question "What is the importance of green hospitals in the sustainability of health services?" For this purpose, the concept of sustainable health services and green hospital will be clarified and the relation between these two concepts will be mentioned.

Key words: Health services, sustainability, innovation, green building, green hospital.

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MODA TASARIMINDA TİPOGRAFİNİN KULLANIMI ve BİR ÖNERİ OLARAK ALFABE KOLLEKSİYONU

Mehmet Erol ÇOPUR[1]

ÖZET

Grafik tasarımın en temel öğelerinden birini oluşturan tipografi; günümüzde pek çok tasarım alanında bir tasarım elemanı olarak görülebilmekte ve bu anlamda değerlendirilebilmektedir. Moda tasarımında tipografinin kullanımına genel olarak bakıldığında ise; kumaş deseni oluşturma, marka görünürlüğünü artırma, süsleme öğesi ya da aksesuar oluşturma amaçları ile kullanıldığı görülmektedir. Oysa gerek grafik tasarımın gerekse görsel iletişimin önemli bir elemanı olan tipografik materyaller bütünsel bir bağlamda bakıldığında moda tasarımında da aktif olarak kullanılabilecek potansiyele sahip tasarım materyalleridir.

Bu çalışma ile tipografi materyallerinin daha etkin kullanımıyla moda tasarımına bir katkı sunulması amaçlanmaktadır. Araştırma sorununa yönelik olarak görsel ve yazınsal literatür incelendiğinde, yapılan tasarımların sayı, çeşitlilik ve yaratıcılık anlamlarında kısıtlı olduğu söylenebilir. Çalışma kapsamında getirilen önerilerin; gerek moda tasarımına, gerekse tipografinin kullanım alanlarını çeşitlendirmeye yönelik çalışmaların gelişmesine katkılar sunacağı ve moda tasarımcılarında tipografinin olanaklarına yönelik bir farkındalık oluşturacağı düşünülmektedir.

Anahtar Kelimeler: Tipografi, moda tasarımı, alfabe koleksiyonu

THE UTILIZATION OF TYPOGRAPHY AT FASHION DESIGN AND ALPHABET COLLECTION AS A SUGGESTION

ABSTRACT

Typography, as one of the basic elements of graphics design, is accepted as a component of graphics design today and canbe evaluated in this sense. When we look at the usage of typography at fashion design, it is observed to be used for the aims of creating fabric pattern, increasing trademark famousness, forming embellishment item or accessory. In fact, typographic materials, as an important component of both graphics design and visual communication, when handled as a whole they are the design materials that have the potential to be used actively in the fashion design.

With this study, it is aimed to contribute to the fashion design by utilizing typography materials more efficiently. In accordance to the research question, after investigating visual and written literature, it can be remarked that the present designs are scarce in regard to number, variety and creativity. Suggestions brought within the scope of study are thought to create awareness by promoting both fashion design and typography usage areas.

Keywords: Typography, fashion design, alphabet collection

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3D PRINTING TECHNOLOGY: METHODS AND MATERIALS

Esra KOÇ[1], Cihan GÖKÇÖL[2]

ABSTRACT

Generally called as 3D printing, Additive Manufacturing has a very good potential to shorten the manufacturing processes, minimize material and energy use, and reduce waste. With the industrial revolution and the changing consumer buying behavior, companies are looking for ways to quickly transform the traditional model currently being used in production and logistics into advanced technologies to gain competitive advantage over their competitors. A wide range of the available 3D printing technologies and materials makes it necessary to choose among the followings: dimensional accuracy, surface quality and post-processing requirements. The aim of this study is to classify and summarize the differences between the production methods of the Additive Manufacturing Technology and the types of materials used in these technologies. In addition, advantages, usage fields and current challenges of the 3D printing technology are mentioned.

Keywords: 3D Printers, Additive Manufacturing, SLA, FDM

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TREYLER SEKTÖRÜNDEKİ ENDÜSTRİ 4.0 GELİŞMELERİ İLE NESNELERİN İNTERNETİNE DAYANAN NAKLİYE ÇÖZÜMLERİNİN LOJİSTİK SEKTÖRÜNE ETKİLERİ

Gizem Bacak[1], Ferhat Yiğit[2], Erkan Çakıroğlu[3]

ÖZET

Endüstri 4.0, geleneksel sanayinin dijitalleşme yönünde teşvik edilmesi ve yüksek teknolojiyle donatılması projesidir. Bununla birlikte, çalışma ortamında her bir verinin toplanmasına ve efektif bir şekilde izlenip analiz edilmesine olanak sağladığı için daha verimli iş modellerini ortaya çıkarmıştır.

Bu çalışmada, yüksek teknoloji donanımı ile verimliliği arttırmayı hedefleyen Endüstri 4.0' ın treyler üzerindeki uygulamaları ve lojistik sektörü üzerine etkileri araştırılmıştır. Bu kapsamda filo yönetim operasyonları, treyler arıza ve bakım süreçleri, lojistik operasyonları ve şoför davranışları ele alınmıştır. Ele alınan mevcut süreçler ile Endüstri 4.0'a uygun treyler uygulamaları verimlilik yönünden karşılaştırılmıştır. Yapılan çıkarımlardan treyler üzerinden elde edilen veri miktarı arttıkça verimliliğin arttığı görülmüştür ve ürünün ilk üreticiden son tüketiciye ulaşıncaya kadar olan tüm süreçlerini karşılayan lojistik sektörü için önemli fırsatlar sunduğu ortaya koyulmuştur.

Elde edilen veriler incelendiğinde, lojistik sektöründeki verimlilik beklentisi ile birlikte lojistik sektörüne hizmet veren firmalarında teknolojik gelişimi kaçınılmazdır. Lojistik sektöründe ihtiyaç duyulacak bu teknolojik gelişimi sağlayacak olan da treylerlerdir. Gelişen teknolojik imkanlarla birlikte treyler üreticileri "ürüne dayalı" modelden "ürün ve çözüm odaklı" modele geçiş için çalışmalar yapmalıdır. Treyler sektöründeki gelişmeler treyleri "ticari bir ürün" olmaktan "nakliye çözümüne geçirecektir. Bu çözümler için Endüstri 4.0'ın getirdiği nesnelerin internetine dayalı, komponentlerin birbirleri ile haberleşerek dijitalleşen, arıza tehşisi yapabilen ve insan gücünün azaltıldığı makine odaklı sistemler yaygınlaşacaktır.

Anahtar Kelimeler: Endüstri 4.0, Nesnelerin İnterneti, Lojistik, Treyler 4.0

DEVELOPMENTS OF INDUSTRY 4.0 IN TRAILER SECTOR AND EFFECTS OF THE TRANSPORTATION SOLUTIONS BASED ON THE INTERNET OF THINGS TO THE LOGISTİCS SECTOR

Industry 4.0 is a project of encouraging traditional industry to digitalize and equipping it with high technology. However, it has created more efficient business models, as it allows each data to be collected and analyzed in an effective way in the working environment.

In this study, the applications of Industry 4.0, which aims to increase efficiency with high technology equipment of the trailers and it's effects on the logistics sector were researched. In this context, fleet management operations, trailer failures and maintenance processes, logistics operations and behaviors of the drivers were researched. These existing processes which we researched and Industry 4.0 applications which is suitable to trailer sector were compared. After these inference we obtained, the efficiency increases as equally as amount of data which is acquired from trailer and tremendous advantages were revealed on the logistics sector which contains all the processes from the manufacturer to the end user.

When the obtained data was analyzed, technological advancements are inevitable in logistics companies which endeavours with efficiency expectations. These much-needed technological

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advancements will be provided by trailers. Together with this technological opportunities, trailer companies needs to start studies on transition between product based model and product and solution based model. These advancements on the trailer sector will turn commercial product into transportation solution. Based upon Internet of Things which is brought by Industry 4.0, digitalizating with communication between the components, enabling to troubleshoot and machine oriented systems with less human effort will become widespread.

Keywords: Industry 4.0, Internet of Things, Logistics, Trailer 4.0

THE IMPORTANCE OF PERCEPTION IN ARCHITECTURAL DESIGN

Riyad Şihab[1]

ABSTRACT

The architectural process has aim to get specific relationship between the forms and meanings. Causal relationship between the meaning of each other`s perception, and the perception of the form with the designer. This relation has been resulted at which the students` suffer from the most throughout their architectural teaching process which might be difficulty of clarifying the relations during design process. For instance, the difficult issue in clarifying the relation during architectural design process as intellectual ability `to generate the ideas of design; represented by producing highest number of possible ideas of forms related to certain designing problem. The method that has been employed the study of the form and meaning and their perceptions, associating from imagination with its meaning and usage nature to achieve association results. Disparity among architectural students has been distinguished through their tested performance on theoretical architectural design activities. The phenomenon of associating the form with a certain meaning has been linked to achieve figurative usage through demonstrating the placement of from and meaning and their architectural relationship. Versus the actual usage of the meaning which fulfils its role of leading receiver's mind to imagine the meaning unconditionally because of causal language relationship between the form and its meaning which may be capable of achieving this purpose. The most may feel like architect but is not easy to carry out the most purposes which should be taken in count to satisfy two important targets. First of all the problem should be obtained in property way. Second thing is, clarifying the solution of this issue.

In this study the perception of architects would be related to education and the background of general facts of science, because the design needs all the knowledge about the environment and the culture of the region which we need to serve in. The role of perception has been investigated and some suggestions are given to realise the perception especially for new architects who may get huge and wide experience from very famous architects such as ZAHA HADID.(ZAHA HADID is The most famous architects in the world)

The lack of wide view to the life and the luck of experience would lead to te awful result for the architects who have narrow mind and cannot get significant perception for this career.

As a conclusion, the perception is very important for design and architect to be able to build ecstatic and strong construction. So the experience would play very important role in design and perception.

Key words: Architect, design, environment, perception.

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ENDÜSTRİ 4.0 VE ÇALIŞMANIN GELECEĞİ

Nisan Nur Çakır[1]

ÖZET

2011 yılında Hannover Fuarında bahsi geçen ve ardından Almanya'nın sanayi modernleşmesi olarak duyurduğu Endüstri 4.0 paradigması, tüm sektörleri derinden etkileyecek ve işgücü piyasasının yapısında birçok değişikliğe neden olacak gelişmeleri ifade etmektedir. Bu çerçevede öngörülen temel değişiklikler, insanlığın daha önce tecrübe etmediği gelişmeleri barındıran teknolojik atılımlar olarak adlandırılmaktadır. Nitekim, Endüstri 4.0 üretim sistemlerinin ve ürünlerinin tasarımında, imalatında, işletilmesinde ve servisinde hızlı dönüşümleri ifade etmektedir.

İnsanlar ve akıllı fabrikaların birbirleri ile iletişim kurarak ortak hareket etmesinin önünü açacak olan Endüstri 4.0'ın işgücü piyasası ve istihdam, yatırımlar, teknolojik gelişmeler, politika ve yasal düzenlemeler, üretim, çalışma ilişkileri, eğitim alanlarında yenilikler yaratması söz konusudur. İşgücü piyasasına yönelik olarak literatürde vasıflı çalışanlara artan ihtiyaç sonucu, vasıfsız çalışanların işsizlik sorununun giderek artması, orta vasıf kaybı, robotların çalıştığı karanlık fabrikaların sayılarındaki artış ile insan emeğine olan ihtiyacın azalması beklenen olumsuz gelişmeler arasındadır. Diğer yandan, yeni meslek türleri ve istihdam alanlarının yaratılarak Endüstri 4.0'ın istihdama katkısı olacağı da pozitif bakış açısıyla dile getirilmektedir. Bu çalışmada, literatür incelemesi yapılarak Endüstri 4.0'ın çalışma koşulları ve işgücü piyasası üzerinde yaratması muhtemel değişiklikler incelenmiştir. Mevcut araştırmada öncelikle Endüstri 4.0 kavramına ve gelişimine değinilmiş ardından da çalışma koşulları ve işgücü piyasasında meydana getirebileceği yenilikler ele alınmıştır.

Anahtar Kelimeler: Endüstri 4.0, İşgücü Piyasası, Çalışmanın Geleceği

INDUSTRY 4.0 AND THE FUTURE OF WORK

ABSTRACT

The Industry 4.0 paradigm mentioned in Hannover Fair in 2011 and then announced as Germany's industrial modernization, refers to the developments that will deeply affect all sectors and cause many changes in the structure of the labor market. The fundamental changes envisaged in this framework are called technological breakthroughs which contain the developments that humanity has not experienced before. In fact, Industry 4.0 refers to rapid transformations in the design, manufacture, operation and service of production systems and products.

Industry 4.0, which will pave the way for people and smart factories to communicate with each other, will create innovations in the fields of labor market and employment, investments, technological developments, policies and regulations, production, labor relations and education. The increase in the unemployment problem of unqualified workers, the loss of middle skills, the increase in the number of dark factories where the robots are working and the need for human labor are among the expected negative developments of Industry 4.0 . On the other hand it is expected that Industry 4.0 will contribute new employment opporutnities. In this study, working conditions of the Industry 4.0 and the possible changes on the labor market were examined by literature review. In this sense, firstly the

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concept and development of Industry 4.0 was discussed and then the working conditions and the innovations in the labor market were examined.

Key Words: Industry 4.0, Labor Market, Future of Work

MOBİL UYGULAMA GELİŞTİRME SÜRECİ ANALİZİ: KIRKLARELİ ÜNİVERSİTESİ ÖRNEĞİ

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ÖZET

Dünya genelinde akıllı telefon, tablet, vb. mobil cihazların kullanımı giderek yaygınlaşmaktadır. Bu cihazlara yüklenerek kullanılan ve "Mobil Uygulamalar (MU)" olarak adlandırılan uygulamalar sayesinde; hızlı bilgi edinme, haberleşme, banka hesap kontrolü, vb. işlemler kolaylıkla gerçekleştirilebilmektedir. MU'lar, gündelik işlemlerin kolaylaştırılmasına olan katkıları dolayısıyla milyonlarca kullanıcı tarafından çeşitli ihtiyaçların giderilmesi amacıyla yoğun bir şekilde kullanılmaktadır. Android, iOS, Windows, vb. platformlara yönelik olarak geliştirilen MU'lar, üniversiteler gibi kurumsal yerlerde bilgiye kolay ve hızlı erişme noktasında oldukça önemli bir görev üstlenebilir.

MU geliştirimi süreci diğer yazılım süreçlerinde olduğu gibi "İhtiyaç Analizi" ile başlayıp tekrarlı bir şekilde devam etmektedir. Sistem Geliştirme Yaşam Döngüsü (SGYD) döngüsünde "Test" ve "Değerlendirme" aşamalarında tasarlanan ürünün yeterliliği incelenerek gerekli görüldüğü takdirde yeniden "Tasarım" aşamasına geçilmesini öngörmektedir. Tüm süreç, ortaya çıkan ya da çıkabilecek bütün eksikliklerin kapatılmasıyla birlikte tamamlanmakta ve ürün ortaya çıkarılmaktadır.

Bu çalışmada, Kırklareli Üniversitesi'nin hem Android hem de iOS olmak üzere 2 farklı platforma yönelik olarak MU'larının geliştirilme süreçleri anlatılacaktır.

Anahtar Kelimeler: Mobil Uygulama, Yazılım Geliştirme, Sistem Geliştirme Yaşam Döngüsü

ANALYSIS OF A MOBILE APPLICATION DEVELOPMENT PROCESS: THE CASE OF KIRKLARELI UNIVERSITY

Use of mobile devices, such as smartphones and tablets, is becoming increasingly widespread worldwide. Thanks to software called "Mobile Applications (MA)" that can be installed and used on mobile devices, processes like information access, communication and bank account control can be easily carried out. MAs are being used extensively by millions of users in order to meet various needs due to their contribution to facilitating everyday transactions. MAs developed for platforms such as Android, IOS, and Windows can play an important role in easy and quick access to information in institutional locations such as universities.

Like other software development processes, MA development starts with a "needs analysis" and continues repeatedly. During the test and evaluation stages of the System Development Lifecycle, the adequacy of the designed product is examined and possible needs for transitions to redesign can be foreseen. The entire process is completed together with the closure of all shortcomings that may arise, and the product is revealed.

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In this study, the development process of Kirklareli University's MAs for two different platforms (Android and iOS) will be described.

Keywords: Mobile Application, Software Development, System Development Lifecycle