



# ISTANBUL UNIVERSITY

## 2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP

"Reforms for Intellectual Economy and Innovative Entrepreneurship"

MAY 12-14, 2017  
ISTANBUL CONGRESS CENTER  
ISTANBUL - TURKEY

[www.istanbuluniversityinnovation.org](http://www.istanbuluniversityinnovation.org)

# CONFERENCE BOOK





ISTANBUL UNIVERSITY



# 3<sup>rd</sup> WORLD CONFERENCE ON TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP

**2019, ISTANBUL - TURKEY**  
(Istanbul University Innovation - 2019)

**Honorary Chairman**

Prof. Mahmut Ak, Rector of Istanbul University

**General Coordinator**

Prof. Sedat Murat, Vice Rector of Istanbul University

**Chairman of Conference**

Prof. Sefer Şener, Istanbul University



**ORGANIZATION SECRETARIAT  
FIGÜR CONGRESS & ORGANIZATION**

19 Mayıs Mah. 19 Mayıs Cad. Nova Baran Center No:4  
34360 Şişli / Istanbul - Turkey

**Phone:** +90 212 381 46 00 - **Fax:** +90 212 258 60 78

**E-mail:** istanbuluniversityinnovation@figur.net  
istanbuluniversityinnovation@istanbul.edu.tr

[www.istanbuluniversityinnovation.org](http://www.istanbuluniversityinnovation.org)

ISBN: 978-605-9811-01-9



**ISTANBUL UNIVERSITY**

**2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP**  
***“REFORMS FOR INTELLECTUAL ECONOMY AND INNOVATIVE ENTREPRENEURSHIP”***

**Managing Editor**

**Prof. Sefer Şener:** sefersener@istanbul.edu.tr

**Deputy Editor**

**Asst. Prof. Çiğdem Börke Tunalı:** cbtunali@istanbul.edu.tr

**Redaction**

**Zafer Sami Tekat**

**Merve Çakır**

**ISTANBUL UNIVERSITY**

**2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP**  
**“REFORMS FOR INTELLECTUAL ECONOMY AND INNOVATIVE ENTREPRENEURSHIP”**

---

**Address Correspondence and Communications**

Istanbul University

e-mail: istanbuluniversityinnovation@istanbul.edu.tr

---

**Graphic Design**

Pasifik Reklam ve Tanıtım Hizmetleri

Rıhtım Cad. Rezaizade Sk.No: 37/A

Kadıköy / İstanbul

Phone: +90 216 348 97 22

e-mail: pasifik@pasifikreklam.net

---

**Publication Services - Print**

Armoni Nüans Baskı Sanatları A.Ş.

Phone: +90 216 540 36 11

---

**Congress Organizing Secretariat**

Figür Congress & Organization

19 Mayıs Mah. 19 Mayıs Cad. Nova Baran Center No:4,

34360, Şişli / İstanbul - Türkiye

Phone: +90 212 381 46 00 - Fax: +90 212 258 60 78

e-mail: istanbuluniversityinnovation@fi gur.net

---

50 copies of the issue has been published.

Printing Date: 2017

---

The authors have the all the scientific and legal responsibilities of the articles.

---



Published with contributions of HAVELSAN.



**ISTANBUL UNIVERSITY**

**2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP**  
*“REFORMS FOR INTELLECTUAL ECONOMY AND INNOVATIVE ENTREPRENEURSHIP”*

**May 12-14, 2017**

**Istanbul Congress Center, Istanbul - Turkey**

**CONFERENCE BOOK**

**[www.istanbuluniversityinnovation.org](http://www.istanbuluniversityinnovation.org)**



**Dear Esteemed Academicians, Business World, Civil Society and Public Sector Representatives,**

Technological developments and innovation have become one of the most important determinants of international competitive advantage in recent years. Countries which create new technologies and innovative procedures and apply these developments to the production processes can achieve high economic growth rates and converge to the high income countries quite easily. Hence, nowadays technology and innovation play a key role in terms of economic development.

2<sup>nd</sup> The World Conference on Technology, Innovation and Entrepreneurship organized by Istanbul University and held in Istanbul between 12 and 14 May 2017 aims to create a bridge between university and industry by bringing academics, firms and entrepreneurs together.

This volume of proceedings from the conference contains papers that were presented during the conference. The first section of the book includes the abstracts of the oral presentations. In the following sections, poster presentations and full papers are presented. This book gives an opportunity to the readers to find out the most recent academic research about technology, innovation and entrepreneurship together with the most debatable issues in this field.

The 2<sup>nd</sup> World Conference on Technology, Innovation and Entrepreneurship would not materialize without the significant contributions of a big team. Firstly, I would like to thank the authors who presented their valuable works at the conference. Secondly, I would like to thank Andrew W. Wyckoff, OECD Director of Science, Technology and Innovation (STI); Prof. Stefan SCHEPERS, Secretary General High Level Group on EU Innovation Policy Management; Prof. Dr. Kouroush Jenab , Member of IEEE, IIE & SRE, Embry-Riddle Aeronautical University and Juilus Waller, Director of EPPA for their great contributions as keynote speakers of the conference. I also would like to thank vice chairpersons, organizing committee, scientific committee and the referees who did a very hard job in order to organize a flawless conference. I am grateful to our sponsors (Ministry of Science, Industry and Technology of the Republic of Turkey, The Republic of Turkey Prime Ministry Investment Support and Promotion Agency, Republic of Turkey Promotion Fund, Istanbul Metropolitan Municipality, Halkbank, Turkcell, Sinbo, Toki, Emlak Konut, Central Bank of the Republic of Turkey, KuveytTürk, Albaraka, Turkish Technic, Turkish Academy of Science, the scientific and technological research council of Turkey, IGDAS, TRT, Abvizyonu, Omafıl, Damat Tween, Bandırma Onyedı Eylül University, Havelsan) for their valuable supports. Additionally, I would like to thank Ali ÇALIŞKAN, the director-general of the Figür Congress and Organization Company; Bener ATAKAY, the deputy director-general of the Figür Congress and Organization Company and all of the staff of the Figür Congress and Organization Company for their hard work. Finally, I would like to thank our Rector Prof. Mahmut AK and Vice Rector Prof. Sedat MURAT who provided full support at every stage of the conference.

I hope that you will find the program intriguing and the conference will give all of the participants an opportunity to exchange knowledge with other researchers, firms and entrepreneurs from all over the World.

**Prof. Sefer ŞENER**  
**Chairman of the Conference**

# **Committees and Board**

## **Honorary President**

Prof. Mahmut Ak, Rector of Istanbul University

## **General Coordinator**

Prof. Sedat Murat, Vice Rector of Istanbul University

## **Chairman of Conference**

Prof. Sefer Şener, Istanbul University, Director of Technology and Industry Department of Economics

## **Deputy Chairmen of Conference**

### **Deputy Chairmen Responsible for Academic Evaluation and Coordination**

Asst. Prof. Çiğdem Börke Tunalı, Istanbul University

Asst. Prof. Volkan Hacıoğlu, Istanbul University

### **Deputy Chairman Responsible for International Relations and Broadcast**

Asst. Prof. Selva Staub, Bandırma Onyedi Eylül University

## **Organizing Committee of the Conference**

Prof. Stefan Schepers, Secretary General, High Level Group on Innovation Policy Management

Assoc. Prof. Yusuf Tekin, Undersecretary of Ministry of National Education

Assoc. Prof. Kadir Tuna, Istanbul University

Assist. Prof. Mustafa Yurttadur, Gelişim University

Assist. Prof. Donald F. Staub, Işık University

Assist. Prof. Mesut Savrul, Çanakkale Onsekiz Mart University

Assist. Prof. Elife Akiş, Istanbul University

Assist. Prof. Cengiz Ceylan, Istanbul University

Haydar Çolakoğlu, Member of the Executive Board at TEB Holding Corp.

Orhan Aydın, Chairman of the Board at Oma Inc.

Saim İlçioğlu, T.C. Secretary General of the Prime Ministry Promotion Fund.

Süleyman Orakçioğlu, Chairman of the Board at Orka Holding

Mustafa Özan, General Manager of Metropol Mall

# Scientific Committee

## 1. Social Sciences

Prof. Aref Abu-Rabia, Ben-Gurion University of the Negev  
Dr. Abdullah M. Abu-Tineh, Qatar University  
Prof. Ahmet Cevat Acar, President of Turkish Sciences Academy  
Prof. Yücel Acer, Çanakkale Onsekiz Mart University  
Prof. Mahmut Ak, Istanbul University  
Prof. Ali Ekber Akgün, Gebze Technical University  
Assist. Prof. Elife Akiş, Istanbul University  
Prof. Hüseyin Aktaş, Manisa Celal Bayar University  
Assoc. Prof. Laith Al Any, National University  
Dr. Samah Al Sabbagh, Carnegie Mellon University  
Anwar Al Said, UN Educational, Scientific and Cultural Organization (UNESCO)  
Jasmin Alam, University of New Brunswick  
Assoc. Prof. Erkut Altındağ, Beykent University  
Prof. Sumru Altuğ, Koç University  
Prof. David Anderson, Eastern Michigan University  
Wieke Ankersmit, University of Applied Sciences Saxion  
Prof. Sudi Apak, Beykent University  
Prof. Ersan Aslan, Ministry of Science, Industry and Technology  
Prof. Erhan Aslanoğlu, Marmara University  
Prof. İzak Atiyas, Sabancı University  
Assist. Prof. Erdal Aydın, Çanakkale Onsekiz Mart University  
Assist. Prof. Zafer Aykanat, Ardahan University  
Assoc. Prof. Ahmet Faruk Aysan, Boğaziçi University  
Prof. Bünyamin Bacak, Çanakkale Onsekiz Mart University  
Prof. İrfan Başkurt, Istanbul University  
Prof. Thomas A. Bauer, Vienna University  
Prof. Adam Bednarek, International Researches Academy  
Prof. Smail Berrah, Bejaia University  
Prof. James E. Berry, Eastern Michigan University  
Prof. Abdelkader Boukourt, Mostaganem University  
Mehmet Büyükeksi, Turkish Exporters Assembly (TİM)  
Prof. Emrah Cengiz, Istanbul University  
Prof. Frances Chang, Macquarie University  
Dr. Ruxandra Ciulu, FEAA, Alexandru Ioan Cuza University  
Assoc. Prof. Mauro Costantini, Brunel University  
Prof. Ünal Çağlar, Kırklareli University  
Prof. Ahmet Kemal Çelebi, Manisa Celal Bayar University  
Murat Çetinkaya, Central Bank of the Republic of Turkey - TCMB  
Haydar Çolakoglu, TEB Holding Corp.  
Dr. Dirk De Vos, Vives University College, Katho  
Dr. Antonio M. Del Carmen, Anteneo de Manila University  
Dr. Mirjam Dibra, University of Shkodra  
Prof. Seyhun Doğan, Istanbul University  
Prof. Suut Doğruel, Marmara University  
Prof. Fuat Erdal, Istanbul Technical University  
Prof. Halis Yunus Ersöz, Istanbul University  
Assoc. Prof. Nizar Farjou, Monash University

Prof. Jan Fidrmuc, Brunel University  
Prof. Jarko Fidrmuc, Zeppelin University  
Prof. Bülent Güloğlu, Istanbul Technical University  
Assist. Prof. Volkan Hacıoğlu, Istanbul University  
Prof. Rolandy Hayn, Aix-Marseille University  
Assoc. Prof. Elif Haykır Hobikoğlu, Istanbul University  
Dr. John M. Heffron, Soka University of America  
Prof. Ahmet İncekara, Istanbul University  
Prof. Himmert Karadal, Aksaray University  
Eyyüp Karahan, Istanbul Metropolitan Municipality (İBB)  
Prof. Halim Kazan, Istanbul University  
Assoc. Prof. Hülya Kesici, Istanbul University  
Prof. Halit Keskin, Yıldız Technical University  
Prof. Fatma Gülay Kırbaşlar, Istanbul University  
Assoc. Prof. Cüneyt Kılıç, Çanakkale Onsekiz Mart University  
Assist. Prof. Burcu Kılınç Savrul, Çanakkale Onsekiz Mart University  
Indre Knyviene, Kauno Kolegjia  
Prof. Anil Kumar Bera, University of Illinois  
Assoc. Prof. Serdar Kurt, Çanakkale Onsekiz Mart University  
Prof. Derman Küçükaltan, Istanbul Arel University  
Assoc. Prof. Burak Küntay, Bahçeşehir University  
Dr. Kornelia Lazanyi, Obuda University  
Dr. Peggy Liggitt, Eastern Michigan University  
Assoc. Prof. Nur Nacar Logie, Istanbul University  
Prof. Mehmet Marangoz, Muğla University  
Dr. Edgar Meyer, University of Southampton  
Prof. Kerry McCluskey, University of Quisland  
Prof. Eldin Mehiç, Sarajevo University  
Prof. Sedat Murat, Istanbul University  
Prof. Suat Oktar, Marmara University  
Renato Operti, UN Educational, Scientific and Cultural Organization (UNESCO)  
Assoc. Prof. Volkan Öngel, Beykent University  
Assist. Prof. Ali Şahin Örnek, Çanakkale Onsekiz Mart University  
Prof. Oya Özçelik, Istanbul University  
Mustafa Özan, Gelişim University  
Prof. Süleyman Özdemir, Onyedi Eylül University  
Prof. Neslihan Özkan, Bristol University  
Assoc. Prof. Fatma Özkul, Bahçeşehir University  
Prof. Emine Nur Özkan Günay, Boğaziçi University  
Assist. Prof. Mehtap Özşahin, Yalova University  
Assist. Prof. Hanifi Parlar, Istanbul Commerce University  
Assoc. Prof. Noemi Piricz, College of Dunaujvaros  
Oksana Popovych, University of Applied Sciences Saxion  
Prof. Edwin Portugal, The State University of New York  
Dr. Merijn Ritmeester, University of Applied Sciences Saxion  
Prof. Cem Saatçioğlu, Istanbul University  
Prof. Joana Salazar-Noguera, University of the Balearic Islands  
Prof. Burak Saltoğlu, Boğaziçi University

Dr. Hanane Sarnou, Mostaganem University  
Assist. Prof. Mesut Savrul, Çanakkale Onsekiz Mart University  
Prof. Serdar Sayan, TOBB University of Economics and Technology  
Prof. Francesco Scalera, University of Bari  
Dominique Schreurs, University of Leuven  
Musa Schteiw, University of Jordan  
Alma Sehic, University of Applied Sciences BFI Vienna  
Prof. Osman Senemoğlu, Galatasaray University  
Prof. Esra Siverekli, Harran University  
Assoc. Prof. Canan Sokullu, Bahçeşehir University  
Assoc. Prof. İlyas Sözen, Beykent University  
Prof. Adem Sözüer, Istanbul University  
Assist. Prof. Donald Staub, Işık University  
Assist. Prof. Selva Staub, Haliç University  
Prof. Daniel Stavarek, Silesian University in Opava  
Dr. Marco Strijks, University of Applied Sciences Saxion  
Prof. Sefer Şener, Director of Technology and Industry Department of Economics, Istanbul University  
Assist. Prof. Sabri Sami Tan, Çanakkale Onsekiz Mart University  
Prof. Dilek Teker, Işık University  
Prof. Suat Teker, Işık University  
Assoc. Prof. Yusuf Tekin, Undersecretary of Ministry of National Education  
Dr. Victor V. Timchenko, Herzen State Pedagogical University of Russia  
Prof. Luis Felipe Torres Gomez, Tecnologico de Monterrey  
Assist. Prof. Çiğdem Börke Tunalı, Istanbul University  
Assoc. Prof. Ayhan Uçak, Trakya University  
Assoc. Prof. Suat Uğur, Çanakkale Onsekiz Mart University  
Prof. Ercan Uygur, Ankara University  
Prof. Cevahir Uzkurt, Ministry of Science, Industry and Technology  
Assoc. Prof. Beliz Ülgen, Istanbul Commerce University  
Jozsef Vago, College of Dunaujvaros  
Prof. Freiderikos Valetopoulos, Poitiers of University  
Dr. A.P. Van Den Heuvel, The Hague University  
Dr. Burçak Vatansever, Bahçeşehir University  
Dr. Nico Vloon, University of Applied Sciences Saxion  
Dr. Barbara Waldhauser, University of Applied Sciences BFI Vienna  
Prof. Julius Waller, High Level Group, European Union  
Prof. Felicia L. Wilczenski, University of Massachusetts Boston  
Assoc. Prof. Murat Yalçıntaş, Istanbul Commerce University  
Assoc. Prof. Xin Yao, University of Colorado  
Assoc. Prof. Figen Yıldırım, Istanbul Commerce University  
Assist. Prof. Tayfun Yıldız, Ardahan University  
Assoc. Prof. Selman Yılmaz, Istanbul University  
Hasan Yılmaz, Affiliates Manager of IBB  
Assoc. Prof. Yusuf Yiğit, Çanakkale Onsekiz Mart University  
Assoc. Prof. Kadir Yıldırım, İstanbul University  
Assist. Prof. Mustafa Yurtadur, Gelişim University  
Prof. Tarik Zaimoviç, Sarajevo University  
Prof. Cemal Zehir, Yıldız Technical University

## 2. Physical and Engineering Sciences

Prof. Bayram Akça, Muğla University  
Prof. Ersan Aslan, Ministry of Science, Industry and Technology  
Dr. Hayri Baraçlı, Secretary General of İBB  
Prof. Smail Berrah, Bejaia University  
Prof. Mehmet Bilgin, Istanbul University  
Prof. Abdelkader Boukortt, Mostaganem University  
Prof. B. Sıddık B. Yarman, Istanbul University  
İhsan Faik Çıtak, İstanbul University, TTO Manager  
Hakan Çoban, Istanbul Chamber of Industry  
Yasin Erol, İstanbul University, Teknokent Manager  
Prof. Stefano Fanti, University of Bologna  
Prof. Rolandy Hayn, Aix-Marseille University  
Prof. Arzu İmren, Istanbul University  
Prof. Erol İnce, Istanbul University  
Prof. Kouroush Jenab, Embry-Riddle Aeronautical University  
Prof. Alok K. Verma, Old Dominion University  
Prof. Valtteri Kaartemo, University of Turku  
Ahmet Karaman, General Manager of Turkish Technic  
Prof. Metin Orhan Kaya, Istanbul Technical University  
Prof. Muhammah Khan, Effat University  
Assist. Prof. Sam Khoury, Athens State University  
Prof. İsmail Kırbaşlar, Istanbul University  
Assoc. Prof. Maria I. Klapa, University of Maryland  
Prof. Şefik Kurultay, Tekirdağ University  
Prof. Iwona Maciejowska, Jagiellonian University  
Prof. Kerry Mclluskey, University of Queensland  
Prof. Metin Orbay, Amasya University  
Prof. Rosemary Papa, Northern Arizona University  
Prof. India Plough, Michigan State University  
Dr. Goudarz Sadeghi, University of Tehran  
Prof. Şakir Sakarya, Balıkesir University  
Prof. Joana Salazar-Noguera, University of The Balearic Islands  
Jill M. Sparks, Asheville-Buncombe Technical Community College  
Prof. Mümin Şahin, Trakya University  
Dr. Sabahattin Şen, Istanbul Sanayi Odası  
Prof. İzzet Şener, Kastamonu University  
Prof. Osman Şimşek, Tekirdağ University  
Prof. Süleyman Tanyolaç, Istanbul University  
Prof. Madjid Tavana, La Salle University, Philadelphia  
Halil Tokel, General Manager Consultant of Turkish Technic  
Dr. Kadir Topbaş, Mayor of Istanbul Metropolitan Municipality in Turkey  
Prof. Freiderikos Valetopoulos, Poitiers of University  
Dr. Patrick van der Duin, TUDelft, Delft University of Technology  
Prof. Atilla Yaprak, Wayne State University  
Prof. Ece Yaprak, Wayne State University  
Prof. Muzaffer Yaşar, Istanbul University  
Prof. Ahmet Yeşil, Istanbul University  
Prof. Yuda Yürüm, Sabancı University  
Prof. Ali Zaoui, Sidi Belabbès University

**ISTANBUL UNIVERSITY  
2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY,  
INNOVATION AND ENTREPRENEURSHIP**

---

---

**ORAL PRESENTATIONS**

---

---

OP-001

**Regional Analysis of The Effect of Employment in Science and Technology Intensive Sectors on Inequality and Growth**

Metin Toprak<sup>1</sup>, Yüksel Bayraktar<sup>1</sup>, Ayfer Özyılmaz<sup>2</sup>  
<sup>1</sup>Industry and Technology Economics/ Faculty of Economics, Istanbul University, Istanbul/ Turkey  
<sup>2</sup>Department of Economics, Gümüşhane University, Gümüşhane, Turkey

Technology and human capital are among the leading factors in Regional inequality and regional growth. Technology and human capital which have dual structure on the economy have a decisive role both on growth rate and inequality. Technological development affects growth and inequality with different transmission channels. In relation to technology-growth, the growth process is accelerating with the interaction of technology and human capital by increasing productivity and production in the economy. In relation to technology-inequality, With technology, the need for skilled labor is increasing and wage differentials are growing between skilled and unskilled labor. When technology, growth and inequality are evaluated as a whole, in the first stage of technological developments, the need for skilled labor is increasing; this process further deepens general inequality by increasing the wage inequality between skilled and unskilled labor. with the spread of science and technology, knowledge and skill level is spreading community-wide and economic growth is accelerating. The aim of the study is to analyze the impact of science and technology-intensive sectors of employment on inequality and growth at regional level. In this context, firstly, the theoretical framework of the effect of technology on growth and inequality will be discussed. Afterwards, the impact of science and technology-intensive sectors of employment on inequality and growth will be analyzed with panel data econometrics using level 1 data between 2008 and 2015 in Turkey. In the regional growth analysis, per capita regional GDP will be used as dependent variable while the regional inequality analysis, the regional gini will be used. According to the results of the study, skilled labor in the science and technology intensive sectors increases both regional growth and regional inequality.

OP-002

**Investigation of the Relationship Between Technological Development and Economic Growth: Analysis of OECD Countries**

Elif Erbelet  
 Halic University, Department of Banking and Insurance, Istanbul, Turkey

Purpose: This study aims to show that relationship between technological development and economic growth using empirical methods. For this purpose, as an indicator of technological development; research and development expenditures (GERD) has been used and as an indicator of economic growth, Gross Domestic Product Data (GDP) has been used.

Methods-Materials: Today, there have been many studies that examine the relationship between technological developments and the economy. Academic studies have examined in both theoretical and empirical dimensions, and there are certain inferences. In this study, the relationship between GERD and GDP was investigated OECD country for the period of 1981 to 2014. In this direction has been accomplished time series analysis using annual data set the World Bank and the OECD database. To this paper related issue have been evaluated using econometric methods. In advance the series of classical unit root tests were applied and then used Lee and Strazicich unit root test which allowing for one structural breaks in series and Gregory & Hansen (1996) one structural break cointegration test.

Finding and Results: As a result of the research, it is found that the series contains unit root and inspected are stationary in first-order. and than Lee and Strazicich unit root test have show that break points and Gregory & Hansenn co-integration test have no co-integration relationship between GERD and GDP.

OP-003

**Sectoral Development of ICT For Care**

Hatice Reyhan Özgöbek, Güber Can Vural  
 Ministry of Family and Social Policies

Because of disability and or aging or illness people need long term care services in specific part of their life. Health and social care burden is increasing day by day in the world and our country. These services are home care, daily care, residential care, nursing home and paliative care services. These services are provided elderly people by formal and informal caregivers. According to World Health Organization and OECD's datas while care burden is increasing, cost of care is increase, too. For this reason, using ICT technologies in care services is an important issue that cost of care services can minimize by using this technologies in care. To illustrate, following individual diabete rate by far, home security systems for Alzheimer, easy use technological products for elderly people. Because these products are popular for people who every aged and from different socio-cultural levels that they need them. In Turkey, there are techno-parks and entrepreneurs that work in ICT for care. Nowadays, little part of consumers use ICT for care in home care services&mobile health care. In Turkey, families are caregivers in long term care services system mostly. Ministry of Family and Social Policies deliver instituonal care services to 45 thousand people, social aids for informal care to 500 thousand people. Ministry of Health deliver home health care services to 300 thousand people. For increasing access of care services, families should be supported by ICT. Thus, existence structure will be sustainable care and helath and social care expenditures will decrease. There is need of feasibility study in ICT for care in our country. To sum up, using of ICT for care provide spreading of all care services models and relevant sectoral development.

OP-004

**A Positive Contribution of Technological Spending to Economic Growth (The Case of Turkey)**

Gümrah Can Başdağ<sup>1</sup>, Kenan Koç<sup>2</sup>  
<sup>1</sup>Finance Department, Faculty of Economics and Administrative Sciences, Kilis 7 Aralık University, Kilis, Turkey  
<sup>2</sup>Business Administration, Faculty of Economics and Administrative Sciences, Kilis 7 Aralık University, Kilis, Turkey

The positive and significant contribution to economic growth is an undeniable fact that labor, fixed capital investment and level of human development. Moreover all these factors, r&d activities spending increased exponentially in recent years, It proved to give a contribution to economic growth together with analysis results. Economy of Turkey is draw the graph in terms of economic growth how it fluctuating growth. The economy of Turkey incorporates multiple variables. Also R & D spending represents a relatively new area can be counted among these variables. Moreover It has increased over the years its share in GDP R & D spending has increased in from 0.6% to 1.06% in the decade from 2006 to 2016. R & D spending show the effects of the economy is difficult alone. Nevertheless, high-tech products and the products of export, health spending, per capita income of all foreign direct investment and the increase in capital stock has improved thanks to technological spending. Technology spending is to create a dynamo effect. This give rise occurs in more than one variable. Thus showed more clearly the effect of arginine for growth.

OP-006

**The Relationship between Innovation and Economic Growth: Evidence from Newly Industrialized Countries**

*Mehmet Sabri Topak*

*Department of Business Administration, Faculty of Economics, Istanbul University, Istanbul, Turkey*

This study examines the relationship between innovation, research and development (R&D) expenditures, and economic growth in newly industrialized countries during the period between 2000 and 2015. Using yearly data from 10 newly industrialized countries, a balanced panel data set has been constructed to which the Swamy's Random Coefficients Model has been employed. Four models have been used with per capita economic growth as dependent variables. According to the general results, number of patents, number of researches engaged in R&D activities and the ratios of research and development expenditures to gross domestic products (GDP) have positive effect on economic growth. Based on the results on individual countries, innovation and R&D expenditures have been found to have a positive impact on economic growth in each of 10 countries.

OP-007

**The Role of Transformational Leadership in Fostering Organizational Creativity and Innovative Culture**

*Reem Al Mansoori, Muammer Koç*

*college of science and engineering, HBKU, Education City, Doha, Qatar*

Late in the twentieth century, most developed countries have moved to innovation-driven economies where countries, organizations and firms started to place innovation as part of their strategic plans mainly for continued and increased sustainable economy as well as for public recognition (Porter, 1990). The increasing importance of creativity as well as innovation, discovery and inventiveness of organizations as they are moving from industrial to knowledge based economies hold a number of advantages including competitiveness, continuity and long-lasting benefits (Morris, 2007). For these reasons, innovative culture should be studied, built and fostered in all types of organizations. The role of human factor, represented in leadership, in fostering the culture of change towards creativity and innovation, is a crucial one. The leadership is considered as one of the most important factors in shaping not only the financial profitability, operational excellence in organizations but also the innovative culture (Correa, Morales and Pozo, 2007). The transformational leadership, in specific, have approved its effect and strong influence on the organizational learning, which as a consequence, affect the innovative outcomes directly and indirectly. In this study, the author is discussing the basic elements of transformational leadership identified by Bass in 1985, which are the Idealized Influence (II), the Inspirational Motivation (IM), the Intellectual Stimulation (IS), and Individualized Consideration (IC) and their relation to promoting the innovative culture. These main elements will be linked to practical behaviours a leader can apply in the workplace, like face-to-face communication, questioning assumptions, taking risks, optimism and others. The outcome of this study is a set of quantitative and qualitative indicators selected and created to determine and monitor the leadership performance to build and foster the innovative culture within organizations, which is the result of integrating the main elements of transformational leadership identified by Bass with the practical behaviours.

OP-008

**Analysis of The Changes In Consumers' Behaviours In The Periods of Economic Crisis**

*Ümit Bozoklu, Merve Yanar Gürce*

*Istanbul Gedik University*

With the expansion of the 2008 global economic crisis from the finance sector to the real sector, the private segment deferred consumption and investment spending and all economies experienced shrinking in demand. Income, prices of products and services, socio-cultural structures such as consumer preferences and general economic conditions of the time are main factors that effect consumer behaviours. The subject of this study is to test whether or not the 2008 crisis caused change in consumers' consummatory behaviours with linear/non-linear time series or panel data econometric methods using the micro data that were created by Turkish Statistical Institute.

OP-009

**The Study of The Impact of E-Commerce Activities on Firm Value and The Relationship Between E-Marketing and Firm Value**

*Mustafa Yurttadur, Cansu Türker*

*Department of Management, İstanbul Gelişim University, İstanbul, Turkey*

In this study, the effects of e-commerce activities on firm value regarding tangible and intangible assets are examined. While tangible assets contain profit, revenue, and sales, intangible assets contain online marketing activities, advertisements, brand equity, and customer equity. Financial statements are analyzed for determining tangible assets. E-marketing activities are taken into consideration as intangible assets and whether these activities affect firm value or not are analyzed. These approaches and calculations are brought together to state firm value in terms of both customer based and firm based point of views. Marketing and e-marketing activities, which add value to a firm, should be taken into consideration during decision making process. Therefore, calculating the value of marketing and e-marketing activities in financial statements is useful for both finance and marketing specialists. Accordingly, in this study, the firm value before and after launching e-marketing activities as well as the change among the factors which add value to a firm are analyzed in detail. The relationship between firm value and the predetermined data of e-marketing activities is analysed. The measurement of marketing and e-marketing activities in literature is either customer based, which adopts the marketing point of view, or firm based, which adopts the financial point of view. On the other hand, the aim of this study is to analyze both of these views simultaneously. The study first dwells on the factors which affect firm value and shareholder value, and then on whether there is any difference between the factors before and after launching e-marketing activities.

OP-010

**Why Companies Go Positive Marketing Innovations: A New Theoretical Prototype For 4Ps of Innovation**

*Ali Ekber Akgün<sup>1</sup>, Halit Keskin<sup>2</sup>, Hayat Ayar<sup>1</sup>, Tuba Etiioğlu<sup>2</sup>*

*<sup>1</sup>Science of Strategy, Faculty of Business Administration, Gebze Technical University, Kocaeli, Turkey*

*<sup>2</sup>Department of Business Administration, Faculty of Economics and Administrative Sciences, Yıldız Technical University, İstanbul, Turkey*

Changing customer demands and expectations, shortening technology and product life cycles, increasing competitive pressures force firms

to develop and then implement marketing strategies in general and “positive marketing practices” in particular to become more successful in their innovation activities (Stoeckl and Luedicke, 2015). In this respect, researchers have paid increasing attention to the concept of “positive marketing”, which refers to any marketing activity that create value for the firm, its customer, the society at large (Gopaldas, 2015), in the innovative marketing literature (Mittelstaedt et. al. , 2015).

Given the importance of positive marketing practices to firms’ innovations and performance, such as strengthening the loyalty of customers and society and leveraging firms’ competitive advantages by maximizing the mutual benefit for consumers, firms and society (Bublitz and Peracchio, 2015), researchers have highlighted a variety of positive marketing practices to enhance firms’ innovations, including material-meaning innovation (a reconfiguration of a product/service with more environment-friendly and humanitarian materials), practice innovation (an original assemblage of existing/new materials, meanings, competencies) (Gopaldas, 2015). Nevertheless, what a positive marketing practice is comprised of is still missing in the literature (Lerman and Shefrin, 2015). Also, while the role of positive marketing practices on two patterns of innovation (i. e. material-meaning and practice) has been mentioned in the literature (Gopaldas, 2015), their role was not argued on the four levels of innovation (i. e. product, process, position, paradigm).

Accordingly, this article will make two conceptual advances toward a theory of positive marketing in the innovation context. First, the article will recognize what constitute positive marketing practices are in contrast to other innovative marketing concepts. Second, the article will elaborate on how positive marketing practices work on the four levels of innovation. We will present a conceptual model that aids researchers and marketers in describing positive marketing practices for the four types of innovation.

**OP-011**

**Effects of Institutionalisation Factors and Benchmarking Techniques on the Firm Performance in Turkish Family Companies**

*Zeynep Coşkun, Erkut Altındağ  
Beykent University*

In this study, the effects of institutionalization factors and benchmarking techniques in Turkish family companies providing service in the food sector on firm performance were put forward with a literature survey. A survey was applied to the employees of family companies providing service in the food industry by using a seven-point Likert-type scale consisting of 56 questions, and 160 surveys were evaluated. The survey results were evaluated in the light of the reliability analyses of the answers, factor analyses, correlation analyses, and regression analyses by using SPSS. The effects of institutionalization, sustainable management, and benchmarking on company performance were determined with the applied analysis technique. As a result, it was determined that institutionalization and benchmarking techniques have a significant impact on the firm performance.

**OP-012**

**Persuasive messages and emotional responses in social media marketing**

*Halit Keskin<sup>1</sup>, Ali Ekber Akgün<sup>2</sup>, Hayat Ayar<sup>2</sup>, Tuba Etiioğlu<sup>1</sup>  
<sup>1</sup>Yıldız Technical University, Turkey  
<sup>2</sup>Gebze Technical University, Turkey*

Social media marketing (SMM) deals with interactions and collaborations among users through sharing user-generated contents and the timely exchange of news/information, focuses

on the contents that attract users’ attention, highlights social media applications and platforms such as blogs, social networking sites, wikis, to generate synergistic effects (Vries et. al. , 2012). In this study, we specifically focus on the “social networking sites” (SNSs) aspect of social media channels in the SMM context. The concept of SNSs, which is defined as web-based services to communicate informally with others, find people, and share similar interests (Dahnil et. al., 2014), has become enormously popular with millions of users on popular sites. Nevertheless, while most studies in the SMM literature have discussed or investigated the impact of marketing activities on SNSs at the firm level (Kim and Ko, 2010), little is known about the impact of persuasive messages in SNSs on user’s emotional and behavioral responses. In addition, although the Elaboration Likelihood Model (ELM) is the most popular and useful theory of persuasion researchers often use regarding behavioral changes among message receivers, ELM studies in SMM are still new in the literature. We also observe that SMM studies about ELM are mainly descriptive; they provide no theoretical foundation and do not empirically analyze how persuasive messages can influence users’ emotional and behavioral responses in SMM activities. Therefore, to enhance ELM theory in SMM, the aim of this study is to empirically test the effect of using persuasive messages on users’ emotional and behavioral responses. Our findings show that (1) argument quality, post popularity and post attractiveness are related to sympathy, (2) sympathy is associated with empathy, (3) sympathy mediates the relationship between persuasive message variables and empathy, (4) emotional responses influence behavioral intentions.

**OP-013**

**Optimal Policy Instrument Selection in Monetary Policy: Endogeneity of Money Supply**

*Abmet Incekara, Akmyrat Amanov  
Economic Policy Department, The Institute of Social Sciences, Istanbul University, Istanbul, Turkey.*

Nowadays, the central bank’s primary objective is price stability which is defined as low and stable inflation. The central bank has to fulfill some institutional and operational conditions to achieve this goal. One of the operational conditions is the selection of the appropriate policy instrument to implement the monetary policy. The central bank can choose interest rate or monetary base as policy instrument according to these criteria: (1) the instrument should be observable and measurable, (2) the instrument should be controllable, and (3) the instrument should have a predictable effect on final target. The main question of this paper is whether the monetary base the optimal instrument. The choice of monetary base as a policy instrument is dependent on the exogeneity of money supply, which means that the money supply is controllable by monetary base. Although there have been many empirical studies on this subject, no compromise has been reached. Post Keynesian and institutional economists argue that money supply is endogenously determined by credit demands and financial innovations, thus money supply is unpredictable and money supply targeting strategy cannot be used. On the other hand, monetarists argue that money supply is exogenously determined by central bank; hence money supply targeting strategy can be used to provide price stability. This paper investigates endogeneity of money supply of Turkey from year 1990-2016 using Johansen cointegration test. As a research method, the Johansen cointegration test and error correction model is used to show long-term relationships and causality between variables, and Granger causality test is used to examine short-term causality between the variables. Significance of empirical findings according to these tests is questioned both statistically and theoretically. As a result, a recommendation has been made whether the CBRT should use monetary base as an instrument.

OP-014

**Efficiency of The Minmax Portfolio on The European Capital Market - Can We Beat The Market**

Almira Arnaut Berilo<sup>1</sup>, Azra Zaimovic<sup>2</sup>, Mirza Sikalo<sup>3</sup>

<sup>1</sup>School of Economics and Business University of Sarajevo Department for Quantitative Economics, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

<sup>2</sup>School of Economics and Business University of Sarajevo Department of Finance, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

<sup>3</sup>School of Economics and Business University of Sarajevo, University of Sarajevo, Sarajevo, Bosnia and Herzegovina

This paper presents game theory approach for solving problem of the optimal investment portfolio selection. We have formed a quantitative model where the investment is presented as a non-cooperative normal-form game a two player zero-sum. Model was formed on the basis of historical returns on stocks presented as a matrix of payments. The goal is seeking the minimum between the largest potential losses, and therefore it is called minmax model. Unlike Markowitz mean-variance (MV) model, which is essentially quadratic programming model, this model provides linearization and simplification of the problem of optimizing the portfolio. An important feature of the model is that it does not take into account the standard deviation as a measure of risk. The measures of risk are maximum losses. Therefore, this model is by many characteristics different from the MV model which we have used for comparison. The main objective of this paper is to answer whether the minimax model tool performs better than the stock market index, and to verify the relationship between the established MV efficient portfolios and minmax optimum portfolio. We use data from the European capital market and Euro Stoxx 50 index as a reference index. The model was created based on the observed changes of returns in the period 2004-2015, which we divided into two parts. We compared and analyzed the performance of the portfolios created through minimax model with the performance of market index and MV model in the actual investment period and it proved to be dominant and more successful.

OP-015

**An Investigation of Self-Service Technology (SST) of Participation Banking in Turkey**

Waleed Mango<sup>1</sup>, Büşra Mücceldil<sup>2</sup>, Oya Erdi<sup>2</sup>

<sup>1</sup>Kuveyt Türk Bankası / İstanbul

<sup>2</sup>Gebze Technical University / Kocaeli

Scholars and practitioners have recognized the importance of the advent of technology and information technology in various industries such as supermarkets, banks, health sectors for surviving. Self-service technology (SST) is the one of the important usage of technology in service organizations -particularly in banking industry-. Self-service technology indicates the technological interfaces which provides a service independent of direct service employee involvement (Meuter et al. , 2000). For example, banks use automated teller machines (ATM), Internet, mobile services, interactive voice response (Lin and Hsieh, 2011). SST's are used by customers nearly 40 years however, some customers do not prefer especially young generation use very commonly. SST provide advantages both customers and organizations. For instance, from organizational perspective, directing customers to using SSTs like internet banking helps banks become more cost efficient and productive (Yusuf & Lee, 2015); or ATMs that help reduce operational costs (Tunay & Tunay, 2015). From the customer perspective, customer to engineer the process and guide to whatever s/he expect from a banking service and find enjoyable and fun to use (Dabholkar, 1996). Therefore, the aim of this study is to investigate one of the available SST, i. e. namely XTM which is a new type of technology -an advanced type of VTM- in participation banking. We follow Lin and Hsieh (2011) and used 20-item seven

dimensions SSTQUAL which includes functionality, enjoyment, security, assurance, design, convenience and customization. Moreover, the study contributes the positive effects of SST on satisfaction and loyalty among customers of the Kuveyt Turk Participation Bank which is the only bank to use the XTM technology.

OP-016

**A Study on Financial Aspect of Traditional Food Shopping Via Social Media**

Derya Sari<sup>1</sup>, Mustafa Yurttadur<sup>2</sup>

<sup>1</sup>Business Administration, İstanbul Gelişim University, İstanbul, Turkey

<sup>2</sup>Institute of Social Sciences, İstanbul Gelişim University, İstanbul, Turkey

In recent years the efforts of raising awareness of balanced and healthy nutrition in all over the world and in our country have made a successful impact on public. With this awareness and the need to live a longer and healthier life people tend to consume trusting, natural, additive free, healthy, and traditional food. However living conditions make it impossible for people to make traditional foods themselves therefore people are inclined to buy them. Nowadays, traditional food shopping via social media is gradually increasing. In order to meet the demand of traditional food, satisfy the need of consumers and turn this situation into an opportunity numerous micro entrepreneurs use social media (Facebook and Instagram). This research aims to study the importance of social media shopping of traditional foods and the importance of financial aspect of the said shopping. In order to realize this aim, contents were completed and the relationship between literature and contents was promoted with primary work. With conceptual framework, hypothesis of the research has begun to develop. The questionnaire in accordance with this aim provided a research that is primarily about the financial contribution of buying traditional foods via social media to consumers and to the company. The results obtained were evaluated with statistical analysis and tested with hypotheses. According to the analyses, it is found that traditional food shopping via social media provides high financial gain to consumers and companies. It is also ascertained that if the selling rates of the traditional food producers who do marketing via social media increase, their marketing costs decrease and therefore financial profits increase significantly.

OP-017

**The Relationship Between Financial Development and Entrepreneurship**

Duygu Hidroğlu

İşletme Doktora Öğrencisi, Sosyal Bilimler Enstitüsü, Mersin Üniversitesi, Mersin, Türkiye

Entrepreneurship has been one of the most popular topic of recent years due to its continuing dynamism in the Modern Market Economy and its contribution to economic growth. After literature review, it is realized that among many dynamics effecting entrepreneurship, the most effective dynamics of an entrepreneur's movement is financial dynamics. As a result; in many recent studies investigate the financial obstacles and difficulties in the establishment of new companies and commercial entities and emphasize the effect of financial mechanisms on entrepreneurship from country to country. Hence, this study also focuses on this area both to give distinct details and to complete other studies' missing. The purpose of this research is to define entrepreneurship and entrepreneurship concepts in detail, while explaining financial factors and financial mechanisms at the forefront of environmental factors affecting entrepreneurship in the world. Besides, what are the obstacles to entrepreneurship, and how entrepreneurship is influenced by the financial barriers will be explained. Thus, the

aim of this study is to reduce the number of entrepreneurs who are obstructing the economic development of the countries and to close the jobs that cause growth problems to the countries and to increase the entrepreneurship rates of the countries. This study assumes that there is a positive relationship between entrepreneurship and four financial factors which are affordability of financial services, ease of access to loans, venture capital availability, and soundness of banks. In this context, four hypotheses related to these factors will be tested by panel data analysis. While the dataset was being created, problems such as availability of financial data and the prevalence of informality were encountered, but this did not adversely affect the results and effectiveness of the study. This study also has both theoretical and practical implications.

**OP-018**

**Innovation in Financial Markets and Its Impact on Savings**

*Tarana Azimova<sup>1</sup>, Ebubekir Mollaahmetoğlu<sup>2</sup>*

<sup>1</sup>*School of Economics and Management, Khazar University, Baku, Azerbaijan*

<sup>2</sup>*Money, Capital Markets and Financial Institutions Department, Social Science Institute, Istanbul University, Istanbul, Turkey*

Innovation movements, realized by the process of financial liberalization in financial markets, promote financial instruments, intermediaries and institutional diversity. Channeling the idle savings into productive sectors increase the fund margin of households and entrepreneurs facing financial squeeze. Financial innovation augment the investment alternatives of individuals, allowing them to have different investment opportunities in changing economic conditions. The paper analyzes the main determinants of savings in twenty upper middle income, high income non OECD and high income OECD countries for the period of 2005-2014. In this paper, we build different panel data analyses to investigate the determinants of savings. The paper finds that financial diversification is an important lever in the increasing of savings.

**OP-019**

**Competitiveness Analysis of the Turkish Chemical Industry: A Comparison with the Selected European Union Countries**

*Elife Akis*

*Istanbul University, Faculty of Economics*

Chemical Industry, providing input to both investment and consumption sectors, in wide variety of industries from automotive to textile, from information and communication technologies to machinery manufacturing, from iron and steel production to packaging; provides crucial raw materials, semi-products and consumption goods in global scale. In global perspective countries aiming to improve their international competitiveness have to strengthen their chemical industry. The purpose of this study is to analyse the international competitiveness of the chemical industry of five EU member countries (Croatia, Hungary, Latvia, Lithuania, and Poland) and Turkey, which fall into 19 economies that are in the transition stage from 2nd level (efficiency-driven) to 3rd level (Innovation-driven) as stated in the Global Competitiveness Report classifying the countries according to their development levels. This analysis was held according to STIC Rev.4 using the 2007-2015 actual export figures of the chemicals and related products by calculating the Revealed Comparative Advantage – RCA indices explained by Balassa.

**OP-020**

**Investigation of The Relationship Between Cyber Bullying Behaviors and Internet Addiction In Adolescents**

*Gözde Çınar<sup>1</sup>, Utku Beyazıt<sup>2</sup>, Yeşim Yurdakul<sup>3</sup>, Aynur Bütün Ayban<sup>4</sup>*

<sup>1</sup>*Ministry of National Education, Milli Saraylar Kindergarten, İstanbul, Turkey*

<sup>2</sup>*Near East University, Psychology Department, Nicosia, Cyprus*

<sup>3</sup>*Ministry of National Education, İsmail İltis Primary School, Antalya*

<sup>4</sup>*Ankara University, Faculty of Health, Ankara, Turkey*

The benefits of the Internet provides in many areas, especially education and training, are indisputable. However, as well as experiencing every technological development, problems arise from the abuse of technology as well as visible benefits. One of them is using internet addiction. Internet addiction, which has become a social problem worldwide, can be defined as the need to overuse the internet in general, the need for more and more time on the internet, the loss of the importance of the time spent without being connected to the internet, the emergence of extreme nervousness, tension and uneasiness when they are deprived and the gradual deterioration of one's work, social and family life. Developments in technology and widespread use of technology by young people have enabled the use of technology to enforce bullying behaviors that students have shown in schools. The malicious use of information and communication technologies has led to the observation of a tyranny called "cyber bullying" among bullying types among students in schools. Cyber bullying is all of the behaviors which is intentional and repetitive technical or relational damaging behaviors against an individual or group through computer, mobile phone and other communication technologies. Researchs show that young people are the most affected victims of bullying behavior. Thus in this research, it was examined the relationship between internet addiction and cyber bullying behaviors in adolescents. The sample group of the study was comprised of 239 adolescents attending to different high schools in İstanbul. In the study, "Individual Information Form", developed by the authors, was used for the collection of information data about participants, "Internet Addiction Scale" was used to assess internet addiction in adolescents and "Cyber bullying Scale" was used to assess the cyber bullying behaviours. As a result of the research, certain suggestions will be made in regards with the avoidance of internet addiction and cyber bullying in adolescents.

**OP-021**

**Application of Technology Policies in Turkey**

*Hatice Özkurt Çokgüngör*

*Foreign Trade Department, SBMYO İstanbul University, İstanbul*

In the global world, the topic requiring development in technology has a great importance. Countries present very different perspectives in terms of the capacity of producing and obtaining technology. A lot of factors such as geographical position, cultural structure, educational system of the countries lie behind these differences. Technology policies of a country at macro level affect economic growth, efficiency, employment, intercountry income distribution, foreign trade and cyclical fluctuates and economic policy while effects of the same at micro level appear in cost and price structure. Technology policies play an effective role in educational system, understanding of society, social structure, tradition of industry and advanced technology use and habits of production and experience of all of them and a lot of other parameters. Besides, the technology policies applied in Turkey are very important for the activation of the current values. The concept of competition based on producing more consistent policies, accelerating, and with respect to this, rapid technological development for the future from the inferences to be made by examining the policies applied is gaining a new dimension, and the concept of competition based on cheap labor and natural resources is substituted by production technologies competitive in

international markets. Turkey, by closely following the developments regarding technology within the country or in the world, should be able to readjust its technology policy depending on the developments and also provide its technology policies to be forward looking, long and stable. The objective of the study is to reveal how the technological progress will be possible with the progressions in the subtopics to be determined by means of the analysis of the concepts regarding technology and detection of their importance.

**OP-022**

**From Mass Customization to Product Personalization in Automotive Industry: Potentials of Industry 4.0**

*İnanç Kabasakal<sup>1</sup>, Fatma Demircan Keskin<sup>1</sup>, Ketİ Ventura<sup>2</sup>, Haluk Soyuer<sup>2</sup>*

<sup>1</sup>Ege University, Faculty of Economics & Administrative Sciences, Department of Business Administration - Quantitative Methods, Izmir, Turkey.

<sup>2</sup>Ege University, Faculty of Economics & Administrative Sciences, Department of Business Administration - Operations Management & Marketing, Izmir, Turkey.

Having past three main waves of technological revolutions since the late 18th century, we are now at the cusp of the next one, Industry 4.0 which is a popular term that involves a paradigm shift in operations management with utilization of information technologies and cyber-physical systems. These technologies autonomously communicate with each other along the value chain and promises to transform the existing business models. The new business models leads new opportunities in marketing strategy. Big data, cloud computing, mobile computing provide a basis to create new forms of interaction among the customers and firms. Customer preferences have become more prominent in product configuration since mass customization.

Industry 4.0 will potentially enable smaller lot sizes in production, providing a more customer oriented approach in product design. Ideally, one-lot size production will be feasible in the near future in many manufacturing environments. Particularly, automotive industry is one of the leading industries where the customer preferences are considered important and product customization is effectively performed for many years. In this regard, the purpose of this study is to reveal the importance of product configuration in today's automotive industry and to explore the conformance of marketing strategies in automotive industry addressing the personalization and Industry 4.0 concepts. This paper is designed as an exploratory research employing case study method. Interviews are carried out with one of the leading automotive company engages in these technologies. This study is anticipated to be beneficial by contributing to realizing the transformation from mass customization to product personalization.

**OP-023**

**The Impact of Regional Factors on the New Manufacturing Firm Formation in Turkey**

*Mustafa Özer*

*Economics and Finance Department, University of Portsmouth, Portsmouth, the UK, and Kilis Yedi Aralık University, Faculty of Economics and Administrative Sciences, Kilis, Turkey. Email: mustafa.ozero@port.ac.uk.*

Encouragement of new and small firm formation has been thought as the key policy to deal with uneven regional economic development in both developed and developing countries. Therefore, a growing more recent literature has explored the determinants of regional variation in new and small firm starts-ups at regional level since the 1990s, however they mainly focused on developed countries such as the USA, Italy, the UK, and Germany. There are limited numbers of studies for developing countries. In this paper, in order to identify

regional determinants of new firm formation in manufacturing sector, I used data from a developing country, Turkey, in which regional economic development disparities are common. The data was collected between 2004 and 2009 and it is analysed using panel data model. The results showed that entrepreneurship culture, structure of the industry, industry agglomeration overall are the most important factors stimulating the entry rates. However, number of patent application as a supply side variable seem to be the main deterrent of new firm entry by working as fence in front of new firm entry. The average wage and low skill labour in labour force are the other factors that negatively influence new firm formation in demand and supply side of the economy. These results overall suggest that, in Turkey clustering the firms in the same or different sectors accelerates the entry rates by increasing regional spillovers, and this is consistent with the incubator theory. This study showed the important factors which are effective on new firm formation in Turkey, and also revealed the differences between Turkey, as a developing country, and developed countries.

**OP-024**

**Technical and Strategical Approach to the Structure of Procurement Department of a Small/Middle Sized Company (KOBİ) in Turkey and Innovative Implementations / Recommendations from Institutionalized Procurement Structure of a Big Sized Company**

*Mustafa Öztürk*

*Turkcell İletişim Hizmetleri A. Ş.*

This study benchmarks the procurement practice of a small/medium sized company in Turkey with the procurement practice of a world-class company. First it is analyzed from beginning to end how the small/medium sized company operates its procurement function. The figures and graphics are all real and obtained from sources of the company. The results are analysed and compared with a world-class international company. The procurement functions of the company studied under the scope of supply chain management are Demand Planning, Inventory Challenge, Supplier Approval, Supplier Performance, Supplier Relationship Management (SRM), Negotiation, Payment, Cost, Market Follow-up, Process Analyses of the Purchasing Activity, E-Auction and Kraljic Analyses (risk analyses). We have recommended some structural changes to the company especially with the procurement process analyses. Some concepts and practices are new for the company as E-auction and Kraljic analyses. A contemporary understanding of procurement and its practice is a crucial progress and strategic vision for a small/middle sized company to have competitive advantage in the market. All the findings and recommendations for the company within this study which can be called as case study are related to concept of innovation as referring to changing processes or creating more effective processes, products and ideas.

**OP-025**

**"Competition Policy and its importance for the Economy"**

*Nika Asanidze*

*Tbilisi State University*

The article analyzes and discusses topics such as competition and its importance for markets. Competition is a cornerstone of our economic and social order. The fact that competition leads to the best overall economic results is now undisputed in most economies around the world. Effective competition encourages businesses to push forward. They must make an effort to win customers. As a consequence, consumers can benefit directly from better quality at lower prices. Competition Agencies increased the effectiveness of their cartel prosecution efforts, for example by establishing specialized anti-

cartel divisions, revising their leniency programme and launching an anonymous whistle-blowing system. High-level fines can only have a deterrent effect if the cartel members have reason to expect that their cartel activities will be uncovered. The leniency programme as one of the sources available for uncovering anti-competitive agreements this also has a strong deterrent effect. Cartel members must expect at all times that one of them might have reported the illegal agreements to the competition authorities. The prosecution of illegal hardcore cartels is of key relevance for effective competition protection and, as such, has a direct positive effect in the economy and consumers. Cartels cause great harm to the economy because they lead to higher prices, lower product quality and less innovation. This harm can only be prevented if cartels are effectively prosecuted. Also, anti-competitive agreements lead to excessive prices coupled with inferior product quality. At the same time the elimination of competition undermines the innovative power of businesses. Cartels thus hurt the economy as a whole and the consumer in particular. The motivation to study competition policy and its importance for the economy is to step to introduce more economic possibilities and partnerships in our developing world.

**OP-026**

**Investigation of Reasons for Commercialization of Prototypes Reached as a Result of R&D and Innovation Activities and Reasons for Successful and Unsuccessful Commercialization in SMEs: İkitelli Sample**

*Özay Cebeci<sup>1</sup>, Zafer Utlu<sup>2</sup>*

<sup>1</sup>*Small and Medium Enterprise Development Organisation, Istanbul*  
<sup>2</sup>*Istanbul Aydın University, Istanbul*

In economic systems where commercialization of R & D activities is an important problem, it is important for the competitiveness of national economies to determine the extent to which SMEs can commercialize their R & D activities and to determine the reasons for commercialization / non-commercialization and to make proposals for SMEs to achieve successful commercialization.

Within the scope of KOSGEB and TÜBİTAK support, the enterprises that successfully completed an R & D project and reached the prototype were determined. 54 enterprises that carried out the project to commercialize R & D projects within the framework of Industrial Application Support Program have been determined as sample. In the study, which is applied qualitative research design, one of the purposeful sampling methods, extreme and deviant sampling method is used. Companies that have achieved turnover increase, asset increase and employment increase by completing Industrial Application Project have been determined by document examination method. The reasons for commercialization and non-commercialization were researched by structured interview method on enterprises that can and cannot commercialize in these companies. At the end of the R & D and commercialization processes, it was determined that the enterprises did not decrease at least and that the processes they applied in this scope created added value.

It has been seen that the technical viewpoint is dominant in R & D activities. From the beginning of the R & D period, it has been determined that market and marketing oriented analyzes are inadequate. After reaching the prototype, it was determined that businesses focused on new R & D projects rather than professional commercialization. It has been determined that the commercialization process has failed due to the lack of adequate market analysis before the R & D project and the projecting of the existing or replacement products in the market.

**OP-027**

**Technology: Are We Using it, or It Is Using Us**

*Resul Kaya*

*Yakın Doğu Üniversitesi Lefkoşa- Kıbrıs*

Technological developments lead to a level of prosperity as well as to misery. Latest industrial developments also caused serious problems in the economic, social and political context. In today's world, information as well as information technology are of great significance - this will be of increased importance. Our today's sources of information are based on computer technology. Wars between countries are rather made by the power of information as per weapons. While in the past, reduplication of knowledge generation took 4,000 years, today we only need 50 years for it. The accumulation of knowledge leads to new innovations so that technology is today an indispensable factor of our world. This leads to the fact that the world is today a global village. Today, the industry is not able to meet the demand of the information society. Developments in the information technology go hand in hand with the individual context and the fields like governance, industry, economy, social policy and entertainment. The rapid change and development of technology and information caused incorrect use of technology and information as well as the facts of not being able to follow current trends and a great competitive pressure. All the above-mentioned indicators pointed to pressures and stress on people. In addition, the cultural structure and standards are negatively impacted. People and the world suffer from the incorrect use of technology and information. The rapid change of information and the access to these information caused and increased information pollution. People were not able anymore to differ between correct and incorrect information. This information pollution affected the soul and mind of people negatively.

**OP-028**

**Measuring The Technology Achievement Index: Comparison and Ranking of Countries**

*Abmet Incekara, Gülden Şengün, Tuğba Güz*

*Istanbul University, Faculty of Economics, Department of Economics, Beyazit, Fatih, Istanbul*

Countries that can adapt to the pace of technological developments have the human power that can follow and use this speed and turn out to output can have a stronger economy and have a significant competitive advantage in the global arena.

Technology Achievement Index (TAI), which is one of the studies to evaluate the technological performance of countries, classifies countries according to their technological achievements. TAI that originally proposed in 2002 by Desai et al. is a unified index that revealing countries' technological abilities and performance in terms of technology capacity, diffusion of new technologies, diffusion of old innovations and development of human skills.

In this study, technology achievement index of 105 countries is calculated with data for the year 2015. Countries are classified as leaders, potential leaders, dynamic adopters and marginalized countries and analyzed in terms of technology capacities and capabilities.

OP-029

**Types of Information Technology Capabilities and Their Impacts on Competitiveness**

*Zümrüt Hatice Sekkeli, İsmail Bakan  
Kabramanmaraş Süüçü İmam University*

In today's competitive environment, successfully implementing and utilizing the information technologies are crucial to acquire competitiveness. Because of this, firms are focused on IT capabilities. At logistics sector, information capability that expedites the seamless flow of information is a very important factor in further enhancing the efficiency of logistics activities. Therefore Information technology (IT) is one of the most popular technological innovation in the supply chain. IT capabilities have four sub-dimensions as IT infrastructure, IT business experience, IT relationship resources and IT human resources. IT infrastructure, includes communication technologies for firms to share information across varying functions, and react to changes in the market. IT business experience, is a competence to integrate IT strategy and business strategy. IT relationship resources, are abilities to associate IT functions into business units and IT resources. Also, IT human resources represent an organizational resource and capability. This paper aims to examine how four sub-dimensions of IT Capabilities are implemented in practice on the firm competitiveness at the logistics sector. The data was collected from the national industry of logistics service providers associated in the international forwarding associations UND by survey method. 450 surveys were distributed, 428 of them was returned. All data was analysed using SPSS. Regression analyze was used to investigate the effects of the IT Capabilities on the competitiveness. Overall, this study found that: there are significant and positive relationship between four sub-dimensions of IT Capabilities and competitiveness, as expected. Keywords: IT capabilities, IT infrastructure, IT business experience, IT relationship resources, IT human resources, Competitiveness

OP-030

**Innovation in English Language Teaching for EFL Students: Writing Story Activity Using Computational Thinking Process**

*Satria Dijaya<sup>1</sup>, Dede Supriatna Makbul<sup>2</sup>  
<sup>1</sup>South China Normal University  
<sup>2</sup>Northeast Electric Power University*

Writing story for students in English as foreign language classroom is a big challenge. Many of them cannot express their thoughts, opinions, ideas and attitudes. To solve this problem, this study aims to introduce a problem solving process in writing stories through computational thinking (CT) strategy. Students from Curriculum and Teaching Theories department in South China Normal University cohort 2016 were asked to write chapters of a story collaboratively. The writing story process applied four arts of CT: decomposition, pattern recognition, abstraction and algorithm design. At the end, questionnaires were distributed and researchers enrich the data by interviewing participants. The result was analyzed based on Feldman's 4 aspects of perception which are knowledge, experiences, hopes and expectations. The result stated that computational thinking strategy in writing story activity is a good learning strategy which helped students create a storyline, expressed their thoughts and increased their interest in writing. The difficulties were examined and solved by all participants independently. It is believed that the findings emerging from this inquiry will inform our efforts to improve the implementation of English teaching strategy in EFL context.

OP-031

**A Review of the Practice of Porter's General Competitive Strategies in Car Rental Enterprises**

*Bayram Akay  
Kirkklareli University, Faculty of Tourism*

The purpose of this study is to examine the practices of Porter's general competitive strategies (cost leadership, differentiation and focusing) on car rental enterprises in Turkey and to contribute to future studies. The data has been obtained from 200 car rental enterprises operating in Istanbul and Antalya in the research. As a result of the research, it has been revealed that the enterprises applying differentiation, cost leadership and focusing respectively among the competitive strategies are common and there are also enterprises that are trapped between them without choosing any of these strategies. In addition, a difference has been found between the managers' gender, marital status, mission, level of education, educational field, number of branches of the business, number of vehicles and perception of competition strategies. It can be suggested that car rental enterprises will be successful if they implement competitive strategies.

OP-032

**A Novel Business Model Frame for Innovative Startups**

*Dante Jorge Dorantes Gonzalez  
MEF University*

The business model canvas has been used in business and entrepreneurship to sketch and frame the key points behind the development of a startup, and it was meant to strategically analyze and develop startups or documenting existing businesses. The business model canvas describes the firm's value proposition, partners, resources, activities, customer relationships, distribution channels, customers, revenue streams and cost structure. However, when it comes to innovative startups, this template does not explicitly include innovation measures, no problem/opportunity formulation, or even such a basic component of a business model, as the profit formula. The present paper proposes a novel business model frame to visually and concisely sketch, besides a more accurate statement of the traditional business concepts, key innovation concepts that any startup should integrate to be a game-changer in a competitive market. This new model is based on a combination of key principles of the theory of inventive problem solving (TRIZ) applied to business and management, such as multi-screen analysis of value-conflict mapping, trends of ideality of business system evolution positioning, but also intellectual property and open innovation, as well as financial measures to describe the business differentiation and attractiveness to potential investors.

OP-033

**The Relationship Between the Competence Beliefs of School Administrators on Innovation Management and Their Leadership Behaviours**

*Hanifi Parlar  
Educational Sciences, Istanbul Commerce University, İstanbul, Turkey*

The aim of this study is to examine the relationship between the competence beliefs of school administrators on leadership management and their leadership behaviours. Therefore, the answers to the following questions were sought:

1. What are the competence beliefs of school principals on innovation management from the point-of-view of teachers?
2. Is there a significant difference between the competence beliefs of school principals on innovation management in terms of gender, the type of school worked at, branch, the status of education, age and seniority?
3. What is the relationship between the competence beliefs of school administrators on innovation management and their leadership behaviours?
4. Is there any relationship between the dimensions of innovation management and leadership behaviours?
5. Is innovation management a predictor of leadership behaviours?

Method: This study that aims to determine the relationship between the competence beliefs of school administrators on innovation management and their leadership behaviours is a descriptive study in the relational screening model.

The population of the study consists of teachers working in Üsküdar district of Istanbul at the high school level in the 2015-2016 academic year.

Two different assessment tools were used in the study; the "school principals' leadership style inventory" and "Innovation Management at Schools Scale".

Data Analysis: The t-test, one-way variance analysis (ANOVA), Scheffe test, Pearson product-moment correlation coefficient, and simple linear regression analysis technique were used in the study together with descriptive statistics such as arithmetic mean and standard deviation.

Findings and Results: It was observed that the competence beliefs of teachers on innovation management did not vary significantly between female and male teachers by the gender variable, and they also did not vary significantly by the age variable; . . . . .

**OP-034**

**Social Entrepreneurial Intentions: The Role of Gender, Religion and Culture**

*Hüseyin Doluca<sup>1</sup>, Petra Dicke<sup>2</sup>*

<sup>1</sup>*Chair for Management, Innovation and International Business, Faculty of Economics & Business Administration, The University of Augsburg*

<sup>2</sup>*Institute for Innovation Research, University of Kiel*

While the formation of general entrepreneurial intentions has been broadly researched, far less is known about factors that influence the intent to start a social enterprise. This paper focuses on the interaction effects of attitude toward entrepreneurship and socio-demographic and cultural factors on social entrepreneurial intentions. Building on data from 185 students in two countries, results support that the positive effect of attitude toward entrepreneurship on social entrepreneurial intentions is stronger for women and for religious individuals. We do not find those interaction effects for general entrepreneurial intentions. Findings further indicate that an individualistic culture enhances both general and social entrepreneurial intentions. Implications for research and practice are discussed accordingly.

**OP-035**

**The Effect of Personal Characteristics on Entrepreneurship Intention**

*Şakir Mohamed Abdullabi<sup>1</sup>, Ali Şükrü Çetinkaya<sup>2</sup>*

<sup>1</sup>*Selcuk University, Social Science Institute, Business Management, Konya, Turkey*

<sup>2</sup>*Selcuk University, International Trade Department, Konya, Turkey*

Entrepreneurship has a more fundamental role for economies of developing countries for it is viewed as an engine of economic development, job creation and social adjustment. As a consequence new business formation or small business growth is widely encouraged by national economic policies to boost economic growth and wealth creation nationally. Entrepreneurship can be defined as the willingness to take risks and develop or to manage a business venture in a competitive global marketplace that is continuously changing. So, entrepreneurs become innovators, leaders and inventors. To become an entrepreneur, there must be some determinants that control the possibilities and chances in which one can be an entrepreneur. Therefore, this research will try to figure out the influence of individual factors on entrepreneurship comparing between senior and novice entrepreneurs. There has been always the question of: why some people tend to choose entrepreneurial activities yet others do not? According to

the social cognitive theory, individual or personal factors are those of environmental and biological that have an influence on human behavior. Such factors include self-efficacy, education, intelligence, need for achievement, locus of control, and need for autonomy. The purpose of this study is to examine whether individual factors have an impact on entrepreneurship intentions comparing between senior and novice entrepreneurs. The main hypothesis of the study is: H1: Individual factors have an influence on entrepreneurship intention of senior and novice entrepreneurs.

The study is an empirical research and questionnaire will be employed as data collection tool from the industrial enterprises operating in Konya province. A valid return of 425 questionnaires is expected. This is ongoing study and results will be presented in extended abstract.

**OP-036**

**Impact of Financial Innovation Expenditure on Non-Performing Loans**

*Melike Torun*

*Istanbul University, Istanbul*

In this study, the impact of financial innovation expenditures on non-performing loans was examined by using panel data analysis with annual data. For this analysis, 11 countries with the highest financial innovation expenditures was chosen and employed with a 10-year data set covering the period 2003-2013. It is analyzed that in countries with the highest financial innovation expenditures has a negative impact on non-performing loans, whereas in countries with low financial innovation expenditures, the expected impact between non-performing loans and financial innovation could not be determined. Besides, bank-specific variables which might effect the non-performing loans were included to the analysis.

**OP-037**

**The Effect of Retro-Looking Products Oriented Consumer Attitude on Brand Loyalty**

*Baran Arslan, Abdullab Öz*

*Harran University, Faculty of Economics and Administrative Sciences, Department of Business Administration*

With the rapid development of globalization, the transition was made from industry society to information society. This has profoundly influenced economic and social life, and as a result, marketing practitioners have developed alternative methods of reaching consumers. One of these methods is the concept of retro marketing, which is defined as the presentation of a product or service by the producers to the consumers again, which recreates the feelings and aspirations of the past that the individual possesses and recalls. In the study, after examining the concept of retro marketing, it was aimed to determine the effect of consumers' attitudes towards retro-looking products on brand loyalty. The questionnaire prepared for the study was applied to 1036 people who live in İstanbul and consist of clothing consumers, and after the elimination of questionnaires with errors through reviewing, 1022 questionnaires were analyzed. Regression Analysis, Factor Analysis, Reliability Analysis, t-Test Analysis and Anova Test were performed. As a result of the regression analysis, it was concluded that the attitude towards retro-looking products affects the brand loyalty. According to the results of the analysis made to determine whether there is any difference in the attitudes of the consumers towards the retro-looking products in terms of the demographic factors, it is concluded that there is a significant difference in the consumer attitudes according to the gender, age, education status and income. According to the marital status variable, there was no difference in consumers' attitudes towards retro-looking products. According to the results of analyzes conducted to determine whether there is any difference in the brand loyalty of

the consumers in terms of demographic factors, it is concluded that there is a significant difference in brand loyalty according to gender, marital status, age, education status and income.

**OP-038**

**Consumer Privacy in Internet of Things**

*Mehmet Marangoz, Ali Emre Aydın*  
Business Administration, Faculty of Economics and Administrative Sciences, Muğla Sıtkı Koçman University, Muğla, Turkey

The importance of the internet of things (IoT) which is expressed as the ability to send and receive data by connecting daily objects to the internet, is increasing rapidly. IoT refers to things including devices and sensors that can exchange data with or between each other via the Internet. With the development of the use of wireless communication systems, IoT has become more widespread. Although it can be considered as a new technology, it is possible to see its examples in everyday life in several fields. Smart homes, patients remote monitoring, energy consumption control, following up medical information, traffic control and in-home appliances are prominent examples. In order for this technologies to work, a continuous transfer and retrieval of data is required. As a remarkable example of this, according to Federal Trade Commission/FTC (2015) report, a company's IoT home automation product can generate approximately one data point every six seconds for each household. This, on the one hand, demonstrates the strikingness of technology, while on the other, it leads to some question marks about privacy. The monitoring of people's daily activities and recording of data about these activities cause concerns about the privacy of personal data. Consumers are concerned about how and for what purpose the data collected about them is being used. This theoretical study aims to examine privacy from a consumer point of view and in relation to the IoT. Privacy concern can be an obstacle to consumers' adaptation to IoT technologies. Moreover, it also affects consumers' attitudes towards a particular product, brand or business. For this reason, all actors responsible for the development of the IoT must be aware of the importance of consumer privacy. These actors should show sensitivity to the protection of personal data and consumer privacy as well.

**OP-039**

**Exploring Competitive Gaps to Create a "Turkish" Local Search Engine**

*Taşkın Dirsehan<sup>1</sup>, Meltem Ulutan<sup>2</sup>, Alperen Karabacak<sup>3</sup>*  
<sup>1</sup>Marmara University Faculty of Business Administration  
<sup>2</sup>Galatasaray University Institute of Social Sciences  
<sup>3</sup>Marmara University Institute of Social Sciences

Information has become one of the most important resources and a priority for economic growth, the welfare of society, social and cultural advances, further technological development, education and the healthcare system of a country. More specifically, Web portals as a part of this information society are designed for the purpose of collecting data from different sources, analyzing them, producing information from these raw data, and then transferring the information over the Internet. Based on the World Bank records, 43.9% of the world population was using the Internet by the year 2015, and these users make 6.5 billion daily searches on search engines (SEs), which represent a crucial service for a Web portal. The reason behind it is that they enable people to find the data or information quickly when they need it so that people can use their time more efficiently and adapt to the changing environment. In order to keep up with this information-led environment, Turkey is now in need of developing its own search engine. The aim of this research is to discover the gaps that can create competitive advantages for a new local search engine in Turkey that will be established in the global marketplace and to

determine how to position a local search engine brand in the market. For this purpose, a group of 20 people who use Google and Yandex were interviewed using the Zaltman Metaphor Elicitation Technique (ZMET®). The research findings will help us to understand the insights about these SE brands embedded in consumers' (SE users') minds and explore the hidden patterns. The original contribution of this research is that people who use these SEs see them not only as SEs, but also perceive them as an intelligent friend, a tempting home, or even a universe full of information.

**OP-040**

**Apple is Trying to Resolve Many of Their Marketing and Management Problems**

*Ayşe Demir*  
Sport Science Department, Sport Science Faculty, Kocaeli University, Kocaeli, Turkey

This study mainly focusing on Apple marketing, sailing products and Apples customer's feedback. It could be successful in terms of business that innovate from Apple company to its customers yet the most important assets of the organization relationships with the media across all the productions units of apple. However, apple is facing poor human resources and procedures. In this study we are mainly focusing on SWOT analysis which innovates products and diversified portfolio of apple to show the strength and the stability of Apple. It increasing the demands of the products entering new markets that gives the employer new key to make them innovate more and create more. On the other hand, Apple is facing a very poor Human Resource planning as part of recruitment that paved way for dissatisfaction among the employees. In terms of expansion by Apple to Asian markets should be built new markets in China. From the customer's perspective quality and efficient are the most important priorities for them. It's a must that devising marketing strategies meet the stakeholder's expectations. In order to initiate new market in different countries and that is based on two essential elements confidence and propaganda like media advertisement in order to gain a lot of profits and to make balance between the expenses and profit. It is very important point for the stakeholders to get return on their investments (ROI) such as a lot of exports to other countries. So that will be a guaranteed and confidence for both sides stakeholders and employees. In conclusion the market of Apple company is getting better worldwide because of their qualified products that meet the customers' expectations.

**OP-041**

**Investigation of the Relationship Between Organizational Culture and Organizational Commitment; Administrative Staff of Istanbul Commerce University**

*Murat Yalçıntaş, Eda Türkkkan*  
Istanbul Commerce University, Faculty of Business, Department of Business Administration, Istanbul, Turkey

This research was conducted to determine the effects of organizational culture on the organizational commitment of the staff of Istanbul Commerce University. With the hypothesis that the appropriate organizational culture has a positive effect on organizational commitment, research was conducted on the effects of organizational culture on staff behavior, the value-added contributions of the employee motivation to the organization and its effects on the continuity of the organization. Various definitions have been made on organizational culture. According to Dursun, organizational culture is the common norms, behaviors and values that guide the employee behavior (Dursun, 2013). The concept of organizational commitment generally refers to the psychological attachment of the individual to the organization, including commitment to work by fulfilling the duties and responsibilities

given to the employee as defined by the job descriptions, loyalty and believing in organizational values. The long-term survival of the organization and its continuity depend on the long-term employment stability and less employee turnover. The degree of the employee commitment determines the strength of the organization (Çetin, 2004). Organizational culture is among the main elements that strengthen the organizational identity, ensure employee commitment, increase productivity, and create a competitive advantage. A strong organizational culture will influence the organization to continue its existence for many years. Along with organizational culture, the improvement of the social environment within the organization and the employee personal benefits will strengthen the organizational commitment. The study was conducted with Istanbul Commerce University staff using quantitative research methods. In order to increase the employee loyalty, the organizational culture should be formed as the most suitable model for organizational culture. When the most appropriate organizational culture is formed, the organizational productivity, employee loyalty and competitive advantage will also increase.

**OP-042**

**Gift Giving Behaviors of Consumers and an Innovative E-Business Model Suggestion**

*Fabri Apaydın*

*Business Administration, Faculty of Economics and Administrative Sciences, Yalova University, Turkey*

Consumers give each other gifts for various reasons in every culture and they spend considerable amount of time and money on gift giving activity. Thus, gift giving behavior which is a need of consumers to be satisfied deserves a lot of academic studies and in this conceptual paper, gift giving behavior is examined in details after a comprehensive literature review. E-business is exponentially developing and digital marketing is trying to find out solutions for the problems of consumers more efficiently and effectively. In this exploratory research, after analyzing the problems consumers facing when they are trying to satisfy their need of gift giving, an innovative e-business model to coach consumers for their gift giving behaviors is suggested. This paper presents new study areas for academicians and new business opportunities for practitioners.

**OP-043**

**Modern Macroeconomics**

*Özlen Hiç*

*Istanbul University, Economics (in English) Faculty, İstanbul, Turkey*

We attempt to make a comparative evaluation of modern macroeconomic schools: Monetarism and New Classical School based on the Classical System that envisage automatic full employment or natural rate of unemployment (NRU) equilibrium (AFNE or ANRUE) vs. New Keynesian and Post-Keynesian Economics based on the Keynesian System which gives unemployment equilibrium (UNE) or non-automatic NRU equilibrium (NANRUE) due to insufficiency of aggregate demand. In order to determine which school is relevant, first the basic assumptions of these systems are compared: i) rational vs. adjusted vs. heterogeneous expectations, ii) existence of perfect competition in all markets leading to flexibility of prices and wages vs. imperfect competition giving rise to rigidities, and iii) presence or lack of coordination between markets. In the final phase of our evaluations the performance of the developed economies are surveyed to establish whether we meet with AFNE or ANRUE or else UNE or NANRUE; and whether policy prescriptions devised by respective schools solve or alleviate the problem at hand when implemented. Our investigations point out that New Keynesian and Post-Keynesian

schools are more relevant compared to Monetarism and New Classical School. The choice between New Keynesian and Post-Keynesian Economics, however, is more difficult to make although New Keynesian Economics seems more widespread than Post-Keynesian Economics. Objectively, Post-Keynesian assumptions seem more realistic; normatively, however, New Keynesian stands seems more fit to the present day move towards globalization.

**OP-044**

**Efficiency of ICT Development Indicators in OECD Countries**

*Halil Tunalı, Tuğba Güz, Gülden Şengün*

*Istanbul University, Faculty of Economics, Department of Economics, Beyazıt, Fatih, İstanbul*

Information and communication technologies have a strong influence on sustainable economic growth and global competition. The countries that adapt to the speed of these technologies and have skills, infrastructure and accessibility to use these technologies will benefit from the strong influence of ICT. Various analyses, measurements, and comparisons are made to measure this effect.

Information and Communication Technologies (ICT) Development Index prepared annually by the International Telecommunication Union (ITU) is a composite index calculated from eleven indicators to monitor developments in the field of ICT and make the comparison between countries.

In this study, the efficiency of the indicators in the ICT Development Index (IDD) in OECD countries was examined by data envelopment analysis. By evaluating the relative effectiveness of the countries, the efficiency scores and reference values were determined for 2015.

**OP-045**

**The Effectiveness of ICTs in Enhancing Oral Communication for EFL Learners**

*Hanane Sarnou<sup>1</sup>, Dallel Sarnou<sup>2</sup>*

*<sup>1</sup>Hanane Sarnou Abdelhamid Ibn badis University*

*<sup>2</sup>Dallel Sarnou Abdelhamid Ibn badis University*

This research study aims to scrutinize an investigative approach, and quality concepts in oral communication that are well spread at English department of Abdelhamid Ibn Badis university by the use of the new technologies equipments and their emphasis on rapidity to developing oral skill and understanding the nature of youngsters' ICTs use in which EFL learners are involved, interconnected, and multifaceted. Our selected participants were our students in master one and two; they were selected on purpose regarding their familiarity with the use of ICTs in the classroom. To make this work more credible and qualitative, we have used two methods to collect as much data as we needed for our analysis. The methods used were interview and class observation. Eventually, we suggest some recommendations for encouraging communication efficiency for EFL learners in particular and society in general.

**OP-046**

**What Have We Missed in Entrepreneurship Education in Morocco and What Have We Done Right?**

*Najib Hamouti*

*ESITH-Casablanca/Morocco*

My contribution to the panel is about entrepreneurship education in higher education. As a faculty and manager in higher education,

I have experienced many theories, syllabus, and ways of teaching entrepreneurship. I would like to seize the opportunity of the panel to lay bare our successes and failures in this respect. Many questions are raised when dealing with the issue of teaching entrepreneurship. First of all why do we teach it? Is the purpose behind this to enable students to create ventures or are there some latent objectives? Second is what should we teach in terms of skills: designing a business plan? Knowing the legal procedures of setting up a company? Financial literacy? These last words sum up to a great extent what is taught currently in entrepreneurship classes. It is legitimate to question whether this is adequate with the 21st Century spirit and the IT revolution. Finally I would like to defend my idea of how can entrepreneurship be taught more efficiently through involving students with social entrepreneurship projects, start up events, and a sector-oriented entrepreneurship curriculum.

**OP-047**

**Academics Performance in Malaysian Public Universities**

*Rahman Bin Hasbim<sup>1</sup>, Rabimah Binti Shawkataly<sup>1</sup>*

<sup>1</sup>*Institut Pengurusan Teknologi dan Keusahawanan; Fakulti Pengurusan dan Perniagaan*

<sup>2</sup>*Universiti Teknikal Malaysia Melaka; Universiti Teknologi MARA*

<sup>3</sup>*Melaka*

<sup>4</sup>*Malaysia.*

The standard of universities always depend to their excellence and quality of academicians. Academicians normally teach efficiently besides giving full commitment to their respective organisation. Academicians are requested to have a better performance by fulfilling a series of requirements by the universities. For instance, if academicians are not satisfied, they may not be committed to deliver the best. In addition, there is a possibility that their job performance may not achieve the target. These research aims to determine the level of job performance amongst academicians in Malaysian public universities. Since the past few years, the rapid growth in number of universities in Malaysia, has driven management to set a more ambitious ultimate goal. Academicians are requested to have a better performance by fulfilling a series of requirements, such as actively involved in journal publishing. This is in-line with Malaysia quest, that is to be a leading education hub in the Asia region. However, it has been established that academicians remain committed to their chosen vocation and continuously demonstrate commitment to their students despite undertaking increasing workloads, administrative duties and conducting researches. The significance of this study is to contribute benefits to various parties, whether the university, public universities and the state. Results from the study are expected to contribute towards the development of knowledge, especially in the field of human resource development in order to enhance the commitment of the academic staff at public universities nationwide. The findings of this study could also assist public universities in gaining loyalty among academicians who then contribute to obtaining a high-class standard of education in the Asia Pacific region.

**OP-048**

**A Research on the Technological Innovation Tendencies of the Students of Firat University**

*Yusuf Cemalettin Çoburoğlu<sup>1</sup>, Özge Öztürk<sup>2</sup>*

<sup>1</sup>*Firat University, Elazığ*

<sup>2</sup>*Firat Technocity, Elazığ*

Today, technology is developing very fast. This situation is accelerating and intensifying competition. Thus, countries and institutions need to innovate. Because they have to do this to ensure sustainable development. Otherwise it will be inevitable to lose back at the competition. Innovations serves as a driving force for both society and economy.

Today universities are quite effective adopting and spreading innovations. Creating environment and conditions for enhancing students' innovation inclinations in our country, will make us feeling this effect more. In this way, a society that can temporize to social and technological innovations quickly and provides accretion value to the country by achieving these innovations, can be built. This study is Firat University senior undergraduate students oriented and it has been studied to determine the innovation inclinations of these students. Questionnaire form applied in May 2016 was answered by 161 students. IBM SPSS Statistic 22 program was used to analyze the data obtained as the result of the application. In the analyzes, the respondents' demographics and trends towards technological innovation were evaluated respectively. In the paper, primarily, innovation, social innovation and technological innovation notions will be explained and after these descriptions some assessments will be made about which specialities of students and their environment affect innovation inclinations. Finally, some suggestions will be presented to support technological innovation inclinations of university students.

**OP-049**

**Lifestyle Entrepreneurship and Technology Startups: The Case of "Piri" Mobile Application**

*Ayla Esen<sup>1</sup>, Tutku Eker Işcioglu<sup>2</sup>*

<sup>1</sup>*Department of Business Administration, School of Economics, Administrative and Social Sciences, Istanbul Kemerburgaz University, Istanbul, Turkey*

<sup>2</sup>*Department of International Management and Trade, School of Economics and Administrative Sciences, Piri Reis University, Istanbul, Turkey*

Lifestyle entrepreneur is attributed to those business owners who have an aspiration for self-management and independence but with an emphasis on their quality of life with respect to their livelihood. In line with their lifestyles, these entrepreneurs are mostly motivated by the factors such as balance between work and family life, sufficient and comfortable living, freedom and flexibility rather than economic drives, such as enormous financial gains or business growth. Lifestyle entrepreneurship has long been associated with tourism or hospitality domain, especially with accommodation, bed & breakfast or guest house services. Acknowledging that the term is used for entrepreneurs who establish a business corresponding with their lifestyle, with the motivating factor of achieving better life quality and being their own boss, this study aims to build on existing lifestyle entrepreneurship conceptualization by transferring it to a technology startup, simply by taking Piri mobile application as a case study. Piri is an audio walk tour application that allows users to listen to the stories of cities from the tour guides as the users take one or two hour tours. It is developed by an entrepreneur who quit professional business life because of challenging colleagues and demanding bosses, traveled all around the world for two years and created Piri as he returned back to homeland. A two hour in-depth interview held with the entrepreneur of Piri revealed that lifestyle entrepreneurship of a technology startup might be considered as a constrained lifestyle entrepreneurship where the entrepreneur has strong economic or growth motives but constrained by the desire of a particular lifestyle. The findings of the study will also provide managerial and marketing implications for technology startups.

**OP-050**

**Individual and Institutional Determinants of Growth Driven Entrepreneurship: A Multilevel Analysis**

*Mehmet Nasib Tağ, Duygu Hidiroğlu*

*Department of Business Administration, Faculty of Economics and Administrative Sciences, Mersin University, Mersin, Turkey*

Entrepreneurship is one of the primary engines of innovation and economic growth. Yet, we have a limited understanding of the antecedents of the rate and type of entrepreneurial activity. Most studies of the causes of entrepreneurial activity focus on individual level factors. Recently there has been an increasing interest in the relationship between country level institutions and entrepreneurship. The main argument of these studies is that institutions influence the structure of incentives that determine the level and type of entrepreneurial activity. However, institutions favoring entrepreneurship that is motivated by necessity might be different from those that favor the formation of ventures with aspirations for growth. Thus, it is important to identify institutions that are conducive to growth driven entrepreneurial activity. In this paper, we develop a multilevel framework that relates individual level as well as country level institutional factors to improvement (growth) driven entrepreneurial activity. Specifically, we argue that growth driven entrepreneurship increases with individual level educational attainment, self-confidence, experience, gender (male), and country-level institutions of economic freedom. To test our hypotheses, we construct a sample that combines longitudinal data from the Global Entrepreneurship Monitor and Heritage Foundations index of economic freedom. Results from multilevel logistic regression analyses are largely consistent with our conceptual framework. We discuss the implications of these results with respect to entrepreneurship policy.

**OP-051**

**Boosting Entrepreneurship in Georgia - Development of Fab Labs**

*Giorgi Benashvili*

*International Economics Department, Iv. Javakbishvili Tbilisi State University, Tbilisi, Georgia*

Boosting entrepreneurship is a crucial for long-term economic development. It is taken as axiomatic that innovative activity has been the single, most important component of long-term economic growth. The Fab Lab concept is to provide spaces open to the public where people can access tools, training and designs in digital fabrications, and to base this around a global network of physical workshops with access to on-line and other support services, as well as being networked with one others. Fab Labs take advantage of increasing accessibility to versatile and powerful digital design and fabrication tools. During the last few years Georgian government increase funding and state support to diffusion innovations into the economy. It's evident if we count launching the innovative laboratories in the different cities of Georgia. The network consists more than 20 labs in the country. All of them are located at the public spaces and are funding by state government. Fabrication Laboratories offer to all entrepreneurs, students, and citizens full service of product prototyping and business consulting. The article considered and discusses about the role of this innovative laboratories into the economic growth, stimulation of entrepreneurship and startup developments.

**OP-052**

**Measuring Entrepreneurship Performance of OECD Countries via Entropy-Maut Hybrid Model**

*Gizem Akıncı, Özge Eren*

*Anadolu Bil Meslek Yüksek Okulu, İstanbul Aydın University, İstanbul, Turkey*

The purpose of this article is to analyse the entrepreneurship performance for OECD countries based on the OECD data for the years 2014-2015. The set of entrepreneurship indicators are part of the OECD-Eurostat Entrepreneurship Indicators Program (EIP). EIP develops policy-relevant and internationally comparable indicators based on an analytical model and measurement infrastructure that

allows gathering comparable data. The indicators that are used in this model are; employees by business size, enterprises by business size, self-employed with employees, self-employed without employees and starting a business. We measure the entrepreneurship performance of OECD countries by using the Entropy-Maut hybrid model. Entropy method has been used to determine the weights of the above mentioned indicators and also these weights have been used with MAUT (multi-attribute utility theory) to rank entrepreneurship performance which is an important indicator for the economic development. Our aim is to rank groups of countries with similar entrepreneurial indicators and to determine the drivers of entrepreneurship in each group.

**OP-053**

**An Investigation on The Effect of Personal Characteristics of Generation Y on Their Entrepreneurial Tendencies**

*Gönül Konakay*

*Kocaeli University*

Research on entrepreneurship is increasing more and more every day. "Information era" enables the sustainability of innovations in entrepreneurial activities. Generation Y, accelerating entrepreneurial activities, are those born between 1980 and 2000. This generation is also known as Internet generation, echo-boomers, millennials and nexters. The purpose of this study is to find out the effect of personal characteristics of Generation Y on their entrepreneurial tendencies. The study was administered to 948 Gen Y students of Kocaeli University who took the course titled Introduction to Management. The "Rokeach Value Inventory" was used for the personal characteristics the Generation Y university students. As a result of the factor analysis, Safety, Helpfulness, Universality, Traditionality, Power and Success and Hedonism were determined as personal characteristics. Entrepreneurial tendencies of Generation Y were determined by using the "Entrepreneurship Scale For University Students", developed by Yılmaz and Sünbül in 2009. As a result of the factor analysis, entrepreneurial characteristics were determined as innovation, self-confidence, opportunism, risk-taking, extraversion, belief in success. t-test was conducted for the gender variable, and the Kruskal Wallis test was carried out for the variables including education in different departments, income, having an entrepreneurial family. Personal characteristics of Generation Y and their opinions of entrepreneurial tendencies were determined by means and standard deviations, and significant results were obtained supporting the literature.

**OP-054**

**Non-Pecuniary and Pecuniary Motives in Entrepreneurial Decision Making: An Empirical Analysis**

*Hüseyin Doluca<sup>1</sup>, Özlem Kunday<sup>2</sup>*

*<sup>1</sup>University of Augsburg, Germany*

*<sup>2</sup>Yeditepe Üniversitesi, İstanbul*

In the literature there exist different explanations why entrepreneurial decisions may violate own values such as the individual's sustainability orientation. The reasons for such a (at first place) counter-intuitive behavior can be explained using various theories. A tradeoff between pecuniary (i. e. financial) and non-pecuniary (e. g. sustainability oriented) motives has been proposed by Batson (2011, p. 80). Only if the non-pecuniary motive exceeds the pecuniary motives, the entrepreneur decides in line with his personal non-pecuniary values.

Empirical evidence for Batson's proposal of trading off non-pecuniary and pecuniary motives in entrepreneurial decision making have been provided by Kuckertz & Wagner (2010). They show that sustainability orientation is a main driver of the decision to become self-employed in business when being a student but that it

reduces and even disappears when being a long-term professional. An explanation for this phenomena is that with increasing business experience pecuniary motives are weighted higher.

We have chosen to compare the entrepreneurial intent of people in two different countries which strongly differ with respect to non-pecuniary motives, namely Germany and Turkey. Although Turkish students are more likely to become self-employed and are on average more sustainability oriented, our analysis shows that, given both Turkish and German students having same sustainability orientation, Turkish students are less likely to become self-employed in a sustainable field compared to their German counterparts. The irrationality of identically sustainability oriented individuals deciding differently in identical sustainability related entrepreneurial decisions stems from contextual factors.

Our findings extend the existing research by showing that values such as sustainability orientation are not the only driver of sustainable behavior but that financial motives independently of the sustainability orientation drive entrepreneurial behavior. Policy makers are thus encouraged to foster projects to promote a positive association of sustainable ventures with financial motives.

**OP-055**

**Foreign Borrowing, Reasons and Results Turkey Sample**

*Faik Çelik*

*Kocaeli University-Economics and Administrative Sciences-Economics Kocaeli Turkey*

The first steps of the external indebtedness of the Republic of Turkey have been taken in the late years of the Ottoman with approximately 3 to 5 million liras as a start and advanced to the discouraging state of quarter trillion dollars in 1. 5 centuries. External debt is evaluated as one of the mutual problems of many developing countries in the global world at the present day. 20% of the present day world population lives in the developed countries and the rest of the 80% lives in the developing countries. There is a very big difference in the distribution of income that falls per capita between these two classes and the developing countries struggle in the cycle of external indebtedness and dependence. The developing countries need sufficient savings to be able to make development investments. The countries in such circumstance refer to external borrowing with the reason of the internal borrowing made from domestic borrowing parties such as the banks, wealthy people and the financial institutions causing economical imbalances. In the scope of the article; the concept of the external debt is evaluated, the statistics and data are discussed and it is attempted to make solutions and suggestions orienting the subject. Key Words: Foreign Debt, External debts and exchange rates, External debts and public borrowing, Economic crises and debts, external debts and Turkey Sample

**OP-056**

**The Driven Elements of The Monetary Policy in The Context of Islamic Economics**

*Ferda Güvenilir*

*Islamic Economic and Finance, Istanbul University, Istanbul, Turkey*

People are questioning more about the economic politics a few decades because of the increased income inequalities, crises, unemployment and so on. In the theoretical approach, some economists don't find monetary policy important as much as fiscal policy on the other hand some economists define many important economics variable with money. Indeed, monetary policy has been living its golden decades last a few decades. Is there an alternative way through the monetary policy? Monetary policy in

the context of Islamic finance could be the investigated answer. Particularly after 2008 crisis, people focus more about the Islamic finance that is because of the commitment of Islamic finance more stable and robust financial environment. How can Islamic finance provide silent financial environment? While the Islamic finance made serious progress, the progress in the monetary policy area has very limited. This paper claims that to propose an alternative way through the establishment of monetary policy. The definition of rationale human behavior in conventional system and the definition of rational human behavior in Islamic economic system are different in many ways so that the driver dynamics of the conventional economic system and Islamic economic system are differentiating. The demand of money which is the crucial point for conducting monetary policy in two systems is driven with different necessities. Due to stability of demand of money and robust financial system in the context of Islamic banking system, monetary policy can be more effective through providing price stability. Monetary policy in the context of Islamic finance do not commit just price stability but also commit more equate socio-economic justice and equitable distribution of income and wealth and optimum rate of growth.

**OP-057**

**A Research on Measuring The Exchange Risk In Strategical Financial Management Applied In Companies**

*Mustafa Yurttadur<sup>1</sup>, Ender Çeliktas<sup>2</sup>*

*<sup>1</sup>Business Administration, İstanbul Gelişim University, İstanbul, Turkey*

*<sup>2</sup>Institute of Social Sciences, İstanbul Gelişim University, İstanbul, Turkey*

The strategical financial management in companies could be defined as assuring the required reserves to continue the company's existence under favorable conditions, also protecting and efficient use of these reserves; applying cash flow in the correct way; helping to occur the policies which the companies will follow as a result of being evaluated each internal and external developments. Within this scope of assessment, there is need to analyze the problems of businesses at the stages of 'measuring the exchange risk in strategical financial management' on two principal axes as internal and external dynamics. The purpose of this study which is actualized to measure the exchange risk in strategical financial management is to reveal the effect of the exchange risk of the companies about financial management and how the companies are affected by the negative developments at the end of measuring the exchange risk correctly. After being described the terms that create the content of the study, the relations between these terms and literature are tried to be supported by the primary studies to achieve this purpose. The hypothesizes of the research are started to be improved by the generating the theoretic frame. First of all, research was actualized by the survey for this purpose to reveal how important the frame of strategical financial management and the accuracy of measuring the exchange risk in strategical financial management are. The same data was tested by the hypothesizes beside being evaluated the obtained data with the help of statistical analysis. It is observed by the result of analysis that the strategical financial management is significant for the financial structures of the companies and the existence a meaningful relationship between the correct measuring of exchange risk and right financial decisions.

**OP-058**

**The Position and Importance of The Behavioral Finance to Solve The Financial Problems of Sme (Small and Medium Sized Enterprises)**

*Mustafa Yurttadur<sup>1</sup>, Ebru Çeliktas<sup>2</sup>*

*<sup>1</sup>Business Administration, İstanbul Gelişim University, İstanbul, Turkey*

*<sup>2</sup>Institute of Social Sciences, İstanbul Gelişim University, İstanbul, Turkey*

The behavioral finance could be defined as being avoided the market actors to take a rational approach to decisions by their psychological and sociological characteristics. On the other hand, the behavioral finance searches about how the decision-making mechanisms of financial directors in their mind structure are affected by the social, sensual and mental prejudgements. Since the small and medium-sized enterprises are mostly the family businesses in our country, professional approaches in the financial management of companies are not found. Due to being one or more than one person takes care of the decision mechanisms and the decisions are being taken as a result of the knowledge, abilities, education and experiences of the people; it is observed that the financial management functions of the companies are not used productively. The applications which are employed in modern businesses such as financial planning, production, human resources, marketing, accounting, finance, R&D and public relations could not be performed heedfully. The biggest problems of small and medium-sized enterprises are in fields of finance. By this purpose, after being described the concepts in the study, the relations between these terms and literature are tried to be supported by the primary studies to achieve this purpose. The hypothesizes of the study are started to be improved by being generated the theoretic frame. The research was actualized by a questionnaire form about what the financial problems of the sme are and if these problems could be solved by the behavioral finance or not. The data obtained were evaluated by the statistical analysis and tested by the hypothesizes. The dimensions where the behavioral finance is sufficient for solving the financial problems were determined by the result of the analyses and seen that a significant relation between the financial challenges and the behavioral finance as directly proportional.

**OP-059**

**Evaluating the Impact of Sustainability Reporting on Financial Performance: An Application on Firms Subject to BIST Sustainability Index**

*Tuğçe Uzun Kocamış<sup>1</sup>, Özlem Tuncer Tokur<sup>2</sup>, Gülçin Yıldırım<sup>2</sup>*  
<sup>1</sup>*Istanbul University Vocational School of Social Sciences Accounting and Tax Department*  
<sup>2</sup>*Babçesehir University, Business Administration (Ph. D)*

Sustainability is a very important issue for the corporate world today. Being only a profitable company, transparency and accountability is not enough to become a successful company. Stakeholders expect companies to be sustainable. "Sustainable" means, more broadly, meeting the needs of the current generation without compromising the next generation. Businesses and partners acknowledge the importance of sustainability. Sustainability reports are also seen as a means of accountability and communication. One of the key features of these reports is the emphasis on the link between financial and non-financial performance of companies. In the reporting process, companies are developing long-range goals, shaping management strategies, policies and business plans within the framework of their sustainability vision. Sustainability reporting is believed to enhance business performance and bring many advantages to the company. The BIST Sustainability Index in Turkey has been calculated and published as price and yield since 4 November 2014. The aim of this study is to show whether the companies entering the BIST Sustainability Index have a meaningful change in their activities and financial performances compared to the previous periods without entering the index. For this purpose, Performance ratios were calculated for eight different ratios for the five quarters period before entering the companies sustainability index and the three quarters period after entering the sustainability index. The differences between these performance measures were revealed by t test. As a result, there were significant differences in the performance indicators except asset turnover, financial leverage and equity profitability before and after index coverage.

**OP-060**

**Relations between Higher Education and Innovative Entrepreneurship**

*Yagoub Entezari*  
*Iran, Tebran, Institute for Research and Planning in Higher Education, Economics of Higher Education Department*

One of the main problems of developing countries, such as Iran, is graduates unemployment. The main objective of this paper is to propose a fundamental policy for solving this problem. For this purpose, we have used a qualitative meta-analysis of literature on the knowledge-based employment and innovative entrepreneurship and relationship between those. The findings this analysis show that effective employment of graduates needs to create knowledge-based activities and occupations. This type of activities and occupations were created by innovative entrepreneurship in all sectors of an economy. Thus, graduate unemployment elimination need to develop innovative entrepreneurship. On the other side, this type of entrepreneurship can develop by universities and higher education institutions through developing entrepreneurial competences in graduates and creating spin-off firms. Government can also assist to these processes by determine framework conditions and fiscal policies.

**OP-061**

**"Total Medicine" Approach As a Survival Method for Highly Specialized Units in State Medical Faculties in Istanbul: A Preliminary Report**

*Ilgın Özden*  
*Hepatopancreatobiliary Surgery Unit, Department of General Surgery, Istanbul Faculty of Medicine, Istanbul University*

The dramatic discrepancy in the incomes of highly specialized physicians working in the state and private institutions creates an unsustainable brain drain from state university hospitals in Istanbul. A smaller but real discrepancy exists between nurses working in university hospitals and non-university state hospitals, with the inevitable outcome. These processes seriously undermine specialized units at state universities which still form the backbone of the institutions treating patients with complicated conditions. At the Hepatopancreatobiliary Surgery Unit of the Istanbul Faculty of Medicine, we have been working an a "Total Medicine" approach inspired by the "Total Football" approach initiated by Jack Reynolds and developed to maturity in Hungary, United Kingdom and Holland. The idea behind total football is that except the goalkeeper, any player should be able assume the role of any other player in case of need. At the core of the system is a small group of senior faculty members whose primary objectives are not monetary concerns but survival and progress of the unit. Other vital health care personnel involves fellows (surgeons who attend for periods between 6 months to 2 years; for them, monetary concerns are secondary as long as they receive adequate specialized training), nurses (who are motivated and financially supported to conduct academic studies and required to function in clinical roles as extensively as possible according to the existing legislation in Turkey) secretaries (who are motivated and financially supported in self-development projects and required to function as medical data keepers and public relations personnel rather than typists) and cleaning personnel (who are taught to function with discipline in a ward hosting immunosuppressed patients some of whom are colonized/infected with multi-drug resistant organisms and are compensated for their extra effort). This approach enabled us to preserve and develop further the first hepatopancreatobiliary surgery unit of Turkey.

OP-062

**Significance of Technology-Based Environment in The Development of Nursing Students' Critical Thinking Skills**

*Nur Güven Özdemir, Nuray Turan, Hatice Kaya  
Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey*

In parallel with the increase of the students, there is a rapid increase use of technology. Wider accessibility to internet, use of e-mails, web sources, use of advanced mobile gadgets and simulators further fuels the use of technology. Technology-based learning environment not only enriches undergraduate courses and enables distant learning, but for students in the formal education, it also positively contributes to evidence-based practises, similar learning processes. Nursing faculties which provide education in line with global technological developments. It is expected that technological resources are utilized so as to facilitate learning processes. Nursing students currently are able to acquire essential nursing knowledge and skills in an interactive fashion, through case studies and simulations conducted in the class and laboratories. However, it is of crucial importance that technology-based learning environment has high-security hardware, that it embodies features that will properly suit their level of and help their development of cognitive, psychomotor and social development process of the students. These nursing students, due to very nature of prospective occupations, nursing will need hands-on experience where problems are solved through critical thinking. Therefore, online class/labs and online applied conference/courses—when used effectively—will positively contribute to development of critical thinking skills, an indispensable part and major aim of contemporary education. These skills embody set of other skills such as data gathering, developing an effective memory, use of intuition, connecting reasons and consequences in a rational frame, reviewing the data with due discipline and directing all these to a creative decision. In correlation to use of technology, participation of students to the discussion forums by means of online learning methods, platforms where feedbacks are exchanged on nursing practises, there is an obvious increase in development of critical thinking skills. Therefore, it is vital that technology-based learning environment is utilized and its significant is appreciated in order to enable development and actual practice of critical thinking skills by the nursing faculty members and the students.

OP-063

**A New Approach on Occupational Health and Safety: Financial State Support For Employer**

*Özgür Hakan Çavuş  
Department of Labor Economics and Industrial Relations, Manisa Celal Bayar University*

With the Law on Occupational Health and Safety No. 6331, which entered into force on 30.06. 2012, an important transformation has begun in terms of the dissemination of work safety and occupational safety culture in the life of work in Turkey. Law No. 6331 generally encompasses all establishments within the scope of the Law and obliges health and safety professionals to be appointed for occupational health and safety services in their workplaces. The new obligations introduced by Law No. 6331 and the obligation to employ occupational health and safety professionals in particular have brought with it a serious financial burden in terms of workplaces with a large number of stumbling blocks and low profit margins. Regarding this issue, Law No. 6331 has legally introduced the possibility of financial State support for occupational health and safety services to workplaces in a very dangerous and dangerous class with fewer than ten employees through a very positive arrangement. In this study, the principles of the implementation of financial State support on the support of occupational health and safety services introduced in accordance with the Law No. 6331 have been discussed.

OP-064

**Entrepreneurship in Nursing Education**

*Yeliz Çulba, Nuray Turan, Hatice Kaya  
Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey*

Entrepreneurship in the nursing is not a new phenomenon. On the other hand entrepreneurship is becoming increasingly important within nursing care as societal changes give space for new entrepreneurs in the field. Entrepreneurship means that salaried nurse develops, promotes, and delivers an innovative health care or nursing practice. Nursing role and responsibilities are continually changing with developments in medical science, policy directives and movements in priorities in health care, and advances emanating from nursing and scientific research. Hence, there is a need for entrepreneurial nurses, to maintain and improve the individual care. Nurse need to understand the process of the introduction and management of change so as to determine and carry through his/her position in the change process and participate as valid. Nonetheless, there is also need nurses who have acquired the set of skills needed to initiate and lead the introduction of change. Therefore education about entrepreneurship is becoming an important concept in nursing education. For entrepreneurship to be improved severity in nursing, nursing education must ensure that students are provided with the opportunity to develop the necessary knowledge and skills. Entrepreneurs need to have specific feature which are common between nurses and are the type of features. They need to be: creative and innovative; confident, motivated, realistic; energetic and hard-working; good communicators and person. In addition, they need a range of generic skills most of which nurse education programmes endeavour to instil and which have been identified as abilities in: opportunity spotting and innovation; planning and critical thinking, decision-making, time-management, self-discipline; and communicating. Due to the changes in working life, entrepreneurial skills are necessary in the health care field. Nurses in every area of practice and at any level will be able to make a valuable contribution to health care if they demonstrate the characteristics and skills of the entrepreneur. For this reason, education programmes in nursing care should pay more attention to entrepreneurship in the nursing curriculum.

OP-065

**The Effect on The Healthy Lifestyle Behaviors of E-Health Literacy in Nursing Students**

*Türkinaz Aştı<sup>1</sup>, Hatice Kaya<sup>2</sup>, Nuray Turan<sup>2</sup>, Yeliz Çulba<sup>2</sup>,  
Nur Güven Özdemir<sup>2</sup>, Gülsün Özdemir Aydın<sup>2</sup>  
<sup>1</sup>Bezmi Alem University, Faculty of Health Sciences, Department of Nursing, Istanbul, Turkey  
<sup>2</sup>Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey*

Purpose: This research was carried out to determine the effect of nursing students' e-health literacy on healthy lifestyle behaviors. Material-Method: All nursing students studying in the Nursing Department of a Faculty of Health Sciences in Istanbul in the 2016-2017 academic year constituted the population of the research which was designed in the descriptive-cross-sectional type, and 205 nursing students who agreed to participate in the study constituted the sample group. Informed consent was obtained from the institution and the students before starting the research. The data were collected by interviewing face-to-face using "Structured Question Form", "E-health Literacy Scale (e-heals) in Adolescent" and "Adolescent Lifestyle Profile (ALP)". In analysis of the data, frequency, percentage, arithmetic average, standard deviation, median, Mann-Whitney U, Kruskal Wallis, Spearman's rho Correlation tests were used. Results: It was determined that 90.2% of the students were female, their average age was 20.66±1.92 years, the incomes of 88.3% of them covered their expenses, 95.6% of them had health insurance, 98% of

the students used internet, and 97.6% of them access the information through internet. In the E-Health Literacy Scale, it was determined that the point average of Usage of Internet Sub-dimension was 6.76±1.62, Internet Attitude Sub-dimension was 29.50±5.02. The Adolescent Lifestyle Profile (ALP) point average was 112.11±14.66, and their point averages of ALP sub-dimensions were 16.27±2.58 in Health Responsibility, 16.29±3.02 in Physical Activity, 15.09±3.20 in Nutrition, 17.90±2.80 in Positive Life Appreciation, 17.48±2.64 in Interpersonal Relations, 14.58 ± 2.33 in Stress Management, 14.40 ± 2.53 in Spiritual Growth. There was a positive correlation between sub-dimensions of E-health Literacy Scale score and The Adolescent Lifestyle Profile total score and statistically significant difference ( $p < 0.001$ ). Conclusion: The health lifestyle behaviors of nursing students impacted in e-health literacy. Thus, nursing students should be encouraged to improve health lifestyle behaviors, use internet to promote her/his health.

**OP-066**

**Technology Management in Global Competition and Competitive Advantage**

*Deniz Dilara Dereli*  
Istanbul Kültür University, Faculty of Economics and Administrative Sciences, Department of Economics, Istanbul, Turkey

Technology is a major factor for success in the global competitive environment. In today's world, by technological development, competition become more intense and new opportunities arise. Obtaining an advantageous position in the global competitive environment depends on satisfying consumer demands with best quality at an affordable cost. However, achieving and maintaining competitive advantage is not only possible with low cost and high efficiency but also with right technology management. Meeting the changing needs and demands, ensuring competitive advantage and realizing economic growth depends on following technological developments and adapting new technologies to production activities and processes. In this context, it is necessary to understand the relationship between technology and competition, form necessary strategies, realize research and development activities for new technologies, make necessary investments and carry out the process of technology management. Technology management becomes essential for economic growth and sustainability of companies. This study aims to evaluate the impact on competitive advantage of technology management by putting out the importance of technology management.

**OP-067**

**Influencing The Practice of Human Resource Accounting: Skills and Strategies**

*Krishna Priya Rolla*  
Dr. Babasaheb Ambedkar Marathwada University

The purpose of the study is to provide empirical insights into the relationship between the prevalence of human resource accounting with skill inventory existent in an organization. Purpose: Valuing human resources is argued to be one of the key elements of strategic human resource management. This argument has been widely advocated by empirical research, especially by studies executed in developed countries. The purpose of the study is to provide empirical insights into the relationship between the prevalence of human resource accounting (HRA) with skill inventory in the particular context of Indian manufacturing sector.

Design: The sample comprises of ninety-six India manufacturing units (Israel 1992). The data is collected by survey-study using established and validated scales in the international context. The author has used a two-step data analysis - factor and regression analysis - to answer research

questions. The findings demonstrate significant positive relationship between HRA as independent variable and endogenous variables: Business, Technical and Strategic Human Resource Management Skills.

Implications: The study implicates need for enhanced skill-inventory and human resource investments. The study contributes to further development of HRA in developing countries, especially in institutional and cultural contexts of India.

**OP-068**

**Role of Knowledge Management in Achieving Organizational Performance: Proposed Framework through Literature Survey**

*Mubammad Yousaf Yousaf Jamil*  
University of Management & Technology, Lahore, Pakistan

Keeping in view the increasing demand of knowledge management, Researchers has recognized the need for structures for appraising the influence of knowledge management (KM) on organizational performance (OP). Despite of the wide performances of KM, at present there is no uniform structure for evaluating the OP. The basic intent of this study / research is to plan the appropriate methodologies to evaluate the impact of KM to enhance OP. At the end of this paper, the author proposes a theoretical model based on comprehensive and inclusive researches in the extent of KM and OP. Through a wide-ranging organization of KM practices, the probable model discovers the influence of each KM practice on enlightening the level of OP. The suggested model can play an important part in the management of the processes of KM execution in order to explore as it affects on OP.

**OP-069**

**Deploying Knowledge Management in DMAIC Methodology of Six Sigma Projects**

*Mubammad Yousaf Yousaf Jamil*  
University of Management & Technology, Lahore, Pakistan

Six Sigma, as a tremendous acclimated method for doing things, moves towards steady and plausible change by developing buyer dependability and reducing action time and number of imperfections. On the other hand, Knowledge Management (KM) is a most recent approach that strategies with the uncommon asset of affiliation i. e. data. In this exploration, resulting to evaluating the looks into of examination on this alliance, the linkage amongst KM and Six Sigma is investigated and in conclusion usage of KM instruments in parts of DMAIC procedure as a sensible and valuable system for Six Sigma, have been secured. Both KM and 6 Sigma are quickly cautious business association frameworks with essential thinking and process improvement strategies, Specialists in both fields can get benefit from each other. Six Sigma can get from KM how to be acquainted with Knowledge furthermore forms. Specialists also can pick up from KM systems that care for change. Six Sigma is an apparent methodology for Quality and strategy updating with observable quality on deformity obstruction instead of yield detection. By decreasing assortment and waste at the same time, fundamental concern comes about and persistent change are to be progressed. KM of course is proposed at rolling out handy improvement, too. At the end of this study, the author proposes the conceptual framework about the perceived benefits which Knowledge based and Six Sigma oriented organization can achieve after implementation of these best practices.

OP-070

**Critical Factors for Oil Palm Plantation Workers Acceptance and Use of Mechanization Technovation Tools**

*Nur Syazwani Binti Mohd Nawi<sup>1</sup>, Baba Md Deros<sup>2</sup>, Norani Nordin<sup>1</sup>, Mohd Nizam Ab Rahman<sup>2</sup>, Ezrin Hani Sukadarin<sup>3</sup>*

<sup>1</sup>Department of Technology Management, School of Technology Management and Logistic Universiti Utara Malaysia 06010 Sintok, Kedah, Malaysia

<sup>2</sup>Department of Mechanical and Materials Engineering, Faculty of Engineering and Built Environment, Universiti Kebangsaan Malaysia, 43600 UKM, Bangi, Selangor, Malaysia

<sup>3</sup>Occupational Safety and Health Program, Faculty of Engineering Technology, Universiti Malaysia Pahang, 26300 Gambang, Pahang, Malaysia.

Oil palm plantation workers, still rely on manual tools and using mechanization technovation tools has been big issues as they rejected to use. Thus, in emphasizing technovation tools in a human activity, this study aims to examine several factors influencing acceptance and use technovation machine tools in Malaysia based on the revised Unified Theory of Acceptance and Use of Technology (UTAUT) model. A total of 126 oil palm plantation workers answer the questionnaire. This model was analyzed using SPSS technique and conducting reliability test, correlation analysis and regression analysis. The results reveal that performance expectancy, facilitating condition and intention to use were supported as important factors to accept and use of technovation. However, effort expectancy and social influence have been rejected because not significantly influence intention to use technovation. The results of study give implications and suggestions to future researchers and practitioners in order to address problems regarding technovation acceptance.

OP-071

**Business Incubators Performance Based on The Characteristics: How Business Incubator Characteristics Affects Results? A Framework of Multiple Cases From Experience Chile, Israel and Italy**

*Selma Oliveira<sup>1</sup>, Sandro Trento<sup>2</sup>*

<sup>1</sup>Federal Fluminense University

<sup>2</sup>Trento University

This research examines the relation between the characteristics and business incubators performance in three countries: Chile, Israeli and Italy. The business characteristics are in the context of: corporate mission, plans and strategies, leadership/management, staff competence and expertise, facilities and resources and technology. The performance measures in this study drawn from literature: graduation of businesses incubated; success of businesses incubated; jobs created by incubation; and salaries paid by incubator clients. Integrates theory and empirical data to investigate links between characteristics and business incubators performance. Structured interviews and questionnaires will be used to develop the research. The research involved the intervention of experts. Several support tools will be used to formulate the modeling to reduce subjectivity in the Results: psychometric scaling – Thurstone’s Law of Categorical Judgments (LCJ), Multicriteria Analysis-Compromise Programming, Electre III and Promethee II, Artificial Neural Networks (ANN) and Neurofuzzy Technology. Incubators contribute to the international economy and play a vital role not only in the economic recovery but also in smart growth and economic development. These findings will assist incubator managers, policy makers and government parties in successful implementation of incubator policies.

OP-072

**A Strategic Approach to Innovation**

*Ebru Doğan*

*İstanbul University, Faculty of Economics, Department of Business Administration*

Pioneering emergence of new markets and expanding competition areas make innovation the basis of development and dynamism in all economies. In this respect, innovation which creates significant impacts in a way that increasing and supporting competition can also create impacts that will change qualification of competition in goods and services markets. In this context, research and development plays a critical role in the strategic innovation process. It is essentially an investment in technology and future capabilities transformed into new products, processes and services. Nonetheless, research and development is a crucial component of innovation and a key factor in developing new competitive advantage of companies, and by the macro view of countries. In this study, strategic innovation and research and development which is the crucial factor on creating the innovation was analyzed.

OP-073

**Effectiveness of Digital Public Relations Tools on Different Customer Segments**

*Necmiye Irem Gülerman, Fabri Apaydın*

*Business Administration, Faculty of Economics and Administrative Sciences, Yalova University, Turkey*

This study aims at measuring effectiveness of digital public relations tools on different customer segments. Digital public relations, an important component of digital marketing, is gaining more and more importance in the e-commerce market. Digital public relations tools, social media, company forum page, e-mails, company websites, blogs, are used by most of the e-businesses to manage the organizations’ reputation in the virtual life. Thus, it is necessary for the organizations to be aware of how these tools affect different customer segments and develop digital marketing strategies accordingly. The data is gathered on the internet with structured questionnaire forms and it is analyzed using SPSS statistical program. ANOVA tests and frequency tables are used to make analyses. The results reveal that various tools might have different effects on specific customer segments.

OP-074

**A Theoretical Analysis on Workplace Recreation: Suggestions to Implementability in Tourism Enterprises**

*İlke Başarangil*

*Department of Travel Management and Tourism Guidance, Kırklareli University Tourism Faculty, Kırklareli, Turkey*

Tourism as a labor-intensive sector, causes workloads under extreme stress and oppression, employee exhaustion, job dissatisfaction and inefficient work. Tourism business managers have begun to worry more about the effect of workplace recreation on productivity in order to prevent all of this. The workplace recreation can contribute to job satisfaction and productivity by allowing the worker to spend leisure time more efficiently and efficiently, by providing working time and leisure time balance when implemented by administrators. For this reason, the aim of this study is to carry out a theoretical review on the workplace recreation and to present various suggestions to the sector managers in tourism for their applicability in tourism enterprises. In addition, workplace recreation evaluates the benefits to tourism enterprises, employees and the economy of the country. For this purpose, the relationship between leisure time and work productivity has been tried to be revealed in this study, then evaluations and suggestions on the applicability of workplace recreation in tourism businesses are presented. This work presents a theoretical framework for future research.

OP-075

**Effect of Human Capital on Organizational Performance in Healthcare Organizations**

*Serkan Deniz<sup>1</sup>, Mesut Çimen<sup>2</sup>, Özlem Atan<sup>3</sup>, Seyit Kaya<sup>3</sup>*

<sup>1</sup>*Yalova Üniversitesi*

<sup>2</sup>*Acıbadem Üniversitesi*

<sup>3</sup>*Haliç Üniversitesi*

For today's competitive environment, organizations are required to increase their performance continuously in order to survive. Human capital is one of the most important aspects, which increases performance. In this study, the influence of human capital on organizational performance is examined. The study was conducted between November 2016 and January 2017 in private healthcare organizations operating in Istanbul. The sample includes the managers working in healthcare organizations. According to the findings, it is founded that there is a positive but low correlation between human capital and organizational performance. Similarly, according to the managers, human capital influences organizational performance in a positive way, however its affect is relatively low. Depending on these results, it is concluded that managers' awareness related to human capital is not sufficient, and increasing these awareness in further studies is recommended.

OP-076

**Relationship Among Big Five Personality Traits, Compulsive Buying, and Variety Seeking**

*Aysel Erciş, Musa Ünalın*

*Department of Business Administration, Ataturk University, Erzurum, Turkey*

This study examined associations among the Big Five personality dimensions and compulsive buying tendency and variety seeking tendency in Erzurum. Participants (n=389) completed a survey that included measures of personality, compulsive buying and variety seeking. The results revealed that four personality traits (extraversion, agreeableness, conscientiousness, and openness to experience) were positively correlated with variety seeking tendency. Extraversion was positively related with compulsive buying tendency, and conscientiousness was negatively related with CBT. Finally, compulsive buying tendency was positively related with variety seeking tendency. Limitations of the current study are noted and future directions are discussed.

OP-077

**Consumer Privacy in The Era of Big Data: A Survey of Smartphone Users' Concerns**

*Tuğfik Şükri Yapraklı, Musa Ünalın*

*Department of Business Administration, Ataturk University, Erzurum, Turkey*

Smartphones have been proliferated and high-speed mobile data networks become increasingly ubiquitous in the recent years. Also, there is a large and ever increasing number of mobile phone applications on the market. Privacy issues in such context become critically important because vendors may access a large volume of personal information. This paper attempts to identify the consumer privacy and concerns in the context of big data and to explore how consumers' demographic differences may affect their concerns for information privacy. The smartphone owners' demographic differences and their concerns over privacy are analyzed, based on a survey of 392 smartphone users in Erzurum. It has been found that consumers' demographic differences have varying degrees of impact on their concerns for information privacy in the context of big data.

OP-078

**Place and Importance of Human Resources Management in Hotel Operations**

*Mustafa Tandoğan*

*Yakın Doğu Üniversitesi / Lefkoşa*

As nowadays technology production is out of monopoly of certain countries, it also possible for countries that don't have necessary equipment for technology production to acquire them by copying. In this context every other resource except human resources can be bought, substituted or acquired by various means. Human resource is hardest to acquire and the most expensive. The most important feature of the tourism sector whose importance is ever-growing today and the future is it being a service sector. Therefore, the only way to reach maximum quality of touristic products is manpower. Within hotel operations, running services and satisfying customers are largely provided by the effort of personnel. For this reason; human resources is very important for the efficiency of hotel operations. Operations that adopts a modern manner of management, practices human resource management techniques that ensures the employment of right person, in the right place and the right time. It is clear that competitive power increases by the correct planning of human resources in an operation. In hotel operations, "human" factor is the one that creates both the income and expenditure. Good management of human resources factor will ensure efficient use of manpower in businesses. In a sector such as hotel managements, that face-to-face relationships and the case of "service of a human to a human" happens densely, management of human resources is only possible by a Human Resources Management which requires special knowledge and skill in this field. Human resources management is a discipline that educates the personnel, improve their knowledge and skill, motivate and ensure them being satisfied with their work. For hotel operations to adopt and practice the mentality of human resources management will ensure their continued existence.

OP-079

**Design Awards as a Design Promotion Activity: International Design Awards**

*Damla Şabin, Alper Çalgüner*

*Industrial Design Department, Gazi University, Ankara, Turkey*

Design is a powerful tool for nationalities and companies willing to add value to their products or services and to be competitive in both local and global market. However, especially small and medium-sized enterprises (SMEs) are still not aware of the potential benefits of design (Raulik-Murphy and BDes, 2010). This lack of awareness results in low value-added products and services and brings financial failure to both enterprises and nations. In addition, public awareness level about design and its adding value on products and services is also low. Because of this lack of understanding, many governments have formed and carried out design promotion programmes. These programmes aim to inform citizens and companies about the benefits of design to increase awareness through such as seminars, exhibitions, publications and awards. Design awards are essential as promotion activity which provide companies with reputation and publicity. Especially receiving international design award promote the product and the company itself in the global context. The aim of this study is to identify design promotion and its content, to compare four design schemes (Design Turkey Industrial Design Award, IF Design Award, Red Dot Design Award, and Good Design Award) in terms of different dynamics and promotion activities.

OP-080

**Relation Between Contemporary Furniture and Technology**

*Işıl Özçam*

*Mimar Sinan Fine Arts University*

Furniture, the indicator of the identity, belief and prestige, being always in interaction with person's life, is in addition to its function, a meaning carrier and communication object. Furniture, which were previously manufactured due to practical, aesthetic and status based needs, but started to be used deliberately in order to transmit messages by the beginning of the last century; has reached a broad meaning content and diversity by the influence of the technological developments at present, too. Contemporary artists and designers deem this form as a tool which transmits thoughts, philosophy, ideologies, statements, ideas, feelings and can at the same time be used as an application area where experimental manufactures, composite materials, scientific researches, contemporary design and production methods can be tried out.

OP-081

**Examination of The Experience Phenomenon Over Commercial Area Examples**

*Işıl Özçam*

*Interior Design Department, Mimar Sinan Fine Arts University, İstanbul, Turkey*

Nowadays there exists an increasing rivalry between companies which leads them to go on a quest for making a difference. Many of them try to arrange their areas thematically or present different experiences to their clients in their areas in order to distinguish themselves amongst the others. Thanks to recent technologies, virtual and augmented reality form the basis for brand new types of experiences. Experience phenomenon which is deemed to be one of the ways to create value in today's economy is to be examined within this article through examples from commercial areas.

OP-082

**The Role of Design in Competitive Strategies of Turkish Ceramic Sanitary Ware Industry**

*Merve Yavuz<sup>1</sup>, Serkan Güneş<sup>2</sup>*

*<sup>1</sup>Merve Yavuz, Gazi University, Faculty of Architecture, Department of Industrial Design*

*<sup>2</sup>Serkan Güneş, Gazi University, Faculty of Architecture, Department of Industrial Design*

In the globalizing world, sustainable development depends on the competitiveness of the countries. It can be argued that global competitive sectors play an important role in the development of countries when it is accepted that the competition power of a country depends on its' firms competitiveness. In this context, ceramic sector also has a critical importance for the Turkish economy as it is one of the sectors with the least use of indigenous resources and the least import dependency as well as having a strong presence in the world market with its export potential.

Today, the pressure of price-based competition from developing countries is seen in the ceramic sanitary ware industry. In developed countries, average product prices have been kept high due to design, brand and product quality. Although Turkey is the largest exporter in Europe in terms of capacity, it is third in terms of turnover. The European Union countries' ceramic sector focuses on competitive strategies based on strengths such as innovation, design, and branding abilities to move countries away from the market, such as Turkey, where they can not compete through cost leadership

Turkey has a great investment in ceramic sanitary ware industry. In order to expand the market share and the use of idle capacities, companies need to produce high value added products through design and branding investments. In this study the added value role of industrial products design for Turkish ceramic sanitary ware industry and possible competition strategies based on design will be introduced.

OP-083

**Application of Industry 4.0 Practices on A Factory Scale and Recommendations**

*Alaeddin Koska<sup>1</sup>, Nusret Göksu<sup>2</sup>, Hamdi Ayyıldız<sup>1</sup>,*

*Mebri Banu Erdem<sup>1</sup>*

*<sup>1</sup>Kabramanmaraş Sütçü İmam Üniversitesi Türkoğlu Meslek Yüksekokulu Kabramanmaraş*

*<sup>2</sup>Kabramanmaraş Sütçü İmam Üniversitesi İktisadi ve İdari Bilimler Fakültesi*

In this study, it is aimed to test the applications of industry 4.0 on a factory scale and to propose a solution to find out the deficiencies in reaching the industry 4.0 standards and to overcome these deficiencies. This study was conducted in a manufacturing firm which is a leader in its sector in Kahramanmaraş. Survey technique was used in the research. The data were obtained by face-to-face interview technique. The findings of this study indicate that this company is at the level of Industry 2.0, so it was determined this company has reached the manufacturing technology which is in the mid-20th century. It has also been determined that this firm has different levels of maturity in each activity related to production. Some activities have achieved level of industry 4.0 while some activities is at the level of industry 1.0.

OP-085

**Beginning of The End Capitalism: Macro Effects of The 2008 Financial Crisis (The Case of Turkey)**

*Gümrah Can Başdağ<sup>1</sup>, Emin Barlas<sup>2</sup>*

*<sup>1</sup>Finance Department, Faculty of Economics and Administrative Sciences, Kilis 7 December University, Kilis, Turkey*

*<sup>2</sup>Finance Department, Faculty of Economics and Administrative Sciences, Gaziosmanpaşa University, Tokat, Turkey*

Economic turmoil of worldwide began to Express discourse since 2007. Hazard has shown itself that repayment of subprime mortgage loans, fall in property prices and it give the signal of financial institutions. A large increase in all commodities and agricultural products took place in the early 2000s. Food prices reached their highest level in 2008. US dollar fell considerably against other currencies. Immovable property market(residential) occurred because of a large fall in paralel with the decline of the US dollar. US residential prices tended to rise since the early 2000s. The reason being the trend of mortgage loans. Mortgage loans in the market that it has created excessive optimism, and it created an environmet that allows even low-income people to easily find loans to buy housing. Residential subprime mortgage market collapsed with the passing down of prices and the borrower has led to the bankruptcy of low-income families.

In this study, the subprime mortgage crisis on the employment, unemployment, rate and currency examined the effects of this crisis on perceptions formed in Turkey has been analyzed, and efforts to manage the crisis.

OP-086

**The Impact of the Global Financial Crisis on the Innovative Performance in the Industrial and Service Companies within the Framework of European Union: A Case of Turkey**

*Taner Akçacı, Özcan Özkan*  
*Department of Economics, Faculty of Economics and Business Administration, Kilis 7 Aralık University, Kilis, Turkey*

Innovation and research and development (R & D), which are indispensable in today's market economy, have become both widespread and increasingly important over time. Stable period of the economy is not the only parameter to explain what firms do to improve their selves, fluctuation periods are also important to understand the circumstance of the firms. Therefore, we try to analyse how Turkish firms behaved during and post crisis period constitutes the basis of our work in 2008 in the global crisis period and after the crisis period in Turkey, and how the firms are changing within the concept of these two important items (Innovation and R&D). To do so, we aim to obtain new and important data for Turkey by comparing the data obtained from the Turkish Statistical Institute (TUIK) with those of the European Union countries of the same period, and to give policy recommendations on how Turkish firms can act in this crisis period and afterwards.

OP-087

**Barter System As An Innovative and Alternative Financial and Trade Model During The Periods of Economic Crisis and Recession and Its Importance for Businesses**

*Özgül Uyan*  
*İstanbul Gelişim University*

Increasing economic integration among countries with the effect of globalization led to spreading of world trade volume, intense competition in national and international markets and the dependency to global markets. On the other hand global economic crisis cause increasing money cost, cash problems and commercial recession. Due to these developments, the companies have some difficulties carrying on their business with traditional marketing and financing techniques and use alternative methods. One of these methods is Barter based on the principle of exchanging goods and services without using money.

Barter is innovated form of exchange system used since the early ages as a trading method. Bartering which lost its significance with money's invention, came back again as a way of getting rid of the depression caused by 1929 world economic crisis. Corporate barter applications have been seen in our country since the 1990s. Barter is both a trade model and a finance technique allowing the companies to purchase the goods and services they need by the goods and services they produce. Barter offers companies various benefits such as moving inventory, utilizing idle capacity, increasing sales, finding new markets, free advertisement, supplying interest-free credit, conserving cash and debt configuration.

The aim of this study is to examine the benefits of bartering used as an alternative trading and financing technique in today's economies in terms of commercial and financial dimensions. As a result of the study, it has been determined that the barter instrument is not well known in Turkey and legal legislation is required for effective and safe implementation of it. It could be mentioned that barter is a serious alternative to traditional mentality based on interest and it could be a trading type and financing instrument contributing Turkey's economy if appropriate regulations are realized.

OP-088

**A Research on Dividend Policies of The Companies In Logistics Sector In Turkey**

*Mustafa Yurttadur<sup>1</sup>, Zeynep Işık Altıntaş<sup>2</sup>, Hülya Gökçe<sup>2</sup>, Yılmaz Kurt<sup>2</sup>, Yunus Emre Yıldırım<sup>2</sup>, İbrahim Çelebi<sup>2</sup>, Veli Kayar<sup>2</sup>, Sefa Şencan<sup>2</sup>*  
<sup>1</sup>*Department of Management, İstanbul Gelişim University, İstanbul, Turkey*  
<sup>2</sup>*Institute of Social Sciences, İstanbul Gelişim University, İstanbul, Turkey*

The primary policies of the financial management could be stated as the investment, financing and profit share, and there are different approaches between the various opinions on the target of the dividend policies is to increase the value of the company. The dividend policies include the decisions about sharing the business income obtained at the end of the period to the partners or being turned these assets into the investment. One of the purposes of the establishment of the company is to make a profit and share this to the partners. The dividend policy is also important in terms of maximization the stock quotes. It is inconsistent with the expectation that the business grows and gives a high-profit share at the same time. Being the dividend policies intensifier of the productivity of the company and supportive of the growth are so important to eliminate this inconsistency. By this purpose, firstly the terms in the study are described, and the relations between these terms are tried to be supported by the literature review by the premise studies. The hypothesizes of the study are started to be improved by being generated the theoretic frame. The research was done by a questionnaire form about how the companies actualized the profit sharing, such a relationship between their financial growth and their dividend policies has existed and how these policies affect the company value. The data obtained were evaluated by the statistical analysis and tested by the hypothesizes. The dividend policies of companies in logistics sector in Turkey are specified at the end of the review and seen that a significant relation between company growths by the dividend policies and growing the companies financially as directly proportional.

OP-089

**Types of Information Technology Capabilities and Their Impacts on Logistics Capabilities: An Empirical Study**

*Zümrüt Hatice Şekkelî, İsmail Bakan*  
*Kabramanmaraş Sütçü İmam University*

In the current competitive business environment, companies are obliged to achieve competitive advantage over their competitors. Therefore many studies have focused on how to gain competitive advantage. In recent years some of them point out organizational capabilities as the key to achieve that. Organizational capabilities are defined as abilities and capacities, complicated talents and aggregated knowledge implemented through organizational processes to coordinate activities. There are too many organizational capabilities, but this study is focused on two of them; Information Technology (IT) Capability and Logistics Capability (LC). This study aims to investigate the impacts of four sub-dimensions of IT capabilities on LC at the logistics sector. Information Technology (IT) Capability can be defined as a cluster of IT-associated resources, talents and compiled information, to coordinate activities and to reach organizational goals. The IT capabilities have four sub-dimensions: IT infrastructure, IT business experience, IT relationship resources and IT human resources. Also LC is an organizational ability to provide advantage on logistics service by minimizing time and cost as much as possible. LC is an exhaustive indicator of an enterprise's logistics situation. The study is supported with a field study conducted on the 3PL firms -that members of the international forwarding associations UND-

operating in 9 cities in Turkey. After distribution of 450 questionnaires, 428 usable questionnaires were returned (a response rate of 95%). The data was analyzed by using the frequency, Pearson correlation and regression analyses via SPSS programme. After analyzing the research data, it was realized that there is a statistically significant relationship between four components of IT capabilities and logistics capability. Keywords: IT capabilities, IT infrastructure, IT business experience, IT relationship resources, IT human resources, Logistics capability

**OP-090**

**Negative Effects of inequalities in Academic Entrepreneurship Ecosystem: FETÖ Case**

*Elyase İskender<sup>1</sup>, Yasemin İskender<sup>2</sup>*

<sup>1</sup>Computational Science and Engineering Department, Boğaziçi University

<sup>2</sup>Physics Department, Yıldız Technical University

In this study, a specialized entrepreneurship concept academic entrepreneurship, has been evaluated in the context of TÜBİTAK's Scientific Funding. Scientific and technological research council of Turkey has funded scientific projects for supporting academic entrepreneurship. In this study the equity of the Fund Distribution has been examined. For this aim the data from TUBİTAK for funds of 2011-2016 time span has used. Gini coefficients for every years in this time interval has calculated with utilizing this funding data. In addition to this funding amount per capita for cities has examined to find the causes of high Gini values. As a result of this calculation, Ankara, Kocaeli and Isparta cities are the most ruiner of the TUBİTAK Scientific Fund Distribution's fairness. Albeit Hakkari, Şırnak, Muş, Mardin and Amasya are the cities which raises the Gini Coefficient, with their short of funding. An interesting finding is the funds sent to Tunceli has been dramatically raised recent years, although its geographic location. Besides this study is the first study in Turkish Literature which is examining the fairness of the TÜBİTAK Scientific Funds and relation of this distribution with FETÖ. In this study we also examined the spearman correlation between the given fund rank of Universities and the rank of the percentages removed from public service with a decree law from related university.

**OP-091**

**Organic Agriculture Practices in Turkey as A Value Chain Creating Model of Agricultural Production**

*Murat Cetin<sup>1</sup>, Gonca Yılmaz<sup>2</sup>*

<sup>1</sup>Istanbul Üniversitesi, [mcetin@istanbul.edu.tr](mailto:mcetin@istanbul.edu.tr)

<sup>2</sup>Istanbul Gelişim Üniversitesi, [goyilmaz@gelisim.edu.tr](mailto:goyilmaz@gelisim.edu.tr)

This study emphasises the importance of promoting organic agriculture activities which will contribute to reviving and bringing the agricultural sector of Turkey to a level that is in keeping with the country's farming assets such as its land, natural resources and diversity of living organisms in the soil and also contribute to the monetary added value created in the country, which unfortunately has yet to achieve reaching contemporary development goals despite being described as a country of agriculture.

The main area of focus of this study, which puts the organic farming community of Kirtık Village at the center, is the mechanism whereby all products and semi-products produced in this village are directly supplied to producers and consumers; creating an organic chain.

Ensuring the fair dissemination of wealth created by the monetization of organic farming products; contributing to public health by promoting organic product awareness and increased consumption of organic products at more reasonable prices, and creating opportunities for conducting agricultural practices in a sustainable environment as a model that creates a value chain in Turkish agricultural production are the topics focused on in this study.

**OP-092**

**Innovative Entrepreneurship Under Uncertainty**

*Sefer Şener, Volkan Hacıoğlu*

*Istanbul University, Faculty of Economics, Istanbul, Turkey*

This paper analyzes the economic activity of innovative entrepreneurship under uncertainty. We examine the profit maximization model of innovative firm under two kinds of uncertainties. The first kind of uncertainty pertains to market conditions. Erratic behavior of future prices creates market uncertainty. This uncertainty is at least partly resolved by rational expectations hypothesis. But repercussions of market imperfections still loom large in the background of theoretical framework. The second kind of uncertainty is caused by technological changes and the patterns of innovations. The pace and space of innovation adoption is retarded and narrowed by technological uncertainties. This problem is tackled by neoclassical innovation models to some extent. In particular, endogenous growth models and the industrial dynamics model attempt to endogenize the innovation and technology under rational expectations. But these models provide incomplete insights for they do not deal with learning behavior of innovative entrepreneurs. We propose an alternative learning model which takes into account the adaptive and imitative behavior of individual innovators whose economic actions matter in the general framework of real life economics.

**OP-093**

**Present and Future of Social Innovation In Spain: Triggers, Best Practices and Frequent Mistakes**

*Blanca Herrero De Egaña Muñoz Cobo<sup>1</sup>*

<sup>1</sup>Instituto Universitario de Migraciones y Desarrollo, Universidad Pontificia de Comillas, Madrid, Spain

<sup>2</sup>Benefactor Innovación Social, SL, Madrid, Spain

The current context is a context of uncertainty, change and enormous challenges for those who work from whatever the field, in the fight against poverty and exclusion and for a better, more just and more human world for all human beings.

The reduction of resources for social needs attention both publicly and through Civil Society Organizations, the increasing of social needs of individuals and groups who suffer and the insufficient impact of projects, programs and policies aimed at reducing poverty, exclusion, inequality in the world are key factors to define the context.

Given the context described above and the certainty that they will but to intensify in the coming years, Social Innovation, seems a way in which it might be worth to work further.

The paper tries to show and share some conclusions the research on Social Innovation, being holded by Mrs Blanca Herrero de Egaña is giving away.

Analyzing many Social Innovation projects in Spain, Europe and all over the world, data shows that there are some triggers, some frequent mistakes, and some best practices, which diffusion could be useful for other innovators or the future of Social Innovation.

**OP-094**

**The Role of Institutions Within National and Regional Technologic Innovations in the USA and Germany**

*Hülya Derya, Elif Kaya*

*Kilis 7 Aralık University*

If we a little bit elaborating Schumpeter model of technological innovation (invention → investor → diffusion), we can confirm that every stage of innovation process is frankly interconnected. With this judgement, it is also seen that socio-economic institutions are quite influential in the emergence of technological innovation. The main purpose of this paper is to figure out why countries show different level of success; moreover, what kind of effects national education, finance and science have on national and regional technological advances. Furthermore, the role of radical and process innovation is examined in respect of national technological advance and institutional innovations. In this regard, two countries are contrast and compare, namely the USA and Germany.

**OP-095**

**Crowdfunding As A New Generation Financing Model: Turkish Potential**

*Fatma İzmirli Ata<sup>1</sup>, Ayşe İdil Kacar<sup>2</sup>*

<sup>1</sup>Accounting and finance, Faculty of economic and administrative sciences, Manisa Celal Bayar University, Manisa, Turkey

<sup>2</sup>Marketing, Faculty of economic and administrative sciences, Manisa Celal Bayar University, Manisa, Turkey

Crowdfunding is a new financing model that enables entrepreneurs with innovative ideas meeting their financial needs with early access to web sites and social media tools from so that the idea can be developed. This model has emerged in last decade in countries such as America, England and Germany and factors like the increase in internet access and income level, widespread electronic money transfer, dissemination of risks, understanding of social responsibility adopted by enterprises and employment supplement have played an important role in the development of the model. In particular, it prevents an entrepreneur with a new idea from disappearing due to inaccuracies or projecting failures to offer early-stage financing before reaching the angel investor or other traditional methods by offering financial resources in the implementation process (prototype presentation).

This model has started to attract attention recently from the perspective of our country and it will be examined in terms of emergence reasons and operational process. The most successful crowdfunding sites in the world will be examined in terms of their emergence, objectives, services, accounting policies and success levels and will be compared to sites established for this purpose in Turkey. It is envisaged that this study will contribute to the development of this model, development of legislative regulations and the increase of awareness about the subject.

**OP-096**

**Investigation of Crowdsourcing Concept by Open Innovation Perspective: Application Examples**

*Yeter Demir Uslu<sup>1</sup>, Yasemin Hancıoğlu<sup>2</sup>*

<sup>1</sup>Medipol Üniversitesi, Sağlık Bilimleri Fakültesi, Sağlık Yönetimi Bölümü

<sup>2</sup>Ordu Üniversitesi, Ünye İktisadi ve İdari Bilimler Fakültesi, İşletme Bölümü

Today, local markets become much more dependent on outside world, and environment consist of barriers between countries are eliminated. This situation brings enterprises faced with new competitive conditions. Enterprises are more affected by competition than old ones. D’Aveni defines this new competitive environment as “hyper-competition” and asserts that hyper-competition is a critical success factor for enterprises. In hyper-competition environment, enterprises must continually improve themselves, processes, products and services. Changing competitive environment changes approach of enterprises to innovation. “Closed innovation” approach which reflects innovation that is done only large corporations and behind closed doors leaves its place to the concept of “open innovation”.

These two innovation approach can be explained through chess-poker metaphor. In chess, all stones and playground are determined. New information is not included in game from outside. It is a closed system and with these features similar to closed innovation approach. In poker, the game is maintained by changing and opening cards. By constantly exchanging information with competitors, resources available are persistently changing. This new information is very important for players. The poker game with its peculiar features can be likened to open innovation approach. The pursuit of open innovation that enterprises benefit from technology brings us with concept of “crowdsourcing”. The concept of crowdsourcing consists of combination of crowd and outsourcing words. Crowdsourcing means that crowd is working towards subject and solution that is reached as a result of this work. When the concept is examined in terms of enterprises, it is seen that “it is not work to be done for its own employees but crowd for certain reward and get advice and solutions on the job”. Many enterprises are using the “crowdsourcing” approach to increase intensity of innovation and compete. In the study, enterprises benefiting from crowdsourcing approach and application examples in Turkey will be examined.

**OP-097**

**AN EVALUATION OF CURRENT CAPITAL STRUCTURE DECISIONS OF TURKISH SMEs**

*Dilek Demirbaş*

*Faculty of Economics, İstanbul University, İstanbul, Turkey*

Findings of this study suggest that Turkish SMEs happen to experience obstacles in raising finance to improve and develop their business environment. In particular, as information asymmetry and uncertain economic environment are the key barriers, financial constraints turn out to be main handicap for SMEs’ survival. Despite its own merits, SME owners, in family business case, are reluctant to take external finance for their projects with the intention not to lose their independence and control. The main purposes of this study are firstly to investigate the issue of financing of SMEs in Turkey in the theoretical context and secondly to make policy suggestions for the future. Miller and Modigliani (1958)’s basic capital structure theory, Myers, (1984)’s trade off theory, and Myers and Majluf (1984)’s the pecking order theory are the key standing theories to examine SMEs’ capital structure needs. The results of this study are similar to those reported for most Western economies that owners of SMEs follow a pecking order theory and prefer retained profit to external finance in order to cover their financing gaps.

**OP-098**

**A Research About The Effect of The Strategical Financial Planning of The Companies In Logistics Sector In Turkey on The Company Growth**

*Mustafa Yurttadur<sup>1</sup>, Alp Şimşek<sup>2</sup>, Muammer Ünlü<sup>2</sup>, Serhan Cibanoğlu<sup>2</sup>, İbrahim Ak<sup>2</sup>, Şeyma Arıcı<sup>2</sup>, Burçin Güvenilir<sup>2</sup>*

<sup>1</sup>Department of Management, İstanbul Gelişim University, İstanbul, Turkey

<sup>2</sup>Institute of Social Sciences, İstanbul Gelişim University, İstanbul, Turkey

The financial planning involves a part of the planning process, and the planning helps to improve the profit, develop the decision making and even decrease the number of it. The planning means to take the decisions which will affect the future of the company by today. Since the future is indefinite, it is also possible that the plans made are not realized. That’s why the future is a moving target, and the reason of the planning is to achieve the goal of the company. Logistics enterprises that actualize the financial planning effectively can grow with ease. Because all the sources obtained are used most effectively, and these actually used sources affect the company growth positively.

Revealing how the strategical financial planning of the enterprises in the logistics sector in Turkey should be and how these financial plans affect the company growth are the primary purposes of this study. For achieving this purpose, the relations between literature and the terms are tried to be supported by the major studies after being described the conditions that generate the content of the survey. The hypothesizes of the research has begun to be developed by being created the theoretical framework. Within this scope, firstly a research was actualized by a questionnaire form to see at what level the strategical financial planning in companies grows in comparison with the profitability of the company, company growth, and the sector average. The data obtained were evaluated by the statistical analysis then tested by the hypothesis as well. It is observed at the end of the analysis that the strategical financial planning is essential to empower the financing structure of the companies in the logistics sector and being realized this planning correctly is directly associated with the correct financial decisions.

OP-099

#### Digital Agriculture Practices in The Context of Agriculture 4.0

*Hüseyin Aktaş, Burak Özdoğan, Anıl Gacar  
Manisa Celal Bayar University, Faculty of Economics and Administrative Sciences, Business Dep., Manisa, Turkey*

Increasing World population and significant changes in the climate have put agricultural production under heavy pressure. Importance of agriculture however, is derived from its strategic importance in terms of international competition and agriculture sector can be characterized as a decisive factor in this context. Using technology in agriculture provides significant competitive advantages along with increments in efficiency and productivity. Innovative agriculture practices and usage of information technologies in agriculture is of critical importance for Turkey and similar developing countries. In this study, digitalized agriculture practices and their effects on agricultural productivity is discussed. Circumstance is evaluated through a case study of Doktor Inc. which is a digital agriculture company located in Turkey.

OP-100

#### Knowledge of Cuisine: Intellectual Property Protection In The Turkish Food Sector

*Başak Bak  
Ankara University, Faculty of Political Science, Department of Law, Ankara, Turkey*

Food sector in Turkey is considered as having a strategical importance when considering its place in the overall economy, its capacity to create employment, and its share of export. Turkey's capacity to compete in the international markets is closely associated with its diversified and plentiful raw material content, a multicultural and ancient food culture, and the unique geographical position. IP protection in the Turkish food sector is, therefore, never an outdated issue. On the contrary, it becomes more significant as the innovative methods in food industry, and IP sensitive issues have gained importance. This study examines the IP protection over the food sector under the conventional IP laws in Turkey. The main questions of this study are as follows: how the food industry can be protected under the Turkish copyright regime, can recipes be patented under Turkish law, in which ways can the geographical indications serve the Turkish food sector, is protecting recipes under trade secret more beneficial to companies, and what are the requirements and benefits of having a design or a trademark for a food company as a business strategy. In this study, the relationship between food, and traditional knowledge is also discussed. Traditional knowledge is an IP-related issue. It refers to the knowledge that is passed down from generation to generation within a community who acts as the guardian of this

knowledge. Traditional knowledge is a trending topic in the world, and there is an ongoing demand for the protection of the traditional knowledge, either by conventional IP regimes or by a sui generis protection. As having a rich traditional knowledge on food, Turkey holds a strong potential. Hence, the considerations on this issue help to create an opportunity both for local communities who own the knowledge, and for entrepreneurs who want to commercialize it.

OP-101

#### Perceptions of Entrepreneurs and Barriers to Innovation: Empirical Evidence from Turkish SMEs

*Dilek Demirbaş  
Faculty of Economics, İstanbul University, İstanbul, Turkey*

Purpose –However, despite the recognition of important roles of SMEs in the economy, some crucial barriers to innovation prevent SMEs from developing and contributing sufficiently. This paper identifies some important innovation barriers perceived and experienced by entrepreneurs in Turkish SMEs. Design/Methodology/approach – A logit regression model was used to explain the innovation barriers of SME entrepreneurs based on a survey questionnaire of 250 respondents. Findings – An analysis of 250 Turkish SME entrepreneurs reveals the fact that “lack of government’s R&D and technology policy” from formal barriers; “Informal economy’s negative impact on investment” from informal barriers; “high cost of innovation” and “lack of appropriate source of finance” from environmental barriers and “lack of qualified personnel” from skill barriers, are the most important variables, and they have a significant effect on the entrepreneurs’ innovation decisions in Turkey. Research limitations and Implications –More than two million SMEs cannot be included here. Because of the constraints on resources only a small sample of randomly selected SMEs from a large population was analysed. Therefore, our findings represent this small sample. Practical Implications –Our results may be considered by policy makers in their decision making process to overcome some innovation barriers for entrepreneurs and to improve their economic performance in Turkey. Originality/Value – Understanding basic innovation barriers for entrepreneurs in SMEs will be a critical condition for Turkey’s future growth and prosperity. This study provides an important theoretical insight into the innovation barriers encountered by SME entrepreneurs, and presents empirical evidence to the entrepreneurship and innovation literature with a case study from Turkish SMEs. Key words – SMEs, Barriers to Innovation, Entrepreneur, Logit Model, Turkey Paper type – Research paper

OP-102

#### The Decision of Eurasian Countries to Join an Economic Bloc: The Relationship between Economic Membership and Business in Eurasia

*Abe Harraf  
University of Northern Colorado*

The purpose of this study is to examine the decision Eurasian countries face with joining an economic bloc or remaining independent. It is further evaluated whether an economic membership has an effect on business in Eurasia. The two different economic blocs discussed throughout this study are the European Union (EU) and the Eurasian Economic Union (EAEU). The former is an overall integration of countries, whereas the latter integrates countries through just the economies. Research and data evaluation revealed Eurasian countries face the greatest chance of economic success if they become members of the Eurasian Economic Union. It offers the countries certain advantages, such as trade freedoms, while reducing the political and social risks to other member states. Countries with similar economies and sanctions for free trade also reduce industry conflicts and obstacles for companies conducting business in Eurasia.

OP-103

**An Investigation of Awareness Level of The Construction Employees on Occupational Safety**

Zafer Utlu<sup>1</sup>, *Serenay Şahin*<sup>2</sup>

<sup>1</sup>*Istanbul Aydın University, Engineering Faculty, Head of Mechanical Engineering Department, İstanbul*  
<sup>2</sup>*Omer Halisdemir University, Niğde Vocational School of Technical Sciences, Occupational Health and Safety Department, Niğde; İstanbul Aydın University, Graduate School of Natural and Applied Sciences, Occupational Health and Safety, İstanbul*

Occupational safety is an essential element in the prevention of occupational accidents, but more importantly, employees should be aware of the necessity of occupational safety and must avoid dangerous movements that can cause accidents. The safe behavior of employees can be considered as the most important factor in preventing occupational accidents, especially in the construction industry where work place accidents are very common. Working conditions in the construction sector have been changing because of rapid development of technology. Also, demand for different construction types has been increasing. The most difficult task is undertaken by workers to meet this increased demand. Working conditions have become inharmonious because of the need to meet the demand and the construction with the costumer and also the difference between the working areas. This situation brings about the employees are treated like machines and forced to work in hazardous areas. The most common reasons of accidents in this sector are mainly the various dangers arise from the structural features of the sector, lack of knowledge about the conditions of occupational health and safety, not to change the standard working style and the desire of employers to make more profit. The aim of occupational safety in this sector is to diminish the level of the workplace accidents and to make workers conscious of the issue consequently transforming their safety attitudes to a culture. The aim of this paper is to investigate the opinions of workers in construction areas on occupational health and safety. For this purpose, a questionnaire is conducted and applied in various construction sites in Niğde. The obtained results are thoroughly analyzed by SPSS 24 packet programme.

OP-104

**An Analysis of Turkey's Export Competitiveness According to The SITC Technology Classification**

Kazım Sarıçoban, *Elif Kaya*  
*Kilis 7 Aralık University*

The main purpose of this paper is to determine Turkey's export competitiveness in respect of SITC Technology Classification. The classification has five different categories of goods, namely, raw-material-intensive, labour-intensive, capital-intensive, easy-to-imitate and hard-to-imitate. For analysis, Turkey's export data (US dollars) between 1997 and 2016 is used. Revealed Comparative Advantage (RCA) formula put forward by Bela Balassa (1965) is taken as methodology to analyse. In compliance with Turkey's RCAs of the period from 1997 to 2016, it is found out that Turkey has competitiveness (comparative advantages) on the export of labour intensive and capital intensive goods while it has competitiveness disadvantage on the raw-material intense, easy-to-imitate and hard-to-imitate goods which are research-based goods. It means the goods exported by Turkey is mostly production of labour intense technology, thus it demonstrates that the labour factor is the most significant production factors for Turkey. It is seen that, however, Turkey has disadvantage on easy-to-imitate and hard-to-imitate research-development-based goods strengthen by innovation and highly value-added productions, which are commonly accepted as development indicators for countries.

OP-105

**The Role of The Oil Transfers In The Fiscal Policy: The Case of Azerbaijan**

*Nijat Huseynov*

*Management and Business Administration, Szent Istvan University, Hungary; Godollo*

The Azerbaijan economy has been more sensitive to the fluctuations in the world market. Unlike from the other developing countries, the main source of this relationship has been oil-gas products. That is why, the falling oil prices in the world oil market has affected the macroeconomic situation in Azerbaijan. In this context, the main goal of the paper is to investigate the fiscal policy in Azerbaijan for the last decade. The author applies the correlation and data analysis of the state budget of Azerbaijan with investigating the relationship between the transfers from the State Oil Fund (SOFAZ) and some groups of the expenditures.

OP-106

**Technological Branch Investments in Physical Branching Strategies of Small and Medium Scale Banks / Comparative Evaluation of Potential Physical and XTM Branches Locations over a Medium Scale Bank Example**

*Selman Ortaköy*  
*Kuveyttürk Katılım Bankası*

Purpose: The objective of this study is to evaluate the technological branch investments in the physical channel strategy of the banks with a cost-oriented approach and to evaluate this alternative strategy for small and medium scaled banks to increase their physical asset penetration in the market when physical branching investments has a decreasing tendency.

Approach: Small and medium-sized banks, whose physical coverage is still low in Turkey, are still required to invest in physical channels, despite the increasing trend in online channels. Investments in technological branches could be an alternative for banks in this respect. The definition of the technological branch has been deepened and XTM Branches of a medium scale Bank has been taken as a technological branch example in this sense. The bank's XTM Branch investment and the physical branch option has been compared to a cost-based approach. It has been questioned that how many additional potential locations in Turkey can be chosen according to the Branch Location Decision Parameters of this Bank if the Bank decides to invest in XTM Branches rather than classic physical branches.

Findings: Technology-focused channel approaches in the banking sector, where physical branch investments are getting smaller day by day due to falling margins, are increasingly heavier. The technological branches, which are a hybrid channel between the physical branch and the internet / mobile branches, are also presented as a different channel model in order to increase the penetration of the bank's new geographical locations. The results of this study reveal that small and medium sized banks can find more potential efficient location alternatives than new physical branch investments through the technological branches that save the expenses by half according to the physical branches.

**OP-107**

**Determination of the Seafood Export Competitiveness: The Comparative Analysis of Top Ten Countries Having Lion Share from Seafood Export**

*Kazım Sariçoban, Elif Kaya*  
Kilis 7 Aralık University

The main aim of this paper is to examine the countries' sectoral competitiveness on seafood export. By this study, it is tried to find out whether the countries having great share of seafood export also have got competitiveness in export or not. Therefore, top ten countries that have the biggest share in the seafood export worldwide are chosen and the Standard International Trade Classification (SITC) Revision 3 product groups are used to analyse by Revealed Comparative Advantage (RCA) method. The findings of analyses have surprisingly showed that Vietnam, Denmark and Chile which have lower-shares of global seafood export also have specialization and comparative advantage on seafood export while the USA with higher-share has competitiveness disadvantage with no specialization.

**OP-108**

**Knowledge Management As A Tool to Create Value: Case Study In Algerian Enterprises**

*Smabi Ahmed*  
University of Tlemcen

Actually, many enterprises around the world have started taking more attention to their changing environment, mainly with the rise of the big data and information among enterprises as well as their stakeholders, thereby, enterprises are trying to improve their performance and creating more value, via the best exploitation of their available resources. Therefore, this work aims to study the impact of knowledge management in value creation within the Algerian enterprises. In addition, we try to give a whole situation of the KM application in the Algerian enterprises through the practical study. From one hand, the result of this study is very important in the term of the Algerian leader's interest about creation value through knowledge management, but from another hand, they need more efforts to increase their capacities and improving the practice of knowledge management in their enterprises as an official organizational structure

**OP-109**

**Effects of Servant Leadership on Innovativeness and Perceived Performance**

*Elif Baykal Narcıkara<sup>1</sup>, Cemal Zehir<sup>2</sup>, Mahmut Köle<sup>2</sup>*  
<sup>1</sup>Medipol University  
<sup>2</sup>Yıldız Technical University

Positive organizational scholarship researchers claim that there is an important link between virtuousness in organizations and positive outputs that an organization can create. Without doubt leaders play a significant role in the actualization of organizational goals. According to Positive Organizational Scholarship researchers servant leaders bring the discipline necessary to set goals in guiding his followers towards organizational goals and contributes to higher levels of performance. Servant leaders have a tendency to empower and support their followers and give priority to their betterment rather than glorifying leaders role and position. Thus caring atmosphere created by servant leadership contributes to a coherent organization and servant leader's genuine love, personal development of the employees and concern for their welfare result in the development of gratitude towards leader and extra-role behaviors. On the one hand, servant leader's belief in the intrinsic value of each individual contributes to the recognition, acknowledgment, and the realization

of each person's abilities and and what the person can still learn and create. Moreover, in the extant literature there are indicative evidences about effects of a caring environment prepared by servant leadership to organizational commitment, in parallel with this, to organizational identification. Further more employees' in the POS literature there is enough evidence that favorable attitudes toward their supervisors is usually related to the productivity of the work group and unique behaviors of servant leaders facilitate the atmosphere of growth, development, and trust that encourages followers to reciprocate by performing at the highest levels that may result in innovative ideas and products. We proposed that all the positive links between servant leadership, gratitude felt towards leader, innovativeness and perceived empowerment will lead to higher levels of performance. We examined these relationship among Turkish white collar workers working in service sector in Marmara region.

**OP-110**

**Perspectives on Collaborative Innovation Network Organizations from An Emerging Market: The Case of "Kovvan"**

*Hande Sinem Ergun<sup>1</sup>, Seray Begüm Samur Teraman<sup>2</sup>, Emre Özbek<sup>3</sup>*  
<sup>1</sup>Assoc. Prof. Dr. , Business Administration (in English), Marmara University, Istanbul-Turkey  
<sup>2</sup>PhD Candidate, Business Administration (in English), Marmara University, Istanbul-Turkey  
<sup>3</sup>Founder, Kovvan, Istanbul-Turkey

This study specifically aims to enrich the body of research on new-organizational designs as important reflection of emerging collaborative approaches in innovation ecosystems. New business logic requires sharing of expertise and knowledge to co-create value transcending the boundaries of individual organizations (Corsaro, Ramos, Henneberg and Naude, 2012; Reypens, Lievens and Blazevic, 2016). Therefore, markets are already regarded as network configurations (Storbacka and Nenonen, 2011). Based on the premises of "value is always co-created" and "all social and economic actors are resource integrators" (Vargo and Lush, 2011), there is a growing need for collaborative innovation network organizations. However, our knowledge about how such organizations are formed and operate - especially in an emerging market - is still limited. This study aims provide an example of collaborative innovation network organization from an emerging market to clarify the processes of such organizing entities. In order to reach this goal, intrinsic case study method is employed. Data were collected through interviews, participant observations, and several informative documents. Kovvan is a collaborative innovation network organization which is made up of several organizations who are experts at their field. When an organization is in need of an innovation, Kovvan designs the process of this innovation and with the help of its member organizations carries out the innovation process for the organization in need. For each organization, according to their innovation need, this process and design differs. This study aims to reveal the internal processes of value co-creation in a collaborative innovation network organization.

**OP-111**

**Review of Risks associated with Renovation & Modernization of Thermal Power Plants in India**

*Purnima Bajpai*  
The NorthCap University and IIT Delhi

Renovation and Modernization (R&M) refers to a set of activities intended to improve the performance and reliability of the existing production facilities, and is seen as a cost-effective alternative to increase the operational life of plants. Through R&M, obsolete generation equipment undergoes technological upgrades to boost capacity and reduce harmful emissions. It consists of a five-step process of identification, assessment, planning, execution and closure

in order to plan, implement and monitor the entire procedure. The R&M cost per Megawatt (MW) varies, depending on the age of plant, operational history, fuel type, demand of the equipment to be replaced, the cost of generation and technology. The study aims at of Renovation and Modernization R&M of existing thermal power plants, which as an alternative can help the Country not only to increase the existing capacity and efficiency but will further help to reduce the heavy dependence on coal. Hence it is important to understand the major risks associated with the implementation of R & M projects and mitigate them proactively to enhance the effectiveness of this approach.

**OP-112**

**Emotional and Learning Capability and Their Impact on Team Performance and Product Innovativeness in R&D Teams**

*Cemal Zehir, Evrim Gemici, Mahmut Köle  
Faculty of Business Administration, Yıldız Technical University,  
Istanbul, Türkiye*

When considering the business management requirements of the twenty-first century, it is no longer enough to have employees with high level intelligence quotient (IQ) or merely improved technical and reasoning competence for a competent and productive work with customer satisfaction. In the meantime, it is necessary to have employees who are aware of their feelings and also who can control them and understand the other people's feelings, namely employees who have emotionally and socially high capacity. Since innovation and new product development are extremely critical for economies to increase the amount of value-added goods and services, one of the major aim of this study is to reveal the certain effects of emotional intelligence together with the learning capability, in product innovativeness which is the result of R&D process and known as IQ-dominant field. We propose that emotional capability of an organization influences product innovativeness via team performance, which is affected by learning capability. This study used survey data from a sample of 900 participants in manufacturing firms based on R&D teams.

**OP-113**

**RFID Adoption for Agility in the Fashion Business**

*Evrim Kabukcu  
Department of Design, Manisa Celal Bayar University, Manisa, Turkey*

Fashion markets are needed to be recognized as complex open systems that frequently demonstrate high levels of 'chaos' during 'turbulent times'. In such conditions, managerial efforts may be expended on devising strategies to ensure company's success in turbulent times via creating innovative fashionable product designs, manufacturing and delivering on the basis of 'real-time' demand to spawn 'agile supply chain' and the 'philosophy of quick response (QR)'. Fashion manufacturers and retailers reacted to the challenges by increasingly considering innovative supply chain technologies such as RFID (Radio-Frequency Identification) which is a wireless technology that uses radio signals to tag, recognize, track and trace the movement of an item automatically. In this paper, by focusing on fashion industry, determined benefits of RFID technology are going to be argued. Four benefits of RFID in the fashion industry, are categorized as: (1) improved inventory management, (2) velocity of fashion cycle, (3) integrated fashion business model, and (4) efficiency of operations. To create an agile supply chain proposal, a new model is going to be designed on the basis of the model developed by Martin Christopher, Robert Lowson and Helen Peck (2004). By this integrated applicable structure of this proposal, it is aimed to support the efforts focused on product and process improvement. In this way, it is intended to contribute to the sustainability of the fashion industry.

**OP-114**

**A Case Study to Define a Technology Management Framework within A Defense Enterprise**

*Pınar Kaya<sup>1</sup>, Tolga Eroğlu, İzzet Gökhan Özbilgin<sup>3</sup>  
<sup>1</sup>HAVELSAN, Technology Management  
<sup>2</sup>HAVELSAN, Technology and Innovation  
<sup>3</sup>HAVELSAN, Technology and Academia*

The method of managing technologies in enterprises depends primarily on the size of the company and its organisational structure. Not without significance is also a way of understanding the definition of technology. The main purpose of this paper is the identification and analysis of the factors influencing the manner in which technologies are managed in big enterprise companies especially focused on defence industry. The research process is based on a case study of an enterprise. The received results will help to enhance knowledge related to the development of methods used for technology management in production enterprises. In this paper, the methodology of definition a tailored TM Framework (TMF) for a large scale enterprise defense company (HAVELSAN) will be explained briefly, and selected subset of TMF components in the company will be further discussed.

**OP-115**

**Culture of Enterprising in Schools: A Collected Study**

*Arzu Önel  
Kafkas University, Education Faculty, Department of Mathematics and  
Science Education*

In the last quarter of our century, it is an inevitable obligation to adapt change in the world, modification, production, information and globalization as Turkey. These improvements are possible only with the upbringing of eco-entrepreneurs who will be able to do sustainable environmental studies and development; to cope with ecological problems, emerging as the result of obsessive consumption, industrialization; with the upbringing of social entrepreneurs who will make difference and value in the essential fields as a community.

There are totally 23 million students, consisting of 17,5 million for primary-secondary education; 5,5 million students for college education in our country. The failure to be appointed of approximately 23 years-old young or in other words; their failure to be present in their own educated field create big problems, owning a young population. Throughout education process, the young become unemployed and get psychological traumas while they are not appointed; there emerge very serious familial and social troubles since they do not have alternative profession. To cover up all these problems as a solution, abilities for entrepreneurship that will open all the alternative career gates for the college students.

As a result, education programs that will be helpful for the outcome of the enterprising peculiarities of the students; the subjects to improve the qualities of the students as to be a entrepreneur should be added to the curriculums; practicing enterprising studies should be done in every phase of the faculty of education and entrepreneur teachers should be brought up; spirit of enterprising that is added to education system should be elaborated to get the targets of 2023 of our country and abilities of 21st century; culture of enterprising should be imposed on all the teachers in different branches and entrepreneur students should be brought up within the possible and accurate education.

OP-116

**The Emergence of the New Technologies in Education in Algeria: Case Study on the Engineering Software**

*Boualem El Kechebour*

*Université des Sciences et de la Technologie (USTHB), Faculté de Génie Civil, Laboratory Water, Environment, Geomechanic and Works, Bab Ezzouar, Algiers, Algeria*

This work aims to situate the introduction of new techniques, in particular Computer Science in educational institutions and Universities. The work begins by an overview on the practice of the new technology in some European countries. This is to analyze the European experience and its benefits for to adapt them to the Algerian context. The school and education are not immune to the new information and communications technology: Knowledge transfer is no longer only by the book and the mediation of a teacher, but now goes through audiovisual technology and multimedia. The challenges are twofold: mastering by the student of the new technologies in their cultural and economic context in which they are increasingly present on the one hand; and other hand the diversification of forms of learning in relation with reforms in the education system in Algeria. The study finishes by a thinking on the causes which delays the emergence of the new technologies in Algeria. After investigations, some remarks and deductions are made. Significant results were obtained in some universities, particularly the University of Science and Technology Houari Boumediene (USTHB), in terms of allocation of computers and Internet connection. But, it remains to make great efforts in the field of software acquisition, video training and in the computer-aided design.

OP-117

**Challenges and Drivers for Qatar's Transformation into a Knowledge Based Economy and Society- Work in Progress in Education System Reforms**

*Btool Hashim Mohamed, Muammer Koç*

*Sustainable Development Division, Hamad bin Khalifa University (HBKU), Qatar Foundation(QF), Education City, Doha Qatar*

Submitted to 2nd World Conference on Technology, Innovation and Entrepreneurship, Istanbul, May 12-14, 2017

Until the late 1990's, core Arab traditions and a nationalistic approach were the main factors determining the structure of the educational system in Qatar. The system was old, rigid and devoid of any international benchmarking, to assess its competitiveness at a global scale. However, beginning in early 2000s, the Qatari leadership, with the help of international assessments, was quick to realize that if Qatar desired a place among the leading knowledge economies, it had to revamp its educational system and all peripheral activities to enrich its human capital. Moreover, Qatar's need to move away from oil/gas-based economy has been a key driver to reform and enhance its education and innovation system to gradually transform Qatar into a knowledge based sustainable economy and society, which was adopted as its National Vision 2020 (QNV 2030) and a blueprint for its sustainable development plans for the next few decades. However, while the leadership plans and focuses on implementation of QNV 2030 objectives, there is a general sense of incoherency between key stake holders and execution and implementation of conceived projects. This paper discusses various challenges that need to be overcome to realize Qatar's ambitious knowledge economy goals after analyzing the current progress of several reforms and initiatives within the human capital development arena. Several recommendations are also proposed entailing adjustment in policy and governance of the educational and innovation framework of Qatar, which needs to invoke economic incentives and fortify intellectual property rights while nurturing expansion in innovation, education, vocational skills, information and communication technologies, measures and projects

OP-118

**Integration and Vocational Course Suggestions for Migrants**

*Burcu Bektaş<sup>1</sup>, Erdoğan Köse<sup>2</sup>*

*<sup>1</sup>Istanbul University, Vocational School of Technical Science, Computer Programming, Avclar; Turkey*

*<sup>2</sup>Istanbul University, Vocational School of Technical Science, Printing and Publishing Technology, Avclar; Turkey*

When the terrorist activities across the world are considered, Turkey is also affected by the migration wave created by it. According to the official numbers, Turkey now hosts 3 million migrants whereas the unofficial numbers claim that this reaches to 5 million people. The new lives people establish in Turkey bring several integration problems such as loneliness, social isolation, alienation, regret or feeling invaluable. Therefore, it is essential that these people improve their language skills and develop skills in order to leave in harmony and peace with the local residents and to overcome the difficulties rising from cultural differences. To serve this aim, integration programmes and vocational courses can help people overcome the adaptation problem as well as help them gain a skill that could create job opportunities for them. Within the scope of this research, 10 different courses that could be offered to migrants and its potential affects and impact on these people will be looked into.

OP-119

**Technologizing English as a Foreign Language (EFL) Teaching and Learning**

*Dallel Sarnou, Hanane Sarnou*

*Abdelhamid Ibn Badis University*

The infiltration of technology in educational settings has not gone without consequences on and in the process of learning. Around the globe, access to internet has strongly marked education and how people learn new things. However, this new way of learning has given rise to an unprecedented controversy among educators and educationalists. In fact, 21st century language teaching is a revolution that needs rebels. Teachers must be the revolutionaries who are expected to subvert the language classroom and change it into a successful learning community. English as a foreign language teachers are at the very center of this revolution. Hence, it is of paramount urgency to re-model EFL classrooms to cope with the tremendous changes that were brought by the permeation of technology in almost every aspect of our life. In the present paper, we will examine the results of a two-year experience of blended learning and teaching undergone with first and second year master students of Applied Linguistics field at the English department of Abdelhamid Ibn Badis University. The results to be displayed in this research work are the outcome of a revolutionary initiative (project) undertaken by the two researchers who are the teachers of three different modules where the new approach was adopted, notably in Applied linguistics, e-learning and human resources development (HRD). The researchers claim that a blended (and sometimes a hybrid) mode of teaching (and learning) is what may bridge the gap between us, teachers who belong to generation X, and our students who belong to generation Y. Based on a variety of theories and approaches (bloom's taxonomy, Kolb's Experiential Learning Theory and Lage, Platt and Treglia's the flipped classroom approach), the researchers seek to demonstrate throughout this paper that a blended approach to learning and teaching English in our departments has become mandatory.

OP-120

**Reforming Turkey's Higher Education System to Get Rid of Mid-Income Trap and Attain Intellectual Economy**

*Halil Kürşad Aslan*

*Istanbul Medipol University, Department of Political Science and International Relations, İstanbul, Turkey*

Innovation is about the creation, diffusion, marketization and practical usage of new ideas and technological advances in an economy. There is an axiom "innovate or die" to show the vital place of innovation in the competitive global economic structure. Another affiliated topic is mid-income trap which is a status of slowing down and stagnation in economic growth when countries reach middle-income level in the simplest terms. The country has to restructure its economy fundamentally in order to get rid of mid-income trap. One of the most critical conditions of this restructuring process requires the most effective usage of national resources particularly human capital for higher education, technological production and innovation systems. It is commonly shared that geopolitical competition among big powers (the USA, EU, and BRICS) is reshaping the world economy and unravelling global power relationships and governance. Under these circumstances adaptation and innovation capacities of nations along with knowledge production processes have gained extra importance. Fresh perspectives share the view that competitiveness of national economies is founded on innovation; and nation states are required to provide support for publicly-funded scientific research that leads to the competitiveness and commercialization of products. Supporting research and development, and formulating a national innovation policy especially in developing countries seems to be essential for economic growth and development. Under the rubric of national innovation systems governments assume major roles in designing science, technology and innovation policies. In this light a crucial role governments are expected to assume is reforming research institutions, technology transfer institutions and higher education systems in general. In this paper, I will analyze these perspectives with a specific focus on Turkey's national innovation efforts and higher education system.

OP-121

**Definition and implementation of procedures for IT assets managing**

*Jaumin E Ajdari, Ahmed Abdullai, Xhemal Zenuni, Bujar Raufi, Florie Ismaili*

*South East European University in Tetovo*

Manually tracking and management of thousands of IT assets in a company is costly, takes significant time, and has a tendency for mistakes. In order to reduce costs while planning the budget, companies require a solution to manage the hardware, software, and information throughout the life cycle of the IT assets, to maintain control, increase accountability and to support strategic decision making. The main purpose of this study is to analyze and develop a IT asset management solution and to help the companies to store information about the assets, locations, owners and costs.

OP-122

**Outlier Detection Method by Using Deep Neural Networks**

*Olgun Aydın, Semra Erpolat Taşabat*

*Department of Statistics, Mimar Sinan University*

Detecting outliers in the data set is very important for building effective predictive models. Consistent prediction can not be made through models created with data sets containing outliers, or robust models can not be created. In such cases, it may be possible to

exclude observations that are determined to be outlier from the data set, or to assign less weight to these points of observation than to other points of observation. Lower and upper boundaries can be created to exclude outliers from the dataset, and models can be created using the data between those boundaries. In this study, it was aimed to propose a different perspective on outlier detection methods by creating upper and lower bounds with the aid of deep neural networks using skewness, kurtosis and standard deviation values obtained from the dataset with trained models.

OP-123

**Displaying of Data's of Developed Environmentally Intelligent Systems Using Wireless Sensor Networks on Android Platforms**

*Murat Dener*

Wireless Sensor Networks consist of large number of tiny sensor nodes. Each sensor node has communication, sensing and computing capabilities. These sensor nodes perform the environmental measurement tasks with the cooperation. Intelligent systems can be developed using these sensor nodes. Also, the number of mobile applications used in the display of intelligent systems has increased rapidly in recent years. As a result of this rapid increase, displaying and control of data over these mobile platforms have also begun. In this study, a wireless sensor network that detects the environmental data has been established using WiSeN sensor nodes. In addition, a mobile application has been developed to monitor the data's. This study brings innovation to the monitoring of environmental data's.

OP-124

**Indoor Localization for Wireless Sensor Network and DV-Hop**

*Merve Kanmaz, Mubammed Ali Aydm*

*Istanbul University, Faculty of Engineering, Department of Computer Engineering, İstanbul, Turkey*

Indoor positioning is a significant problem for many work areas. Indoor positioning due to breakage and disappearance of signals due to walls and other obstacles in indoor requires a different solution to the outdoor Therefore, the GPS, which is successful for outdoor positioning, can not work in the same way as internal positioning. Positioning can be done by using anchor nodes that have their own position information located in wireless sensor networks In this study, DV-hop method, one of these methods, has been examined. It has been investigated in three different methods presented as an alternative to the classical Dv-Hop method and its advantages and disadvantages are discussed.

OP-125

**Intelligent Transportation Systems and Traffic Management in Wireless Sensor Networks**

*Murat Dener*

Wireless Sensor Networks are the source of intelligent systems today. With the development of sensor nodes that form Wireless Sensor Networks, these systems can be easily used in our daily life. In this study, intelligent transportation systems and traffic management with Wireless Sensor Networks are described. Within the scope of intelligent transportation systems, vehicle sensors, road sensors, weather sensors and environmental sensors are mentioned. Within the scope of Traffic Management, dynamic signalization systems are mentioned. It is estimated that the work done will be beneficial to readers and practitioners.

OP-127

**Network Analysis of Interbank Cross-border Flows at Country Level (2006-2015)**

*Ercan Eren<sup>1</sup>, Semanur Soyuyiğit<sup>2</sup>*  
<sup>1</sup>*Yıldız Technical University, Istanbul*  
<sup>2</sup>*Erzincan University, Erzincan*

In today's globalized World, economic activities are performed beyond the physical boundaries of countries. It can be seen as increasing activities such as trade of goods, financial flows and trade of intermediate goods. Network analysis, that has been used to analyze formations of complex systems recently, is frequently used to investigate these global economic relations. In this context, international trade networks, financial networks and global production networks (input-output networks) are some of the fields that are analyzed in an interdisciplinary way. In this study, it is aimed to analyze interbank cross-border flows at country-level by applying network analysis. Thus, we expect to investigate the systemic importance and vulnerabilities of countries in international banking sector by applying HITs algorithm from 2006 to 2015. HITs algorithm has an advantage since it takes second order adjacencies of countries into consideration. As a consequence of the analysis, it will be possible to see the effects of global and Eurozone crises on systemic importance and vulnerabilities of countries.

OP-128

**Regional Innovation Performance With The Method of Normalization Analysis: Example of TR1**

*Erhan Duman*  
*Bitlis Eren University, Bitlis*

Today the economic decision units are need in order to raise competitiveness and economic growth to provide resource to develop social welfare. The economic structure in these resources are emerging knowledge, technology and innovation. Especially the economic growth assume central role in the compensation of resources needed in the innovation systems. Therefore, the new world economy as a production factor is important where innovation of analyzing the relationship between economic growth. In this study, the relationship between regional innovation and economic growth are investigated normalization methods. In this context, the innovation performance aim to the TR1 region and comparison in Turkey.

OP-130

**A Picture of Women's Entrepreneurship: A Field Study of Motivation Factors, Regional Differences and Value Perceptions**

*Sevgi Kesim Güven, Tamer Atabarut, Aylin Löle*  
*Bogazici University Lifelong Learning Centre*

While the concept of entrepreneurship that has been rapidly developed since the 1980s, mostly it was involved men at first, but then the achievements of women in the socio-economic field obliged the acceptance of women into the field of entrepreneurship. It is a fact that the active participation of women in business life began later in developing countries than it did in developed countries. Nations' socio-economic systems and systems of values caused this delay; however, other versions of the glass ceiling, with which we are familiar in business life, exist for women entrepreneurs. The issue of women entrepreneurs is a painful issue for developing countries such as Turkey, although women's entrepreneurship is still on the rise. As well as the state-sponsored practices, non-government organizations also try to support women's entrepreneurship. The main materials used in this study mainly depend on the outcomes and analyses of

the questionnaires applied to the aspiring women entrepreneurs who participated in an educational program in Gaziantep, İzmir, Kastamonu, Adana, Çanakkale and Konya within the "My Ideas are My Future Project" carried out by the Inclusive Growth Association and Boğaziçi University's Lifelong Learning Center with the support of The Union of Chambers and Commodity Exchanges of Turkey (TOBB) and General Directorate for SME Development (KOSGEB) in last two years. This study demonstrates the demographic characteristics of the aspiring women entrepreneurs who participated in the educational program, the attitudes towards women's entrepreneurship, the factors that obstruct entrepreneurship activities, the effects of the preference of being entrepreneur on family roles, the preferred women entrepreneur models and women's perception of valuableness. These statements allow to create a picture of aspiring women entrepreneurs in different cities of Turkey and are expected to guide the planning of the next steps of other social responsibility programs.

OP-131

**An Integrated survey in Affiliate Marketing Network Using Innovation Approach**

*Ali Norouzi*  
*istanbul aydin university, social science institute, business management departmant*

As the Internet plays more colorful role in our everyday lives, the consumer's shopping habits is changing toward increase in share of online purchase. Along with expansion of the Internet in people's everyday life the recent years have been featured with growth of online marketing among businesses. Firms have come to understanding that online marketing is a vital element for increasing brand awareness and grab attention of the modern consumers. Moreover, there has been a continuous increase in engagement of the consumer in social media and blogs, which makes them a key marketing channel for the businesses. Businesses currently have to admit the necessity of joining online marketing as a measure to improve their brand awareness and communicate with the target customers. Affiliate marketing functions based on marketing channel and brings less risk comparing with other online marketing channels. As an almost novel phenomenon, online marketing has experiences a continuous growth over the recent years. The present article examines affiliate marketing network, which is an online marketing channel that gives businesses the opportunity to achieve more visibility with relatively low costs. Many popular media including blogs, voucher code sites, and price comparison sites cooperate using affiliate marketing model. Different online marketing challenges are first introduced to give a theoretical background of online marketing in general. Afterward, more detailed analyses of affiliate marketing, as an online marketing channel and the main area of focus of the study is given. Affiliate marketing and all its features from theoretical aspect are discussed in this article, also commissioner and marketing plans in practice, the requirements, and the environment are discussed.

OP-132

**Usage of Disruptive Technologies and Requirement Analysis of Innovation in Insurance Sector**

*Zeynep Stefan*  
*Faculty of Economics, Istanbul University, Istanbul, Turkey*

If we consider just their meanings, these two words innovation and emerging markets are so rarely for being together. The main reason is because innovation need time, at least middle term unfortunately these time and necessary financial sources could be allocated to innovative actions in emerging markets. However, added value provided by innovation and also its acceleration affect are inalienable for every business in our century.

The first indicator, we need to consider, is main aim of a developing country. A developing country wants to upgrade itself among developed countries. It needs increasing its GDP, providing a fair distribution of wealth among its citizens, having a well-regulated and enough structured financial markets, being one of the most preferred country for international investors and giving its best to people who are living in this country. The unique way for making real these dreams is just innovation. If we restrict our macro view and we just think about our core interest, about insurance sector, we will see main requirements of our insurance sector for being one of the best insurance markets around world. First of all, main issues of our insurance market is taking enough share from investors among international insurance market, having enough insurance penetration in nationwide and making validate the basic rule of insurance markets "law of large numbers". An increasing penetration provides a growing fund to the country. If we leave considering the positive social effect of insurance sector later, this fund affects the country's financial markets positively. Today, all insurance professionals are like-minded that a country cannot realize these targets without innovation.

**OP-133**

**Detecting Phishing WebSites Using Support Vector Machine Algorithm**

*Doğukan Aksu<sup>1</sup>, Abdullah Abdulwakıf<sup>2</sup>, Mubammed Ali Aydın<sup>2</sup>*  
<sup>1</sup>*Istanbul Kültür University, Engineering Faculty, Computer Engineering Department, 34156, Bakırköy, Istanbul, Turkey*  
<sup>2</sup>*Istanbul University, Engineering Faculty, Computer Engineering Department, 34320 Avcılar, Istanbul, Turkey*

Cybersecurity is one of the most important areas which aims to protect computer or computer systems, networks, programs and data from an attack such as; financial systems, biometric security systems, military systems, personal information security etc. Nowadays, there are a lot of rule based phishing detection systems which are created to help people who can not understand which URL is real and which one is fake URL address. This paper proposes a method with supervised machine learning that classifies the URLs to legitimate and phishing. By using support vector machine (SVM) classification, a machine-learning algorithm, with an MATLAB-based computer program to give a warning message to the users about the reliability of the web page. In this paper, phishing detection system is implemented with SVM to avoid the internet users from becoming a victim of phishers to do not lose financial and personal information.

**OP-134**

**The Use of Information and Communication Technologies In Physical and Rehabilitation Medicine**

*Dilşad Sindel, Ayşe Yahman, Aydan Oral*  
*Department of Physical Medicine and Rehabilitation, Istanbul Faculty of Medicine, Istanbul University, Istanbul, Turkey*

While modern information and communication technologies (ICTs) are being used widely in business world for several decades, their use in Physical and Rehabilitation Medicine dates back to the onset of the new millennium in the form of 'telerehabilitation'. Telerehabilitation is the offer of rehabilitation services to an individual at a remote place through the use of ICTs including mobile phones, internet, videoconferencing, and telemonitoring. There are successful examples of its use in cardiac, neurological, and cognitive rehabilitation and also for speech and language therapy, pain management, and for the elderly with disabling health conditions (1). In a broader sense, all individuals, either healthy or those with chronic conditions/disability, may benefit from e-health/telehealth/telemedicine opportunities for disease prevention or management (particularly self-management education) in the availability of internet in accessible formats (e. g.

for use by those with vision impairments) (2). ICTs are not only beneficial for health-care recipients, but they also serve health-care professionals in training, professional development, consultations, and sharing experiences to improve quality of health care. Most importantly, ICT use by persons with disabilities (PwDs) in the area of education (e. g. speech recognition techniques for those with hearing impairments, accessible televisions or websites) and work, emergency response, health, rehabilitation, and community life services (e. g. recreation and leisure, voting, justice) (1) may facilitate their equal inclusion and enable their full participation in society. References

1. World Health Organization, World Bank. World Report on Disability. Geneva, WHO, 2011. Available at [www.who.int/disabilities/world\\_report/2011/en/](http://www.who.int/disabilities/world_report/2011/en/)
2. Hailey D, Roine R, Ohinmaa A, Dennett L. Evidence of benefit from telerehabilitation in routine care: a systematic review. *J Telemed Telecare* 2011;17:281-7.

**OP-135**

**Modelling A Context-Aware Friend-of-A-Friend (FOAF) Applications For Mobile Platforms**

*Bujar Raufi, Florije Ismaili, Jaumin Ajdari, Xhemal Zenuni*  
*Contemporary Sciences and Technologies, South East European University, Tetovo, Macedonia*

We live in an era where the evolution of social networks and developments in the field of information technology witnesses and exponential growth. On a daily basis, we have an ever growing, an ever expanding social network users and as a result we affirm an increase of data that is distributed across different platforms. In this paper, we aim to treat the semantic web from the prism of creating a suitable infrastructure for data integration on the web. One of the most promising applications of the semantic web is the presentation of profiles using an RDF (Resource Description Framework) schema called Friend-of-Friend (FOAF) which represents a machine-processable ontology for describing persons, their activities and relations to other people and objects.

In order to demonstrate the concept on how to integrate, relate and share information using FOAF, we model and develop a mobile application called "Find professional" which consists in creating, finding and interacting in a context aware fashion with other users via FOAF. The "Find Professional" mobile app can create a FOAF profile either by asking user's direct input or it can utilize other social network profiles such as Facebook for importing user public profiles into FOAF. User profiles represent RDF files that can be read and queried by semantic query languages like SPARQL, which returns data to their user profiles as well as finds professionals in the FOAF app based on user's geographic location.

The application is also evaluated with a field usability testing performed against ten randomly picked user from various profiles and backgrounds. Usability testing process did not yield severe problems during application evaluation and comments are more related to user interface rather than difficulty in user task completion.

**OP-136**

**Blackout and Blackstart on Power Systems**

*Cihan Aybancı<sup>1</sup>, Yaşar Beyazıt Yoldaş<sup>2</sup>, Bedri Kekezoğlu<sup>1</sup>*  
<sup>1</sup>*Department of Electrical Engineering, Yıldız Technical University, İstanbul, Turkey*  
<sup>2</sup>*Turkish Electricity Transmission Company, İstanbul, Turkey*

Power systems are complex structures that energy production, transmission and consumption units. There are various reasons for energy interruptions on these systems. Power outage on the power

system can lead to partial or complete loss of the network. Energy interruptions in large regions cause significant economic losses and precautions must be taken in this regard. In this study, Blackout situations in power systems were analyzed. Within the scope of the study, important Blackout situations encountered around the world have been examined. Blackout causes are listed and interpreted in power systems in the light of experienced events. Precautions have been put forward in order to avoid blackout situations. In addition, the effects of Blackstart-equipped power plants on the recovery of the network have been examined.

**OP-137**

**Innovative Assistive Technologies For Persons With Disabilities**

*Aydan Oral, Dilşad Sindel, Ayşe Yalman*  
*Department of Physical Medicine and Rehabilitation, Istanbul Faculty of Medicine, Istanbul University, Istanbul, Turkey*

The World Report on Disability illustrated overwhelming figures regarding disability, indicating that approximately 15% of the population of the world (over a billion) are experiencing disability in their lives among which 3. 8% (around 190 million) are having a large amount of problems in functioning and these figures are expected to increase due to the global aging of populations (1). The United Nations Convention on the Rights of People with Disabilities (CRPD) views “equal and full inclusion of persons with disabilities (PwDs) in society as a human right” and advocates the offer of rehabilitation including assistive technologies to enable their participation in all life areas (Article 26) (2). Assistive technologies encompass a very broad spectrum ranging from simple innovative designs of utensils to aid eating to motorized wheelchairs and robotic technologies for mobility as well as those with complex computerized systems (3) to improve functioning in diverse life areas to be offered to the use of persons with disabilities. Recently, human computer interaction solutions have paved the way for the development of motion-based technologies such as virtual reality systems as well as myoelectric orthotics and prosthetics and brain-computer interface systems which could be used for mobility, communicating, and environment control systems (such as smart homes) to facilitate independence of PwDs. Rehabilitation professionals need the support of assistive technologies of diverse types to better serve and meet the needs of PwDs. However, accessibility issues, complex training requirements for specific devices/technologies, social and financial aspects may act as barriers for the wide use of innovative assistive technologies by PwDs. References

1. World Health Organization, World Bank. World Report on Disability. Geneva, WHO, 2011.
2. United Nations. Convention on the rights of persons with disabilities. 2006.
3. Giustini A, et al. Eur J Phys Rehabil Med 2014;50:579-83.

**OP-138**

**The Connection Calcination and Sulphation With The Thermal Behavior of Chalcopyrite Ore Concentrate**

*Meltem Kızılcıca<sup>1</sup>, Mehmet Çopur<sup>2</sup>*  
<sup>1</sup>*Department of Chemical Engineering, Ataturk University, Erzurum, Turkey*  
<sup>2</sup>*Department of Chemical Engineering, Bursa Technical University, Bursa, Turkey*

The thermal behavior of chalcopyrite ore concentrate was used thermogravimetric analysis (TG) coupled by differential thermal analysis (DTA). The thermal analysis were done up to 900oC from 0oC at different heating rates (2, 5, 10, 15 and 20 oC /min) under air atmosphere. The ore was calcined at 30, 60, 90 min and 400, 500, 600, 700, 800 and 900 temperature and investigated sulphation proportions. The products of obtained calcination were characterized

by XRD, SEM/EDS, FTIR analysis. Based on the conclusions obtained was confirmed the thermal behavior of the ore.

**OP-139**

**A Survey on Automatic Text Summarization**

*Oğuzhan Taş<sup>1</sup>, Farzad Kiyani<sup>2</sup>*  
<sup>1</sup>*Oğuzhan Taş*  
<sup>2</sup>*Farzad Kiyani*

Text summarization is compress the source text into a diminished version conserving its information content and overall meaning. Because of the great amount of the information we are provided it and thanks to development of Internet Technologies, text summarization has become an important tool for interpreting text information. Text summarization methods can be classified into extractive and abstractive summarization. An extractive summarization method involves selecting sentences of high rank from the document based on word and sentence features and put them together to generate summary. The importance of the sentences is decided based on statistical and linguistic features of sentences. An abstractive summarization is used to understanding the main concepts in a given document and then expresses those concepts in clear natural language. In this paper, gives comparative study of various text summarization techniques.

**OP-140**

**Flexible and Multifunctional Carbon Nanotube-Graphene Reinforced Cellulose Paper**

*Osman Fatih Damnalı, Volkan Eskizeybek*  
*Department of Materials Science and Engineering, Faculty of Engineering, Çanakkale Onsekiz Mart University, Çanakkale, Turkey*

Flexible devices have recently become popular in many fields such as wearable devices, flexible sensors, and supercapacitors. Modern technology of flexible devices demands an efficient and flexible substrate material to satisfy two major criteria, namely low cost, and scalable processibility. Polyester based thermoplastic materials such as ‘polyethylene terephthalate’, ‘polyethylene naphtholate’ and ‘polyimide’ are used as substrates in order to provide these devices with lower cost and shorter time production. Alternatively, improved physical properties such as electrical conductivity, mechanical strength, and thermal stability can be implemented of the substrates with the aid of nanotechnology. Here, we report the fabrication of flexible, multifunctional, low-cost nanocomposite substrates by adding carbon nanotube (CNTs) (1D) and graphene (2D) as reinforcements into recycled cellulosic paper used as matrix material. The nanocomposite papers were prepared with different weight percentages (wt%) of the nanoreinforcements to reveal the effects of reinforcement type and amount on the physical properties. In addition, the nanocomposite papers were prepared with various thicknesses by controlling rolling process. As a result, the existence of CNTs and graphene nanoreinforcements improved of the electrical conductivity and mechanical strength compared to neat cellulose papers. The minimum sheet resistance was measured as 200 ohm/sq for 10% wt. graphene/paper nanocomposites which has a decreasing trend with increasing graphene concentration. Similarly, tensile strength varies proportionally depending on the amount of nanoreinforcements and the paper thickness in the nanocomposite. We think that this study will provide functional properties to the matrix material and make it an important and inexpensive alternative substrate for next generation wearable devices and flexible display devices. The use of recycled conventional cellulosic paper as matrix material will also be an important application area for the recycling of waste paper.

OP-141

**Optimization of Dissolution of Colemanite Ore in Potassium Dihydrogen Phosphate Solution (KH<sub>2</sub>PO<sub>4</sub>)**

*Özlem Karagöz, Soner Kuşlu  
Atatürk University, Engineering Faculty, Department of Chemical Engineering, 25240 Erzurum, Turkey*

Boron is one of the most important richnesses of Turkey which has approximately 72% of the known boron reserves globally. The production of boron compounds has essentially expanded recently due to increasing demands. Colemanite rich in boron is a common raw material to produce boron components and the first step of this process is the dissolution of colemanite by using different leaching solutions. The main aim of the study is to investigate the optimization of dissolution of colemanite in potassium dihydrogen phosphate (KH<sub>2</sub>PO<sub>4</sub>) solution. Taguchi method was used to determine the optimum conditions while effectiveness of the parameters were identified by variance analysis. Reaction temperature (T), KH<sub>2</sub>PO<sub>4</sub> concentration (C), stirring speed (W), solid to liquid ratio (S/L), and particle size (D) of colemanite were selected as parameters affecting the rate of colemanite dissolution. The optimum conditions for these parameters were determined. As a result of the experiment made under optimum conditions, both 86% of B<sub>2</sub>O<sub>3</sub> passed into the solution and potassium borate by-product were produced by crystallization.

OP-142

**Study of the Influence of Waste of Plastic on the Mechanical Behavior of Modified Bituminous Concrete**

*Noureddine Guessabi<sup>1</sup>, Khedoudja Soudani<sup>1</sup>, Samia Saoula<sup>2</sup>, Smail Haddadi<sup>1</sup>  
<sup>1</sup>University of Sciences and Technology Houari Boumediene of Algiers; Faculty of Civil Engineering; LEEGO  
<sup>2</sup>University Mhammed Bouguera of Boumedes; Faculty of Engineering; LEEGO*

The objective of this work is the study of the influence of the addition of plastic waste on the behavior of modified asphalt mixtures. Two mechanical tests were conducted on the modified bituminous concrete by the waste of plastic. Different contents of waste were used. The modification was performed by the dry method. The mechanical tests were: Marshall test and the indirect tensile strength test. This study showed that adding waste of plastic to asphalt mix improves their mechanical performances, such as increased stability, compactness, Marshall quotient and indirect tensile strength ITS and decreased Marshall flow and the deformation in the indirect tensile strength test. In addition to the interest of the use of plastic waste in road construction, there is a positive influence on the environment and human life by reducing storage areas of these plastics pollutants

OP-143

**Using Multi-Criteria Decision Making For Selection Provinces For Fattening Farm**

*Burcu Özcan, Çağm Karabıçak, Gülşen Akman, Yasin Erdoğan  
Kocaeli University Industrial Engineering Department, Kocaeli, Turkey*

Turkey has a high potential in the field of agriculture and livestock production. Turkey has a long history in the production of livestock system, which became the "buffer" sector of economy and the "locomotive" sector of Turkey. Although nowadays pastures are decreased, Turkey has quite large pastures. Besides, the domestic demand for meat in Turkey is quite large and tend to a show considerable growth. Animal husbandry is carrying great importance in terms of protein source and fattening cattle in the red meat production.

In this study, the causes of increase in meat prices in Turkey were investigated, and the findings showed that, the cause of the price increases made as inadequate animal fattening. As a result, it was decided to establish a new place for the production of cattle-raising. Before starting the construction of the fattening livestock farm, firstly the location of the establishment is considered. In the decision-making process, it is quite difficult to make choices because of the different alternatives in terms of various criterias. For this purpose, PROMETHEE method has been used to select the place of establishment in Turkey.

The choice of fattening farm establishment site was evaluated in 81 provinces; cattle feed areas, demand on meat, urban development index value, minimum temperature, maximum temperature, precipitation amount and grant support criteria were evaluated with using the PROMETHEE method. The interactions between the criterion and the criteria that influence the process were determined as a result of the survey conducted. As a result of this survey study, criterial weights and criterion values were determined by AHP method and solved by PROMETHEE method considering the results. As a conclusion, the most suitable and the less suitable provinces for fattening livestock farm are selected.

OP-144

**Strategies For The Involvement of Nurses As Entrepreneurs In Health Care**

*Nuray Turan<sup>1</sup>, Nurten Kaya<sup>2</sup>, Gülsün Özdemir Aydın<sup>1</sup>  
<sup>1</sup>Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey  
<sup>2</sup>Istanbul University, Health Sciences Faculty, Department of Midwifery, Istanbul, Turkey*

Nowadays, entrepreneurship, which is a dynamic factor in all fields to improve the quality of human life, is gaining importance in the health care system with each passing day. This system, which has a very wide area, allows nurses to fulfill their contemporary roles and responsibilities as a professional. Nursing entrepreneurship has a multi-dimensional background. Unlike traditional nursing approaches, entrepreneurship has an important place among contemporary nursing roles and responsibilities. In terms of nursing profession, entrepreneurship is defined as "the supervision of nurse on patient care and practices". However, nowadays, rapidly developing medical and technological advancements as well as capital limitations in front of nursing entrepreneurship, operating inexperience, lack of professional support, attitudes of other healthcare professionals and legal barriers make innovation compulsory and also creates an opportunity environment for nursing entrepreneurship. Entrepreneurship is an important source of innovation and creativity. When the literature is examined, it is seen that entrepreneurial aspects of nurses are affected by their individual (strong sense of self, belief, being able to take risk, being creative and sociable, being able to imagine, being honest, reliable, patient and eager, being planner and organizer, being able to foresee the future) and professional features (experience, knowledge, communication skills, time management). Entrepreneurial nursing is based on the factors such as nursing services, health care products, legal services, health care services/political advice and publications. Thus, entrepreneur nurses can assume responsibility in various positions outside the hospital atmosphere. The main institutions/organizations where they undertake these positions are consulting and educational companies, home/healthcare companies/agencies, assistance-based daily care institutions for life and adults, child care centers, community clinics, durable medical equipment companies, writing-publishing working places and health care product companies etc. In this context, entrepreneurship in nursing is accepted in every field, and its recognition is increasing. Consequently, nurses are expected to be entrepreneurs as a change agent in the health care system. However, there are many factors that support and prevent nursing entrepreneurship. This review has been designed to describe the barriers of entrepreneurship in nursing and to present strategies for overcoming these barriers.

OP-145

### Strategic Innovation Approach

*Nilbun Doğan*

*Herhangi Bir Kurumda Çalışmıyorum.*

In recent years, the concept of innovation has become the most debated topic in literature and in particular, the strategic importance of innovation management for businesses is emphasized. In this context, the strategic innovation approach, which emerged as a synergy of innovation and strategic management, seems to play an important role in achieving sustainable competitive advantage. The aim of this article is to emphasize the importance of innovation and strategic innovation approach.

OP-146

### Social Entrepreneurship Characteristics of Nurses: A Systematic Review

*Nuray Turan<sup>1</sup>, Gülsün Özdemir Aydın<sup>1</sup>, Nurten Kaya<sup>2</sup>*

*<sup>1</sup>Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey*

*<sup>2</sup>Istanbul University, Health Sciences Faculty, Department of Midwifery, Istanbul, Turkey*

**Aim:** Social entrepreneurship in nursing is an approach involving design and implementation of innovative ideas, practical models to provide social benefits. Main purpose of this study is to determine nurses's social entrepreneurship characteristics. **Method:** A systematic approach to searching the literature was undertaken using identified academic databases Medline, Scopus, PubMed, Cumulative Index to Nursing, Allied Health Literature (CINAHL) from 2006 to May 2016, and used "social entrepreneurship", "nursing" keywords. It was reached a total of 14 studies, six studies met the search criteria. **Results:** Nowadays although examples of entrepreneurship in nursing have become widespread both in the current media, in the literature, it is seen that the great majority of studies aim to determine the obstacles and problems to the entrepreneurship in nursing or to develop entrepreneurship. As a result of this review, it was determined that the articles are aimed at explaining social entrepreneurship in nursing. It was determined that they aren't directly aimed at examining the individual or professional characteristics. As it can be seen from examples of entrepreneurship in the literature, it is seen that nurses have new ideas and are successful by taking into account creative, entrepreneurial, social, cultural and universal ethical principles. The fact that social entrepreneur nurse is aware of social problems related to protection, development of health includes individual characteristics such as struggle, determination, responsibility, risk taking, creativity and foresight about opportunities, planned and work systematical working, being able to perform team work, ability to develop trust relationships, effective communication skills, identifying deficiencies and limitations correctly, having knowledge about the laws. In addition, the fact the social entrepreneur nurse completes the period of inexperience and is in the mastership period is effective in achieving successful social entrepreneurship. **Conclusion:** Although the concept of social entrepreneurship isn't a concept specific to nursing, the creativity inherent in the nursing profession constitutes the first phase of social entrepreneurship. Therefore, these characteristics of nurses receiving training by humanistic care philosophy will develop over time, and the examples of social entrepreneurship in nursing will continue to increase.

OP-147

### Ethical Aspects of Entrepreneurship In Nursing

*Nurten Kaya<sup>1</sup>, Nuray Turan<sup>2</sup>, Gülsün Özdemir Aydın<sup>2</sup>*

*<sup>1</sup>Istanbul University, Health Sciences Faculty, Department of Midwifery, Istanbul, Turkey*

*<sup>2</sup>Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey*

Ethics is one of the characteristics of contemporary civilization. It is thoroughly discussed and elaborated upon; it might equal be taught or otherwise introduced into individual's life. One of the areas where ethics has become increasingly important is economic activity. In healthcare, the costs have continued to increase, alarming those within and outside the industry. On the other hand the health care systems have increasingly encouraged competition between providers which in turn has facilitated the development of entrepreneurship as well as intrapreneurship ventures. Thus, during the past twenty years, there has been an explosion in entrepreneurs. Ethical issues of entrepreneurship which is very important include under a seemingly clear simplicity numerous. Yet only recently has serious research attention been devoted to the ethical problems. Health care system faces uniquely complex ethical problems such as basic fairness, personnel and patient-health care teams' relationships, distribution dilemmas, and other challenges. Many points of serious concern need to be raised under the concept of ethics. For nurse entrepreneurs to be professionally credible they have to be competent and accountable. While fundamental responsibility lies with the individual nurse entrepreneur, the professions have to evidently improve these essential attributes as well. It is important that continuing education be an integral part of nurse entrepreneurs' practice and career development strategy. Thus, the code of nursing ethics would constitute supplementation of legal provisions and professional regulations, would shape the feeling of responsibility for social consequences of professional actions, would promote honest activities, would reveal and negatively qualify non-ethical activities. There is growing recognition of the important contributions made by nurse entrepreneurs within health care systems and an acknowledgement that nurse entrepreneurship promises future advancement in health care. As a consequence, ethics will contribute to harmonious, agreeable cooperation of patients in entrepreneurship processes by nurses, as well as harmonious social coexistence with the healthcare environment which in itself cannot protect.

OP-148

### Academic Entrepreneurial Intentions In Science and Engineering: Validation of The Scale In Turkey

*Ufuk Gür*

*Faculty of Business Administration, Okan University, Istanbul, Turkey*

Academic entrepreneurship is defined as entrepreneurial activities engaged by faculty in order to commercialize research results and deliver societal and economic benefits. It is closely related to the "Entrepreneurial University" which extends the mission of universities beyond teaching and research. Higher education institutions and their affiliated faculty members in sciences and engineering disciplines are important actors of innovation ecosystems. This study investigates academic entrepreneurial intentions distinguished by soft level intentions (industry collaboration) and hard level intentions (spin-off formation). The data was collected between December 2015, and March 2016 from a national online survey of Turkish academics in science and engineering faculties at approximately 90 universities of which 402 full responses were gathered. Major methodology included multivariate analysis technique namely as Structural Equation Modelling. Within the scope of this study, the constructs of academic entrepreneurship intentions were created and applied comprehensively in sciences and engineering disciplines in Turkey for the first time.

OP-149

**Wearable Technology In Nursing***Gülsün Özdemir Aydın<sup>1</sup>, Nuray Turan<sup>1</sup>, Nurten Kaya<sup>2</sup>**<sup>1</sup>Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey**<sup>2</sup>Health Science Faculty, Istanbul University*

Nursing care are changing and evolving every day. Wearable technology has gained the interest of nurses. Wearable technology devices are being developed to help people live healthier lives and to know their bodies better through a complex network of interrelated tools. These devices worn on the body that can capture data such as heart rate, gait abnormalities, heart rhythms, number of calories burned, and even hours slept. Many people already have cell phones, computers, tablets, or other devices that networked together with other devices, allowing caregivers, care providers, and even friends and family to monitor functioning and have historical records on a day-to-day or minute by-minute basis. The system's software can use the data from these sensors to build a personalized profile of the user's physical performance and nervous system activation throughout the entire day-providing a truly personal medical record that can revolutionize healthcare. Information from the sensors in the devices is sent to specified persons of interest via the Internet. Wearable technology allows for data capture that is reliable and easy to retrieve and uses objective measures to enhance clinical decisions. Nurses are going to be increasingly responsible for patients who use wearable technologies. Nurses must be on the front lines of using this technology because so many clinical decisions rely on the subjective assessment data, which is the hallmark of nursing's contribution to the health of patients. Nursing should capitalize on the wearable technology phenomenon by being visionary, vocal, and proactive, because wearable technology is part of the future of nursing. Professional nursing must be involved in the process of evolving and applying digital equipment which can have a profound effect on health and well-being. Therefore, nursing educators should empower nursing students to learn about research, development, production, and marketing of inventions to help patients.

OP-150

**Automatic Hate Speech Detection in Online Contents for Albanian Language***Xhemal Zenuni, Jaumin Ajdari, Florije Ismaili, Bujar Raufi**South East European University*

Internet in general and social media in particular have greatly facilitated the communication, interaction and collaboration among people and different entities. As generally there is no censorship, these media sometimes are used to proliferate discourses that contain hateful messages targeting ethnic origin, religious or sexual groups, which potentially may degenerate to violent acts against individuals of such groups. Therefore, we explore the idea of building of automatic classifier that can be used for detection of hate speech in public Albanian language pages. A hate speech corpus for Albanian language is created, and then leveraging lexicon and morpho-syntactic features of Albanian language, an automatic hate speech detection system is proposed. Such system can be used to detect and analyze hate speech in online contents over time and to enhance our knowledge on how they affect opinion creation in society.

OP-151

**Expansion of A Relational Database to Support Semantic Web Queries***Ylber Januzaj<sup>1</sup>, Artan Luma<sup>2</sup>, Arben Hajra<sup>2</sup>, Besnik Selimi<sup>2</sup>**<sup>1</sup>University of Mitrovica "Isa Boletini"**<sup>2</sup>South East European University*

Nowadays various types of data, especially those with public character, are stored and represented in relational databases. While this way of storing data is a practice for most of the institutions, it turns them into isolated silos with low level of accessibility and interoperability in the web. Indeed not all datasets are readable from the World Wide Web, therefore to increase their access it is necessary to provide mapping from relational databases to any serialization format of Resource Description Framework (RDF), as one of the best practices for distributing and interlinking data on the web. While there are several ways to accomplish the mapping process, the most appropriate and fastest way is by using the Protégé Plugins application. In this paper we present this mapping method, and describe the complete conversion of a database from SQL Server relational Database to RDF using different scenarios. By using Sesame Repository, as the local repository for our dataset, several SPARQL queries will be generated on top of our data. As a main contribution this paper emphasizes the advantages and performance of querying and using serialized RDF statements versus those stored in the relational databases.

OP-152

**Predicting Pressure Felt Level According to Different Driving Position***Nor Kamaliana Khamis<sup>1</sup>, Baba Md Deros<sup>1</sup>, Dieter Schramm<sup>2</sup>,**Niko Maas<sup>2</sup>, Martin Koppers<sup>2</sup>, Mohd Zaki Nuawi<sup>1</sup>**<sup>1</sup>Universiti Kebangsaan Malaysia, Malaysia**<sup>2</sup>University of Duisburg-Essen, Germany*

Drivers' state has been the ultimate target nowadays by majority of involved organisation. With regards to discomfort while driving, there are a large number of interacting factors involving the driver, the interior components of the car, such as the seat, the steering wheel, the gear, and the pedal as well as the driving tasks. In addition, the environment of the road and the driving period also influence the state and condition among the driver. To fulfil these requirements, there has been remarkable and abundant research in drivers' issue in the past decades. However, in spite of vast studies regarding this issue, many questions still had been escalated on drivers' state due to lack of research focus on several matters and the findings from existing studies have rarely addressed these topics comprehensively. Hence, this study integrates objective measurements and subjective evaluation to predict drivers' state. For the main objectives methods, pressure interface distribution had been used, due to its measure outputs and functions to determine the effects of driving position to drivers' discomfort. Pressure distribution was taken on the seat pan. Meanwhile, for subjective assessment, self-report assessment regarding the pressure felt level according to driving position has been performed among each subject. This study is a static field experiment where data acquired are in the quantitative form. The findings from the seat pressure shows that the pressure of the heavier subject is more scattered at the buttock area, while the lighter subject has mild stress concentrated under ischium tuberosity. Based on the detailed analysis on pressure distribution findings, there is statistically significant difference between pre and post task at the buttock.

OP-153

**Infrastructure With R Package For Anomaly Detection In Real Time Big Log Data**

*Zirije Hasani*

*Faculty of Computer Science, University "Uksbin Hoti" Prizren, Kosovo*

Analyzing and detecting anomalies in huge amount of data are a big challenges. On one hand we are faced with the problem of storing a large amount of data, on the another to process it and detect anomalies in reasonable or even real time. Real time analytics can be defined as the capacity to use all available enterprise data and sources in the moment they arrive or happen in the system. In this paper, we present an infrastructure that we have implemented in order to analyze data from big log files in real time. Also we present algorithms that are used for anomaly detection in big data. This algorithms are implemented in R language. The main components of the infrastructure are Redis, Logstash, Elasticsearch, elastic-R client and Kibana. Redis is used for temporary buffering of the log data, Logstash utilizes different filters to manipulate and analyze the data, Elasticsearch is used for indexing and storing the data, elastic-R client is used for anomaly detection and Kibana is a user interface used to visualize the results.

We explore implementation of several filters in order to post-process the log information and produce various statistics that suit our needs in analyzing log files containing SQL queries from a big national system in education. The post-processing of the SQL queries is mainly focused on preparing the log information in adequate format and information extraction. The other interesting part of the paper is to compare the anomaly detection algorithms and to conclude which of them is better to us for our needs. Also we add the elastic-R client to the infrastructure we develop for big data analytic, elastic-R will help us to detect anomalies. The purpose of the analysis is to monitor performance and detect anomalies in order to prevent possible problems in real time.

OP-154

**Application of geographical information system (GIS) for spatial distribution of electrical transformers in Ikorodu, Lagos, Nigeria**

*Akinwumi Abodunrin Akinpelu<sup>1</sup>, Olufemi Felix Iyiola<sup>2</sup>, Abiodun Olatunji Abisuga<sup>1</sup>*

*<sup>1</sup>Department of Building Technology, School of Environmental Studies, Lagos State Polytechnic, Lagos, Nigeria.*

*<sup>2</sup>Department of Surveying & Geo-informatics, Federal School of Surveying, Oyo, Nigeria.*

Epileptic power supply is a major problem which has great impact on socioeconomic development of Nigeria. Power Holding Company of Nigeria (PHCN) is responsible for power distribution in the country and one of the major challenges is the haphazard distribution of their facilities, most especially, electrical transformers. In addition, spatial locations of electrical transformers and other attribute data are kept using manual approach and in some cases, the records are not available. This study is aimed at using Geographic Information System (GIS) to take inventory of PHCN electrical transformers in Ikorodu district of Lagos, in order to assess their spatial distribution. The research method adopted includes converting the existing map of the study area into digital format through scanning and digitizing, collection of spatial locations of electrical transformers' with GPS receivers and attribute data through social survey. ArcGIS software was employed to create spatial database for forty two (42) electrical transformers located in the study area and various spatial analyses such as query, overlay, buffering, etc. were performed to view the spatial distribution of PHCN facilities. The spatial database created can be easily updated from time to time at a fast rate and reduced cost, and without passing through the whole process of map production.

Appropriate recommendations were made for socioeconomic development of the country and effective management of the PHCN facilities. The outcome of the study can be adopted in other developing countries with similar challenges.

OP-155

**Information Systems Management at Kosovo Energy Corporation (KEK)**

*Vebbi Ramaj<sup>1</sup>, Ylber Januza<sup>2</sup>*

*<sup>1</sup>University of Peja "Haxhi Zeka"*

*<sup>2</sup>University of Mitrovica "Isa Boletini"*

With the continuous growth of global environment, the pressure in organizations has also increased in order to make their operational and strategic processes as effective as it can be. Information System (IS) is a set of components that can enhance this effectiveness and help in gathering information that can affect in decision-making. Therefore, lots of companies have decided to implement Information Systems in order to increase the performance of their company. However, one must keep in mind that neglecting while implementing can bring problems with it. One of the biggest companies in Kosovo that have implemented Information Systems is Kosovo Energy Corporation (KEK). The purpose of this paper is to show some basic concepts about Management Information Systems (MIS) and information technologies, especially about hardware, software, data processing, telecommunication and networks. Moreover, this paper include how Information Systems have been implemented in KEK, an introduction about history of KEK, and what kind of information technologies are used there, particularly about hardware and software that are used in KEK for data storage and maintenance as well describing software applications like computerized accounting system. We talk about how are communication achieved and what kind of network's infrastructure is used by the company in question. Furthermore, we discuss about database system that is used in KEK's. Some databases of this corporation will also be described, including their design, database diagram, data types, indexes, as well as how we can make reports of particular databases by reporting services like SSRS, thus helping in data analysis.

OP-156

**An Alignment-Free Dna Sequence Comparison Method Based on N-Grams**

*Abdulkadir Seker<sup>1</sup>, Banu Dir<sup>2</sup>, Emre Delibaş<sup>1</sup>*

*<sup>1</sup>Engineering of Computer Department, Cumburiyet University, Sivas, Turkey*

*<sup>2</sup>Engineering of Computer Department, Yildiz Technical University, Istanbul, Turkey*

Comparisons are performed with their DNA sequences to determine similarities between species. Alignment methods is commonly used for this comparisons. However, by cause of the cost of this method, researchers diverge to alignment-free methods. In this study, due to comparing DNA sequences, a method which use n-grams that are often applied to the field of text processing has been proposed. Character based n-grams were extracted from mtDNA sequences which belong to 12 different primates, including humans. The hierarchical clusters obtained by the alignment-based methods are mainly clustered among the three groups of these species. It is expected that at least these clusters will be seen in this study. As a result of the method, considerable similarities have been achieved.

**OP-157**

**Simulation of the Radio-induit Damages by Photons on the DNA Molecule in its Environment**

*Houcine Oudira<sup>1</sup>, Lotfi Djouane<sup>1</sup>, Ahmed Saif<sup>2</sup>*

<sup>1</sup>*University Moubamed Boudiaf, Departement of electronics, M'Sila Algeria*

<sup>2</sup>*University Constantine 1, Departement of electronics, Constantine Algeria*

Monte Carlo codes and equation of diffusion were successively, used to simulate the physical, and physicochemical, and chemical steps that to estimate the simple and double breaks produced on a linear and hydrated DNA model by an incident photons beam. The increase of the biological effectiveness, between 150 and 550 eV, is mainly due to the variation of photon cross section upon the K- ionization threshold in O, N, C atoms of DNA. In this study we present yields of main radiolysis species (e-aq, H, OH) as function of time, then parameterised by the concentration of solute such formicate (HCOO-). Moreover, we show that, with the same number of absorbed photons, the evolution of breaks as a function of energy reaches a maximum around 450 eV.

**OP-158**

**Role of Innovation In Reconstructive Surgery**

*Emre Hocoğlu  
Office*

A successful reconstructive surgeon has to be innovative as every case in need for reconstructive surgery differs in terms of defect site, shape, function, composition and size. In other words, each case, each operation in reconstructive surgery has the potential to lead an innovation. Sometimes imagining extraordinary conditions during a routine procedure inspires the reconstructive surgeon for an innovation; but usually a particular handicap, an insufficiency is the main reason and motivation for an innovation. These can be called as opportunities for innovation and to be ready to acquire these opportunities one has to possess some properties. A reconstructive surgeon has to be a good observer of the whole universe, from cells to galaxies; has to be familiar with basic physics, chemistry, and mathematics; has to be a good biologist. A reconstructive surgeon must be a good imitator; has to have enough observational knowledge and experience to mimic natural processes and/or movements and/or shapes. Because, a good reconstruction means a good imitation of the nature. To improve technology, to improve medical sciences academicians from different departments must have opinions about each other's daily routines. The main purpose of this abstract is to share a reconstructive surgeon's opinion on innovation and gain a chance for new synapses between departments for improvement.

**OP-159**

**Enhancing Breast Cancer Detection Using Data Mining Classification Techniques**

*Floriye Ismaili<sup>1</sup>, Lulzana Shabani<sup>2</sup>, Bujar Raufi<sup>1</sup>, Jaumin Ajdari<sup>1</sup>, Xhemal Zenuni<sup>1</sup>*

<sup>1</sup>*South East European University*

<sup>2</sup>*State University of Tetovo*

Cancer is one of the crucial cause of death for both men and women. All over the world, breast cancer is one of the major death causing diseases of the women. The most effective way to reduce cancer death is to detect it earlier but the detection of cancer in early stages is not an easy process. Therefore, diagnosing breast cancer in earlier

stage is still challenging for doctors. As result, many researches are focused on developing different systems for breast cancer detection.

Recently, research in the field of using data mining techniques for cancer detection is improving every day. Classification of mammography images is very important because it is one of the best methods used to discover breast cancer at an early stage. The purpose of current research is to propose a method with the intention to automate the process of mammography classification.

In this paper we have discussed various data mining approaches that have been utilized for breast cancer diagnosis and prognosis. We have proposed a breast cancer prediction system based on data mining technology in order to enhance the breast cancer diagnosis as well. The goal is to find the best combination for feature extraction algorithm and classification algorithm, which gives good results in the classification of mammograms.

This system is validated by comparing its predicted results with prior medical information. This research helps not only in reducing human error in reading the mammograms but also in detection of a person's predisposition for cancer.

**OP-160**

**A New Feature Vector Model For Alignment-free Similarity Analysis of Dna Sequences**

*Emre Delibas, Abdülkadir Şeker*

*Department of Computer Engineering, Cumburiyet University, Sivas, Turkey*

DNA data are notable on computational biology, bioinformatics and computer sciences. To obtain significant and useful information from DNA sequences, a lot of work are being done about DNA sequence similarity analysis. Alignment-free methods are popular studies of creating feature vectors from DNA sequences. In this paper, we propose a fast alignment-free method to create feature vectors. Similarity of sequences has been detected by euclidean distance between vectors which are obtained characteristic features of nucleotids in the sequence. The experimental results of the analysis in length of 0.9 kb of mtDNA sequences of 12 species showed that the proposed method produced acceptable results in terms of clustering and running time.

**OP-161**

**Hybrid Model to Quantify The Single and Double-Strand Breaks In The Dna Molecule Following The Iron 57 De-Excitation**

*Houcine Oudira<sup>1</sup>, Lotfi Djouane<sup>1</sup>, Ahmed Saif<sup>2</sup>*

<sup>1</sup>*Faculty of Technology, Department of Electronics University Moubamed Boudiaf of M'Sila, Algeria*

<sup>2</sup>*Faculty of Engineering Department of Electronics University of Constantine 1, Algeria*

The therapeutic utility of certain Auger emitters such as iodine-125 depends on their position within the cell nucleus. Or diagnostically, and to maintain as low as possible cell damage, it is preferable to have radionuclide localized outside the cell or at least the core. One solution to this problem is to consider markers capable of conveying anticancer drugs to the tumor site regardless of their location within the human body. The objective of this study is to simulate the impact of a complex such as bleomycin on single and double strand breaks in the DNA molecule. Indeed, this simulation consists of the following transactions:  
-Construction of BLM -Fe- DNA complex.  
-Simulation of the electron's transport from the metastable state excitation of Fe 57 by the Monte Carlo method.  
-Treatment of chemical reactions in the considered environment by the diffusion equation.

For physical, physico-chemical and finally chemical steps, the geometry of the complex is considered as a sphere of 50 nm centered on the binding site, and the mathematical method used is called step by step based on Monte Carlo codes.

### OP-162

#### **Design of Zigbee Based Wireless Monitoring System for Photovoltaic Power Plants**

*Hakan Boğan*  
*Ege University*

Nowadays, big investments are made in photovoltaic power plants. These investments and the production of the plant are of great importance. The analysis of these plants is made in the framework of the parameters determined in IEC 61724 standards and the necessary calculations are carried out.

Within this project, reliable and upgradeable equipment with low power consumption was used. It is intended to design and implement a web-based wireless photovoltaic monitoring system that can measure important parameters for photovoltaic power systems and perform performance calculations and comparisons of the modules.

Existing monitoring systems have lower signal reliability, high power consumption and high end-user sales prices. Therefore, a web-based, low-cost wireless monitoring system using the Zigbee wireless communication protocol has been developed, taking into account the International Electrotechnical Commission (IEC) standards. Thanks to this developed Zigbee based monitoring system, the data in the power plant can be recorded via Modem or GSM Module or SD Card without any loss without regard to weather conditions. It also has the necessary infrastructure for various emergency scenarios. Measurement data and calculations can be monitored instantly through the website. At this point, the investor can access the system from any device with internet access, regardless of where in the world.

As a result of the tests made, there is no data loss between the receiver and the transmitter in this developed system. Emergency systems, which are developed as solutions to electricity or internet interruption problems, prevent data losses by 100%. The calculated electricity consumption considering the 24/7 operation is about 0.2 kWh per month. The extensible network allows the customer to add the desired measuring points. It is anticipated that this system, which meets international standards, will be approximately 75% cheaper than its competitors.

### OP-163

#### **Investigation of The Effects of Renewable Energy Sources On Interconnection Networks**

*Mustafa Tekin<sup>1</sup>, Ökkeş Fatih Keçecioglu<sup>1</sup>, Ceyhan Yıldız<sup>2</sup>, Ahmet Gani<sup>1</sup>, Hakan Açıkgöz<sup>3</sup>, Mustafa Kesenek<sup>4</sup>, Mustafa Şekkelî<sup>1</sup>*

<sup>1</sup>*Department of Electrical and Electronics Eng. , Faculty of Eng. and Architecture, K. Maraş Sütçü İmam University, K. Maraş-Turkey*

<sup>2</sup>*Graduate School of Natural and Applied Sciences, K. Maraş Sütçü İmam University, K. Maraş-Turkey*

<sup>3</sup>*Graduate School of Natural and Applied Sciences, Kilis 7 Aralık University, Kilis-Turkey*

<sup>4</sup>*TEDAŞ General Directorate, K. Maraş-Turkey*

Demand for electricity is increasing due to population growth, the development of technology and the level of prosperity of communities. Coal, natural gas, oil, etc. , which are called traditional sources can no longer meet this demand. In addition, these resources are harmful to the environment and have high costs. For all these reasons, the trend towards alternative energy sources is increasing. These sources are called renewable energy sources. Solar, wind,

water, geothermal etc. as examples of renewable energy sources. In addition to producing enough energy, it is also necessary to use the produced energy efficiently. This is defined as the energy quality (power quality). The power quality parameters are defined to keep the obtained electric energy within certain limits in terms of quality. These parameters include; harmonic, voltage flicker, voltage fluctuation etc. Through this study, it has been analyzed; With the increasing number of solar power plants connecting to the network, what kind of changes occurred in the electricity network and how the solar power plants affect the network in terms of energy quality. The analysis was carried out by evaluating the one month data from a 5 MW solar power plant.

### OP-164

#### **Investigating the potential of data analytics solutions in maritime industry**

*Ömer Söner<sup>1</sup>, Metin Çelik<sup>2</sup>*

<sup>1</sup>*Department of Maritime Transportation and Management Engineering, Istanbul Technical University, Tuzla 34940, Istanbul, Turkey*

<sup>2</sup>*Department of Marine Engineering, Istanbul Technical University, Tuzla 34940, Istanbul, Turkey*

Recently, enhancing the data collection and utilization in maritime field is one of the key issue. At this stage, the maritime authorities seek for applicable solutions through improving the operational processes of key stakeholders such as ship operators, shipyards, offshore structures, ports & terminals, etc. This study reviews the existing data analytics solutions derived by research groups, classification societies, and technology providers. Considering the operational level integration requirements, the potential of the existing solutions in safety, efficiency, environmental sensitiveness and other performance indicators is determined. In conclusion, this study contributes to identification of the challenges and opportunities in order to extent data analytics applications to maritime field.

### OP-165

#### **Evaluation of Carbon Footprint for Wood Based Panel Industry In Turkey**

*Mehtap Erdil<sup>1</sup>, Nural Yılğör<sup>1</sup>, Yiğit Güngör<sup>2</sup>*

<sup>1</sup>*Department of Forest Products Chemistry and Technology, Forestry Faculty, Istanbul University, Istanbul, Turkey*

<sup>2</sup>*Department of Environmental Engineering, Engineering Faculty, Gebze Technical University, Gebze, Turkey*

In wood-based panel industry, the importance of carbon footprint has been increasing due to global warming and climate change all around the world. So this topic has been studied extensively in the world, especially in developed countries. Eventhough wood based panel industry is one of the most important industry in Turkey there is not any comprehensive study in this field so this study was planned to meet the requirement in industry which release a lot of emissions to the environment. In recent years the use of wood-based panels such as fiber board, particleboard, oriented strand board, plywood etc. , have been increasing due to the fast growth in bulding trade in Turkey. The world's largest board producers are China, USA, Ger-many and Turkey respectively. This charges the industry a great responsibility for the environment because sustainable develop-ment is a development that meets the needs of the present without making a concession the ability of future generations to meet their own needs. From this perspective, it is essential to know the current status of the sector concerning CO2 footprint, energy foot-print and water footprint. This study is aimed to investigate one of the largest board producer industry of Turkey whether clean production (less emission) is carried out or not. Besides, it is aimed to present some improvements to decrease the emissions.

Carbon footprint values are calculated as statistically with Tier method during the particle board production, and Pareto analysis method is used for determine the footprint' problem. Consequently, a liveable environment will be provided and environmental oriented production will be supported to contribute to these properties in the industry for this issue in the scope of this research. Also, this study will provide a general view and perception for the importance of the carbon footprint in the industrial sector.

**OP-166**

**Considering Air Density Effect On Modelling Wind Farm Power Curve Using Site Measurements**

*Ceyhan yıldız<sup>1</sup>, Mustafa Tekin<sup>2</sup>, Ahmet Ganı<sup>2</sup>, Ökkeş Fatih Keçecioglu<sup>2</sup>, Hakan Açıkgoz<sup>3</sup>, Mustafa Şekkel<sup>2</sup>*

<sup>1</sup>Graduate School of Natural and Applied Sciences, K. Maraş Sütçü İmam University, K.Maraş/Turkey

<sup>2</sup>Department of Electrical and Electronics Eng. , Faculty of Eng. and Architecture, K. Maraş Sütçü İmam University, K. Maraş-Turkey

<sup>3</sup>Graduate School of Natural and Applied Sciences, Kilis 7 Aralık University, Kilis-Turkey

Manufacturers develop power-curves for their wind turbines. Customers use these wind turbine power curves for wind farm planning and estimating nearly total production of planned plant. But site measurements has shown that these power curves are small different at operation. Because operating site have different operating conditions and these conditions (air density, vertical wind profile etc.) have an impact on wind turbine-power curve. When wind farm is installed and connected to the grid, this problem becomes more complicated. It is not easy to develop power curves for clusters of wind turbines. Because turbine clusters spread over a large area and it makes site conditions more complicated. Developing a single power curve for wind farm slightly simplifies this problem. Accurate wind farm power curve is a very useful tool for converting wind speed forecasts to power. Also plant owner can use this tool to detect anomalous operations. In this study we developed wind farm power curves by using real site measurements. We used two different methods to develop power curves. They are polynomial curve fitting and mean bins method. Wind speed and power output relation is investigated. Also effect of air density on power curve is argued too. A method is proposed to add effect of air density to power curve. This method rejects air density effect from power curve. Then hourly measured air density and wind speed values are used to calculate power output of the wind farm through this pure power curve. This approach uses variable air density in calculations. Results of this study show that performance of mean bins method is better than polynomial curve fitting. Also proposed air density effect adding method improves performances of power curves obtained by using mean bins and curve fitting approaches.

**OP-167**

**Innovative Solar Energy Technology Selection Using Intuitionistic Fuzzy Sets**

*Sezi Çevik Onar, Başar Oztaysi, Cengiz Kabraman*  
Industrial Engineering Department, Istanbul Technical University

Over the last century, using solar power to generate energy has been considered many times but due to the relatively high costs and low efficiency, these attempts were not successful until the last decade. Electricity generated from solar sources are not considerably significant when it comes to comparing with other sources of electricity. However, solar energy investments are increasing day by day. Solar energy is widely being considered as a reliable source of electricity generation. Solar energy technology selection is a multicriteria decision making problem that includes both tangible and intangible criteria which necessities usage of linguistic evaluations.

The technology evaluation process contains ambiguity, vagueness and subjectivity in the human judgments. An intuitionistic fuzzy set has three functions to define it: membership, non-membership, and hesitancy functions. Atanassov and Gargov (1989) proposed interval-valued intuitionistic fuzzy sets theory, which is a generalization of both interval valued fuzzy sets and intuitionistic fuzzy sets. Their concept is characterized by a membership function and a non-membership function whose values are intervals rather than a real number. In this paper, the steps of interval valued intuitionistic fuzzy AHP method will be given and then it is applied to the technology selection for solar energy. Difficulty of development, operational efficiency of system, difficulty of capacity expansion, supply stability, possibility of replacing oil energy, popularity of use, impact on related industries, pollution impact, scenic impact, development cost, duration of construction, production cost, size of the technology, and annual production are among the most used criteria for the evaluation of solar energy technologies in the literature. We make a multi criteria selection among several solar energy technology alternatives under fuzziness.

**OP-168**

**Safety Shoes Wearer's Comfort Perception and Effects Among Manufacturing Employees**

*Baba Md Deros, Mohd Iezalman Ab Rahman, Nurul Huda Baba*  
Department of Mechanical & Materials Engineering, Faculty of Engineering & Built Environment, Universiti Kebangsaan Malaysia, 43600 UKM, Bangi, Selangor, Malaysia

Wearing inappropriate safety shoes can result in ergonomic related problems, such as: musculoskeletal discomfort, sprained leg and low back pains to the employees. The two main objectives of this study are to identify ergonomic problems that manufacturing employees' faced due to wearing of inappropriate safety shoes and to compare three types of safety shoes. A survey questionnaire developed and pilot tested for its reliability and validity was used to gather the information related to the wearer' comfort perception and effect of safety shoes. A total of 30 respondents was recruited to take part in a survey based on their safety shoes they wear. Pedar-X was used to conduct an experiment and measure the pressure the safety shoes act on the wearer' feet. The data collected was analysed using Cornell Analysis. Results showed, wearer' experienced moderate pain with frequency percentage of 50% for right calf and 53. 33% for left calf for wearing the safety shoes one to two times a week; the highest pain with frequency percentage of 80% for right and 83. 33% for left heel as a result of wearing the safety shoes two to three times a week. Average peak pressure; 90.53 kPa; force 259. 57 N and surface area at 67. 74 cm2 respectively were recorded by the Pedar-X for Amporlo safety shoes. For Land Master safety shoes, average peak pressure; 75.07 kPa, average force; 273. 79 N and average surface area 72. 65 cm2. Jack Parcell ordinary flat shoes showed an average peak pressure; 67. 85 kPa, force; 170.68 N and surface area 52.08 cm2. It was found the strain on the front and middle of the feet were at the lowest. On the other hand, the back foot which locate the heel has recorded the highest pressure value of 185 kPa as a result of wearing inappropriate safety shoes.

**OP-169**

**Observations and Recommendations for the Women Entrepreneurship in Information Technology**

*Ayca Tüzmen Yıldırım*  
Management Information Systems, School of Applied Sciences, Okan University, Istanbul, Turkey

Women entrepreneurship is a process that is being encouraged, publicised and directed by governmental and non-governmental

organisations. There are many forces that allows emergence of the women entrepreneurship in IT. In this paper, I opt to discuss and comment on the journey of the women workforce in IT from corporate organisations to the workforce in women entrepreneurship. This paper will introduce observations of the changes in women workforce in corporate USA and Turkey, and introduce the offerings and challenges observed in the designing, launching and running of a new IT business at Incubation centres and universities in Turkey. This paper will also offer recommendations for governmental policies of small businesses and recommendations for the strategies of the incubation centres that would help women entrepreneurship.

**OP-170**

**Company Innovation System: An exploration based on examples from Arçelik and Vestel**

*Erik Den Hartigh, Pinar Uzun, Ali Auwalu Anwar Özyeğin University, Istanbul, Turkey*

We conceptualize the Company as an Innovation System. The systems approach to innovation has received limited attention at the company level. While it is widely accepted for nations, sectors, regions and technologies, and while some building blocks have been proposed (e. g. , Chen et al. , 2015), the dominant approach at company level is to regard innovation as a process.

A systems approach to innovation (Edquist, 1997) emphasizes interaction, learning and knowledge creation. It allows to include a wide array of company attributes that may be important in explaining innovation. It incorporates the idea that 'new combinations' can be found within the system, producing innovation.

We explore the concept of Company Innovation System using case examples of two Turkish electronics manufacturers: Arçelik, with its Telve Turkish coffee machine, and Vestel with its 3D Smart TV.

We find that using the Company Innovation System approach (Carlsson et al. , 2002), we can map the components of innovation systems at the company level, we can indicate the relationships between those components, such as network-based or process-based and we can identify system characteristics such as innovation as exception versus day-to-day business, large and unique projects versus parallel experiments, closed versus open systems, and exploration versus exploitation.

We conclude that the Company Innovation System approach provides additional insights and as such it is complementary to the existing innovation process approach.

References

Carlsson, B., Jacobsson, S., Holmén, M., & Rickne, A. (2002). Innovation Systems: Analytical and Methodological Issues. *Research Policy*, 31(2), 233–245.

Chen, J. , Huang, S. -F , & Xu, Q. -R. (2015). Firm Innovation Systems: Perspectives of Researches on State-owned Key Enterprises. *Frontiers of Engineering Management*, 2(1), 64–7.

Edquist, C. (1997). *Systems of Innovations: Technologies, Institutions and Organizations*. Chapter 1. Abingdon: Routledge.

**OP-171**

**Ergonomic Risk Assessment of Manual Material Handling at an Automotive Manufacturing Company**

*Baba Bin Md Deros<sup>1</sup>, Dian Darina Indab Daruis<sup>2</sup>, Athirah Liyana Rosly<sup>1</sup>, Ilbami Abd Aziz<sup>1</sup>, Nor Syazwani Hishamuddin<sup>1</sup>, Nur Hidayah Abd Hamid<sup>1</sup>, Siti Maisarab Roslin<sup>1</sup>*

<sup>1</sup>Department of Mechanical & Materials Engineering, Faculty of Engineering & Built Environment, Universiti Kebangsaan Malaysia

<sup>2</sup>Department of Mechanical Engineering, Faculty of Engineering, Universiti Petabanan Nasional Malaysia

In practice, manual material handling (MMH) involves the following repetitive activities, such as carrying, holding, lifting, lowering, pushing and pulling of loads. Performing repetitive MMH activities, using inappropriate posture and techniques can increase the ergonomic risk, which could result in work-related muscular skeletal disorders (WMSDs). WMSDs are related to injuries in the ligament, tendons, muscles, nerves and joints. Today, WMSDs is a major concern in industry because it could affect employees' productivity, absenteeism, turnover, medical costs, compensation and work quality. This study was conducted based on employees' working in the metal crack detector section complaint on back pain as a result of performing MMH activities. The three main objectives of this study are: to identify working posture practiced; to assess the ergonomic risks faced, and to determine musculoskeletal discomfort faced by MMH employees in Company X. A total of 11 MMH employees were recruited to participate in the study. The three methods used to collect the data comprised of Modified Nordic Questionnaire (MNQ), Rapid Entire Body Assessment (REBA) to observe on their working postures while performing the MMH activities and NIOSH Lifting Equation. The MNQ result showed the three body parts pain suffered by MMH employees are shoulders pain (63. 6%), upper back pain (54. 5%) and lower back pain (45. 4%). The three types of movements that have high REBA score (i. e. 9) are twisting, lowering and lifting. Meanwhile, repetitive and reaching movements have recorded REBA score of 5 and 6, which was considered medium risk. Based on NIOSH Lifting Equation, the value of RWL for MMH tasks is 15. 82 and the lifting index (LI) is 0.73. The recommended control measures to be implemented in Company X include to limit the working time, administrative control, training, and reduce the weight of load carried and lifted by the MMH employees.

**OP-172**

**Selection Among Innovative Project Proposals Using A Hesitant Fuzzy Multiple Criteria Decision Making Method**

*Başar Öztayısı, Sezi Çevik Onar, Cengiz Kabraman Industrial Engineering Department, Istanbul Technical University, Istanbul*

Fuzzy sets have a history starting from ordinary fuzzy sets and extending to other types of fuzzy sets: Ordinary fuzzy sets (Zadeh, 1965), interval-valued fuzzy sets (Zadeh, 1975), type-2 fuzzy sets (Zadeh, 1975), intuitionistic fuzzy sets (Atanassov, 1986), fuzzy multisets (Yager, 1996), neutrosophic sets (Smadarache, 1999), nonstationary fuzzy sets (Garibaldi and Ozen, 2007), Hesitant fuzzy sets (Torra, 2010). Ordinary fuzzy sets, intuitionistic fuzzy sets and hesitant fuzzy sets are the most used extensions in the fuzzy sets history. Neutrosophic sets are the generalization of intuitionistic fuzzy sets. Torra and Narukawa (2009) and Torra (2010) proposed the concept of hesitant fuzzy sets (HFS) as a new generalization of fuzzy sets, which allows the membership of an element of a set to be represented by several possible values. HFS is a novel and recent extension of fuzzy sets that aims to model the uncertainty originated by the hesitation that might arise in the assignment of membership degrees of the elements to a fuzzy set. Small and medium-sized enterprises (SMEs) are the main holders of the economy and innovative projects are essential tools for SMEs to ensure

their growth. A high percentage of innovative projects proposed by SMEs lacks a successful selection and funding process, which causes important problems for the funding institute. The selection process involves many quantitative and qualitative criteria, which requires linguistic evaluations and the usage of incomplete data under uncertainty. This paper presents a hesitant fuzzy multiple criteria decision making method integrating fuzzy hesitant AHP and fuzzy hesitant TOPSIS. The weights of the criteria are obtained by fuzzy hesitant AHP and used in fuzzy hesitant TOPSIS. Based on this hesitant fuzzy method, the best innovative project proposal is selected and the robustness of the given decision is checked through a sensitivity analysis.

**OP-173**

**Assessment of Quality Requirement and Importance for Textile Industry in Turkey**

*Ayşenur Erdil<sup>1</sup>, Mehtap Erdil<sup>2</sup>*

<sup>1</sup>*Ayşenur Erdil*

<sup>2</sup>*Mehtap Erdil*

Today's competitory disposition of business obligates companies to implement an extensive business quality control system that highlights continuous improvement of quality and productivity. In every sector, it is significant to support industries, meet the quality requirement of current's market by providing and improving the quality control policy. Management development of work structures should be involved in quality oriented production and quality control strategy. This topic should be supported by top management dedication to increase the quality level of production as a business policy and strategy within supportive resources. It is now generally accepted that textile is a fabric which made from fibers but the fibers may either be converted into yarn firstly and then the yarns put unitedly in one of a diversity of methods to make fabrics or the fibers can be altered directly into a fabric. The garment-textile sector is selected as a research area in this study, because this is one of the most requirement and fundamental industries for households and populations. In this study, the integration steps of Quality Oriented manufacturing is highlighted in the textile sector. An industrial engineering perception is presented for the selected application industry in the scope of this research. All steps of the industrial manufacturing in textile beginning from fiber to fabric and then to apparel is involved in the research. In addition of this, an overview of textile industry in Turkey will be presented and an approach for the importance of quality oriented production in garment industry will be emphasized and will be declared its strengths, opportunities and weaknesses aspects according to the business quality policy.

**OP-174**

**Entrepreneurship Education and Entrepreneurial Behavioral Formation Among Technology Education Students In Pakistan**

*Mubammad Zabeer Asghar<sup>1</sup>, Elisabeta Zelinka<sup>2</sup>*

<sup>1</sup>*University of Helsinki, Finland*

<sup>2</sup>*University of management and Technology, Lahore*

Entrepreneurship education can catalyse entrepreneurial mind set through developing entrepreneurial intentions of graduates. The question under study is "does entrepreneurship education impact entrepreneurial intentions of the students?" Study has the following objectives; 1) to study the impact of entrepreneurship education on attitude of the students to become an entrepreneur; 2) to find out perceived behavioural control of the entrepreneurship education students to become an entrepreneur; 3) to understand the impact of subjective norms on entrepreneurship education students to become an entrepreneur; 4) to assess the impact of entrepreneurship education on entrepreneurial intentions of the students. This study will utilize theory of planned behaviour as theoretical framework

of the study. It is a quantitative study based on casual comparative research design. Entrepreneurial Intentions Questionnaire was validated to make a comparison between technology educations students' (n=240) who have participated in entrepreneurship education and technology educations students' (n=302) who have not participated in entrepreneurship education. The findings of the study have shown appropriateness of theory of planned behaviour to measure entrepreneurial intentions of the students. Students who have participated in entrepreneurship education have shown higher intentions than non participants. The questionnaire validated for study can be useful for further measurement of entrepreneurial intentions of the students. Factor analysis was used to test validity of the questionnaire. t-test was applied to find out difference in intentions between entrepreneurship education participants and non participants. Structural equation model (SEM) was used to find out relationship between entrepreneurship education and antecedents of entrepreneurial intentions. This study was knowledge addition about entrepreneurial intentions of the students in Pakistani context and impact of entrepreneurship education. Future study can be conducted to study the new venture creation process of the students with high entrepreneurial intentions.

**OP-175**

**From Ideation Towards Innovation: Pillars of Front-End In New Product Development**

*Onur Emre Kurt<sup>1</sup>, Çağlar Üçler<sup>2</sup>, Özalp Vayvay<sup>1</sup>*

<sup>1</sup>*Department of Industrial Engineering, Marmara University, Istanbul, Turkey*

<sup>2</sup>*Department of Aviation and Aeronautical Science, Ozyegin University, Istanbul, Turkey*

Companies need to deliver innovative new products in order to compete in the global market successfully. Customer preferences as well technologies are highly dynamic that continuous ideation is required in the fuzzy Front End of product development. Then suitable ideas have to be selected to initiate object innovation. The fuzzy Front End is mainly unorganized in companies and there is a lack of a consistent taxonomy in the literature covering all aspects in the fuzzy Front End for successful product innovation. Consequently a model describing the pillars of the fuzzy Front End with respect to object innovation is synthesized based on evidence from the industry supported by a systematic literature review, which shall support practitioners and researchers in the successful evaluation of innovation ideas.

**OP-176**

**A Framework to Evaluate The Performance of Science and Technology Parks In Turkey**

*Özay Özaydın<sup>1</sup>, Fatih Sönmez<sup>2</sup>*

<sup>1</sup>*Dogus University*

<sup>2</sup>*Babesebir University*

A Science parks, Science and Technology parks, or Technoparks (STP in general) refer to a dedicated area designed to promote innovation with the intent of advancing knowledge and promoting technological and economic development. Also, one of the key pillars of global competitiveness index is innovation capability, which can be measured by the country's capacity to produce new information/products/services and its technological development. Over the last decades, developed and developing countries have invested in STP's for regional and national development. University – Industry collaboration model bringing together the scientific background and new information and their technological applications under the same roof is an effective method to create a fertile environment. Additionally, the governments are added to this two-legged model to create an even more effective system.

Turkey has also created Technology Development Zones with university – industry – government collaborations and expects these centers to be the driving force of high technology production and innovation. The government, as a role of facilitator and auditor, controls STP's to make sure that these centers produce the maximum output of their investment. Therefore, to achieve the highest productivity, STP's need to be evaluated accordingly. In this study, we aim to determine the performance management model of STP's in Turkey and to propose an STP performance evaluation framework. For this, the current evaluations models used globally are benchmarked in addition to local criteria.

**OP-177**

**Exploring Radicality of Production and Flexibility and Agility of System In Smart Manufacturing: An Experience of Value Creation By The Hybrid Technologies 3D Modeling and Additive Manufacturing**

*Selma Oliveira*  
Federal Fluminense University

This research shows the force between the radicality of product innovation and flexibility and agility of system in intelligent manufacturing based on the experience of value creation by the “hybrid” Technologies 3D modeling and additive manufacturing. This article is systematized in two phases: elaboration and verification of a conceptual model. To confirm the conceptual model, a case study of multiple products was elaborated in a traditional segment of pewter in Portugal. The research involved the intervention of experts. Several support tools will be used to formulate the modeling to reduce subjectivity in the Results: psychometric scaling – Thurstone's Law of Categorical Judgments (LCJ), Multicriteria Analysis-Compromise Programming, Electre III and Promethee II, Artificial Neural Networks (ANN) and Neurofuzzy Technology. The results were satisfactory, validating the submitted proposal, allowing to show that it is possible to combine additive manufacturing techniques and traditional processes of production of components in pewter and the incorporation of other components in composite materials and other metallic alloys, allowing to develop innovative products in very short time frames, with market acceptance and creating business value.

**OP-178**

**Solvothermal Synthesis and Biological Activity of Ni-Doped Zinc Oxide Nanoparticles**

*Sammia Shabid, Muhammad Mudassar Sher*  
Department of Chemistry, School of Science, University of Management and Technology, Lahore-54770, Pakistan.

Metal oxide nanoparticles are potential candidate for making future antimicrobials. Increased interest is due to change in fundamental properties at nanoscale due to quantum confinement effect. Ni-doped zinc oxide nano-particles were prepared for pharmacological studies. For this purpose co-precipitation and solvo-thermal methods were employed and both methods successfully yield Ni-doped zinc oxide nano-particles and un-doped zinc oxide nano-particles were synthesized via solvo-thermal method. All prepared nano-particles were characterized using X-ray diffraction studies whereas doping was confirmed by Energy Dispersive X-ray analysis. Shape and morphology of these nano-particles was assessed using Scanning Electron Microscopy. The synthesized nano-particles have shown antibacterial activity against both Gram-negative and Gram-positive bacteria designating these nano-particles as future broad spectrum antibacterial. The optical properties were also studied by measuring the energy band gap and were found 1.50 eV for un-doped zinc oxide nano-particles, and it decreases to 1.47 eV for Ni-doped zinc oxide. Ni-doped zinc oxide nano-particles were proved to be active future pharmaceutical and biomedical agents.

**OP-179**

**Decision Making Techniques for Electronic Communication: An Example for Turkey**

*Semra Erpolat Taşabat, Olgun Aydın*  
Department of Statistics, Mimar Sinan University

Communication is the way for people exchanging information with each other by using various tools. Electronic communication or E-communication is the process of sending, receiving and processing information or messages electronically. Electronic communication that is closely related to the development levels of countries, has made considerable progress especially in terms technology, innovation and entrepreneur.

In this study, it is investigated whether electronic communication in Turkey is used effectively using the data published by Information and Communication Technologies Authority. For this purpose, different decision making techniques in data mining have been used. Obtained results are discussed.

**OP-180**

**Homework System Development with the Intention of Supporting Saudi Arabia's Vision 2030**

*Atifa Elssir Elgimari, Amal Saad Al Shebry, Shafya Abdullah Alshabrani*  
University of Bisha - Bisha - Saudi Arabia

The Ministry of Education in Saudi Arabia, general education sector, annually provides students with hard copies of homeworks note for free, which that costs the Ministry of Education a huge amount of money. This paper suggests a homework system based developing a website. Parents were not evolved in the educational process over the past few years. Recently, involving parents in children's education is being placed in the educational process. The suggested homework system engages parents and teachers in on a day-to-day basis. Teachers can send homework to the system; parents can browse them, therefore they encourage their children to do their homeworks. The data on which this study was based was obtained from questionnaire that was distributed over different types of social media sites. The questionnaire conducted in a nationwide of a randomly selected sample of 377 persons. 41.8 % out of them were teachers, and 58.2 % were parents. Respondents completed an extensive questionnaire whose main issue of investigation was a comparison between the current system and our suggested system. the suggested system will empower parents and teachers in collaborating together in order to improve students' achievement. It is expected to participate in applying Saudi Arabia's Vision 2030, where it considers that education is its cornerstone, as the success of the Vision depends in large assess on reforms in the education system generating a better basis for employment of young Saudis. Saudi Arabia's Vision 2030 sets out a motivated road-map for education development in the Kingdom of Saudi Arabia, this road-map reflects a collective vision for developing curricula, teaching methods, students' values and institution skills.

**OP-181**

**Using Textual Features for the Detection of Vandalism in Wikipedia: A Comparative Approach in Low-Resource Language Sections**

*Arsim Susuri, Mentor Hamiti, Agni Dika*  
Faculty of Contemporary Sciences and Technologies, South East European University, Tetovo, Macedonia

This study investigates the impact of using textual features for the detection of vandalism across low-resource language sections in

Wikipedia. For this purpose, we propose new features that allow the machine learning based text classifiers to better distinguish vandalism and to improve the detection rates of vandalism across languages, based on textual features applied in previous researches. These features enable us to compare the contributions of the bots against vandalism, stressing the differences between bots and editors with regards to the detection of vandalism. We propose a new set of efficient and language independent features, which has the performance level similar to the previous sets. Three Wikipedia sections will be used for this Purpose: Simple English (simple), Albanian (sq) and Bosnian (bs). We will show that our set of textual features has similar and, in some cases, better vandalism detection rates across languages than previous research.

**OP-182**

**Determination of ZIP Coefficients for Residential Loads**

*Mehmet Bircan, Ali Durusu, Bedri Kekezoglu, Onur Elma, Uğur Savaş Selamoğulları  
Yıldız Technical University*

In this study, constant-impedance, constant-current and constant-power ZIP models have been created for loads. Measurement based approach has been used to form model. The measurement-based approach for load modeling is important because it reflects the real dynamics of the system and represents more accurately the load characteristic. The ZIP model is used to estimate the power drawn by the load depending on the voltage changes. Since the ZIP load model is a well-known model that provides power dependence in terms of the physical sense of tension, studies are taking place there. In this study, the voltage and power values of some residential loads belonging to smart home in Yıldız Technical University were observed and the ZIP coefficients have been calculated by using the least squares method. Also in this article, load model types are explained and the least squares method is given. The measured data was compared with the data formed from the model. The P-V curve of each device is plotted from the data taken from the measurement and taken from the model.

**OP-183**

**Regarding the Quality Oriented Development and An Overview of Sustainability of this approach for industrial/Service Sectors: A Case Study for Supply Chain and Production System of X Firm**

*Ayşenur Erdil<sup>1</sup>, Mehmet Erdil<sup>2</sup>  
<sup>1</sup>Ayşenur Erdil  
<sup>2</sup>Mehmet Erdil*

Six sigma provides to reduce cost by improving productivity and this method achieves this by focusing on the reduction of both defects and non-value added facilities. This method aims to reach zero defect in the theory improving supply chain processes. For extending and improving the effectiveness of supply chains, the critical processes of these systems must be developed. When the amount of users increase in the supply chain, processes and steps of systems will be more complex. There is an effective and usable method named as six sigma. This perspective aims to provide zero defect in the theory developing stages of supply chain. In the practical and implementation life, it is impossible because of changes, diversification in the life.

This methodology has been chosen as a quality improvement technique to solve the problem in a production and supply chain system for industrial sector. By this way sustainability of Supply chains' and production processes can be provided and improved continuously. This study aims to present literature survey and overview about this method, six sigma tool. This research includes some implementation stories, backgrounds of firms of services and

industrial sectors. At the end of this study, it presents a case study of X company and some suggestions can be offered about the case study according to the results.

**OP-184**

**On The Prediction of Structural Reactions to Big Earthquakes In Turkey**

*Diaa Gadelmavla<sup>1</sup>, Güvenç Arslan<sup>2</sup>, Coşkun Atay<sup>1</sup>  
<sup>1</sup>Izmir University of Economics, Faculty of Engineering, Department of Electrical and Electronics, Izmir, Turkey  
<sup>2</sup>Kirikkale University, Faculty of Arts and Sciences, Department of Statistics, Yabsiban - 71450 Kirikkale*

The prediction of structural reactions to big earthquakes is vital in giving warnings for potential damages early enough to minimize losses of life and properties. In the current study we describe buildings by fixed construction and environmental related parameters. Our models are based on real data of damaged buildings collected after the occurrence of three big earthquakes in Turkey, namely, Afyon (2002; Mw = 6.0), Bingöl (2003; Mw = 6.4) and Düzce (1999; Mw = 7.2). We extend our previous work to include the soil type beneath damaged buildings. We employ different deep learning techniques to improve the prediction accuracy. It is to be noted that these types of predictions are important for the development of new construction codes.

**OP-185**

**Statistical Analyses of Same Content Texts Written In Different Languages**

*Mentor Hamiti<sup>1</sup>, Elissa Mollakuqe<sup>2</sup>, Asmir Rahmani<sup>2</sup>  
<sup>1</sup>Faculty of Contemporary Sciences and Technologies, South East European University, Tetovo, Macedonia  
<sup>2</sup>Faculty of Computer Sciences University of Prizren "Uksbin Hoti", Prizren, Kosovo*

Language is the basic and most consummate way of communication between people. It can be materialized in two ways: spoken and written. Every society has a spoken language, even the primitive ones. Although only civilized societies have a written language with a defined alphabet. The presence of letters in the context of words determines the meaning, while the determined order of these in words presents a work of art. It is, thus, understandable to raise the question: Which letter is used the most and least in different languages? Or maybe there is similarity on their distribution even though it has to do with languages which use different alphabets? Or in general, which are the differences or what could different languages have in common when they interpret the same content? The answer to this question remains within the scope of this paper.

**OP-186**

**Turkey on The Path of Establishing Knowledge Economy: Innovation, Icts and Education**

*Burcu Sakız  
Business Administration PhD Program, Istanbul Aydın University, Istanbul, Turkey*

Knowledge-based economy is re-defining enterprises, re-formatting working styles, empowering individuals and re-shaping the links between education and business tasks in today's globalized world. Emerged communication and information technologies especially invented in six decades ago is still changing the nature of business and the economy dramatically. It is obvious that transition to knowledge-intensive business models become popular since late

1950s. Also it is clear that advent of the knowledge economy shapes and changes the rules for enterprises that organize their activities in the global market places. Additionally intellectual capabilities become more important than physical inputs which was very important for the first machine age. The application of knowledge is one of the main sources of growth in the global economy and it becomes the strategic factor for the success. Having sufficient national production, sustainable growth, strong economy and modern technologies to create a welfare society is crucial for any modern nation. This study presents the concept of the knowledge economy and its framework in this respect. Developed by World Bank "Knowledge Assessment Methodology" is one of the important methodologies in order to measure the progress of countries towards having a knowledge based economy. It has 4 pillars including 83 structural and qualitative variables and 12 knowledge indicators. World Bank's four Knowledge Economy pillars are economic and institutional regime, education, innovation, and Information and Communication Technologies (ICTs) developed for countries to do fundamental assessment of countries' readiness for the knowledge economy and help them the transition to a Knowledge-based Economy. Also in this paper the analysis of knowledge economy for Turkey especially the role of innovation, ICTs and education pillars are examined.

**OP-187**

**Applying Fuzzy Logic Theory to Performance Management**

*Cemal Ardil*

*Computer Engineering, Institute of Sciences and Engineering, Okan University, Turkey*

Modern organizations are mainly required to use performance appraisal system for evaluating the effectiveness, efficiency, and productivity of their employees. In evaluating employee performance, subordinates are usually awarded by superiors some numerical values or linguistic labels to their performances in the organization. These scores awarded by the appraisers are only approximations, which are then used to represent each employee's achievement by reasoning incorporated in the computational methods. Therefore, the employee performance appraisal system is considered using fuzzy logic theory approach. This research seeks to describe the development of fuzzy logic theory approach for decision making in the employee performance appraisal process. Finally, it is expected that reasoning based on fuzzy logic theory method provides an alternative way in dealing with various kinds of imprecise data, which often reflected in the way humans think and make judgments.

**OP-188**

**Determining Shipboard Integration Requirements of Maintenance 4.0 Concept In Marine Engineering**

*Çağatay Kandemir, Metin Çelik*

*Department of Marine Engineering, Istanbul Technical University, Tuzla 34940, Istanbul, Turkey*

Ship machinery maintenance is a core technical aspect to achieve expected reliability, availability and efficiency in system level. Since maintenance practice on-board ships is so critical, the integrity of planning, coordination and execution stages are expected to be well functioned. At this insight, this study considers the implementation potential of maintenance 4.0, relatively a new concept defined within industrial 4.0 initiative, in marine engineering field. In detail, the generic design and implementation requirements of maintenance 4.0 including key opportunities and challenges are identified. Moreover, a comprehensive requirement analysis is conducted to adopt maintenance 4.0 concept into ship machinery systems of existing and new building merchant ships.

**OP-189**

**Overview and Comparison of Three Classifiers: Arabic Documents as a Case Study**

*Essam Said Hanandeh*

*Computer Information System, Zarqa University, Zarqa, Jordan*

Nowadays, text classification is used in various fields of research and applications, such as information retrieval, text mining, and data mining. This study tests the Naïve Bayes, K-Nearest Neighbors, and Support Vector Machine algorithms on a relatively large data set of Arabic documents. This data set comprise 1, 000 Arabic documents that are distributed across 10 classes. This comparison is based on recall and precision measures. The evaluation results show that the Support Vector Machine algorithms classifier outperforms the other two.

**OP-190**

**Open Innovation Awareness and Utilization of Companies in Turkey**

*Gül Özkan<sup>1</sup>, Burcu Felekoğlu<sup>2</sup>*

*<sup>1</sup>The Graduate School of Natural and Applied Sciences, Dokuz Eylül University, Izmir, Turkey*

*<sup>2</sup>Department of Industrial Engineering, Dokuz Eylül University, Izmir, Turkey*

Open innovation is becoming an increasingly important and essential approach for private companies, governmental agencies, institutions, universities and other type of enterprises since Chesbrough coined this term early in 2003. Open innovation is a paradigm, where new ideas can flow-in and flow-out of the company without boundaries and the external use of innovation sources enhances respectively. Open innovation ensures flexibility, agility, ease of identifying and reducing uncertainty and risk in innovation for the companies. A previous study analyzed practices of open innovation only in science park companies in Turkey. Yet, there has not been any study conducted in Turkey involving various sectors and company sizes (small, medium or large sized) to analyze awareness of the companies for open innovation and their use of open innovation practices.

The aim of this study is to analyze the open innovation awareness and utilization of companies in Turkey. First, main practices of open innovation are identified from literature. Then, a comprehensive survey is developed to elicit the awareness and utilization of the identified open innovation practices in the companies in Turkey.

The findings of the study indicate that most frequently adopted open innovation practices by companies in Turkey are giving importance to the opinions and new ideas of the internal and external partners and following new trends, technologies closely during new product/process development. The least scored open innovation practices are getting a license or buying and licensing or selling the Intellectual Property Rights or technology during general operation of the company.

This study contributes to the literature by demonstrating companies' awareness and utilization of open innovation activities and approaches in Turkey. Besides, the strengths of the companies in Turkey at using the open innovation approach and the directions of their development needs are specified, which provides insights for academicians as well as business people.

OP-191

**Innovation Applications in İgdaş that is a Natural Gas Distribution Company operating in the energy sector**

*Mehmet Akif Demirtaş*

*Manager of Strategic Planning&Management Systems, İgdaş, Istanbul, Turkey*

Istanbul Gas Distribution Industry and Trade Inc. was founded in 1986 in order to solve the air pollution problem in Istanbul. The people who lives in Istanbul started using natural gas with İGDAŞ comfortably in 1992. Especially after the rapid growth of the infrastructure investments made in 1994, the company has become a reference point that gives direction to the sector in our country.

Innovation studies started with “Everyone’s Idea is valuable” approach in İGDAŞ. Starting from the point of view of “Tomorrow, how can we make our business better than today” in 2001.

The “Innovation Volunteers Team” was established in 2008 and the suggestions were started to be evaluated by the Innovation Volunteers Team under the presidency of Assistant General Manager.

In the light of the radical improvement studies initiated on the existing system in 2008, it has been decided to design a much more comprehensive and more professional system based on changing needs. Within this scope; Firstly the national and international sources on innovation were examined and afterwards successful companies in the country were visited on site and benchmarking studies were made. As a result, in 2012 innovation activities were deeply restructured, an open innovation system was introduced, and a structure was created through the Innovation Management System Module, from the beginning to the end, where all the process was monitored and its performance evaluated. This structure is also supported by İGDAŞ Innovation Web Site; The acceptance of the recommendations submitted by employees, customers, suppliers and the public on this site and feedback of the results have begun to be made.

In this report, which is briefly summarized above, an “Innovation Management System Model” that can be applied to a large-scale business operating in the energy field - natural gas distribution sector is shared with case studies.

OP-192

**Intrusion detection based on Naïve Bayes and nature-inspired algorithm Particle Swarm Optimization for feature selection**

*Abdullabi Hussein Abdullabi<sup>1</sup>, Mesut Gündüz<sup>2</sup>*

*<sup>1</sup>Selcuk University, Computer Engineering, Konya, Turkey*

*<sup>2</sup>Selcuk University, Computer Engineering, Konya, Turkey*

Intrusion detection systems IDS was found to be assisting in the detection of mischievous or harmful activities against computer systems for decades thus a lot of researchers have been offered this system with a combination of a machine learning methods, Data mining and nature-inspired algorithms to deal with difficulties of intrusion detection problems. The concept of combining many learners is to study from different algorithms which helps in accuracy and it’s one of the easiest techniques to train different algorithms that present diverse assumptions on data. Therefore instead of depending on one algorithm, it is to be combined Naïve Bayes and PSO to achieve better performance and attain accuracy. Currently there is enormous growth of data making the classification of the data a has become a very challenge task thus the feature selection methods is put forward to tackle these challenges and produce greater accuracy in the data set classification and to reduce the dimensionality of the huge data. Particle swarm optimization is one of the evolutionary algorithms and a computational technique that can be used as a feature selection method to search an optimal solution. . PSO Feature selection algorithm

is used for choosing important features to improve the accuracy of the Naïve Bayes classification algorithm. The objective of this study is to apply Naïve Bayes and PSO techniques to classify network intrusion of reduced attributes of data sets to improve performance and compare the result of these algorithms with other classifications which of them performed well both in quality and accuracy. NSL-KDD data was used to measure and assess the performance of these methods and the result of proposed model had provided better classification accuracy and better performance than the other models. This is ongoing study the full results and findings will be presented in and extended abstract.

OP-193

**Budesonide Self-Nanoemulsion Formulation As An Oral Drug Delivery System: Preparation, Characterization and Cytotoxicity Studies**

*Burcu Mesut, Şeyma Hande Tekarslan Şahin, Yıldız Özsoy*

*Istanbul University Faculty of Pharmacy, Pharmaceutical Technology Dept. , Istanbul, Turkey*

Introduction: Self-nanoemulsifying drug delivery systems (SNEEDs) are lipid based isotropic mixtures and they are anhydrous forms of emulsions. They consist of oil, surfactant and co-surfactant. This systems are prepared at room temperature with gentle stirring process without using any other component or heating process and become micro-/nano-emulsion form upon gentle agitation in gastrointestinal tract. Self-nanoemulsifying drug delivery systems are new approach for enhancing the oral bioavailability of BCS II or IV class lipophilic drugs.

The aim of this study was to develop new self-nanoemulsion (SNEED) formulation of Budesonide and evaluate cytotoxicity of budesonide-loaded SNEED formulation.

Methods: Self-nanoemulsions were prepared by mixing of oil phase (Peceol®), surfactants (Labrasol® and Gelucire 48/16®) and co-surfactant (Transcutol®). Droplet size and polydispersity index values were measured by Zetasizer after diluting in purified water and buffer solutions at different physiological pHs at 25°C and 37°C. Cytotoxicity of budesonide-loaded SNEEDS formulations (0.05, 0.10, 0.25, and 0.50% (v/v)) were investigated by MTT (3-4,5-dimethylthiazol-2-yl-2,5 diphenyltetrazolium bromide) assay using human epithelial colorectal adenocarcinoma cells (Caco-2).

Results: The droplet size of this formulation is 18 nm ± 2 nm, PDI values are below than 0.3. MTT assay test of this formulation showed that toxicity of formulations were concentration-dependent. The empty SNEEDS formulation and budesonide-loaded formulation have significantly higher viability at a concentration of 0.05 (v/v) compared to the other concentrations (0.10, 0.25, and 0.50% (v/v)).

Conclusion: Budesonide-loaded formulation (0.05, 0.10% (v/v)) exhibited low toxicity. It demonstrated that this formulation at concentrations of %0.05, 0.10% (v/v) are convenient for oral administration.

OP-194

**Effect of High Curing Temperature on Mechanical Properties of Concrete**

*Deborah Olukemi Olanrewaju<sup>1</sup>, Abiodun Yesiri Akinsanya<sup>1</sup>, Oluwaleke Adekunle Olowu<sup>2</sup>*

*<sup>1</sup>Department of Building; Lagos State Polytechnic; Lagos; Nigeria*

*<sup>2</sup>Department of Building; Yaba College of Technology; Lagos; Nigeria*

It has been shown that Concrete increases in strength with age after setting. The strength at a particular age can be further increased by suitable curing of the concrete while it is maturing. Such curing

comprises the application of heat and/or the preservation of moisture within the concrete. In this research work, an attempt has been made to study the influence of elevated curing temperature on mechanical properties of concrete. Mechanical properties such as comprehensive strength and pullout strength were investigated. Concrete Specimens were cured under three different temperatures and curing age 300C, 600C and 1000C and 7, 14 and 28 days respectively. Compression test and pull out test were conducted on concrete cubes. The results showed strong positive relationship with correlation coefficient 0.779 between number of days and strength of concrete and the P-value 0.004 implies that the relationship is significant at 5% level while the coefficient of Determination (COD) indicates that number of days have 60.75% effect on strength of concrete. Correlation coefficient 0.932 with a P-value 0.013 and COD of 86.79% indicate that temperature has a very strong effect on strength of concrete. The regression analysis showed a unit increase in temperature will lead to 0.062 N/mm<sup>2</sup> increase in the strength of concrete. However the rate of concrete strength at the increase in temperature is lower than the increase in number of days, this implies a tendency for concrete to be weak in future with increase in temperature especially above boiling point.

**OP-195**

**Absorption of Sulfur Dioxide in Aqueous Suspension of Phosphate Rock**

*Hayrunnisa Mazlumoğlu, Mustafa Şahin Gülaboğlu*  
Department of Chemical Engineering, Ataturk University, Erzurum, Turkey

There has been an increase in energy requirements linked to the advances in technology. For energy production, the most common method is the use of fossil fuels to obtain energy by processing in thermal power stations. Wet flue desulfurization methods are commonly used to absorb sulfur oxides produced by burning in the large coal-fired power stations. The reaction between aquatic suspensions containing appropriate absorbents and the sulfur oxides in the flue gas forms the basis of these methods. As a result, the absorption of SO<sub>2</sub> in a solution prepared from Mazıdağı phosphate rock, with appropriate characteristics identified in previous studies, and changes to the rock were observed and with this aim a multi-phase continuous flux reactor was used. In conclusion, domestic phosphate rock may be said to easily enter a reaction with SO<sub>2</sub> with high efficiency under conditions appropriate to wet flue gas desulfurization.

**OP-196**

**Applicability of Radiation Absorbing and Non-Absorbing Nanoparticles In Photo-Thermal Energy Conversion: A Comparative Study**

*Layth Al Gebory*  
Ozyegin university-Mechanical engineering department, Istanbul-Turkey

The radiative properties of nano-sized particles play a significant in a widely range of industrial and engineering applications, such as chemical, electric power, industry, meteorology, biomedicine, biophysics, astronomy, combustion, fire and flame, as well as solar power plants. In the thermal applications field, nanoparticles are found to be effective electromagnetic wave absorbers within UV-Visible wavelength range; where, short wavelength radiations include high energy photons. Because of their excellent and unique thermo-optical properties which are the basis of thermal phenomena and energy conversion. Nanoparticles are used as working media in solar thermal collectors for photo-thermal energy conversion. The purpose of the present study is to investigate the applicability of absorbing (conducting) nanoparticle and non-absorbing (dielectric)

nanoparticles in photo-thermal energy conversion. These particles are dispersed in a media to produce nanoparticle suspensions. The comparison between the radiative properties of the two nanoparticles with their suspensions is carried out. The radiative properties include scattering, absorption and extinction coefficients which are important parameters in the capture and utilization of solar energy. The contribution of particle scattering in the radiation attenuation is investigated by computing the single scattering albedo. Through the analysis of the radiative and thermal behaviour of the particulate medium, it is clear that photo-thermal conversion is important to not only the solar thermal systems, but also to the electricity generation and solar chemical technology, etc.

**OP-197**

**An Optimization Study on Dissolution of The Calcined Colemanite Mineral In Methyl Alcohol By Co<sub>2</sub> In An Autoclave System Using Taguchi Method**

*Meltem Kızılcıca<sup>1</sup>, Mehmet Çopur<sup>2</sup>*  
<sup>1</sup>Department of Chemical Engineering, Ataturk University, Erzurum, Turkey  
<sup>2</sup>Department of Chemical Engineering, Bursa Technical University, Bursa, Turkey

The process of optimizing the dissolution of colemanite ore (2CaO.3B<sub>2</sub>O<sub>3</sub>.5H<sub>2</sub>O) in methyl alcohol by CO<sub>2</sub> in a high-pressure reactor was evaluated by using the Taguchi method. Optimum conditions for the cholemanite mineral were determined to be as follows: reaction temperature: 140°C, reaction time: 50 min, calcination time: 240 min, calcination temperature: 450 °C, solid-liquid ratio: 1/6 g. mL<sup>-1</sup>, mixing rate: 500 cycle/min, pressure: 20 bar, grain size: -100 mesh and the amount of CaCl<sub>2</sub>: 7.5 g.

**OP-198**

**Enhanced Web Cache replacement policy based on Data Mining and RFSD scoring**

*Mohammad Edris Rajaby, Tuğrul Çavdar*  
Karadeniz Technical University

By rapid growth of the Internet users and devices, the number of servers also increase simultaneously which causes the exponential increment of the internet traffic and static data. Handling these huge amounts of user requests and efficiently responding to them require high bandwidth links, powerful servers and robust equipment, which despite the availability of these requirements getting the full user satisfaction is extremely difficult and a tough challenge. In order to overcome the mentioned problem, the cache servers are being used as a suitable solution. The performance of web cache server directly depends on its replacement policies. Several cache replacement policies have been proposed in literature each having varied hit rate (HR) and byte hit rate (BHR) performances on different networks. The replacement policy proposed in this paper is a dynamic cache replacement policy which trains itself utilizing previous network logs and by exploiting the data mining clustering algorithm. Once the training step is completed, the proposed policy utilizes the normalization formulas to score each metric of the enquiries including recency, frequency, size and delay. Simulation results showed that the proposed policy has the optimum performance on different networks and it not only improved the performance of web cache server in term of HR and BHR, but also decreases the data retrieval time (Delay Ratio (DR)) of the cache servers.

OP-199

**A Review on Different Extraction Methods of Natural Colour Derivatives from some Malaysian Agricultural Products**

*Siti Noor Suzila Maqsood Ul Haque  
Universiti Teknologi MARA*

Colorants for food products may be natural or synthetic origin. The used of the colorants as food additives are relatively low. Most of the natural colours will be degrade with respect to heat, light and pH conditions. Some of the natural colour derived from plants are anthocyanins which gives red and blue colour, carotenoids giving yellow, orange and red colour and phenolics which gives orange and yellow colour. These pigments are obtained from different source of plants and fruits. This paper will review some of the potential colour derivatives from different agricultural products that can be found in Malaysia. The natural colour chosen were blue pigment which derived from Bunga Telang and Buah Senduduk; red pigment from Red dragon fruits and Roselle flower; green pigment from spinach, Pandan leaves and broccoli; yellow pigment from banana peels, mango peels and turmeric and purple pigment from purple cabbage, yam and purple dragonfruit. The different extraction methods for these pigments were reviewed and presented in this paper.

OP-200

**Composite Material Prepared From Acrylic Non-Woven Waste and Polyurethane Resin**

*Wafa Baccouch<sup>1</sup>, Adel Ghibi<sup>1</sup>, Wafa Miled<sup>2</sup>, Faten Fayala<sup>1</sup>  
<sup>1</sup>Textile Engineering Department, National School of Engineering of Monastir, Monastir, Tunisia  
<sup>2</sup>Textile Engineering Department, Higher Institute of Technology Studies of Monastir, Monastir, Tunisia*

Recycling textile waste gained a great importance in the past decades, and using it as reinforcement of new composite materials is a new research theme that is being studied in these last few years. The use of reprocessed fibers has the primary advantage of being eco-friendly and low cost compared to virgin ones on the expense of lower structural properties. In this study, a needle punched acrylic non-woven waste was used as reinforcement material in two different densities and polyurethane resin as matrix material to produce a new composite material. Textile non-woven waste was afforded by a local textile recycling industry and was characterized in a metrological laboratory; chemical identification of the composition of the fabric, width, density and fiber orientation of the nonwoven. The effect of experimental molding parameters on the mechanical properties of the composite material was studied using a design of experiments. 24 composite panels were manufactured using two different reinforcement densities (800 g /m<sup>2</sup> and 1000 g /m<sup>2</sup>), 4 different polymerization time (30, 35, 40 and 45 minutes) and 3 different resin/reinforcement weight ratios (84/16, 86/14 and 88/12). For the production, matrix polymer and non-woven waste were weighed based on the predetermined weight ratios; acrylic mat was immersed with polyurethane resin and laid in a mould, the lid of the mold was then closed and the composite was dried in an oven at a temperature of 170°C. The mechanical properties of the composite were investigated by a tensile testing machine and a bending testing machine. The objective of this study is to determine the optimal experimental parameters in order to obtain the best mechanical properties of this composite material. Results obtained were analyzed and compared to other results of the bibliography

OP-201

**Comparison of The Conventional and Artificial Neural Network Methods Performances In The Tracking of Photovoltaic Maximum Power**

*Fayrouz Dkbichi, Benyounes Oukarfi, Hicham Lhachimi, Youssef El Kouari  
Condensed Matter Physics and Renewable Energy Laboratory, Faculty of Sciences and Techniques, Hassan II University of Casablanca, B. P 146, Mohammedia, Morocco*

The power maximization of a photovoltaic system is extremely important to optimize the production of photovoltaic energy. When a photovoltaic panel is connected directly to a load, the output power is not at its maximum. However, the integration of an electronic converter type chopper is required. Indeed, the optimal control of the duty cycle of chopper allows to force the panel to generate the maximum power for a gainful functioning in the photovoltaic system containing photovoltaic panel, chopper “boost” and a load. To do that, several specific methods for controlling the duty cycle through the *Maximum Power Point Tracker* (MPPT) method are reported in literature. Among these methods we distinguish the classical and intelligent control methods based on artificial learning such as *Artificial Neural Network* (ANN). The classical ones are: *Constant voltage, constant current, incremental conductance* and *Perturb & observe* (P&O). In this paper we have treated the MPPT control of the photovoltaic system by each of these methods, by ANN and also by the combination between ANN and P&O (ANN-PO). Then we studied their performances and their influence on the output power, delivered by the system. We distinguish the classical methods by their deficiencies in front of the change in temperature and irradiance while ANN and ANN-PO methods are renowned for their good performance at the change of the two weather factors. This later method show good accuracy and good speed of tracking of the output power compared to the classical ones.

OP-202

**Ensemble Based Approach For Improving The Detection of Vandalism In Wikipedia Across Languages**

*Arsim Susuri, Mentor Hamiti, Agni Dika  
Faculty of Contemporary Sciences and Technologies, South East European University, Tetovo, Macedonia*

This paper analyses the current trend in applying machine learning in contributing to the solving the problem of detection of vandalism in Wikipedia articles. The detection of vandalism in Wikipedia can be enhanced by utilizing automatic detection techniques. However, imbalanced and noisy data can have a negative impact on the effectiveness of such an approach. In this paper we propose an ensemble-based with the aim of improving training data and classification performance. For this purpose, Simple English and Albanian Wikipedia datasets will be used. Based on the comparison of several learning classifiers and data processing techniques, the experiments showed that the suggested approach provided better results in terms of classification performance.

OP-203

**Investigation on The European Union Euro Motor Standards and Country Applications For Reducing Pollutational Gases In The Clean Environmental Healthy Generation Framework**

*Süleyman Üstün, Recep Onur Uzun  
Celal Bayar University, Akbisar Vocational School, Manisa-TURKEY*

After the second half of the 19th century, steam engines left the place to internal combustion engines. Fixed installations and automobile

engines have been manufactured in series at the beginning of the 20th century, and quickly turned out to be the preferred engine for both performance and ease of use. Fuel, which we commonly refer to as fossil fuels and used in internal combustion engines, comes in the form of gasoline, diesel, liquefied petroleum gas (LPG), liquefied natural gas (LNG). Fossil fuels contain hydrocarbons and carbon at high ratios. The number of these engines is increasing day by day when considering the production of automobiles and commercial vehicles, and the harmful pollutant emissions from the exhaust after the combustion are not considered to be a problem, but nowadays it is a problem of the whole world due to the production of fossil fuel vehicles. Nowadays it is legal for automakers to develop auxiliary systems to control the harmful emissions of vehicles and to manufacture vehicles within specific emission standards. By setting global production standards and conducting emission tests at regular intervals, the emission values of fossil fuel vehicles that are actively used are being controlled within standards. In this study, European Union euro motor standards were examined and compared with the practices of our country taking into consideration the values of euro motor pollutant gases. Studies conducted on the reduction of polluting gases brought about by fossil fueled vehicles in our country are presented as research results. Proposals have been made to increase the effectiveness of current practices in our country for a cleaner environment and a healthier future by examining the data, tables, graphs and figures. The other results of the research will be discussed at the symposium.

OP-204

**Gender Differences In Entrepreneurship: The Eu and Turkey**

*Gönül Oğuz  
Giresun Üniversitesi*

A test case for the Turkish membership for the European Union is to see how well Turkey fosters women's entrepreneurship. As a part of the strategy of the Union, Turkey is required to boost women's entrepreneurship to transform its social policy. Evidence indicates that the trends in women's self-employment are downward in the last decade. Women are still less likely than men to start-up new businesses. Turkey's overall compliance can be explained through the labour market measures introduced by the principle of EU conditionality. This objective is based on a perceived large deficit as compared to the EU member states. Often this deficit is portrayed as a consequence of the lack of starts-up, although the EU policies are targeted to improve women's labour market participation. This study provides an overview of the some of the main trends and issues concerning Turkish women's entrepreneurship, with a particular focus on the process of their integration and its impact on the labour markets. For the general descriptive overview, the study relies on the European Commission, the OECD Labour Force Statistics and the Turkish Employment Institution. These statistics are useful to illustrate the trends and relative status of female entrepreneurs, although data comparison across countries is greatly limited.

OP-205

**Women Entrepreneurship: Contribution of Human and Social Capital to Overcome Gender Stereotypes**

*Haroon Muzaffar  
AYBU Business School, Ankara Yıldırım Beyazıt University, Ankara*

A growing body of scholarship documents the prevalence of unconscious gender stereotyping in social and economic spheres of life. The ascription of gendered stereotypes devalues women in the socio-economic context and in modern work organizations. Gendered stereotyping occurs through a binary division where stereotypical behaviors are associated with masculine and feminine traits where the former is more valued. Consistent with this gendered stereotype

view, entrepreneurship scholars found that entrepreneurship is also widely considered to be a male-specific task. Entrepreneurship characteristics are perceived to be masculine traits. To overcome this gender stereotyping behavior human and social capital plays a vital role for women entrepreneurs. Human capital in the form of individual resources like education, training, and work experience serves as the basis for obtaining different types of resources. Woman entrepreneur with a strong human capital inspires confidence among the resource providers that she has the individual qualities necessary for the creation and running of a business. Similarly, social capital in the form of networking allows the women entrepreneurs' timely and efficient access to information, advice, and resources. Effective embeddedness in social networks enables the women entrepreneurs to enter the domains where they are considered as "outsiders". Thus, for women entrepreneurs, human and social capital contributes tremendously to overcome the gender stereotyping. However, there is a gap in the literature about the role of human and social capital in overcoming the gender stereotyping. By using qualitative research methodology this study is an effort to fill this gap. We conducted interviews with 12 women entrepreneurs running their businesses in Middle East Technical University Teknokent, Ankara. The results of our study offer insights about the significance of human and social capital for overcoming the gendered stereotyping and also have implications for public policymakers.

OP-210

**Effect of Inovativness, Need For Achievement, Locus of Control, Risk Taking Propensity and Self Confidence to The Intention Entrepreneurship Student**

*Hermin Endratno  
Universitas Muhammadiyah Purwokerto (Purwokerto, Indonesia)*

Inovativness Effect, Need For Achievement, Locus of Control, Risk Taking Propensity and Self Confidence to The Entrepreneurship Intention of Student by: Hermin Endratno herminendratno@gmail.com Universitas Muhammadiyah Purwokerto, Indonesia The results of this study found that the entrepreneurial intentions of students is determined by self-confidence, locus of control and innovativeness. Self confidence is the most influential variable to the intention of entrepreneurship There is no difference between the entrepreneurial intention professions student's parents both employers and employees. Another result, there is a difference between entrepreneurial intentions of students who have work experience and who do not have work experience.

OP-211

**Performance Measurement of Entrepreneurship Education in Hitit University**

*Eşref Savaş Başçı<sup>1</sup>, Gökhan Yürürer<sup>2</sup>, Reba Metin Alkan<sup>3</sup>,  
Paige C. Dabney<sup>1</sup>  
<sup>1</sup>Hitit University, Çorum, Turkey  
<sup>2</sup>SmallandMediumIndustryDevelopmentOrganization, Çorum, Turkey  
<sup>3</sup>Istanbul Technical University, Istanbul, Turkey*

One of universities' primary aims is to prepare their students for post-graduate life. This purpose is related to the universities' social responsibility to help the students meet their own needs after their educational period is finished. Teaching theoretical education alone in universities is not sufficient for contemporary education. The new approach in university education has undergone significant changes in its attempt to integrate a practical education into a theoretical one. Here, the mission of the universities is beginning to include the promotion of a knowledge economy via the addition of

entrepreneurship education in their curricula. This paper primarily focuses on entrepreneurship education in the university structure. Universities are aware of the importance of entrepreneurship education in satisfying the private sector's demands. Entrepreneurship at Hitit University, Çorum has been continuously taught from 2010 to 2015 in the Faculty of Economics and Administrative Sciences (FEAS) of the Business Management department. A total of 189 students were trained in entrepreneurship education during this period. They have also received an entrepreneurship certificate from the Small and Medium Industry Development Organization (KOSGEB). An online survey was prepared to evaluate their post-study situation to determine whether they have been successful or not in starting up a new company. We additionally want to know if students have holistically benefitted from their extensive training; the entrepreneurship education curriculum was organized for a total of 70+ hours and included analyzation of business plans. The population of the questionnaire is 189, so we are still continuing to reach them by using an online questionnaire. As a result of this study, we expect to determine the success rate of the students. When we complete the statistical analysis of the questionnaire, we will have measured the performance level of entrepreneurship education at Hitit University.

**OP-212**

**Enterprise Training and Business Performance: A Case of Small Business Manufacturing Sector in the West Midlands**

*Fahad Sultan<sup>1</sup>, Mubammad Ibrahim Khan<sup>2</sup>, Syed Mobsin Ali Shab<sup>2</sup>*  
<sup>1</sup>*Institute of Business Studies and Leadership*  
<sup>2</sup>*Abdul Wali Khan University, Mardan, Pakistan*

The provision of education and training is considered to be a resilient elucidation in bridging workforce skills needs and in improving business performance. Given the important role small businesses play, it is essential to investigate how performance is effected through the provision of training. The purpose of this study is to examine the impact of education and training on employee's turnover rate; to explore the perception of training amongst owners/managers in education and training, with a particular focus in the West Midlands. This exploratory study is based on a mixed-method approach including case study review and survey questionnaires. The choice of case study method for this research is considered to be appropriate in order to obtain in-depth findings through semi structured interviews. For the quantitative part of the study, having survey strategy can help to get accurate numeric findings. Therefore, study is based on 26 semi-structured face-to-face interviews and 136 survey questionnaires carried out within small business organisations in the West Midlands. The results of the study show that owners/managers are aware of the importance of training which could enhance the quality of companies' products and reputation. There is overwhelming evidence from firms' responses that training positively impacted on employee's turnover rate and overall business performance. This study demonstrates that small enterprises are exposed to international competition; their products and services compete across regions and in many cases, globally due to the presence of the internet, and online purchases. Small enterprises have to embrace and internalise training to remain pertinent and competitive. The findings of this research suggest that small business management should recognise the importance of training to maintain turnover rate.

**OP-213**

**Relations Between Entrepreneurship, Entrepreneurship Grade and Cultural Intelligence: A Study on School Principals**

*Ali Baltacı*  
*Milli Eğitim Bakanlığı, Ankara*

Entrepreneurship means of the capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit. The most obvious example of entrepreneurship is the starting of new businesses and opportunities. On the other hand, cultural intelligence stand for a measure of a person's capacity to function effectively in a multi-cultural environment. Employers and organizations apply CQ as a way to foster tolerance and enhance cross-cultural interactions. This study was investigated the possible relationships between Entrepreneurship, Entrepreneurship Grade and Cultural Intelligence, and the main purpose of this study is to determine the mediating role of the entrepreneurship attitude between the cultural intelligence that school principals have and the grade of entrepreneurship of schools. The design for this study was classified as correlational survey research. By using 150 school principals randomly selected from 25 central districts of Ankara. Relations between the variables of this study were examined by correlation and hierarchical regression analysis. Findings have shown that cultural intelligence is positively related to entrepreneurial attitude and entrepreneurship. As a result of the hierarchical regression analysis, it was found that the entrepreneurial attitude was completely mediated agent between the cultural intelligence and the entrepreneurship level. The findings are helpful to the organizational literature, but in practice they will provide strategic alternatives for school principals to engage in entrepreneurial activities.

**OP-214**

**The Effects of Regional Development In Technological Innovation Island Technoparks Metu Technocity**

*Yabya Özdemir*  
*Yalova University*

One of the most fundamental factors in the level of development of country societies in today's information age that countries have the advanced technologies. Technological Innovation is regarded as one of the most important building blocks of economic growth and development, and therefore prosperity and quality of life, both in terms of competitiveness and efficiency in national and international fields both in terms of countries and companies. Technology and innovation are the most important key points in the economic growth performance of the countries. The impact of technological innovation in the economic growth of the developed countries especially in the last 25 years is more than 50%.

Countries that do not attach importance to technological innovation and do not invest, have to withdraw from the market after a while. Because of this, technological innovation has become the most strategic concept in the global world in terms of both economic growth and competition. Innovation affects economic development positively by accelerating the diffusion of technology from developed countries to developing countries. As a result, countries can play an important role in diaspora in technology transfer.

The research emphasizes the importance of technological innovations in terms of regional development and the importance of technological innovation in the economic development of technoparks and technological innovations that are commercialized by METU Technocity companies and the economic development of innovation-driven technoparks.

The research aims to examine the prominence of technoparks, which are the places where technological innovation is supported and developed, in terms of regional development, on the sample of METU Technocity, the technological innovation that companies working in METU Technopolis can commercialize which emphasizing the importance of R & D activities on firm work and economic development and the importance of economic development in innovation-driven technoparks.

OP-215

**Influence of Various Parameters on The Springback Behaviour During Strech-Bending Process**

*Soumaya Hakimi, Azedine Soualem*

*Laboratory of physical and mechanical Metallic material (LPMMM), institute of Optics and Precision Mechanics (O. M. P), University Ferhat Abbas, Setif, Algeria*

This work aims to study the springback behaviour of aluminum alloy sheet during the stretch-bending process with three different rolling directions (0°, 45°, 90°). The experimentation has done to analyse the influence of various parameters such as orientation of the sheet, die radius, punch velocity, on springback behaviour. The results showed that springback is affected by the die radius values in the stretch-bending experiments. From this analysis, it can be concluded that the springback values can be increased by increasing the values of the die radii and the punch velocity.

OP-216

**Anion Substituted Zinc Oxide For Optoelectronic Devices: From Fp-Lapw Calculations**

*Abdelkader Boukortt*

*Laboratoire d'Elaboration et Caractérisation Physico Mécanique et Métallurgique des Matériaux (ECP3M), Département de Génie Electrique, Faculté des Sciences et de la Technologie, Université Abdelhamid Ibn Badis de Mostaganem, 27000 Mostaganem, Algérie*

Increasing interest in substitution of oxygen by a group-V impurity in zinc oxide as a semiconductor with a hexagonal wurtzite crystal structure becomes a key challenge of the production of p-type material conduction in ZnO. Thus our interest goes towards the calculation of ZnO doped with Co and co-doped with Nitrogen (N), Phosphorus (P), and Arsenic (As) that are investigated by using the full potential linearized augmented plane wave (FP-LAPW) method. In this work we discuss the effect on the O site substitution and co-doped with Transition Metals (TM) to find the origin of p-type conduction. Electronic structure, optical and magnetic properties are also study and discussed, a wrong position of the 3d bands which may be repaired by the LSDA+U method. That compound is potentially important for spintronics and magneto-optoelectronic applications.

OP-218

**Product Design Process Has A Very Important Effect on Product Costs. It Is Aimed to Develop Products That Have The Ability to Compete By Reducing Product Cost By Achieving Optimum Design In Product Design Process. In This Study, The Optimal Structura**

*Ali Rıza Yıldız*

*Bursa Technical University*

Product design process has a very important effect on product costs. It is aimed to develop products that have the ability to compete by reducing product cost by achieving optimum design in product design process. In this study, the optimal structural model of the vehicle connecting rod was determined. Connecting rod is one of the parts used in internal combustion engines. During operation, three different forces are acting: the connecting rod arm, the gas forces, the inertia forces and the friction forces. In the optimization process, fifty different design alternatives were created by using latin hypercube method and stress analysis was performed for each of these designs. According to the generated answers, formulas which define radial based functions and purpose

and constraint functions are obtained. The problem of optimization has been solved by the loaded system search algorithm which has been newly gained in the literature and the optimum connection rod geometry has been obtained.

OP-220

**Comparative Analysis of The Fuzzy, Sliding Mode and Direct Power Control and Their Effect on The Dfig Behavior**

*Hicham Lhachimi<sup>1</sup>, Benyounes Oukarfi<sup>1</sup>, Fayrouz Dkhichi<sup>1</sup>, Yassine Sayouti<sup>2</sup>, Youssef El Kouari<sup>1</sup>*

*<sup>1</sup>The Laboratory of Physics of Condensed Matter and Renewable Energy, Faculty of Sciences and Techniques, Hassan II University of Casablanca, B. P 146, Mohammedia, Morocco*

*<sup>2</sup>The Laboratory of Electronics, Energy, automation and information processing, Faculty of Sciences and Techniques, Hassan II University of Casablanca, B. P 146, Mohammedia, Morocco*

The DFIG is the most used machine when it comes to the production of electricity based wind energy, it has many advantages as ensuring a variable speed operation that will maximize the power extracted from the wind with a decoupled active and reactive power control, producing an electric power with better quality and reducing the torque oscillations. However, to deal with the different disturbances and changes that can alter the DFIG behavior, we have to employ strategies that guarantee robustness, fast response time and a good precision. In the literature, many strategies were compared to choose the appropriate control. In this paper, we applied many tests that include reference fluctuation, speed change and DFIG parameters variation, in order to analyze the performances of each control in terms of disturbance rejection, rapidity and accuracy of tracking. We noticed that the fuzzy control delivers the fastest response time and guarantee a good precision during reference tracking, but remains sensible to disturbances, on the other hand, the sliding mode and direct power controls present a robustness against disturbances, have a fast response time but generate some oscillations around the reference power that influence the precision.

OP-221

**Innovation and Economic Transition in Algeria**

*Abdelkader Nouibat*

*University of M'sila, M'sila, Algeria*

This paper discusses the role of government in managing innovation systems in Algeria. The country has opted for the "industrializing industries" concept to launch its early industrialization program, which was based on the transfer of technology and the building of turnkey factories in specifically chosen geographical spaces according to economic efficiency criteria. By all counts, this strategy failed on many levels; neither industrialization nor job creation was materialized. However, since the country opted for small and medium enterprises to carry its economic reforms in the 1990's, it decided to implement an innovation model linking government, university and industry to collaborate at the national, regional, and sectorial levels. Nevertheless, it will be argued in this paper that the weakness of the current national innovation system in Algeria is due to the transitional institutions, legislations, and reform programs that led to dismantling the industrial base that existed under socialism, and the creation of a private sector that lacks the necessary dynamism to carry the government's innovative agenda, especially at the regional level. In order to analyse the major issues that the private sector faces in regard to the government's innovative agenda at the regional level, the paper will address these questions: (1) What are the explicit innovation policies that the Algerian government has put in place to carry its regional development programs in this transitional phase; (2) To what extent has the private sector become another promoter of innovation in Algeria?

**OP-222**

**Innovation and Innovative Thought In The World of Tecghnology**

*Ablay Ablay*

*Giresun Üniversitesi, Giresun*

As we know today, technology is advancing rapidly and rapidly. This rapidly develops in thought together with advancing technology and innovation emerges in thought. Now our needs that satisfy us are inadequate and the desire to develop them arouses. For this reason, innovation and innovative thinking are aimed at improving technology development. However, a more "comfortable", "easier" and "sustainable" life is targeted

If human life is necessary, it has always been better to be. New thoughts, different innovations have emerged. The reason for this is the evolving living standards and advancing technology. People in ancient times have found a better way of thinking about what they can do and what other needs they can do from a bar. Innovation and technology is a concept that has a continuity. Therefore, people are constantly developing new ideas and developing them.

As a result, new ideas will emerge as technology advances. Human life will become easier and new job opportunities will be created with it. If the problem of unemployment is small, it will be removed.

**OP-223**

**Examining The Historical Evolution of The Concept of Social Innovation Using Scientific Mapping Method**

*Tayfun Yıldız, Zafer Aykanat*

*Ardahan Üniversitesi*

This study aims to examine the evolution of the concept of "social innovation" from 1966 to up till now. The present study seeks to analyze the change and revolution of the concept of social innovation using firstly bibliometric analysis and secondly scientific mapping methods and the obtained results are interpreted. Bibliometric analysis method enables a statistical analysis of various data about scientific publications including their country, author(s), cooperation among authors, citations, references, institutions, publication date, and puts forward the general aspect of a certain discipline in the light of obtained statistical results. In other words, the purpose of scientific mapping is to demonstrate structural and dynamic aspects of a scientific research. This study introduces how many social innovation-related papers were published between the period 1966-2016 regarding SCOPUS data base and their distributions are established with respect to the scope of journals and keywords using scientific mapping analysis with Science Mapping Analysis Software Tool (SciMAT). This package program provides a comprehensive data sorting and opportunity to succeed single-handed distinctive analysis methods for scientific mapping. Moreover, VOSviewer program is also used to put forward citation patterns among authors. Thus, differences between subjects that may have an impact on the revolution of studies concentrated on the concept of social innovation on SCOPUS data base, can be examined. There is a total of 1, 428 publications indexed in SCOPUS data base, while articles take the share of 58. 1% (830), conference papers take the share of 16% (229), book chapters take the share of 11. 2% (160), and the rest of them is classified as other publications. When the revolution of the concept of "social innovation" regarding countries is observed, the US ranks first with 207 publications, the UK and Italy rank second and third with 200 and 117 publications, respectively. Turkey takes 31st place with nine publications.

**OP-224**

**Invention and Innovation in Economic Change**

*Sefer Şener, Volkan Hacıoğlu*

*Istanbul University, Faculty of Economics, Istanbul, Turkey*

In this paper we investigate the difference between invention and innovation. Since theories of invention are rare in the literature, this subject deserves the appropriation of proper attention. In the economics of competitive market, there is an important distinction between invention and innovation. An invention is devoid of economic value unless it is put into practical use and consumption. An abstract idea may be an important invention. But it takes an entrepreneur to transform the abstract invention into a marketable product. By "getting things done," the entrepreneur produces economic value and thereby utility. The entrepreneur produces utilities by arranging, designing or re-organizing things in a new way that were not done before. On the other hand, the inventor creates ideas to produce something new that was inexistent beforehand. The task of inventor may seem more essential at first. However, as far as competitive economy is concerned, the function of innovative entrepreneur is determinant in economic change and development. An inventor becomes entrepreneur if endeavor in invention is transformed into labor in entrepreneurship.

**OP-225**

**Policy Intervention on Innovative Entrepreneurship**

*Binod Anand*

*Binod Anand, We think for Rural India, New Delhi, India*

Approaches in the understanding of the role of innovative entrepreneurship in addressing current SDG of United Nations have led to a different understanding of the expected contributions and outcomes of innovative entrepreneurship and related policy. The expansion of the number of deployed instruments, pursued objectives, and actors involved in innovative entrepreneurship policy has increased the complexity of the policy landscape, and enhanced the risk of inconsistencies and redundancies between programs. Achieving coherence and balance in the set of policies affecting innovative entrepreneurship, and coordinating the various actors involved in these policies have, consequently, become increasingly important for policy efficiency. Common policy challenges include for innovative entrepreneurship are public intervention be most effective in support of innovative entrepreneurship, Policy rationales and objectives for innovative, instruments can governments use to achieve the policy objectives they have set and efficient coordination between the various actors involved in innovative entrepreneurship policy? Strategy and Coherence of Policies covering various dimensions affecting the capacity to design and conduct effective policies in support of innovative entrepreneurship, including dominant policy models and ideas, administrative capacities, public budgets, policy arenas, and strategic policy intelligence is analysed here with special context of South Asia. I have done a empirical study on how Policies are affecting Innovative Business in South Asia with a special emphasis on current Price Control order of Government of India and its overall impact on Socio- Economic development.

**OP-226**

**E-Health Practices In Turkey**

*Demokaan Demirel*

*Public Administration, Ömer Halisdemir University, Niğde, Turkey*

Today's states are living the stage of information society after agriculture and industrial society. Concepts such as speed, quality, efficiency and productivity have gained importance in the information

society. The most important competitive tool in the information society is the acquisition of information and sharing among institutions. The most important contribution of the information society towards public administration reforms is the e-government, which provides advantages in terms of time and labour costs. E-government practices strengthen communication between citizens and administrative institutions. E-government is accelerating communication and mutual communication between public institutions. It makes public administrators accountable directly to the public. It prevents managerial corruption. It increases citizen participation in managerial processes and practices in a democratic manner. The e-health, which refers to the e-government's practices in the health sector, ensures that the services provided to all stakeholders are delivered quickly and easily in the field of health. Turkey is still in its first phase in e-health applications. Since the announcement of the health transformation program in 2003, many e-health projects have been developed and put into practice. This study aims to explain the concepts of information society and e-government, to examine and evaluate the e-health applications in Turkey. From a methodological point of view, the study discusses the e-health projects in Turkey in a descriptive way starting from the literature on e-government theory. It demonstrates the contribution of e-health projects in Turkey's e-transformation process.

**OP-227**

**Entrepreneurship and Private Enterprise in Terms of the Freedom of The Turkish Legal System Analysis**

*Mehmet Ali Akkaya*

*Muğla Sıtkı Koçman University, Fethiye Faculty of Management*

Economic sense of initiative and freedom of industrial and commercial activity, and freedom are not attempted. Entrepreneurship; speeding up of economic growth and the prevention of unemployment, the social structure has the basic function of the process started in the exchanger. Entrepreneur, factors of production, in addition to profit and the risk of damage to the undertaking. Stakeholder, has been involved up to legal economic of profitability is assured. Turkish legal system to secure this idea was found in a number of editing, but it has not been enough. In this study, we will explore the basic national legislation related to entrepreneurship, giving European Union legislation taking into consideration comparative system analysis. Conclusions and recommendations based on the front of the restrictive laws of entrepreneurship in domestic law changes related to offer and made suggestions.

**OP-228**

**Strategy Instruction for Successful Learning**

*Melouka Ziani*

*Department of English, university Abdelhamid Ibn Badis, Mostaganem, Algeria*

Success and failure in foreign language learning have long been major subjects under discussion and investigation in order to trigger for the factors that lead to each of them. In fact, studies have demonstrated that success relates to the use of adequate learning strategies and failure pertains to the wrong use of the adequate strategy. (Oxford, 1990 & 2005). The present paper, then is an attempt to shed light on a major issue that pertains to learners' awareness of the appropriate use of learning strategies. The findings show that it is of paramount importance that our language learners be acquainted and trained to regular use of the appropriate learning strategies that allow them solve tasks successfully and achieve effective learning. Accordingly, strategy instruction has become a major step for making language learners get accustomed to the suitable learning strategies that lead to successful learning.

**OP-229**

**Social Entrepreneurship Applications In Fisheries Sector and Good Practice Examples In World and Turkey**

*Mustafa Sarı*

*Maritime Faculty of Bandırma Onyedi Eylül Üniversitesi*

Social entrepreneurship, defined as developing innovative, participatory, ethical and sustainable solutions to chronic problems, has a wide range of applications. It is possible to come across social entrepreneur in areas as diverse as health, obstacle, street children, prisoners, forestation, poverty, environmental problems to gender mainstreaming. There are examples of social entrepreneurship implemented in different parts of the world in order to raise income levels, create new jobs and achieve sustainable fisheries in the fisheries sector, where the employees are mostly rural people with relatively low income levels. In this study, the principles of social entrepreneurship are summarized and social initiatives applied in the field of fisheries are explained. In the last part, examples of good practices related to fisheries have been included in the World and Turkey.

**OP-230**

**The Role of Personal and Family Background In Influencing Ethnic Entrepreneurs: A Study Case of Malaysia**

*Siti Daleela Mohd Wabid<sup>1</sup>, Shafinar Ismail<sup>1</sup>, Subaimi Mohd Sarif<sup>2</sup>, Nurul Amyra Mat Isa<sup>1</sup>*

*<sup>1</sup>Universiti Teknologi Mara Melaka*

*<sup>2</sup>Universiti Islam Antarabangsa*

Economic activities carried out by ethnic' entrepreneurs and their enterprises could be a huge potential source of entrepreneurial and economic impetus for the perspective recipients' countries. The benefits of having ethnic' entrepreneurs in the host country such as physical capital investment, job creation for local workers and contributions towards the country's GDP receive considerable recognition. Thus, this study was conducted with the express attention of adding to the existing theory of entrepreneurship literature relating to immigrant entrepreneurship. It attempt to have better understanding the role of personal and family background of ethnic entrepreneurs in Malaysia. The qualitative method was utilized to this study. This study has conducted total five in-depth interviews of various ethnic entrepreneurs in Malaysia. To end with, this study summarized that, there are significant differences between personal characteristic and family background of ethnic entrepreneurs in Malaysia. The biggest effects on entering entrepreneurship come from having parents' entrepreneurs, sibling entrepreneurs, and having higher education's background.

**OP-231**

**A Study on a Model of E-Service Quality in Hotel Industry towards E-Customer Satisfaction, E-Customer Trust and E-Customer Loyalty**

*Mutia Sobihah Abd Halim<sup>1</sup>, Rabiatul Adawiyah Alias<sup>2</sup>*

*<sup>1</sup>Faculty of Economics and Management Sciences, Gong Badak Campus, Universiti Sultan Zainal Abidin, 21300 Kuala Terengganu, Terengganu, Malaysia.*

*<sup>2</sup>Faculty of Applied Social Sciences, Gong Badak Campus, Universiti Sultan Zainal Abidin, 21300 Kuala Terengganu, Terengganu, Malaysia.*

Malaysia Tourism Transformation Plan listed under the Economic Transformation Program (ETP), towards achieving the target of 36 million tourists in 2020. Tourism and hotel industry in particular is a key-driver for economic growth in Malaysia. E-commerce system have

served and aided to develop the hotel business in the globalization field. In Malaysia, there is a lack of studies on E-commerce service quality of hotel industry and has prompted this study to be done. Therefore this study was conducted to develop a model that consists of four dimensions E-service quality, customer satisfaction, customer trust and customer loyalty that represented by 29 items. This study involved data from 290 tourists from 63 three star hotel on the East Coast of Peninsular Malaysia were collected through questionnaire and analyzed using the Structural Equation Modelling (SEM). The results showed the beta coefficient was significantly contributed between E-service quality and E-customer trust (0.12), E-service quality and E-customer satisfaction (0.89), E-service quality and E-customer trust (0.66), E-customer satisfaction and E-customer loyalty (0.27) and E-customer trust and E-customer loyalty (0.33). The finding also shown that the E-customer satisfaction and E-customer trust had partial mediated to the relationship between E-service quality and E-customer loyalty. This study succeed to develop a model how to maintain E-customer loyalty and can be used by stakeholders, especially the top management of the hotel to enhance the effectiveness of their management, particularly in the quality of E-service.

**OP-233**

**The effect of magnetic impurities on the optical properties in ZnO**

*Abdelkader Boukortt*

*Laboratoire d'Elaboration et Caractérisation Physico Mécanique et Métallurgique des Matériaux (ECP3M), Département de Génie Electrique, Faculté des Sciences et de la Technologie, Université Abdelhamid Ibn Badis de Mostaganem, 27000 Mostaganem, Algérie*

Density functional calculations of TM-doped ZnO and a theoretical analysis of the optical inter-band transitions are presented. That material is potentially important for spintronics and magneto-optoelectronic applications. Using the full potential linearized augmented plane wave method we analyze the dielectric functions (real and imaginary part) to understand the optical inter-band transitions. We show that the local spin-density approximation LSDA and LSDA+U are investigation for calculating and correcting the wrong position of the 3d bands which may be repaired by the LSDA+U method. We show the appearance of new peaks in the optical conductivity related with the magnetic impurities which we analyze in detail.

**OP-234**

**Electrochemical Study of Corrosion Inhibitors Efficiency In Brines With Different PH**

*Moussa Bounoughbaz<sup>1</sup>, Zakia Bouadda<sup>1</sup>, Ilham Kaci<sup>1</sup>, Saida Cheikh<sup>2</sup>*

*<sup>1</sup>University of M'bamag Bougara Faculty of Sciences Department of Chemistry*

*<sup>2</sup>Sonatrach Crd Boumerdes*

Two commercial corrosion inhibitors named A and B were investigated electrochemical impedance spectroscopy (EIS) and linear polarization resistance (LPR). The electrolyte was constituted from 3, 35 and 250 g/l NaCl and for different values of pH (4, 7 and 10). The performance of the two inhibitor increases with an increase in inhibitor concentration and decreases in the basic. Electrochemical impedance studies show that charge transfer resistance increases with concentration of inhibitors. LPR studies follow the results obtained by EIS According to the obtained results it was clearly indicated that a change in pH medium may affect the efficiency of corrosion inhibitor.

**OP-235**

**A Comparison between High-Technology Exports of Turkey and Developed Countries**

*Hatice Özkurt Çokgüngör*

*Foreign Trade, Vocational School of Social Sciences, İstanbul University, İstanbul, Turkey*

Exports of high technological products reflect the ability of a country to commercialize the results of research and technological innovations in international markets. The exporting structures of the countries in terms of high-tech products also show the knowledge and competence levels of the product structure. In order for a country to have the ability to compete and to have an economy based on dynamic information, new technologies need to be created, used and commercialized. Despite some economic crises and political instabilities, Turkey has succeeded in growing over the years and is now one of the world's best-performing emerging economies. In order to take a leading role in the league of industrialized countries, Turkey should develop in terms of trade and industry structures in both high technological composition and added value. A growing portion of exports includes imported intermediate inputs. This indicates that the local value of exports may be much lower than expected than the high growth of exports. If in a country, high-tech exports exceed technology imports, there is foreign trade surplus in that country. If the technology imports exceed the exports, then there is the problem of the foreign trade deficit in that country. Moreover, the Turkish industry seems to be more specialized in medium and low-tech products than the high-tech products. In this study, the changing nature of Turkish trade in recent years will be evaluated; industry competitiveness will be analyzed and some fault lines will be highlighted to help improve international high-tech trade and help sustainable growth; the role of trade in developing countries will be examined and the problems of implementation of high-tech product exports will be discussed.

**OP-237**

**Entrepreneurship in Nursing: A Concept Analysis**

*Nurten Kaya<sup>1</sup>, Nuray Turan<sup>2</sup>, Gülsün Özdemir Aydın<sup>2</sup>*

*<sup>1</sup>Istanbul University, Health Sciences Faculty, Department of Midwifery, Istanbul, Turkey*

*<sup>2</sup>Istanbul University, Florence Nightingale Nursing Faculty, Department of Fundamentals of Nursing, Istanbul, Turkey*

Aim: Although the concept of entrepreneurship has been mainly used in the field of economy since history, it is used in all professions that concern the human as it brings out production. One of the fields that deal with human, is rapidly changing is the healthcare field. Nurses who are the providers and practitioners of health care use entrepreneurial features in determining the needs of the individual, in applying innovations, in designing and producing nursing care products. However, the concept of entrepreneurship is used together with the concepts of 'creativity' and 'innovation'. Therefore, the conceptual analysis of entrepreneurship in nursing should be performed. Methods: Walker, Avant's well-established method of concept analysis was employed to clarify of concept of entrepreneurship in nursing. Results: When the historical root of concept of entrepreneurship is examined, it is seen that concept comes from word "entreprendre" in French and means "to do something". According to Turkish Language Association, entrepreneurship is state of being entrepreneur. From a sociological and psychological perspective, entrepreneur is the person who aims to achieve something, makes an effort for something and wants to gain authority, power and prestige when he/she achieves. It is seen that the word entrepreneurship is not found in the Turkish Language Association's nursing dictionary. However, entrepreneurship also involves creativity and innovation by its nature. In the past, entrepreneurship in nursing was used for the people working in the private sector and setting up their own business outside of nursing

care, education, management and researches in public institutions. There are examples of entrepreneurship such as electronic recording systems for nurses in education, administration and practice, communication technologies, design and production of nursing care products, the forms developed to measure patient outcomes. Conclusion: It is seen that entrepreneurship is also found in nursing depending on the developments in health care services. In this context, to be open to developments, innovations reveals creativity in nursing. It is necessary to increase the knowledge, skills for the development of entrepreneurship in nursing and for the removal of legal, ethical and institutional barriers.

**OP-238**

**A Research on Project Maturity Perception At Techno-Entrepreneurship Firms**

*Doğuban Yıldız<sup>1</sup>, Hasan Boztoprak<sup>2</sup>, Yıldız Güzey<sup>2</sup>*

<sup>1</sup>*Institute of Social Sciences, Beykent University*

<sup>2</sup>*Faculty of Economics and Administrative Sciences, Beykent University*

The objective of study is measuring the project maturity levels of techno-entrepreneurship (start-ups) which was established toward technology development, and analyzing the relationship between project maturity levels and demographic features of firms. We used a scale developed by Holmes and Walsh in 2005 to measure project maturity levels. The scale is addressing the maturity levels based on scope, time, cost, quality, risk, human resource, communication and procurement management. The survey was conducted on the techno-entrepreneurship firms located in Turkey. We did correlation analysis on the data in SPSS. So we found relationships strikingly between difference of project maturity levels and difference of age and size of firms. Also the subfields in project execution display significantly interaction.

**OP-239**

**Innovative Perspective In Vocational and Technical Education**

*Recep Onur Uzun<sup>1</sup>, Süleyman Üstün<sup>2</sup>*

<sup>1</sup>*Department of Mechanical Technologies, Akbisar Vocational School, Celal Bayar University, Manisa, Turkey*

<sup>2</sup>*Department of Automotive Technologies, Akbisar Vocational School, Celal Bayar University, Manisa, Turkey*

Developments in the field of globalization and technology have transformed enterprises into institutions where competition is constantly and intensely experienced. The knowledge level of the firms operating in the dynamic market structure and the level of qualification in the innovation determines the competitive power constantly. Besides, in terms of maintaining its existence and achieving its objectives, enterprises should adopt the concept of innovation as a priority. The existence of innovation is not sufficient in terms of continuity of operation. At the same time, innovation must be continuous. For this reason, businesses should create the most efficient workforce, one of the production functions that they use to reach their goals. The continuity of innovation and the increase of competitive power of enterprises depend on the ability of innovative thinking provided to employees by vocational and technical education. Thus, enterprises seeking to pursue their existence together with their search for innovation can easily reach a continuously competitive position with qualified innovative workforce. For this purpose, vocational and technical education at universities with qualified labor force production mission should be applied from an innovative point of view. In this study, the structure, necessity, difficulties and advantages of innovation are discussed by talking about concepts like business, competition, innovation, and the innovative perspective that should be given to vocational and technical education given in universities has been examined.

**OP-240**

**The Economic Politics of Search Engines and Transformation of Knowledge**

*Sertaç Özdemir*

*Faculty of Communication and Media Studies, Eastern Mediterranean University, Famagusta, North Cyprus*

Internet is affecting a large part of our lives with the rapidly developing and changing new communication technologies. With the conveniences brought along the information age, our habitual actions have also been restructured such as consumption understanding and reading styles. Nowadays, where access to information is very fast and easy, information age has also brought certain negative influences. Transformation of knowledge became a topic of discussion with the rapidly flowing information. Additionally, we see search engines as a by-product of the developments in Internet technologies. Google, as the most well-known and major shareholder of the market, also hosts intellectual capital. This process extends from manipulated search results to an Internet visit shaped around the monopolization of technology market and political economy interests. Google does not only get to know us and it also follows us. In fact, Google also restructures some of our habitual actions. However, how much are we aware of this fact? This study will investigate how Google restructures our habitual actions through a political economy perspective within intellectual capital framework.

**OP-242**

**The Moderating Role of Personal Innovation Efforts on Job Satisfaction and Person-Organization Fit: A Study on Bandırma Municipality Employees**

*Selva Staub<sup>1</sup>, Yeliz Babayigit<sup>2</sup>, Esra Deniz<sup>2</sup>*

<sup>1</sup>*Bandırma Onyedi Eylül University, International Trade and Logistics, Bandırma, Turkey*

<sup>2</sup>*Bandırma Onyedi Eylül University, Bandırma, Turkey*

Globalization has immense influence on development and sustainability of businesses' existence. Businesses need to develop strategies to transfer all the opportunities they face in today's agile environment. The only way to accomplish this, is a well planned innovation strategy and processes. The purpose of this study is to look at individual innovation, whether or not it has a meaningful effect on person-organization fit and job satisfaction. When we look at the literature, there has been many studies on innovation management, person-organization fit and job satisfaction separately. However, these three variables have not been reviewed in the same study before. The study was conducted face-to-face surveys of 121 full-time employees working at different capacity at the Bandırma Municipality. As a result of this study, it has been determined that person-organization fit has a positive and meaningful effect on job satisfaction. However, when we looked at the sub- dimensions of individual innovation and their effect on person-organization fit and job satisfaction, it has variable results.

**OP-244**

**Detecting Bias in Media - a Data Mining Approach**

*Visar Shebu, Adrian Besimi, Nubi Besimi*

*Department of Contemporary Sciences and Technologies, South East European University, Tetovo, Macedonia*

It is clear nowadays that the role of journalists is increasingly changing, shifting towards new means of communication that utilizes the power of the internet. A major concern is the quality of published

media, often suffering from incorrect or plagiarised content as well as a bias towards a party, idea or a person. Unfortunately, for the general public as a consumer of such media, it is impossible to detect such issues and therefore often can be subjects of miss information or influences. In this paper, we propose an approach to quickly and correctly analyze textual information by using text mining techniques. Algorithms used in our approach show that the above anomalies can be detected. As a case study, we have analyzed published articles in online media in Macedonia during the three months before the general elections in the country. Furthermore, we propose methods to present such information to the general audience through visual clues that will make mined information easier to understand for them.

**OP-245**

**Overview of Self-Organizing Maps**

*Merve Arıtırık*

*Babçeşbir University, Faculty of Engineering and Natural Sciences, Software Engineering, Istanbul, Turkey*

In this study, the structure, working principle and applications of the self-organizing maps, which are the competitor models in the context of artificial neural networks, are explained in detail. Suggested algorithms for artificial neural networks and self-organizing maps (self-guiding maps) among architects have the “internal demonstration” which includes various characteristics of base entry signals and their properties. The details of the self-organizing maps have been investigated by examining the structures in network architectures and artificial neural networks. Future studies are planned considering the studies and work areas about the subject.

**OP-246**

**Computer Vision Technology on Food Science**

*Duygu Balpetek Kulcu<sup>1</sup>, Sercan Kulcu<sup>2</sup>*

*<sup>1</sup>Food Engineering Department, Faculty of Engineering, Giresun University, Giresun, Turkey.*

*<sup>2</sup>Department of Computer Technologies, Technical Science Vocational High School, Giresun University, Giresun, Turkey.*

Computer vision is a science that extracts useful information about an object from an observed image or image sequence automatically by analyzing in theoretical and algorithmic bases. Computer vision systems are increasingly used for detection of the surface defects, contamination, and quality inspection of the foods in food industry. Essentially, such systems take the place of human inspectors to assess the various quality characteristics of raw and ready-to-eat foods. Computer vision technology plays key role by giving rapid, precise, and consistent results as well as having relatively low cost. Today, computer vision systems are considered as an indispensable part of food processing units for real-time quality assessment and control. Effective techniques will be developed to process image stream data in real time to meet increased production amounts and comply with quality requirements. Robot-controlled and fully automated production will be key technology about quality assurance for competitive food producers. Also, Consumers will be able to check the quality of their products by themselves in the near future thanks to developing mobile hardware and software technologies.

**OP-247**

**Bolster Barrier (BOLER): Simulation Analysis of The Crash Impact**

*Bibie Sara Salleh, Asnizab Sabekbaini, Iskandar Zulkarnain Adamulbasza, Nur'izzab Sabirab Amiruddin, Nur Qasrina Amiruddin, Awangku Nazrul Haziq Awangku Abdul Rabim Polytechnic of Sultan Salabuddin Abdul Aziz Shah*

Guardrail is the most important road furniture to prevent vehicles from crashing to the shoulder of the road or into the opposite lane. It also protect the objects at the roadside and prevent vehicles from entering into dangerous areas such a ravine or river. Performance of guardrail is not only influenced its design, but also the design of the vehicle. Fundamental design of guardrails is aimed to reduce serious effects to vehicles and users in the event of an accident. One of the guardrail impact devices is Bolster Barrier (BOLER) that enhances the existing W-shape guardrails. It is intended to reduce the accident impact between road users and the guardrails themselves. Usually, the application of BOLER is focused at critical areas where it will reduce the numbers of serious injuries and fatalities in an accident. To test the performance of the BOLER, it was placed through an impact test known as dolly test at MIROS Lab, Provisional Crase Crash Centre (PC3) of Ayer Molek, Melaka. The test measured the dolly's velocity, w-beam guardrail bar's deformation and the overall force overtime trace. Results for Standard W-beam guardrail with BOLER recorded a lower peak force (47. 6kN versus 51. 5kN) and a delayed time to reach peak force by 11. 4 milliseconds as compared to guardrail without BOLER. This delay of 11. 4 milliseconds creates a safe zone for an airbag to fully inflate before the full impact between road users and the guardrails occurs.

**OP-248**

**Use of Social Media for the Analysis of Food Consumption**

*Duygu Balpetek Kulcu<sup>1</sup>, Sercan Kulcu<sup>2</sup>*

*<sup>1</sup>Food Engineering Department, Faculty of Engineering, Giresun University, Giresun, Turkey.*

*<sup>2</sup>Department of Computer Technologies, Technical Science Vocational High School, Giresun University, Giresun, Turkey.*

Nutrition has an important place in our lives and our eating habits reflect our culture and influence our health. The condition of consumed food has also been associated with food consumption habits and weight gain causes various diseases such as heart disease, diabetes, osteoarthritis, allergies, obesity, insomnia, and even cancer. Food consumption is one of the basic needs of people biologically. However, the real importance of nutrition is not only biological but also psychologically and socially important. Food consumption can be seen as a tool by which love and desire are expressed and transmitted. Nowadays, when people have a meal, they take a photo of the table before start to eat and then the photos or comments are shared with other people via social media. In recent years, due to the rapid development of the internet, social media has become a major communication platform where people from all ages and all cultures use for different reasons such as communicating, acquiring information, sharing their experiences or evaluating their free time. Social media is attracting the attention of researchers because of the large amount of personal and valuable information they contain, and software technologies are being developed to be able to analyze this large scale data. Using of social media in our lives has affected not only our social life, but also our consumption habits that are closely related to gender, age, education level and social level. This survey was conducted to examine how individuals use social media in food consumption and how they are affected.

**ISTANBUL UNIVERSITY  
2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY,  
INNOVATION AND ENTREPRENEURSHIP**

---

---

**POSTER PRESENTATIONS**

---

---

PP-01

**Effect of Milling on The Structural and Magnetic Properties of Some Nanocomposites**

*Amel Kibal, Bouguerra Bouzabata*

*Physics department, LM2S Laboratory, Badji Mokhtar Annaba University, Annaba, Algeria*

In recent years, elaboration of metal nanoparticles dispersed by oxide nanoparticles reveal a great interest due to their chemical and physical properties. When particles dimensions reach the nanometre level, interactions at phase interfaces become largely improved, which is important to ameliorate materials properties. In the present work, the synthesis of nanocomposites of hematite and (Chromium/Silicon) mixture powders have been made by using mechanochemical reactions induced by mechanical alloying. The as-milled powders were structurally and magnetically characterized by X-ray diffraction and magnetic measurements in dc magnetic fields at room temperature. The refinement of the X-ray diffraction patterns ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>/Cr) shows that the reduction of hematite by chromium is gradual with the formation of nanoparticles of  $\alpha$ -Fe. The final phases  $\alpha$ -Fe and Cr<sub>2</sub>O<sub>3</sub> are formed, with nanometric grain sizes ~20nm. The saturation magnetization (Ms) of Fe-Cr<sub>2</sub>O<sub>3</sub> nanocomposites jumps to 76Am<sup>2</sup>/kg. This value is in relationship with the change in the computed fraction of iron nanoparticles. In the milled mixture of (Fe<sub>2</sub>O<sub>3</sub>/Si), there is no change up to 5h of milling. After 15h,  $\alpha$ -Fe nanoparticles are formed in an amorphous SiO<sub>2</sub> phase. All phases have nanometric size. The magnetic measurements of Fe-SiO<sub>2</sub> nanocomposites show that the (Ms) reaches 70.6Am<sup>2</sup>/kg. The increase of Ms is expected since this parameter depends on the total mass of material embedded into silica matrix. The grain size effects, the reduction of the particle size toward the size region of single domain and matrix nature can explain the above structural and magnetic variations.

PP-02

**The Role of Iron/Zinc, Copper/Zinc Ratios and Oxidative Damage in The Pathogenesis of Preeclampsia**

*Birsen Aydemir<sup>1</sup>, Fatma Behice Cinemre<sup>1</sup>, Hakan Cinemre<sup>1</sup>, Nagihan Kartal<sup>1</sup>, Tevfik Gülyaşar<sup>2</sup>, Mustafa Yıldız<sup>2</sup>, Ali Rıza Kızılar<sup>3</sup>, Abdullah Tüten<sup>4</sup>, Nevin Yılmaz<sup>4</sup>*

*<sup>1</sup>Department of Biophysics, Department of Biochemistry, Department of Internal Medicine, Medical Faculty, Sakarya University, Sakarya, Turkey*

*<sup>2</sup>Department of Biophysics, Medical Faculty, Trakya University, Edirne, Turkey*

*<sup>3</sup>Department of Biophysics, Medical Faculty, Namık Kemal University, Tekirdag, Turkey*

*<sup>4</sup>Departments of Obstetrics and Gynecology, Cerrahpasa Medical Faculty, Istanbul University, Istanbul, Turkey*

Background: Preeclampsia (PE) is a complex disease and mechanisms underlying the disease are not yet known. It is well-known fact that oxidative stress and trace elements play role in the pathogenesis of various diseases. Some reports showed that ratios of trace elements together with levels of the trace elements are more sensitive indicator for following of disease activities.

Objective/Purpose: Our aim was to investigate roles of oxidative damage parameters as 8-hydroxy-2'-deoxyguanosine (8-OHdG) for DNA damage together with levels of copper, iron, zinc in serum, serum iron/zinc and copper/zinc ratios in preeclampsia. Materials-Methods: 91 pregnant women with PE and 98 healthy pregnant women were included in this study. 8-OHdG levels were measured by enzyme-linked immunoassay. Serum Fe, Cu and Zn were measured by atomic absorption spectrometry (AAS) and iron/zinc and copper/zinc ratios were calculated.

Results: Serum iron/zinc and copper/zinc ratios, serum copper, iron, plasma 8-OHdG concentrations were significantly increased in PE pregnant women (p<0.001). However, serum zinc levels were significantly decreased in PE group (p<0.001). In PE patients there was positive correlation between iron/zinc and copper/zinc ratios (r=0.460, p<0.01).

Discussion: Trace elements such as iron, zinc, copper are transition metals and involve in oxidation-reduction reactions producing some radicals. Our findings indicate that increased oxidative stress takes place in PE as a result or a reason.

Conclusion: Our results showed that together with oxidative stress, trace element ratios were involved in PE etiopathogenesis. Details of mechanisms underlying the disease should be clarified with further studies.

PP-03

**Development of a Direct Borohydride Fuel Cell (DBFC) Consisting of Novel Membrane Electrode Assemblies**

*Cem Gözülü<sup>1</sup>, Ramiz Gültekin Akay<sup>1</sup>, Cenk Çelik<sup>2</sup>, Ayşe Nilgün Akın<sup>1</sup>*

*<sup>1</sup>Kocaeli University Chemical Engineering Department*

*<sup>2</sup>Kocaeli University Mechanical Engineering Department*

Use of value-added boron compounds and wide applications related to these products is very important strategically for our country for the fact that Turkey has a high share in the world Boron Mineral reserves. From this perspective, development of Direct Borohydride Fuel Cell (DBFC) technology running with sodium borohydride (SBH) solution which is a product of Boron mineral is particularly an important subject. In this study, the main objective is to develop a novel Membrane-electrode assembly (MEA) which is the basic technological component of DBFC. PdCo (1:1) bimetallic alloys were prepared and investigated as both anode and cathode catalysts for the first time for DBFC in literature. Besides, for the first time these catalysts were used with new non-fluorinated, cheap hydrocarbon based membrane materials instead of conventional Nafion™ membranes. Carbon supported Pd<sub>50</sub>Co<sub>50</sub> nano particles have been prepared by a modified polyol process. The influences of the pH values of reaction solutions and the reaction temperatures on the particle size and uniformity of Pd<sub>50</sub>Co<sub>50</sub> nanoparticles and their activity for sodium borohydride electrooxidation were investigated by ICP-OES, XRD, TEM and Cyclic Voltammetry tests. Polyetherether ketone (PEEK) and polybenzimidazole (PBI) based blend and composite membranes were investigated. Membranes were produced by post sulfonating PEEK at various degree of sulfonations and blending with PBI to optimize the conductivity stability properties and then by solvent casting using dimethylacetamide (DMAC) solvent. The potential of SPEEK was investigated widely for PEMFC fuel cells but not investigated for DBFC systems. These developed cation exchange membranes (CEM) were optimized for borohydride crossover, high ionic conductivity and good mechanical/thermal/chemical stabilities. H-NMR, EIS, FTIR, SEM, TGA, DSC, DMA and chemical stability tests were utilized. The MEA's were fabricated using hot press and then final polarization curve evaluations were made in a single cell test system.

PP-04

**Transformation of Phases and Rheologic Behavior of a Mixture Kaolin- Aluminum Slag**

*Chargui Fouzia<sup>1</sup>, Hamidouche Mobamed<sup>2</sup>, Jorrand Yves<sup>3</sup>, Fantozzi Gilbert<sup>3</sup>*

<sup>1</sup>Unity of Search Emergent Materials, Ferhat ABBAS, Sétif 1 University, Algeria

<sup>2</sup>Institute of optics and precision mechanical, Ferhat Abbas-Sétif University 1, 19000 Sétif, Algeria

<sup>3</sup>University of Lyon, INSA-Lyon, Laboratory MATEIS CNRS-UMR 5510, 69621Villeurbanne, France

For the valuation of a kaolin of Algeria, Noted DD2, We enriched him with aluminum slag, Residue of the local industry.the objective of this study is to obtain a mullite for technical applications. The structural transformations of the mixture kaolin-aluminum slag during the thermal treatment were followed by using the differential thermal analysis (ATD) and the thermogravimétrique analysis (ATG). The identification of the formed phases was made by means of the diffraction of the X-rays (XRD) and the scanning electron microscope (SEM). From 1500°C, we noted that the mullitisation of the mixture kaolin-aluminum slag is complete. The mullite obtained have a bimodal morphology (primary and secondary). The primary mullite is formed at 990°C; is in the form of elongated crystals. While the secondary mullite, formed beyond 1400°C, is in the form of aciculaires grains of smaller size. To optimize barbotine to facilitate the casting of the mixture. A rheologic study was led, several technological parameters were investigated. We used barbotines with various concentrations of dry materials: 20%, 30%, and 40% (mass %), with and without the addition of a dispersant. The results obtained show that the viscosity increases with the increase of the quantity of dry material. The adding an amount of 1% (mass) of Darvan 7 led to a minimal viscosity for kaolin alone, While for the mixture (kaolin + aluminum slag) it reaches its minimum with a 1,5 mass % addition of Darvan 7 (DV7).

PP-05

**Recycling and Valorization of Aluminium Slag for Mullite Production From Algerian Kaolin**

*Chargui Fouzia<sup>1</sup>, Hamidouche Mobamed<sup>2</sup>*

<sup>1</sup>Unity of Search Emergent Materials, Ferhat ABBAS, Sétif 1 university, Algeria.

<sup>2</sup>Institute of optics and precision mechanical, Ferhat Abbas-Sétif University 1, 19000 Sétif, Algeria.

Mullite, whose chemical composition is found between 3Al<sub>2</sub>O<sub>3</sub>-2SiO<sub>2</sub> to 2Al<sub>2</sub>O<sub>3</sub> -SiO<sub>2</sub>, is one of the most studied and used ceramics. Its applications are very diverse and cover from refractory to advanced technological applications. In air and under atmospheric pressure, it is thermally and chemically stable from ambient up to melting temperature. It has very good thermo-mechanical properties, allowing it to be used as structural parts. Different precursors and various methods are used to synthesize mullite.The aim of the present work is the mullitization of Algerian kaolin by adding aluminium dross.a shade of kaolin used is natural, extracted from Djebel Debbagh near Guelma ( Algeria), noted DD1. The used aluminium slag, are provided by the firm ALGAL (ALGERIA). Stoichiometric mixtures were fired between 1000°C and 1500°C for 2 hours. The amount of mullite formed increases with the firing temperature. At 1500°C, the mullitisation of the mixture is complete. The morphology of the formed mullite is bimodal (primary (3:2) and secondary (2:1)). The secondary mullite is formed at a temperature below 1300°C.The formation of the secondary mullite is accompanied by a decrease of the glassy phase owed probably to a reaction between the phases rich in Al<sub>2</sub>O<sub>3</sub> and the present metallic oxides in the viscous phase rich in SiO<sub>2</sub>, causing to the formation of a transient liquid, from which would precipitate the mullite.

PP-06

**Implementation of process mining algorithms**

*Çiğdem Bakır  
Yıldız Technical University, Istanbul, Turkey*

Widespread use of information technologies in recent years of our era is leading some problems like analyzing huge amounts of process data in big entities. Such problems have necessitated a research field focused on process. Process mining is a new scientific discipline which became popular in recent years, analyzing, modeling processes working in cooperation with data mining. Process mining includes discovery of processes, analyzing them, modeling and improvement studies and thus enables efficient and effective use of process data in this way. It became essential for big companies to employ process mining techniques in competitive business environment. It focuses on the analysis, discovery, management and improvement of the business processes. Process mining uses the event logs as a source and works on this source. As such the event logs consisting of each step in the process model is analyses and developed. Several different algorithm approaches are being used in process mining. These algorithms are Alpha, Heuristic and Genetic Algorithms. In this study, are explained by used frequently Alpha, Heuristic and Genetic process mining algorithms. In the future, process discovery will be performed by using algorithms employed in this field with synthetic and real data. Furthermore, performances of algorithms will be compared by employing likelihood function, accuracy rate and time criteria.

PP-07

**Ensemble Learning Methods with the Neighborhood Feature Extraction Method**

*Çiğdem Bakır  
Yıldız Technical University, Istanbul, Turkey*

In this study feature extraction methods such as PCA, LDA were applied to ECG signals and success of such dimension reduction techniques for the classification and segmentation of ECG signals were discussed. As classification method, such as bagging, boosting and random subspace, ensemble methods have been chosen. Also, segmentation of data through neighbourhood feature extraction (NFE) method were enabled by transiting from high dimensioned space to low dimension space by considering the longitudinal combination of ECG signals. Results of NFE dimension reduction technique performed by considering the neighbour ECG instances, advantage of effect on segmentation of ECG signals were presented at empirical results section and the success of suggested method was indicated. Results obtained by performed study are promising for the studies to be conducted in further period.

PP-08

**Prospecting Innovative Enzymes via Data Mining**

*Elif Coşkun Dağgeçen<sup>1</sup>, Unzile Güven Gülhan<sup>2</sup>  
<sup>1</sup>Agricultural Biotechnology Department, Kabramanmaras Sutcu Imam University, Kabramanmaras, TURKEY  
<sup>2</sup>Chemistry Department, Gebze Technical University, Kocaeli, TURKEY*

Enzymes are natural catalysts. They are produced by organisms to increase the rate of an chemical reactions required for life. They have too important and essential processes such as DNA replication and transcription, protein synthesis, metabolism and signal transduction, etc. They can perform very specific chemical transformations which are highly useful in industrial processes such as food manufacturing, detergents, textile, pulp and paper, biofuels industries. Moreover they

are biocatalysts in biotechnology. Generally enzymes can be obtained from microorganisms in the biosphere. These microorganisms have a large number of enzymes with novel functionalities. Because they has not been discovered yet. Meta data is created by sequencing of genetic materials of microorganisms recovered directly from environmental samples. Metagenomics makes possible us to discover new enzymes from microorganisms and their communities without cultivation needs. This huge metagenomic data provides a great opportunity to discover innovative enzymes from existing microbiota, by data mining using sequence homology based approaches. In data mining approach, function of an enzyme can be predicted from its sequence using either sequence-similarity or sequence-motifs. By accessing different locations such as volcanic vents, deep oceans beds, arctic tundra, etc, this method could help people to find more than a million previously unknown genes coding for novel enzymes. Numerous studies by metagenome screening have yielded enzymes with potential for biocatalytic applications, such as nitrilase, lipase,  $\beta$ -lactamase, protease and many others. On the other hands, bioinformatics is an important approach in helping to understand this complex data with combining computer science, statistics, engineering and molecular biology to study and process the big biological data. Eventually extraction of hidden predictive information from large databases is a milestone for new entries of innovative enzymes.

PP-09

#### Innovations in the Biodiesel Production

*Emine Emel Çakırca, Ayşe Nilgün Akın*  
Chemical Engineering Department, Kocaeli University, Kocaeli, Turkey

In recent years, demand on energy from alternative fuels are growing rapidly due to depletion of fossil fuels and global warming crises. Biodiesel instead of conventional petroleum diesel, is a non toxic, biodegradable and renewable fuels. Therefore, biodiesel can be considered as a promising liquid fuel for transport sector. Among the routes of biodiesel synthesis, the most commonly used are transesterification of oil feedstocks and esterification of free fatty acids, in which these are carried forward in the presence of a catalyst. In transesterification process, a large majority of feedstocks come from vegetable/edible oil, as the first generation biodiesel feedstocks, in many regions of the world. The use of edible oils is not convenient in production of biodiesel due to insufficient amount of edible oil feedstocks and demand for food materials in the world. When it is thought that over 70% of price of biodiesel includes cost of feedstocks, use of cheaper and more sustainable resources have become inevitable. Waste cooking oil and algae oil, which have not been used as food sources, are termed as second generation feedstocks and seem more attractive and promising for biodiesel production. In addition to raw material source, the type of alcohol and catalyst also affects to price and quality of biodiesel. Since biodiesel is a process includes sustainable technology, all inputs are investigated in terms of usability, sustainability and eco-friendly. The aim of this study to give an overview on the biodiesel production in that select of the most effective and available feedstocks and summarize the recent development and innovation in the production process.

PP-10

#### Contribution to The Study of The State of Contamination of The Coastal Waters of Skikda (Northeast Algeria) By Gastropods

*Gueddab Doria<sup>1</sup>, Boutaf Sana<sup>1</sup>, Boulesnane Maroua<sup>1</sup>,  
Djebar Abdallah Borbane<sup>2</sup>*  
<sup>1</sup>Department of Biology- Faculty of Sciences -University 20 Aout 1955-Skikda/Algeria  
<sup>2</sup>Laboratory of Ecobiology of Marine and Coastal Environments / Department of Marine Sciences/Faculty of Science / Badji Mokhtar University - Annaba/ Algeria

The coastline of Skikda has considerable biological potential. Unfortunately, this area is still not receiving the attention it deserves either in terms of management or protection. Several studies have been carried out for the coastal area of Skikda in order to establish a diagnosis of the state of the physical compartments (surface waters and sediments). On the other hand, there are very few studies of impacts on biological compartment.

In order to remedy this problem, we were interested in evaluating the impact of metallic pollution on gastropod mollusks by analyzing and structured stands of *Patellidae* that indicate and reflect environmental conditions not only at the time of But also from the time when these species settled in the environment.

The analysis of 9 MTE levels in water and in the *Patellidae* pulpit allowed us to establish a preliminary diagnosis of the health status of the coastal ecosystem of Skikda.

The study on the composition of the *Patellidae* in the Mediterranean stage during the period of our study allowed us to know the specific diversity of these prosobranch gastropods as well as the effect of metallic pollution on their distribution.

The inventory of limpets reveals the existence of 6 species belonging to the genus *Patella*: *P. caerulea*, *P. rustica*, *P. vulgata*, *P. ulyssiponensis*, *P. intermedia* and finally *P. ferruginea* which is endangered in the Mediterranean.

PP-11

#### Importance of Patent Development in Nursing

*Gülşün Özdemir Aydın<sup>1</sup>, Nurten Kaya<sup>2</sup>, Nuray Turan<sup>1</sup>*  
<sup>1</sup>Department of Fundamentals of Nursing, Istanbul University, Florence Nightingale Nursing Faculty, Turkey  
<sup>2</sup>Department of Midwifery, Istanbul University, Health Sciences Faculty, Turkey

Aim: The purpose of this review is to explain importance of patent development in nursing and patent examples along with the relevant literature in Turkey. Results Patent is monopoly right granted to the owner by preventing the unauthorized production, usage or sale of the invention by third parties for limited space and time. Patent can be obtained as a result producing idea with technical specifications for the solutions new invention/problem. In this context, to be able to obtain a patent, the relevant idea should have technical specification, contain innovation, be applicable to the industry and include an inventive step. The patent of idea is obtained by applying to national/international institutions. In our country, patent is obtained by applying to Turkish Patent Institute. In Turkey the first patented product in nursing is Stomakit, which is a stoma care apparatus developed by nurse Özlem Oktay. Another one is patient washing sheet developed by the intensive care nurse Esmâ Şen. About these products, it is seen that both products have brought innovation to nursing care, have concrete technical specifications and applicable. The fact that nurses have inventions that will facilitate their professional practice or meet a requirement will make nursing stronger and will be the greatest indication that nursing produces and uses its own information. In Turkey, the health sector is gradually growing, the importance is attached to innovation and R&D investments and relevant associations and organizations are established in increasing the quality of nursing services. Conclusion: The need to bring creativity, which is inherent in nursing profession that has developed since Florence Nightingale, the founder of modern nursing, in a tangible and concrete form is increasing. The adaptation of nursing to the changing and developing world will increase the quality of patient care and make significant contributions to the economy of the country. In this adaptation, nurses develop ideas and products will facilitate their implementation and obtain their patents play important role.

PP-12

**Phytochemical Characterization and Pharmacological Activities of Argania Spinosa (L.) Skeels Seed Oil**

*Hadjira Dakiche<sup>1</sup>, Mustapha Kbal<sup>2</sup>, Houcine Boutoumi<sup>2</sup>*

<sup>1</sup>Centre de Recherche Scientifique et Technique en Analyses Physico-chimiques, BP384 Zone Industrielle Bou-Ismaïl RP42004 Tipaza, Algeria

<sup>2</sup>Laboratoire de Protection et de Valorisation des Ressources Agro-Biologiques, Faculté de Sciences de la Nature et de Vie, Université Saâd Dahlab Blida, BP 270, Route de Soumaâ, Blida 09000, Algeria

The extracted oil of Argania spinosa (L.) was investigated in regard to its fatty acid composition and polyphenols by Gas Chromatography-Mass Spectrometry (GC-MS) and Ultra-high Performance Liquid Chromatography-Electro Spray Ionization-Quadruple Time Of Flight-Mass Spectrometry (UPLC-ESI-QTOF-MS), respectively. The reduction rate of topical inflammation of extracted oil was calculated using a mouse model. The skin toxicity of argan oil on intact and damaged skin was assessed using a rabbit model. The findings revealed a rich content of monounsaturated and polyunsaturated fatty acids and presence of phenolic acids. The oil exhibited a reduction of inflammation and facilitated a healing process without any irritation. The experimental study revealed that A. spinosa seed oil displays remarkable wound-healing and anti-inflammatory activities related to its chemical composition. Argan oil has positive potential for skin medicinal application.

PP-13

**Biological Activities and Phenolic Contents of Argania Spinosa L (Sapotaceae) Leaf Extract**

*Hadjira Dakiche<sup>1,2</sup>, Mustapha Kbal<sup>1</sup>, Ahmed Khaled Abu El Haija<sup>3</sup>, Ammar Almaaytib<sup>3</sup>, Qosay Ali Al Balas<sup>3</sup>*

<sup>1</sup>Laboratoire de Protection et de Valorisation des Ressources Agro-Biologiques, Faculté de Sciences de la Nature et de Vie, Université Saâd Dahlab Blida, BP 270, Route de Soumaâ, Blida 09000, Algeria

<sup>2</sup>Centre de Recherche Scientifique et Technique en Analyses Physico-chimiques, BP 248, Alger RP, 16004 Alger, Algeria,

<sup>3</sup>Faculty of Pharmacy, Jordan University of Science and Technology, PO Box 3030, Irbid 22110, Jordan

Purpose: To investigate the phenolic profile and biological activities of Argania spinosa L. leaves.

Methods: The crude methanol extract of leaves of A. spinosa L. Skeels was obtained by ultrasonic extraction, and the total polyphenolic and flavonoid contents were determined by ultra-high performance liquid chromatography-electrospray ionization-quadrupole time-of-flight-mass spectrometry (UPLC-ESI/QTOF-MS). In vitro antioxidant activity was determined by 2,2-di-phenyl-1-picrylhydrazil (DPPH) radical assay and Cytotoxic activity was evaluated by methyl-thiazolyldiphenyl-tetrazolium bromide (MTT) assay.

Results: The results revealed abundant polyphenols and flavonoids (221.39 ± 5.70 µg GAEq/1 g and 66.86 ± 3.36 µg CAEq/1 g, respectively) in the leaf extract. UPLC-DAD-ESI-QTOF-MS profiling showed the presence of myrecitin-3-galactoside, myrecitin-3-glucoside, myrecitin-3-xyloside, quercetin-3 galactoside, quercetin-3-glucoside, quercetin-3-arabinofuranoside, and quercetin-3-rhamnoside. DPPH assay of the leaf extract yielded a half-maximal effective concentration (EC50) value of 125.60 ± 1.87 µg. Cytotoxicity data showed that the extract inhibited the proliferation of PC3 cells (IC50 ~ 600 µg).

Conclusion: A. spinosa L. leaf extract is rich in valuable biologically active compounds and could represent a new resource for natural and preventive therapies.

PP-14

**A WiFi Based Restaurant Order Automation**

*Kerem İzzet Atam, Tansal Güçlüoğlu*

Electrical & Electronics Engineering, Yıldız Technical University, Istanbul, Turkey

In traditional way of meal ordering process at a restaurant, firstly customers browse through the restaurant menu and then they wait for a waiter to come and take their orders. This procedure can be slow and decrease customer satisfaction during busy hours. Moreover, it is prone to human made mistakes. Automated systems can be used to optimize procedures by means of minimizing human made mistakes, decreasing waste of paper and thus making ordering procedures more time and cost efficient. There have been numerous attempts to automate ordering process in restaurants in recent years. For example, having a tablet PC on each restaurant table is one of the most popular solutions in the market while it is not cost effective since it requires many tablets. In this paper, we have designed and implemented an automation solution which benefits from WiFi's captive portal feature on mobile device of restaurant customers. In the proposed system, customers just need to connect restaurant's open WiFi from their table without waiting for a waiter to come and take their orders. Once their connection succeeds, customers will be directly forwarded to the web page on cloud server where they can browse through a menu and submit their orders without installing any application or any change in their mobile device. Each customer is identified by their WiFi card's MAC address which is reported to cloud server by lightweight software that runs on WiFi access point (AP) together with their received signal strength (RSSI) level and restaurant identification code. System is designed to scale easily to multiple restaurants placing configured WiFi AP on each restaurant using same cloud server. Our proposed system provides an easy to use solution for restaurant customers and a cost effective solution for restaurant owners as they can utilize their human resources more efficiently.

PP-15

**Operators of Text Extraction From Sequences Videos**

*Laboauoui Lalaoui*

Faculty Technology/ Department of Electronics/ Laboratory the LGE University Mobamed boudiaf M'sila Icbilia, 28000, Algeria

Video indexing is an important problem that has interested by the communities of visual information in image processing. The detection and extraction of scene and caption text from unconstrained, general purpose video is an important research problem in the context of content-based retrieval and summarization. In this paper, the technique presented is for detection text from frames video. Finding the textual contents in images is a challenging and promising research area in information technology. Consequently, text detection and recognition in multimedia had become one of the most important fields in computer vision due to its valuable uses in a variety of recent technical applications. The work in this paper consists using morphological operations for extract text appearing in the video frames. The proposed scheme well as preprocessing to differentiate among where it as the high similarity between text and background information. Experimental results show that the resultant image is the image with only text. The evaluated criteria are applied with the image result and each one obtained bay different operator.

PP-16

**Distribution of Selenoprotein W1 (rs3786777) Genotypes in Turkish Preeclamptic Women**

Elif Erdoğan<sup>1</sup>, Fatma Behice Cinemre<sup>1</sup>, Leyla Sevinç<sup>1</sup>, Hakan Cinemre<sup>1</sup>, Ali Rıza Kızıler<sup>2</sup>, Abdullab Tüten<sup>3</sup>, Barış Kaya<sup>4</sup>, Birsen Aydemir<sup>4</sup>

<sup>1</sup>Department of Biophysics, Department of Biochemistry, Department of Internal Medicine, Medical Faculty, Sakarya University, Sakarya, Turkey

<sup>2</sup>Department of Biophysics, Medical Faculty, Namık Kemal University, Tekirdağ, Turkey,

<sup>3</sup>Department of Obstetrics and Gynecology, Cerrahpaşa Medical Faculty, Istanbul University, Istanbul, Turkey

<sup>4</sup>Department of Obstetrics and Gynecology, Faculty of Medicine, Near East University, Lefkoşa-TRNC, Mersin 10 Turkey

Background: Preeclampsia is characterized by hypertension, proteinuria and edema during pregnancy, It causes, intrauterine growth retardation, premature birth, fetal and maternal mortality. The selenium takes place in the structure of selenoproteins which are mostly showing oxidoreductase activity in human. Some studies were reported that selenoproteins W (SeW) was associated with fetal development. SeW expression level in the fetal muscle and heart tissue depends on fetal selenium levels. SeW function is not completely elucidated yet. Objective/Purpose: The purpose of this study was to determine whether common variation in selenoprotein W1 (SeW1) alters the risk of preeclampsia (PE).

Materials and Methods: 82 pregnant women with PE and 85 healthy pregnant women from the same geographic region were included in the study. Allele-specific Polymerase Chain Reaction (ASPCR) analysis was used to identify polymorphism of the SeW1 gene (rs3786777). Results: The frequencies of the CC, CA and AA genotypes were found as 23 %, 67 % and 10 % in pregnant women with PE and 27 %, 57 % and 16 % in healthy pregnant women, respectively. Our results indicated that the distribution of the SeW1 genotypes and alleles did not differ significantly among subjects with or without GDM (p>0.05). Discussion: In some study SeW is associated with fetal development, so we thought that its gene distribution may be involved in the occurrence of preeclampsia or its complication. SeW polymorphism did not alter the risk of PE in our population. However, clarification by further studies in larger populations is needed. Conclusions: SeW1 (rs3786777) polymorphism has no role in etiopathogenesis of preeclamptic Turkish women.

PP-17

**Antibacterial Activity of Different Honeys From Northwestern Regions of Algeria Against Pathogenic Strains**

Mehdi Yamina<sup>1</sup>, Nacer Amina<sup>2</sup>, Mebrek Saâd<sup>3</sup>,

Belaoui Hadj Ahmed<sup>4</sup>, Mekiou Zobra<sup>5</sup>, Labied Radia<sup>2</sup>

<sup>1</sup>Biotoxicology Laboratory, Sidi Bel-Abbes University, Algeria; Scientific and Technical Research Center in Physicochemical Analysis, Tipaza, Algeria

<sup>2</sup>Scientific and Technical Research Center in Physicochemical Analysis, Tipaza, Algeria

<sup>3</sup>Biotoxicology Laboratory, Sidi Bel-Abbes University, Algeria

<sup>4</sup>Microbiology Laboratory, Alger, University, Algeria

<sup>5</sup>Food Technology Laboratory, Sidi Bel-Abbes University, Algeria

Several studies in vitro have demonstrated that honey has been shown convincingly a potent antibacterial activity effective against a very broad spectrum of species. Our study is performed on nine honey samples collected from different regions of western Algeria. To determine in vitro their antibacterial power against six pathogen bacteria. Several experimental techniques in liquid or solid medium were used: agar diffusion assay and micro-method in liquid medium. The first step is to screen or select honeys with a potential antibacterial effect in comparison with 14 different antibiotics which are used as a positive control in the experiment. This is a qualitative preliminary study. A second step consists in calculating quantitatively the degree

of antibacterial activity of the selected honeys by determining the Minimum Inhibitory Concentration (MIC) and the Minimum Bactericidal Concentration (CMB). The results showed that all studied honeys reveal considerable antibacterial effect with high 100% concentration of honey; They have an inhibitory effect on the growth of pathogenic bacteria Gram+ (Bacillus cereus, Staphylococcus hominis), which are more sensitive as Gram- (Escherichia coli and Proteus mirabilis). However, Pseudomonas Aeruginosa and Enterobacter cloacae. Show a resistance to various kinds of honey tested but they are inhibited or eliminated at high concentrations (> 40%). These results open an interesting perspective in the clinical area and suggest the potential use of honey as a health food in food technology.

PP-18

**Optimization of Biosurfactants Production By Pseudomonas Aeruginosa S7ps5**

Mohammed El Amine Bendaba<sup>1</sup>, Boumedién Meddab<sup>2</sup>,

Hadj Ahmed Belaoui<sup>3</sup>, Aicha Tirtouil<sup>3</sup>

<sup>1</sup>Laboratoire de biologie moléculaire, Génomique et bioinformatique (LBMGB), Hassiba Benbouali university, Chlef, Algeria

<sup>2</sup>Laboratoire de Bioconversion, Génie Microbiologique et Sécurité Sanitaire (LBMSS), Mustapha Stambouli University, Mascara, Algeria

<sup>3</sup>Laboratoire de Biologie des Systèmes Microbiens (LBSM), ENS Kouba, Algiers, Algeria

Thirty bacterial strains were isolated from soils contaminated with hydrocarbons in the north west of Algeria, and tested for biosurfactants production in a nutrient broth supplemented with olive oil using drop collapsing, oil displacement, emulsification activity (E24) and surface activity measurements; S1PS2, S7PS5 and S9PS2 strains were the best three producers and were selected to optimize the production (S1PS2: E24 = 56,320 ± 1,955 %, Ø = 5,733 ± 0,355 cm and %Reduction = 30,17 ± 0,12, S7PS5: E24 = 43,38 ± 0,07 %, Ø = 8,3 ± 0,10 cm and %Reduction = 31,23 ± 0,01, S9PS2: E24 = 44,27 ± 0,26 %, Ø = 8,66 ± 0,05 cm and %Reduction = 32,00 ± 0,13). After optimization, S7PS5 shows the optimal of rhamnolipids production with the following composition: 100 ml of nutrient broth, 1 % of olive oil and 1 % of inoculums, with shaking at 75 rpm/min at room temperature, for an incubation period of 22 h, and it was selected for an identification using API 20NE system and 16S rDNA sequencing which allowed the link S7PS5 to the genus Pseudomonas and showed percentages of 98.84 % of similarity with Pseudomonas aeruginosa LMG 1242T/Z76651 as the closest specie.

PP-19

**Cadmium and Zinc Ions Removal From Contaminated Soils With Rhamnolipid Biosurfactant**

Mohammed El Amine Bendaba<sup>1</sup>, Boumedién Meddab<sup>2</sup>,

Hadj Ahmed Belaoui<sup>3</sup>, Meriam Mokhtar<sup>4</sup>, Aicha Tirtouil<sup>3</sup>

<sup>1</sup>Laboratoire de biologie moléculaire, Génomique et bioinformatique (LBMGB), Hassiba Benbouali university, Chlef, Algeria

<sup>2</sup>Laboratoire de Bioconversion, Génie Microbiologique et Sécurité Sanitaire (LBMSS), Mustapha Stambouli University, Mascara, Algeria

<sup>3</sup>Laboratoire de Biologie des Systèmes Microbiens (LBSM), ENS Kouba, Algiers, Algeria

<sup>4</sup>Laboratory of Beneficial Microorganisms, Functional Food and Health (LMBAFS), University of Abdelhamid Ibn Badis, Mostaganem, Algeria

A soil treatment process using froth flotation technique involving anionic biosurfactant (rhamnolipids) extraction of zinc using Sodium sulfide (Na<sub>2</sub>S) was studied. The supernatant produced by the strain Pseudomonas aeruginosa S7PS5 was tested for biosurfactants production (drop collapsing, oil displacement, emulsification activity

and surface tension measurement), HPLC analysis showed the presence of L-rhamnosyl- $\beta$ -hydroxydecanoate (RL1) and L-rhamnosyl L-rhamnosyl- $\beta$ -hydroxydecanoate (RL2). The influence of the collector (rhamnolipid), pulp pH, a chemical activation step (sulfidization) and process time on metal removal efficiency has been investigated to recover zinc and cadmium ions from a contaminated soil after a crushing of the particle-size fractions > 250  $\mu\text{m}$ . The rhamnolipids produced by *P. aeruginosa* S7PS5 had the ability to decrease the surface tension of water from 72 to 40.06 mN/m, with an effective critical micelle concentration (CMC) of 35 mg/L. The investigations showed that a great proportion of Zn (CF = 9.29) and Cd (CF = 21.2) was recovered in the froth at pH = 12. At the sulfidization-flotation stage, the best CF of Zn was obtained using 4 mg/g of Na<sub>2</sub>S but the CF of Cd does not show a significant difference in Na<sub>2</sub>S presence. A perfect Zn and Cd removal efficiency was made during the first 5 min of soil washing process, then a longer flotation time (> 5 min) caused mechanical entrainment of Zn and Cd.

PP-20

**Novel Magnetically Modified Adsorbent Synthesis for Cleaning of Wastewater of Dye Industries**

*Nesrin Odabas<sup>1</sup>, Ismail Inci<sup>1</sup>, Şabika Sena Bayazit<sup>2</sup>*

<sup>1</sup>Istanbul University

<sup>2</sup>Beykent University

This work investigates the adsorption of Malachite green from wastewater of dye industries using a novel magnetic adsorbent. Magnetically modified alginate/activated carbon beads composite has been used as novel magnetic adsorbent. The magnetic activated carbon was prepared by co-precipitation method, then magnetic alginate/activated carbon beads composite was prepared and the characterization analysis of composite were performed. Then the adsorption studies were carried out. Adsorption equilibrium of Malachite green on magnetic alginate/activated carbon beads composite has investigated experimentally and theoretically. In experimental section, magnetic alginate/activated carbon beads composite has used as a new adsorbent material for wastewater treatment. Adsorption studies were made with various concentrations of Malachite green in water. The equilibrium time needed have been determined as 90 minutes. Initial concentrations of Malachite green are selected between 4-50 mg/L. Also, amount of magnetic alginate/activated carbon beads composite on adsorption efficiency have been investigated. Langmuir and Freundlich adsorption isotherms have been plotted using experimental results and later the constants of these isotherms have been calculated. Freundlich isotherm found to best represent the data for Malachite green with value of R square 0.9979.

PP-21

**Preparation and Electrical Sensing Properties of Teos Thin Film Humidity Sensors Deposited By PECVD**

*Noubeil Guermat<sup>1</sup>, Ouarda Daranfeg<sup>2</sup>*

<sup>1</sup>Laboratoire d'Analyse des Signaux et Systèmes (LASS), Département d'Electronique, Faculté de Technologie, Université Mohamed Boudiaf de M'sila, BP166, Route Ichebilia, M'sila 28000 Algérie

<sup>2</sup>Département de Physique, Faculté des Science Exactes Université de Constantine 1, 25000, Algérie

This paper reports the study of electrical properties of plasma polymerization of tetraethoxysilane (pp-TEOS) thin film based sensors. Thin water molecule sensitive layers were deposited from hexaméthylsiloxane precursor on tow-interdigitated electrode at low frequency power (19 KHz) plasma conditions. The sensor was calibrated in terms of impedance as a function of relative humidity, using a Frequency Response Analyzer. The electrical properties of the

sensor are measured. The deposited film sensor exhibited a accepted sensitivity (impedance change from 106 to 104  $\Omega$  in the humidity range of 30–95% RH), fast response (8 and 68 s for adsorption and desorption between 35% RH and 95% RH, respectively), and the current intensity increased from 10-10 to 10-6 A in the explored range of RH (25-95% RH). The change in the current of pp-TEOSO with respect to increasing and decreasing RH (hysteresis) of no more than 5% has been observed. Structural analysis of the sensitive layer was carried out by Fourier Transform Infrared spectroscopy (FTIR). The films showed good sensitivity to water molecule due to the presence of hydroxyl groups OH. These groupments provide the adsorption sites for water and play an important role in the humidity sensor properties, make the elaborated layer a promising candidate for humidity sensors developement.

PP-22

**Humidity Sensing Properties of A Thin-Film Hexamethylsiloxane Prepared by PECVD Method**

*Noubeil Guermat<sup>1</sup>, Ouarda Daranfeg<sup>2</sup>*

<sup>1</sup>Laboratoire d'Analyse des Signaux et Systèmes (LASS), Département d'Electronique, Faculté de Technologie, Université Mohamed Boudiaf de M'sila, BP166, Route Ichebilia, M'sila 28000 Algérie

<sup>2</sup>Département de Physique, Faculté des Science Exactes Université de Constantine 1

This paper reports the study of electrical properties of plasma polymerization of hexaméthylsiloxane (pp-HMDSO) thin film based sensors. Thin water molecule sensitive layers were deposited from hexaméthylsiloxane precursor on tow-interdigitated electrode at low frequency power (19 KHz) plasma conditions. The sensor was calibrated in terms of impedance as a function of relative humidity, using a Frequency Response Analyzer. The electrical properties of the sensor are measured. The deposited film sensor exhibited a accepted sensitivity (impedance change from 106 to 104  $\Omega$  in the humidity range of 30–95% RH), fast response (8 and 34 s for adsorption and desorption between 35% RH and 95% RH, respectively), and the current intensity increased from 10-10 to 10-6 A in the explored range of RH (25-95% RH). The change in the current of pp-HMDSO with respect to increasing and decreasing RH (hysteresis) of no more than 3% has been observed. Structural analysis of the sensitive layer was carried out by Fourier Transform Infrared spectroscopy (FTIR). The films showed good sensitivity to water molecule due to the presence of hydroxyl groups OH. These groupments provide the adsorption sites for water and play an important role in the humidity sensor properties, make the HMDSO films showed promising characteristics for humidity sensor development.

PP-23

**Effects of Surface Functionalized Partially Reduced Graphene Oxide and Different Compatibilizers on The Properties and Structure of PP/EPR Nanocomposites**

*Rachida Doufnoune<sup>1</sup>, Zabir Guezout<sup>1</sup>, Nacerddine Haddaoui<sup>2</sup>*

<sup>1</sup>Unité de Recherches sur les Matériaux Émergents – Sétif-URMES, Equipe de Valorisation des Polymères, Université Ferhat ABBAS Sétif-1, Algérie.

<sup>2</sup>Laboratoire de Physico-Chimie des Hauts Polymères (LPCHP), Département de Génie des Procédés, Faculté de Technologie, Université Ferhat ABBAS Sétif-1, Algérie.

Nanocomposites with different amounts of functionalized partially reduced graphene oxide (prGO) were prepared. The nanocomposites were also compatibilized with EPR containing diethyl maleate (DEM), glycidyl methacrylate (GMA) and maleic anhydride (MAH) functionality as a means of controlling ultimately their mechanical behaviour and their structural morphology. Mechanical tests show that the addition of pristine prGO to PP/EPR blend promotes tensile strength and Young's modulus while reducing elongation at break

and impact strength. A significant improvement of these properties was achieved in the presence of functionalized prGO and EPR-g-DEM. TGA analysis showed that the nanocomposites exhibit a higher thermal stability than that of the matrix alone. XRD analysis revealed that the polymer chains have successfully intercalated into prGO layers. SEM has been used to verify the dispersion of the prGO particles in the matrix and to reveal the developed morphology of PP/EPR, in the presence of compatibilizers and functionalized prGO.

PP-24

**Enhancement of Hexavalent Chromium Removal By An Activated Carbon Developed From Ziziphus Jujuba Cores, A Comparative Study Between A Linear and A Non Linear Method**

*Radia Labied<sup>1,2</sup>, Oumessad Benturk<sup>2</sup>, Eddb'ya Eddine Hamitouche<sup>1</sup>, Yamina Mebdi<sup>1</sup>, Yamina Mebdi<sup>3</sup>*

<sup>1</sup>Centre of Scientific and Technical Research on Physico chemical analysis, CRAPC, Bou Ismail, Algeria

<sup>2</sup>USTHB Bp 32 El-alias, Faculty of Chemistry, Laboratory of Physico-Chemical Study of materials and application to environment, Bab Ezzouar, 16111, Algiers, Algeria

<sup>3</sup>Laboratory of biotoxicology, Sidi Bel Abbes, Algeria

Activated carbon « ZRC » is developed from a waste cores biomass Ziziphus jujuba and tested for his ability to remove hexavalent chromium (Cr (VI)) from aqueous solutions. The physicochemical properties of ZRC were characterized by N2 adsorption /desorption, Fourier transform infrared spectrometer (FTIR) and pHpzc, this activated carbon exhibit a height value of BET surface area (608.31 m2 /g) and total pore volume of (0.3388 cm 3/g), besides, the results of FTIR showed that ZRC contained much surface oxygen containing functional groups, Effect of contact time, solution pH, adsorbent dosage and temperature showed strong dependence on solution pH, the adsorbent dosage and temperature have a maximal effect on Cr (VI) removal. The adsorption study was carried out according to a comparison between two methods, the linear method and the non linear one. The adsorption kinetics was best represented by the pseudo second order kinetics model for the two methods, the equilibrium adsorption data for Cr (VI) adsorption onto the carbon agreed well with the Langmuir model. The maximum adsorption capacity derived from Langmuir model was 250 mg /g for the linear method whereas 196.38 mg/g is noted for the non linear one. but the non linear method is the best way for the adsorption study than the linear one, because it predict all experimental data while the linear method take just a linear part of this last. According to this result ZRC is promising adsorbent for the removal of Cr (VI) from wastewater.

PP-25

**Use of Artificial Intelligence for Prediction of Antibiotic Resistance By Data With Specific Gene Markers and Sequence**

*Ragıp Soner Silme<sup>1</sup>, Ömür Baysal<sup>2</sup>, Said Nadeem<sup>3</sup>*

<sup>1</sup>Istanbul University, Scientific Research Projects, Beyazıt Main Campus, Istanbul, Turkey

<sup>2</sup>Mugla Sıtkı Kocman University, Faculty of Science, Department of Molecular Biology and Genetics, Mugla, Turkey

<sup>3</sup>Mugla Sıtkı Kocman University, Faculty of Science, Department of Chemistry, Mugla, Turkey

Antibiotics have always been considered as one of the wonder discoveries of the 20th century. But nowadays, antibiotic-resistance have become a problematic issue in hospitals, public areas, and contaminated environment where their residues are not properly decomposed. The extraordinary genetic capacities of microbes show quickly genetic changes that man's overuse of antibiotics enforce exploiting of every source of resistance genes and by means of horizontal gene transmission ongoing within bacterial populations.

These cases result in developing of multiple-resistance on bacteria to antibiotics introduced into practice at clinical treatments or other eco-systems. In our era, current studies show tendency to do exact prediction that is very close to precise level on biological systems. Our studies showed utility of this technology that provides information on desired resistance traits related to antibiotics resistance. Interpretation of data can be available on traits of resistance based on genetic materials and amplification with selected molecular markers resulting in scores of polymorphic fragments, besides specific genetic sequence of model microorganisms with known characteristic properties after transferring data to a computer system and programming. By this method, higher prediction "validity rate" can be done depending on same marker and sequence data on uncharacterized property of a sample microorganism if its no data is accessible. Providing of information is possible on model microorganisms using artificial intelligence and / or annual neural network (ANN) with high level prediction. Our studies showed that use of artificial intelligence and /or annual neural network (ANN) system will insight new studies on prediction of antibiotic resistance before it occurs. We believe that this approach will provide globally benefits in whole antibiotic resistance studies when sufficient data based on characteristic properties of collected samples has been compiled.

PP-26

**The Role of Apoptotic Markers in Patients with Prostate Cancer Radiotherapy**

*Selim Ögüt<sup>1</sup>, Birsen Aydemir<sup>1</sup>, Fatma Bebece Cinemre<sup>1</sup>, Hakan Cinemre<sup>1</sup>, Didem Karaçetin<sup>2</sup>*

<sup>1</sup>Department of Biophysics, Department of Biochemistry, Department of Internal, Medicine Faculty of Medicine, Sakarya University, Sakarya, Turkey,

<sup>2</sup>Department of Radiotherapy, School of Health, Istanbul Gelişim University, Istanbul, Turkey

Background: The expression of apoptotic proteins may have an important role for therapeutic response of prostatic tumors to radiotherapy. Cellular radio-resistance plays a critical role in the failure of radiotherapy.

Objective/Purpose: The aim of this study was to determine the bcl-2 (apoptosis suppressor), bax (apoptosis inducer), caspase 3, caspase 9 and cytochrome c levels in the patients with prostate cancer before and after radiotherapy.

Materials-Methods: Thirty-one patients who underwent external beam radiotherapy for prostate cancer was included in this study. Blood samples were taken on admission before initiation of radiotherapy and after completion of radiotherapy. Circulating levels of bcl-2, bax, caspase 3, caspase 9 and cytochrome c were measured by using enzyme-linked immunoassay.

Results: The levels of bcl-2, bax, caspase 3, caspase 9 and cytochrome c were decreased in 68% (21/31), 49% (12/31), 13% (4/31), 39% (12/31) and 32% (10/31) of patients and same parameters were increased in 32% (10/31), 61% (19/31), 55% (17/31), 39% (12/31) and 45% (14/31) of the patients with prostate carcinoma after radiotherapy, respectively.

Discussion: Changes of bcl-2, bax, caspase 3, caspase 9 and cytochrome c were in different directions in each patient. This can explain variability of the therapeutic response to radiotherapy among population.

Conclusion: This study shows that bcl-2, bax, caspase 3, caspase 9 and cytochrome c may have an important role for response of prostate cancer to radiation therapy.

Acknowledgements: This work was supported by the Research Fund of the University of Istanbul Gelişim.

PP-27

**Artificial Neural Networks in Pharmaceutical Technology**

*Burcu Mesut, Seyma Hande Tekarslan, Yıldız Özsoy  
Istanbul University, Faculty of Pharmacy, Department of  
Pharmaceutical Technology, Istanbul, Türkiye*

Artificial neural networks (ANNs) are the computer programs that are biologically inspired and simulate as the human brain processes information. Artificial Intelligence (AI) collects knowledge by identification of the patterns and relations in data and it is learned (or is trained) by the help of experience, not by programming. Artificial intelligence (AI) produces softwares which can show the abilities of human brain. It models and simulates brain activities to solve problems. Pharmaceutical processes have non-linear relationship for data sets and ANN is a promising modeling technique for these processes. Many computerized models have been developed to predict outcomes by using machine learning and statistics, such as decision trees, Bayesian networks, logistic regression and artificial neural networks (ANNs). ANN methodology has very wide potential applications in the pharmaceutical sciences based on by modeling, pattern recognition and prediction. Drug design studies, biopharmacy, dosage form development, clinical pharmacy studies and analytical studies are in this wide potential applications. As formulation development in pharmaceutical sciences is a critical process, initial formulations can be generated by computational techniques such as Artificial Neural Networks. ANNs have many advantages compared to other modeling approaches. Examples of these advantages are prediction of model parameters in relatively simpler forms and adaptive solutions. ANN programs have shown high accuracy in finding optimum approach and are recommended to be used during pharmaceutical development studies.

PP-28

**Performance Analysis of A Cooperative Communication System Using Massive MIMO**

*Sidi Ethmane Amar  
Electronics and Communications Engineering, Yıldız Technical  
University, Istanbul, Turkey*

Massive MIMO will be an enabling technology for the deployment of the 5th generation of wireless systems. In the past three years, this technology has been put under the spotlight. Although there is a lot of research work on this topic, a number of challenges still need to be surpassed before reducing Massive MIMO to practice. In this paper, I studied and explored a cooperative communication scenario using massive MIMO at the base station. Based on the work previously done by the project WINNER and the Vienna LTE Simulator, I generated a propagation channel model and simulated the throughput of the system model using different types of schedulers, modulation and precoding.

PP-29

**Mancozeb Has Inhibited The Reproduction Mechanism in Male Domestic Pigeons (Columba Livia Domestica) and Altered Hepatic Function**

*Soubeila Slimani<sup>1</sup>, Dalila Bouakkez<sup>1</sup>, Zabra Yabi<sup>1</sup>, Cherif Abdennour<sup>2</sup>  
<sup>1</sup>Department of Biology, University of 20 August 1955 Skikda Algeria  
<sup>2</sup>Department of Biology, University of Badji Mokhtar Annaba Algeria*

Pesticides are toxic chemicals, very much used in agriculture in order to increase the agricultural outputs. These molecules are associated with the appearance of the metabolic, carcinogenic, neurotoxic and fertility disorders. The objective of this work is to study the toxic effect of the dithiocarbamate "mancozeb" on certain blood biochemical

markers and in particular its effect on seasonal reproduction of male domestic pigeons (*Columba livia domestica*), subjected to a long photoperiod (20L: 04D). The fungicide was orally administered at 2 and 5 g/l (doses used in agriculture). The obtained results reveal that under a long photoperiod, the sexual activity lasted only 04 weeks. In addition, mancozeb administration induced gonadic regression, delayed the refractory phase, provoked a hyperglycemia, a hyperlipidemia, an elevation in the activity of alkaline phosphatase and transaminase, and a reduction in creatinine level. To note that the toxic effects of mancozeb is apparent in higher doses. To conclude, mancozeb has inhibited the reproduction mechanism in male pigeons and altered hepatic function.

PP-30

**Theoretical Studies of Vibrational Spectra and Theoretical Analysis of Piperazine**

*Yabia Cherif Fatima<sup>1</sup>, Rabmouni Ali<sup>2</sup>, Bensaid Okkache<sup>3</sup>  
<sup>1</sup>Yabia cherif fatima  
<sup>2</sup>Rabmouni Ali  
<sup>3</sup>Bensaid Okkacha*

Heterocycles fit into the composition of a large number of natural substances and drugs. Among them we can cite the piperazine molecule. In this work, in order to find the most stable form of piperazine molecule, a conformational analysis of this later was performed by using ab initio Hartree-Fock (HF), MP2 and B3LYP hybrid density functional theory methods. Our results predict as expected that the equatorial-equatorial (e-e) form is the most stable form of piperazine molecule. Also, we were interested in the theoretical vibrational spectra for this molecule. Furthermore, reliable vibrational assignments have been made on the basis of potential energy distribution (PED). Comparison between the experimental and theoretical results indicates that density functional B3LYP method is able to provide satisfactory results for predicting vibrational wavenumbers. As electronic properties, we have predicted the highest occupied and lowest unoccupied molecular orbitals (HOMO and LUMO) of piperazine molecule.

PP-31

**Solid-Liquid Extraction of Ni (II) In Nitrate Medium By Palmitic Acid Impregnated (1180) Resin**

*Zaoui Fatiha<sup>1</sup>, Didi Mohamed Amine<sup>2</sup>  
<sup>1</sup>Zaouifatiha university DrTahar Moulay SAIDA  
<sup>2</sup>Didi Mohamed Amine university TLEMEN Laboratory OF separation and purification technology*

Palmitic acid-impregnated Amberlite XAD 1180 resin is used for the extraction of Ni(II) from the nitrate medium using the RIE technique. The results from this extraction indicated the fixing of Ni(II), with a maximum efficiency. The thermodynamic parameters showed the exothermic nature of the liquid-solid extraction of that metal ion. Correlation of the experimental data of adsorption indicated that lead sorption occurs in a multilayer form, with the Freundlich isotherm; the extraction process is controlled by the pseudo-second order kinetic model.

PP-32

**Comparative Study on Thorium (IV) Sorption Onto Sodic Bentonite and Magnetic Bentonite**

*Mobamed Amine Didi, Abdelkader Miraoui*  
*Laboratory of Separation and Purification Technologies, Department of Chemistry — Faculty of Sciences, Box 119, Tlemcen University — 13000, Algeria.*

In this paper, the liquid-solid extraction of Thorium (IV) is made by Sodic bentonite and Magnetic bentonite. Magnetic adsorbent can be quickly separated from a medium by a simple magnetic process, in view of these properties, some parameters were studied to assess the performance of maghemite nanocomposite clay for the removal of Thorium ions. The operating variables studied are initial La(III) concentration, pH, ionic strength, temperature and contact time. The time needed for magnetic bentonite to adsorb the maximum of Th (IV) is 45 minutes and 60 minutes for sodic bentonite. For magnetic bentonite, optimal extraction yield was achieved in a initial pH equal at 6.2 and for sodic bentonite, the variation of initial pH has no influence on the extraction yield. The sorption capacities of sodic bentonite and magnetic bentonite are 41.24 and 31.34 mg.g<sup>-1</sup> respectively. Adsorption equilibrium data were calculated for Langmuir and Freundlich isotherms. It was found that the sorption of Th (IV) on sodic and magnetic bentonite was better suited to the Langmuir adsorption model. Thermodynamics data leads to endothermic and spontaneous process for magnetic bentonite and exothermal for sodic bentonite. The quantitative elution study of Thorium can be realized with acetic acid for sodic bentonite and sulfuric acid for magnetic bentonite.

PP-33

**Effect of Natural Pozzolan on Concrete Durability**

*Abcene Merida, Fattoum Kharchi*  
*(1.-2.)University of Bab Ezzouar (USTHB), BP 32 Bab Ezzouar, EL Allia, Algiers, Algeria*

Sulfate attack and its effects are important from both scientific and industrial viewpoints. It is perceived that cements containing pozzolan have better performance in sulfate solutions, since the pozzolanic reactions reduce the quantity of calcium hydroxide and increase calcium silicate hydrate. This paper investigates the physical and mechanical properties of concretes made by blended cement containing Algerian natural pozzolan of volcanic origin, and Portland cement. In order to better determine the pozzolanic effect of the pozzolan addition in the concrete, the analysis of the experimental results of the effect of the partial replacement of the cement by the natural pozzolana showed that it contributes positively to the improvement of its mechanical characteristics, its durability with respect to the permeability to the chlorine ions, the ultrasonic pulse velocity as well as the sulphate resistance. The present study confirms the pozzolanic reactivity of the natural pozzolan used.

PP-34

**Optimization of The Manufacturing Processes of Semi-Hard Cheese Based on Algerian Camel Milk**

*Amel Meribaï<sup>1</sup>, Fatma Lacheb<sup>2</sup>, Fawzi Rostane Meklati<sup>3</sup>, Abdelouabab Nouani<sup>2</sup>*  
<sup>1</sup>*Department of Environmental Engineering, University of Science and Technology Houari Boumediène (USTHB), Algiers, Algeria. Department of Food Technology and Human Nutrition. National Superior School of Agronomy (ENSA), Algiers, Algeria.*  
<sup>2</sup>*Department of Food Technology. M'bamed Bougara University of Boumerdes (UMBB), Boumerdes, Algeria.*  
<sup>3</sup>*Research scientist at Technical and Scientific Research Center in Physico-Chemical Analyses (CRAPC), Algiers, Algeria.*

Traditional society has always had difficulty turning camel milk into cheese because of its very low coagulation ability, conversely with cow's milk. The objective of this study was therefore to introduce camel's milk in a semi-hard cheese at different percentages (25%, 50% and 75%) in order to optimize its incorporation rate. The various mixtures of camel and cow milk were transformed into semi-hard cheese, under experimental conditions more or less controlled according to the process practiced in Algerian cheese factories. The camel's milk used came from the Algerian Sahara. From the results of physicochemical analyzes, it appears that the incorporation of camel's milk affects the characteristics of the semi-hard cheeses, and that the intensity of these effects varies more or less with the rate of incorporation. For all the cheeses manufactured, those obtained from the 25% and 50% camel milk production have the best physicochemical qualities. The fragility of the curd in 75% camel milk production compared with other manufacturing (25% and 50%) could be attributed to the characteristics of camel milk with a reduced total dry extract content. From a sensory point of view, it is the semi-hard cheeses obtained from the 25% camel milk mixture which are the most appreciated and have characteristics comparable to cow's milk cheeses, with a very good general appearance, a very good texture and a very good taste, whereas the cheeses from the mixture of 50% camel milk have a good general appearance, a very good texture, and a good taste.

PP-35

**Removal of Copper (II) and Iron (III) Mixture By Pilot NanoFiltration- Effects of Pressure and Concentration on Nanofiltration Membrane Performance**

*Mobamed Amine Didi, Aoufi Boutbeyna*  
*Laboratory of Separation and Purification Technologies, Department of Chemistry — Faculty of Sciences, Box 119, Tlemcen University — 13000, Algeria.*

In the current study, the effect of operating conditions including pH value, feed flow, concentration of the solution and applied pressure on copper (II), iron (III) and their mixtures removal by nanoFiltration membrane for drinking water production was investigated. The results obtained show that by appropriate choice of experimental parameters it is possible to extract all of the iron (III) and copper (II) at the same time to a salt mixture of Fe 50% - salt Cu50% for concentration 4 ppm, pH = 4.5 and pressure = 6 bars. For any pH measurement in the other mixture whatever the pressure admitted to the iron (III) and a concentration of 100 ppm to pH = 3.3. The best results for the copper (II) were obtained for the various mixtures in pressure of 6 bars at varying pH.

PP-36

**A Novel Self-Controlled Smart Irrigation System**

*Atakan Güney, Orban Çağatay, Turhan Can Bakalım, Egidius Pineas, Dıaa Gadelmavla*  
*Izmir University of Economics, Faculty of Engineering, Izmir, Turkey*

The current work presents a high level system design of a self-controlled smart irrigation system. The system is smart in the sense that it adopts its operational functions according to the feedback sensors distributed within the agricultural fields, in addition, it controls itself according to the weather conditions. The amounts of used water for irrigation are controlled by predefined actual relationships between the type of plants and their water consumption. Our system has the ability to monitor the irrigation process in real-time and has the possibility of collecting and analyzing data to be used for enhancing its functionalities. It is important to mention that the energy used for feeding our system is based on renewable energy and thus the system is environmental friendly. Our system is of great important for modern agriculture systems and for saving water and energy.

PP-37

**Heterogeneous Catalyst BaO-KF: Dry Synthesis of Thioaurones As Cytotoxics Agents Under Focused Microwaves Irradiation**

*Benferrab Nassima<sup>1</sup>, Hammadi Mohamed<sup>2</sup>, Villemin Didier<sup>3</sup>*

<sup>1</sup>Center for Scientific and Technical Research in the Physical Chemical Analysis (CRAPC), Boumerdes, 35000 Algeria

<sup>2</sup>URMPE Research Unit for Materials, Processes and Environment, University M'hamed Bougara Boumerdes, Faculty of Engineering Sciences, Boumerdes, 35000 Algeria.

<sup>3</sup>Ensicaen, LCMT—UMR 6507 CNRS, University of Caen, Caen 14050, France

Benzo thiophen-3(2H)-one and naphtho[2,1-b]thiophen-3(2H)-one was condensed in the presence of barium oxide on potassium fluoride with aromatic aldehydes to give 2-arylméthylidène-1-benzothiophène-3-ones (1) (thioaurones) without solvent under focused microwave irradiation. It is a efficient catalyst basic in Knoevenagel condensation reaction.

PP-38

**Rheological Properties of Compatibilized Polypropylene-Clay Nanocomposites**

*Chedri Loubna<sup>1</sup>, Zoukrami Fouzia<sup>1</sup>, Haddaoui Nacerddine<sup>2</sup>*

<sup>1</sup>Research Unit for Emerging Materials (URME), University Setif-1 Algeria

<sup>2</sup>Laboratory of chemistry of the high polymers (LPCHP), University Setif-1 Algeria

In recent years, there is a great interest in polymer nanocomposites materials which show improved of physical and mechanical properties, thermal stability, permeability and flame retardant enhancements at a small filler loading (usually < 5wt%) as compared with conventional filler composites [1-3]. These improvements depend significantly on the quality of the interaction between polymer and filler and on the success of dispersing the solid particles uniformly in the matrix [4]. For this polypropylene clay, nanocomposites were obtained and studied using two different kaolin clay in the nanometric and micrometric scale. The maleic anhydride grafted polypropylene (MA-g-PP) was used as coupling agent. The nanocomposites were prepared by melt compounding. The effect of compatibilizing agent in the clay dispersion was studied by optical microscopy and the apparent melt viscosity were investigated to study the effect of compatibilizer and the type of clay on the interfacial interaction and the degree of dispersion of fillers particles in PP matrix. The polar groups of coupling agent gives a better dispersion and PP/clay, exhibiting modest increases in their rheological properties and viscosity.

PP-39

**Trap Effect in Metal-Semi Conductor Field Effect Transistor**

*Cheikh Khaled<sup>1</sup>, Metiri Wahiba<sup>2</sup>*

<sup>1</sup>University of Skikda 20 August 1955

<sup>2</sup>University Badji-Mokhtar, BP 12, Annaba

GaAs MESFETs (Metal-Semi conductor Field Effect Transistor) are the most commonly used and important active devices in microwave circuits. Although, more complicated devices with better performance for some applications have been introduced, the MESFET GaAs is still the dominant active device for: high frequency devices, cellular phones, satellite receivers, radar, power amplifiers and switching circuits. However, this device presents some functional problems especially at bases frequencies which limit their application. Several studies confirm that traps in the interface between active layer and substrate are origin of these anomalies. In this way we were propose an equivalent circuit of GaAs MESFET taking into account traps effect in substrate/active layer interface and substrate volume traps. This proposed model permits to study the output impedance frequency dispersion.

PP-40

**Doing Business in Pre-paid Electricity: New Business Opportunity for Microentrepreneurs in Indonesia**

*Dede Supriatna Makbul<sup>1</sup>, Satria Dijaya<sup>2</sup>*

<sup>1</sup>Economics and Management, Northeast Electric Power University, Jilin City, China

<sup>2</sup>Curriculum and Teaching, South China Normal University, Guangzhou, China

The demand for electricity usage is always high and every country are competing to make changes in service for citizen's convenience. One of the change is pre-paid electricity which has been widely adopted by many countries. Some countries used this new system as a way to control electricity usage. Indonesia adopted this new system since 2008 and PLN (State Electricity Company) reported the amount of pre-paid electricity consumers increasing every year. In 2015, there were about 38 million customers had been using this payment system and placed Indonesia as the first largest pre-paid electricity consumers in the world. The purpose of this paper is to explore the potential of doing business in pre-paid electricity system and try to give the conceptual business model for microentrepreneurs in Indonesia. Through questionnaires and interview, the outcome of this research will determine the best business model for microentrepreneurs. The result showed that doing business in pre-paid electric system is promising for microentrepreneurs.

PP-41

**Bioformulation of An Antiseptic Cream**

*Didouche Yasmina Fadila*

Research Unit: Materials, Processes and Environment (UR / MPE), University of Boumerdes

The present work relates to the formulation attained from Distilled Fatty Acids (DFA), soybean oil and palm oil, have been subjected to physicochemical analyzes, Gas Phase Chromatography (GC), Infrared (IR) which give convincing results in line with standards. The good quality of the raw material encouraged us to formulate two the Top Antiseptic Creams (TAC) one based on Propolis and another based on camphor. Both TAC were subjected to homogeneity tests as well as pH and gave satisfactory results. The antimicrobial activity of the two TAC was evaluated, using two strains of pathogenic bacteria and a single species of yeast, using the diffusion method from a sterile disk. The two TAC reacted positively to the microbial strains tested, and are highly active on Gram-positive bacteria, but are not very active on Gram-negative bacteria. It should be noted that the TAC based on camphor has a better activity than the based on propolis.

PP-42

**Analysis of Bio-Formulation With Vegetable Substances To Growing Tilapia (Oreochromis Niloticus).**

*Djeziri Mourad<sup>1</sup>, Labied Radia<sup>2</sup>, Nouri L'bad<sup>3</sup>*

<sup>1</sup>Research Laboratory for Food Technology, Faculty of Engineering, M'hamed Bougara University, Boumerdes 35000, Algeria, Center for technical and scientific research in physicochemical Analysis (CRAPC) Bou Ismail, Tipaza.

<sup>2</sup>Center for Technical and Scientific Research in Physicochemical Analysis (CRAPC) Bou Ismail, Tipaza, USTHB Bp 32 El-alias, Faculty of Chemistry, Laboratory of Physical-Chemical Study of Materials and Application to Environment, Bab Ezzouar, 16111, Algiers, Algeria.

<sup>3</sup>Research laboratory for food technology, Faculty of engineering, M'hamed Bougara University, Boumerdes 35000, Algeria.

The type and level of plant protein ingredients included in fish foods affect the characteristics of feed pellets such as stability, fat absorption

capacity, sag rate. It may also affect the digestibility of feed and therefore the composition of fecal matter and the level of products in the environment, as well as other characteristics of fish faeces, related to their dispersion around the rearing zone or To the potential for the elimination of farmed water depending on the type of farm. These effects should be adequately characterized and possible methods of increasing the assimilation studied so that the use of substitute foods would not increase but would even reduce the impact on the environment. This work will examine the environmental burden created by the new regimes, compared with current trade regimes based mainly on fish meal and fish oil. The experiments are designed to measure and characterize the production of waste, either by food or by fish, mainly fecal matter, without addressing the environmental impact as a whole because this issue is too broad. The effects of anti-nutritional factors will be particularly attracted by their importance in the production of waste. The conditions for the production of fish foods which give rise to appropriate food stability and to food treatments will also be studied, which may increase the assimilation of food.

PP-46

**Production of Liquid Fuels From Natural Gas With Modified Zeolites As Catalysts**

*Feddag Ahmed*

*Department of process engineering, Faculty of sciences and technology, University of Mostaganem, Mostaganem, Algeria*

The environmental issue has become a growing concern with the increase in population and the industrial and agricultural development. Vehicles and chemical industries release large quantities of pollutants. In order to reduce pollution, clean fuels are required. Natural gas can be an adequate source of liquid fuels.

The purpose of this research consists in the conversion of natural gas to syngas. This step is followed by the Fischer-Tropsch reaction for the production of hydrocarbons from syngas mainly on iron or cobalt catalysts. This synthesis lead to sulfurless and then pure and ecologic products. Also, the presence of aromatic hydrocarbons and isomers gives fuels with high octane values. Using iron and cobalt supported by Y zeolite, prepared by the dry method ion exchange, as catalysts showed that high activity can be reached and that high selectivity for olefins can be obtained. The catalysts accept a hydrogen poor synthesis gas without marked deactivation. The synthesis of FISHER-TROPSH has been achieved under atmospheric pressure and in a range of temperature between 250°C and 300°C with the ZCoYs and ZFeY. Products of the reaction are light olefins (C2 + C3) and alkanes from C2 to C9.

PP-47

**Point and Click Control for Planar Cable-Parallel Robots**

*Fouad Inel*

*Technolgy Departement-University of Skikda- Algeria*

In this paper we present a study the performance of sliding mode controller (SMC), this last SMC control algorithm is based to provide the stability of the end-effector. The aim contribution of this work is in the firstly, the graphical user interface witch present a point to point command, the position's parameters and the trajectory of end effector for a cable driven robot with 4 cable, secondly present the dynamic model for our mechanism and mathematics equations for the SM control techniques. Moreover, the performances concern settling time, precision, vibration and system stability during trajectory tracking. Finally some simulation results are done for the different trajectories

PP-48

**Handover Selection scheme for Serving Air Traffic Control Communication in Mobile Satellite Constellation**

*Garab Messaoud<sup>1</sup>, Achachi Abdelali<sup>2</sup>, Oudira Houcine<sup>1</sup>, Benatia Djamel<sup>2</sup>*

*<sup>1</sup>Department of Electronic M'sila University Algeria*

*<sup>2</sup>Department of Electronic batna University Algeria*

Due to the satellite motion with respect to the earth's surface and the aircraft's mobility, it is required to handover frequently in the process of communicating. In This paper, assuming that the aircraft's location and speed can be determined, we proposes a suitable study for managing handover in satellite constellations for serving air traffic communication. The main objective of This study is selecting the best scheme which reduce significantly contact failure Probability, this techniques are: non priority, priority, and queuing handoff schemes, in this paper we are interested only in schemes that prioritize handover request in particular handoff queuing schemes. Channel allocation strategy (FCA) is employed, and the simulation results obtained concern: call blocking probability, handover failure probability, and average waiting time in the queue. Also simulation results are compared to choose the best one which reduces the contacts failure

PP-49

**Easy and Green Synthesis of 6-(arylviny)-4-hydroxy-3-(phenylthio)-Pyran-2-Ones Using Potassium Hydroxide Catalyst In Aqueous Medium**

*Hammadi Mohamed<sup>1</sup>, Benferrab Nassima<sup>2</sup>, Bertbiol Florian<sup>3</sup>*

*<sup>1</sup>URMPE Research Unit for Materials, Processes and Environment, University M'bamed Bougara Boumerdes, Faculty of Engineering Sciences, Boumerdes, 35000 Algeria*

*<sup>2</sup>Center for Scientific and Technical Research in the Physical Chemical Analysis (CRAPC), Boumerdes, 35000 Algeria*

*<sup>3</sup>Department of Molecular Chemistry (SERCO), UMR-5250, ICMG FR-2607, University Joseph Fourier, 301 Rue de la Chimie, BP 53, Grenoble Cedex 9, 38041 France*

The 2-pyrones have common products in nature and are responsible for a wide range of biological (Anxiolytic, antifongic, cytotoxic and neurotoxic). The structure 4-hydroxy-2H-pyran-2-one is the key structure in new types of inhibitor especially the drifts of 4-hydroxy-pyran-2-ones functionalized position 3 by sulfides function that represent a new class of protease inhibitor of the virus of AIDS described by the authors.

The powerful pharmacological effect (inibition) in saturated δ-lactones to six members on the central nervous system has attracted the attention of organic chemistry seeking new strategies for the synthesis of this bioactive compound. The current study is devoted to the synthesis of 6-(Arylviny)-4-hydroxy-3-(phenylthio)-pyran-2-ones by condensation of 6-(Arylstyryl)-4-hydroxy-pyran-2-ones with S-phenylbenzene- thiosulfonate catalyzed by potassium hydroxide in water a room temperature

PP-50

**Epr Study of Structural Properties of The Amorphous AlF3 Doped With Cr3+ Ions At Low Temperature**

*Hmida Latelli*

*Physics Department, University Mohamed Boudiaf – M'sila P.O. Box 166, Icbilia 28018, M'sila – Algeria*

Electron paramagnetic resonance (EPR) study of structural properties of the amorphous AlF3 doped with Cr3+, obtained by dehydration of α-AlF3·3H2O, is the main subject of this work. The experimental studies upon powdered amorphous doped with various Cr3+

concentrations have been achieved at X and Q-band frequency and low temperature. Evidence of two types of centers is obtained: ions pairs with antiferromagnetic coupling and isolated Cr<sup>3+</sup> ions. The distribution of spin hamiltonian parameters derived for solids with random ionic arrangement by Czjzek et al. [1] is applied and give rise to the two bands of the spectra which were previously interpreted with two distributions.

PP-51

**Modeling and Simulation of the Energy Recovery in the Baking Line of the Cement Plant**

*Kaabeche Djerafi Khatima*  
Kaabeche-Djerafi Khatima

This study aims at the modeling and simulation of the recovery of energy by using the super pro designer simulator to simulate the tertiary and the secondary air emerging from the cooler at the cement plant Djawad Taher of Algeria, in order to increase the production of clinker and to minimize the amount of hot air pumping out of the firing line to recover energy. There are several cements plants in the world that uses technology of tertiary air, however, in the cement plant Djawed Taher it is not used. In this context we conducted a study on the recovery of the tertiary air based on mass and heat balances in the firing line. The overall results led us to important suggestions by proposing two solutions: The first solution is the increased production of the clinker in the presence of the tertiary air by keeping constant the flow rate of natural gas. The second solution is to increase the production of the clinker in the presence of the tertiary air with changing the debit of natural gas. The results show a very significant reduction in the air pumping in the second solution, with an increase in production but with some more consumption of natural gas.

PP-52

**Study of Characterization and Incorporation of An Aqueous Extract and Oil From Date Seeds (Phoenix Dactylifera L) In A Cosmetic Cream Bio**

*Lecheb Fatma<sup>1</sup>, Meribai Ame<sup>2</sup>, Borbane E.c Ziani<sup>3</sup>, Benamara Salem<sup>1</sup>*  
<sup>1</sup>Research Laboratory in Food Technology, Faculty of Engineering Sciences, University M'hamed Bougara of Boumerdes, Boumerdes 35000, Algeria (S.B.).  
<sup>2</sup>University of Sciences & Technology Houari Boumediene, Algiers-Algeria  
<sup>3</sup>Research Center in Physicochemical Analysis, Bou-Ismaïl, 42004, Tipaza (FL.).

In this work, and for the first time in our knowledge, a test of incorporation of an aqueous extract and oil from date seeds (Mech-Degla) in a cosmetic cream bio was investigated. Also, physicochemical characteristics of the date seed are determined. The weight fraction of the seed is of 19.64 ± 0.21%. Its fat and polyphenol contents are on average 12.13% (DW) and 22.89 g/100 g (ethanol extract 50%) respectively. Moreover, the antioxidant power of the core was analyzed by two Methods: reducing power and scavenging activity. On the other hand, the aqueous extract with 7.7 g/100g polyphenol concentration is incorporated, together with the seeds oil, in the formulation of a biological cosmetic cream. The latter also contains olive oil, almond oil, beeswax and lecithin. The oil extracted from the dates seeds has a high content of unsaturated fatty acids (75.78 %) and it possesses physicochemical characteristics similar to those of refined foods oils. It also shows a significant scavenging activity with an inhibition rate of 93% for a concentration of 2 mg / ml (hexane extract). For the formulation of the cream, as well as for studying its stability, methodologies of melange and experience designs were applied respectively. These results show that the valorisation of dates seeds in food and none food applications is possible.

PP-53

**Environmental Impact of Algerian Cement Manufactories on Ecosystem Quality**

*Bougherara Saliba<sup>1</sup>, Lecheb Fatma<sup>1</sup>, Babakhouya Nawef<sup>2</sup>, Belkhir Meriem<sup>1</sup>, Medjdoub Fatma<sup>1</sup>, Delleci Kamel<sup>1</sup>, Louhab Krim<sup>1</sup>*  
<sup>1</sup>University of M'hamed Bougara, BP 70,35000 Boumerdes Algeria, faculty of engineer science, food technology research laboratory,  
<sup>2</sup>Scientific and technical research center of physico- chemical analysis, BP384siegex-pasna ZI-Bousmail CP42004 Tipaza Algeria

The aim of this study is to evaluate or to assess the environmental impact of two kinds of cement Portland processes in the Algerian manufactories on the ecosystem quality. The first uses the dry process and is located in a rural area (Sour El Ghozlane) and the second is in an urban area (Rais Hamidou) and uses the wet process. To evaluate all impacts generated by those manufactories on the ecosystem, LCA approach is applied, using the Simparo 7.1 software and EDIP method 2003.

A comparative study of the impacts evaluated for these processes and the contribution of the compound for all impact categories were determined.

PP-54

**Contribution to The Study of The Fertility In Pagellus Erythrinus: Spermogramme and Spermocytogramme**

*Lechekhab Shabnaz<sup>1</sup>, Lechekhab Hanene<sup>2</sup>*  
<sup>1</sup>LechekhabShabnaz.FacultyofMedicine,UniversityofAnnaba–Algeria  
<sup>2</sup>Lechekhab Hanene. Department of Natural Sciences, University of El Taref– Algeria

The monthly sampling analysis of the sperm of *Pagellus erythrinus* (Linnaeus, 1758) during the period of reproduction reveals a gradual increase of the density of spermatozoa during the development phase and sexual maturing, from March to May. We note an average of 36.12 x 10<sup>9</sup> cells/ml, the highest rate of sperm cell coinciding with the beginning of the spawning phase. From August the density of spermatozoa falls to reach an average of 4.80 x 10<sup>9</sup> cells/ml, giving evidence of the postspawning phase. Mobility and vitality of spermatozoa are maximal during the period of emission from May to July and become minimal in the end of the season of spermiation. In the middle of the spermiation period, mobility and quality of movement spermatozoa of observed every 5 minutes is gradually modified and tends to fall from the 15th minute. The spermatozoa movement passes from rectilinear to disorientated, then mobile but not progressive, and stand from 60 minutes onwards. The spermocytogramme has allowed us to put in evidence some morphological abnormalities of the spermatozoa, which influence their fertilizing power. Out of 600 observations we found 32% of spermatozoa presenting abnormalities.

PP-55

**The Synergistic Effect of Bacteriocins Produced By Lactic Acid Bacteria Isolated From Algerian Goat's Milk and Essential Oils of Imula Viscosa Separately and in Combination on The Growth of Food Spoilage Bacteria**

*Mekri Meriem<sup>1</sup>, Abbouni Bouziane<sup>2</sup>*  
<sup>1</sup>Centre Scientifique et Technique en Analyses Physico-chimiques, Bou-Ismaïl, Tipaza,Algeria  
<sup>2</sup>Department of Biology, Faculty of Natural Sciences and Life, University of Djillali Liabès of Sidi Bel Abbes, Algeria

In this present study, the synergistic effect of bacteriocins produced by lactic acid bacteria isolated from Algerian goat's milk and essential

oils of *Inula viscosa* alone and in combination was investigated. The physicochemical characterization of the substances responsible for the antagonistic activities showed the presence of a proteinaceous substance characterized by heat resistance and an optimum pH value in the range of 4-7. The chemical components of essential oil extracted by steam distillation from *Inula viscosa* were also analyzed by GC/MS. The dominant active components were Oxygenated sesquiterpenes (78,15%). Minimum inhibitory concentrations (MICs) against *St. aureus* ATCC 25932, were assessed for the bacteriocins extracted from *Streptococcus thermophilus* (1,7 µg/ml), *Pediococcus acidilactici* (1,02 µg/ml) and *Enterococcus faecium* (2,04 µg/ml) and essential oil of *Inula viscosa* (0,6 mg/ml). Furthermore, for combinations of the antimicrobials, The checkerboard method was used to determine their effect by means of the fractional inhibitory concentration index (FICI). A synergistic effect of all combinations (FICI <0.5) was shown for *St. aureus* ATCC 25932, *B. cereus* and *Ps. aeruginosa* ATCC 27853. In conclusion, the combination of bacteriocins and essential oils of *Inula viscosa* could be considered as a promising alternative in the food industry capable of preventing the proliferation of Gram (-) responsible for food spoilage.

PP-56

**Fatty Acid and Physico-Chemical Composition of Camel's Milk In Algeria**

*Mekri Meriem, Fauzi Meklati, Maya Cherfaoui, Lilya Boudriche*  
*Centre De Recherche Scientifique Et Technique En Analyses Physico-Chimiques*

In order to determine the physico-chemical characteristics and the fatty acid composition of Algerian camel milk, camel milk was compared to bovine milk at the same stage of lactation. For this purpose, 06 samples of camel milk of the SAHRAOUI breed and 6 samples of cow's milk of the Montbéliarde breed in mid-lactation stage were collected.

The physico-chemical composition of camel milk samples was close to that was shown in literature, the pH was around 6,5 and his acidity was of about 16 ° Dornic. Its density was between 1,029 and 1,031. The camel milk was more acidic and less dense and its viscosity was lower than cow's milk. Camel milk was on average lower in fat than cow's milk, camel milkfat (obtained by using the Rose-Gottlieb method) contained more long chain (69.05% and 76%); unsaturated fatty acids (29.54% and 34.19%); and less Short chain fatty acids (0.169% and 0.884%) than cow milkfat. The content of the C16:1 fatty acid in the camel milkfat (12,52 %) was significantly higher than that in cow milkfat (1,67%). The ratio of unsaturated/saturated acid was more favorable in camel's milk compared with that of cows. All of these parameters gave a nutritional advantage to camel's milk.

PP-57

**Agricultural and Mechanization**

*Mobamed Fenni*  
*Plant Biology and Ecology, Faculty of Life and Natural Sciences, Ferhat Abbas University, Sétif 1, Algeria*

Tomorrow's agriculture, to be sustainable, must respect the environment. Current agriculture has many adverse effects on the environment, mainly on the climate and soil resources necessary for agricultural production. It has a direct effect on the climate by the exhaust gases released by the large number of machines used. It degrades the biological and physicochemical properties of soils and makes them vulnerable to erosion. Although harvesting operations are relatively less harmful to the environment, they nevertheless require the development of intelligent processes that consume less energy and allow the recovery of the waste resulting from the transformation operations. Agricultural techniques that are more harmful are soil

preparation or plowing, which degrades the soil, mineralizes and oxidises organic matter, creates plowing soles and reduces water infiltration, degrades wildlife habitats and reduces biodiversity. Add to all these drawbacks, the greenhouse gases emitted by tractors and the production chain of all tillage equipment. Sustainability of tomorrow's agriculture inevitably requires respect for the economic, environmental and production components. A more sustainable approach to agricultural production and agroecosystem management are mandatory to reverse these degradation processes. Among the innovative techniques in this field, we mention direct seeding of crops, also known as conservation agriculture. This technique reduces by 75% the use of tractors and associated equipment, 56-70% fuel consumption and 50% working time. It allows the storage of carbon, improved soil, and ensures, in the medium and long term, a stable and economically profitable production. The world area under conservation agriculture in 2010 is estimated to be 117 million hectares. The objectives of this communication is to present research results obtained through its application in the areas of Setif (north east of the Algeria), where conservation agriculture covers nearly two thousand hectares and to discuss the development and the adoption of this new techniques.

PP-58

**A Dft Study of The Chemical Reactivity of Brominated Glutaconaldehyde Benzoyl Ester**

*Mostefai Asmâa<sup>1</sup>, Rabmouni Ali<sup>1</sup>, Taleb Safia<sup>2</sup>*  
<sup>1</sup>*Laboratoire de Modélisation et de Méthodes de Calculs- Université de Saida, B.P. 138, Cité En- Nasr-20002- Saida – Algérie*  
<sup>2</sup>*Laboratoire de Matériaux & Catalyse- Faculté des Sciences- Université Djillali Liabes, Site I, faubourg Ben M'Hidi, E W22000-Sidi Bel- Abbès, Algérie*

Our main interest, in this work, is to predict which atomic site in brominated glutaconaldehyde benzoyl ester is the most susceptible to undergo either a nucleophilic or an electrophilic attack. It will be sufficient to focus attention to the calculated reactivity indices derived from density functional theory which were used as an alternative to the traditional frontier orbital theory. Fukui functions (FF), local softness and local philicity were applied to probe the local reactivity and site selectivity. The dual descriptors were also shown in this study, not only to be capable of simultaneously explaining the nucleophilicity and electrophilicity of the given atomic sites, but especially to identify a dual atom which is proposed to act, simultaneously, as an electron acceptor and an electron donor in the molecule under investigation. The predictions thus made are in a good agreement with experimental results and theoretical calculations of the previously studied analogues.

PP-59

**Medical Images Compression Using SPIHT Approach**

*Nabil Boukbennoufa<sup>1</sup>, Rima Bouzidi<sup>2</sup>*  
<sup>1</sup>*Department of Electronics, University Mobamed Boudiaf M'sila, Algeria*  
<sup>2</sup>*LGE Laboratory, University Mobamed Boudiaf M'sila*

The Medical imaging field has been grown due to the development of digital technologies. It allows a good investigation of human organs thanks to the availability of increasingly efficient radiological systems. The counterpart is a considerable amount of generated data that can quickly saturate conventional transmission and storage systems. The growing and continuing increase in storage capacity provides a partial response to this problem, but remains insufficient in most cases. The necessity to compress the images appears today unavoidable. Moreover, compression is of a great interest for the transmission of images in order to carry out a remote diagnosis which is currently among the potential sectors in telemedicine.

The selection of a good data compression tool is very important, so in this paper we are going to use a non traditional and a powerful technique named SPIHT (Set partitioning in hierarchical trees) for biomedical image compression. It can be noted that this technique is based on the wavelet transforms. This algorithm codes the most important wavelet transforms coefficients firstly, and transmits the bits so that a refined copy of the original biomedical image can be obtained progressively. The tests of this lossy compression/decompression technique are performed on many biomedical images from a database. The obtained results show that SPIHT approach provides more compression ratio, while maintaining a very good quality of reconstruction with higher PSNR (Peak Signal to Noise Ratio) compared to EZW (Embedded Zerotree Wavelet) algorithm.

PP-60

**Comparative Study of The Behavior and Mechanical Properties of Thermosetting and Thermoplastic Polymer Concrete**

*Rahmouni Zine El Abidine<sup>1</sup>, Cherchari Saadia<sup>1</sup>, Tebbal Nadia<sup>1</sup>, Baali Brahim<sup>2</sup>*

<sup>1</sup>Geomaterials Development Laboratory, Civil Engineering Department, M'sila University, M'sila, Algeria.

<sup>2</sup>Maghreb Pipe Industries, M'sila, Algeria.

Polymer concrete is today a very effective alternative to traditional concrete. More manageable, more efficient and lighter, it's composed of different types of silica aggregates, quartz and polyester resins to ensure the strength of each execution. The objective of this work is to study the physic - mechanical behavior and the optimal formulation of polymer concrete based of resin (CPR) and polypropylene (CPP). The results show that CPR concretes exhibit a better behavior than CPP with a bending resistance gain of 16% and 20% for compression. The percentage of water absorption for the polymeric concretes is low; it is of the order of 0.2 to 0.46%.

PP-61

**Correlations of Microstructure and Mechanical Properties of High Frequency Hf Melting Ti-Al Alloys System**

*Salim Boukhessaim, Abd Elbak Fakrache*

Department of Physics, Faculty of Sciences, University 20 August 1955 - Skikda, Algeria

This articles deal with the mechanical properties of some Ti-Al alloys made under vacuum by high fusion temperature, the high frequency HF process, and rapidly solidified. Nominal compositions of Ti-(20, 30, 40 50, 60, and 80) wt. % Al were fixed to realize alloys covering the various phases field of the binary equilibrium Ti-Al diagram system. Microstructure analyses, optical observations and Vickers microhardness tests were used to investigate the mechanical properties of the as-solidified Ti-Al alloys in both brut and heat-treated (500°C) states. It was found that microstructures were fine (typically between 10 to 50 µm) and generally dominated by the ordered the intermetallic tetragonal D022 Al<sub>3</sub>Ti and Hcp D019 Ti<sub>3</sub>Al phases with metastable phases and phase separations developments in going from some brut to corresponding heat treated states. The titanium additions increase microhardness of the as-solidified Ti-Al alloys.

PP-62

**An Economical Approach to Reuse Bleaching Liquor in Continuous and Batch-Wise Processes**

*Sidra Saleemi<sup>1</sup>, Arsalan Khan<sup>2</sup>, Urooj Baig<sup>3</sup>, Tabir Jamil<sup>1</sup>*

<sup>1</sup>Department of Textile Engineering and Technology, University of the Punjab, Lahore, Pakistan

<sup>2</sup>Faculty of Engineering, Science and Technology, Indus University, Karachi, Pakistan

<sup>3</sup>Department of Textile Engineering, Mebran University of Engineering and Technology, Jamshoro, Sindh, Pakistan

Environmental Science is often the most discussed subject nowadays all over the world. In number of countries, currently plenty of harms are associated with the effluent by industrial waste due to growing industrialization, this issue should be considered at large scale. Textile sector is one of the leading area, which uses high amount of chemicals and creating environmental pollution. This research is an effort to investigate the amount of residue that was remained in liquor after bleaching and reuse the same liquor by adding small amount of chemicals according to requirement. Afterward comparison was made between bleached samples with fresh liquor and bleached sample with reused liquor. It was observed that bleaching with reused liquor shows good results though these results are insignificantly less than fresh bleaching liquor. The colour yield of dyed fabric with fresh liquor is less than that of reused liquor.

PP-63

**Horizontal Transfer of Antibiotic Resistance Genes Between Lactic Acid Bacteria Isolated From Some Algerian Food Products**

*Taba Ahmed Benabbou<sup>1</sup>, Karam Nour Eddine<sup>2</sup>*

<sup>1</sup>Department of Biology, HASSIBA Benbouali University, Cblef Algeria.

<sup>2</sup>Laboratory of microorganism's biology and biotechnology (LBMB), Oran, Algeria.

In the first, we established the resistance profile of 51 strains of lactic acid bacteria isolated from some Algerian food products, camel milk, cow's milk, Green Olives, the chicken intestinal epithelial cells and raw beef. they were tested against 21 different antibiotics by antibiogram. The minimum inhibitory concentrations (MICs) were measured for five of these antibiotics. after isolating the plasmids carrying the gene for resistance to tetracycline by the electroelution method, they were used to transform an indicator strain (*Lactococcus lactis*) by electroporation. the stability of these plasmids in transformers were tested, and the variation of the level expression of tetracycline resistance were also examined in transformers. The data sets collected concerning the exceptional antibiotic resistances were rare among the isolates studied, and the vast majority of the MIC values were below the FEEDAP breakpoints. Based on these phenotypic tests, the situation of the resistance susceptibility of Enterococci and Lactococcus is relatively good. However, some strains of Lactobacillus showed simultaneous high resistance to tetracycline, nitrofurantoin, bacitracin, and spiramycinafin, the research of mobile genetic elements has led us to detect in Lactobacilli two plasmids containstetracycline resistance gene. These plasmids, pCHM19 pCHTD29, were transferred by electroporation into indicator bacteria (*Lactococcus lactis*) and tetracycline-resistant transformers were obtained on selective medium. After horizontal transfer of resistance genes carried by these plasmids, the resistance can be expressed in the indicator. The stability of these plasmids in the transformers in the presence or absence of the selected agent varied by case. The expression level of resistance to tetracycline examined in solid medium, varied among clones.

PP-64

**Impact of The Administration of Ampicillin on The Emergence of Resistant Enterobacteriaceae In The Intestinal Flora of The Wistar Rat**

*Taba Ahmed Benabbou<sup>1</sup>, Karam Nour Eddine<sup>2</sup>*

<sup>1</sup>*Department of Biology, HASSIBA Benbouali University, Chlef Algeria.*

<sup>2</sup>*Laboratory of microorganism's biology and biotechnology (LBMB), Oran, Algeria.*

Resistance to antimicrobial drugs is a common characteristic in the world of bacteria. In the interaction between bacteria, genetic material is transferred from one bacterium to another; There is some concern that antibiotic resistance in Enterobacteriaceae could then be transferred to possibly pathogenic bacterial species, complicating the treatment of a disease or infection and lead to the spread of antibiotic-resistant bacteria. In order to illustrate the current situation of antibiotic resistance it is very necessary to quantify the resistance in the intestinal microbiota for tracking resistance levels in epidemiological surveys, a way to quantitatively estimate the level of intestinal microbiota of resistance is to use phenotypic approaches based on the quantification of bacteria resistant excreted in the feces. We studied the effect of administration of ampicillin (20 mg /kg /7days) administered orally on the weight variation in the Wistar rat. We reported a significant increase in body weight of rats treated by counting from the 11th day of the experiment, to parallel a significant increase in the number of resistant of Enterobacteriaceae excreted in the feces of rats was reported. We have been also established the resistance profile of 17 strains of fecal Enterobacteria against 15 different antibiotics, the results showed the existence of strong resistance to ampicillin and penicillin. MICs measured for three antibiotics (Penicillin G, Ampicillin and Oxytetracyclin) showed that most strains were characterized as being resistant to these antibiotics, the MICs displayed towards these antibiotics can exceed 256 µg /ml for most strains.

PP-65

**Cu<sub>2</sub>ZnSnS<sub>4</sub> Thin Film Solar Cells**

*Warda Daranfedi<sup>1</sup>, Noubel Guermat<sup>2</sup>*

<sup>1</sup>*Laboratory of Thin films and Interface, Exact Faculty of Science, Department of Physics, University of Constantine 1, 25000 Algeria*

<sup>2</sup>*Laboratoire d'Analyse des Signaux et Systèmes (LASS), Département d'Electronique, Faculté de Technologie, Université Mohamed Boudiaf de M'sila, BP.166, Route Ichebilia, M'sila 28000 Algérie*

We have investigated synthesis conditions and some properties of sprayed Cu<sub>2</sub>ZnSnS<sub>4</sub> (CZTS) thin films in order to determine the best preparation conditions for the realization of CZTS based photovoltaic solar cells. The thin films are made by means of spraying of aqueous solutions containing copper chloride, zinc acetate, tin chloride and thiourea on heated glass substrates at various temperatures. In order to optimize the synthesis conditions of the CZTS films, two series of experiments are performed. In the first series the sprayed duration was fixed at 45 min and in the second it is fixed at 75 min. In each series, the substrate temperature was changed from 280°C to 360°C. The results of X-ray diffraction analyses indicated that Cu<sub>2</sub>ZnSnS<sub>4</sub> films have nanocrystalline structure with (112) preferential orientation and reveals the formation of ZnSnO<sub>3</sub> and Cu<sub>2</sub>ZnSnS<sub>4</sub> phases. The crystalline size is varied from 28 to 52 nm with increasing substrate temperature. The optical films characterization was carried out by the measurement of UV-visible transmission. The optical gap was deduced from the absorption spectra. The photoluminescence spectrum measured at 77 K showed a broad emission around 1.27 eV

PP-66

**Nano-Carriers as Core-Shell Structure for the Effective Treatment of Skin Disorders**

*Emine Kabraman, Sevgi Güngör, Yıldız Özsoy*

*Department of Pharmaceutical Technology, Faculty of Pharmacy, Istanbul University, Istanbul, Turkey*

Human skin is a unique membrane that protects the human body from physical, chemical and microbiological external factors. However, the effective treatment of dermatological diseases *via* locally administered drugs into the target layers of the skin is difficult due to that strong barrier feature of the skin, especially its most upper layer *stratum corneum* layer. Thus, novel nano-carriers for skin delivery have a great interest as an attractive strategy to overcome *stratum corneum* barrier and to deliver drugs into the targeted sites of the skin in last two decades. Polymeric micelles which are one of the major nano-carriers, have been spontaneously formed nano-aggregates in core-shell structures above/at a certain concentration called as critical micelle concentration from amphiphilic blok copolymers. The hydrophobic core enables to increase solubility of the lipophilic drugs in aqueous medium and act as a reservoir for the drugs, so providing extended release. The hydrophilic shell plays a role in the formation and stability of the colloidal system. Laser Scanning Confocal Microscopy data indicated that polymeric micelles have been deposited into hair follicles and superficial cracks in the skin. Therefore, skin delivery of drugs *via* nano-carriers have resulted in higher efficacy at lower doses due to their deposition in the *pilosebaceous* units including mainly hair follicles. That would provide superiority in topical treatment of dermatological diseases such as acne and the other related to hair diseases.

PP-67

**Effect of The Mobility on (I-V) Characteristics of The MESFET GaAs**

*Benzaoui Ouassila<sup>1</sup>, Azizi Cherifa<sup>2</sup>*

<sup>1</sup>*Technology Department, 20 August 1955 University, Skikda, ALGERIA*

<sup>2</sup>*Department of Material Sciences, Larbi Ben M'hidi University, Oum El-Bouaghi, Algeria*

In recent years, microwave electronics has grown considerably in applications oriented towards public telecommunications (mobile phone, satellite communications, etc.). GaAs metal-semiconductor field-effect transistors (MESFETs) are the most commonly used and important active devices in microwave circuits. The aim of this contribution is devoted to the effect of the mobility on the static characteristics I-V of the MESFET GaAs. The study enables us to calculate the drain current as function of bias in both linear and saturated modes; this effect is evaluated using a numerical simulation program. The influence of mobility was studied. Obtained results allow us to determine the mobility law in the MESFET which gives optimal (I-V) characteristics of the component.

**ISTANBUL UNIVERSITY  
2<sup>nd</sup> WORLD CONFERENCE ON TECHNOLOGY,  
INNOVATION AND ENTREPRENEURSHIP**

---

---

**INDEX**

---

---

## INDEX

- A**
- Ab Rahman, M. I. OP-168  
 Ab Rahman, M. N. OP-070  
 Abd Aziz, I. OP-171  
 Abd Halim, M. S. OP-231  
 Abd Hamid, N. H. OP-171  
 Abdelali, A. PP-48  
 Abdennour, C. PP-29  
 Abdullahi, A. H. OP-192  
 Abdullahi, S. M. OP-035  
 Abdullai, A. OP-121  
 Abdulwakil, A. OP-133  
 Abisuga, A.O. OP-154  
 Ablay, A. OP-222  
 Abu El Haija, A. K. PP-13  
 Açıkğöz, H. OP-163, OP-166  
 Adamulhasza, I. Z. OP-247  
 Ahmed, B. H. PP-17  
 Ahmed, F. PP-46  
 Ahmed, S. OP-108  
 Ajdari, J. OP-135, OP-150, OP-159  
 Ajdari, J. E. OP-121  
 Ak, İ. OP-098  
 Akay, B. OP-031  
 Akay, R. G. PP-03  
 Akcaci, T. OP-086  
 Akgün, A. E. OP-010, OP-012  
 Akinci, G. OP-052  
 Akinpelu, A. A. OP-154  
 Akinsanya, A. Y. OP-194  
 Akiş, E. OP-019  
 Akın, A. N. PP-03, PP-09  
 Akkaya, M. A. OP-227  
 Akman, G. OP-143  
 Aksu, D. OP-133  
 Aktaş, H. OP-099  
 Al Balas, Q. A. PP-13  
 Al Gebory, L. OP-196  
 Al Shehry, A. S. OP-180  
 Ali, R. PP-30, PP-58  
 Alias, R. A. OP-231  
 Alkan, R. M. OP-211  
 Almaaytah, A. PP-13  
 Alshahrani, S. A. OP-180  
 Altındağ, E. OP-011  
 Altıntaş, Z. I. OP-088  
 Amanov, A. OP-013  
 Amar, S. E. PP-28  
 Amel, M. PP-52  
 Amina, N. PP-17  
 Amiruddin, N. Q. OP-247  
 Amiruddin, N. S. OP-247  
 Anand, B. OP-225  
 Anwar, A. A. OP-170  
 Apaydın, F. OP-042, OP-073  
 Ardil, C. OP-187  
 Arıcı, Ş. OP-098  
 Arıtürk, M. OP-245  
 Arslan, A.Öz, B. OP-037  
 Arslan, G. OP-184  
 Asanidze, N. OP-025  
 Asghar, M. Z. OP-174  
 Aslan, H. K. OP-120  
 Asmâa, M. PP-58  
 Aştı, T. OP-065  
 Atabarut, T. OP-130  
 Atam, K. İ. PP-14  
 Atan, Ö. OP-075  
 Atay, C. OP-184  
 Awangku Abdul Rahim, A. N. H. OP-247  
 Ayar, H. OP-010, OP-012  
 Aydemir, B. PP-02, PP-16, PP-26  
 Aydın, A. E. OP-038  
 Aydın, M. A. OP-124, OP-133  
 Aydın, O. OP-122, OP-179  
 Ayhancı, C. OP-136  
 Aykanat, Z. OP-223  
 Ayyıldız, H. OP-083  
 Azimova, T. OP-018
- B**
- Baba, N. H. OP-168  
 Babayigit, Y. OP-242  
 Baccouch, W. OP-200  
 Baig, U. PP-62  
 Bajpai, P. OP-111  
 Bak, B. OP-100  
 Bakalim, T. C. PP-36  
 Bakan, İ. OP-029  
 Bakan, İ. OP-089  
 Bakir, C. PP-06, PP-07  
 Balpetek Kulcu, D. OP-246, OP-248  
 Baltacı, A. OP-213  
 Barlas, E. OP-085  
 Başarangil, İ. OP-074  
 Başçı, E. S. OP-211  
 Başdağ, G. C. OP-004, OP-085  
 Bayazit, Ş. S. PP-20  
 Baykal Narcıkara, E. OP-109  
 Bayraktar, Y. OP-001  
 Baysal, Ö. PP-25  
 Bektaş, B. OP-118  
 Belaoui, H. A. PP-18, PP-19  
 Benabbou, T. A. PP-63, PP-64  
 Benashvili, G. OP-051  
 Benturki, O. PP-24  
 Berilo, A. A. OP-014  
 Besimi, A. OP-244  
 Besimi, N. OP-244  
 Beyazit, U. OP-020  
 Bin Md Deros, B. OP-171  
 Binti Mohd Nawi, N. S. OP-070  
 Bircan, M. OP-182  
 Boğan, H. OP-162  
 Borhane, D. A. PP-10  
 Bouadda, Z. OP-234  
 Bouakkez, D. PP-29  
 Boudriche, L. PP-56  
 Boukhennoufa, N. PP-59  
 Boukortt, A. OP-216, OP-233  
 Boulkhessaim, S. PP-61  
 Bounoughaz, M. OP-234  
 Boutheyne, A. PP-35  
 Boutoumi, H. PP-12  
 Bouzabata, B. PP-01  
 Bouziane, A. PP-55  
 Bouzidi, R. PP-59  
 Bozoklu, Ü. OP-008  
 Boztoprak, H. OP-238  
 Brahim, B. PP-60  
 Bütün Ayhan, A. OP-020
- C**
- Cebeci, Ö. OP-026  
 Cheikhi, S. OP-234  
 Cherfaoui, M. PP-56  
 Cherifa, A. PP-67  
 Cinemre, F. B. PP-02, PP-16, PP-26  
 Cinemre, H. PP-02, PP-16, PP-26  
 Cihan, S. OP-098  
 Coskun Daggecen, E. PP-08  
 Coşkun, Z. OP-011
- Ç**
- Çağatay, O. PP-36  
 Çakırca, E. E. PP-09  
 Çalgüner, A. OP-079  
 Çavdar, T. OP-198  
 Çavuş, Ö. H. OP-063  
 Çelebi, İ. OP-088  
 Çelik, C. PP-03  
 Çelik, F. OP-055  
 Çelik, M. OP-164, OP-188  
 Çeliktaş, E. OP-057, OP-058  
 Çetin, M. OP-091  
 Çetinkaya, A. Ş. OP-035  
 Çevik Onar, S. OP-172  
 Çimen, M. OP-075  
 Çinar, G. OP-020

## INDEX

- Çopur, M. OP-138, OP-197  
Çopuroğlu, Y. C. OP-048  
Çulha, Y. OP-064, OP-065
- D**  
Dabney, P. C. OP-211  
Dakiche, H. PP-12, PP-13, PP-13  
Dannali, O. F. OP-140  
Daranfed, O. PP-21, PP-22  
Daranfed, W. PP-65  
Delibaş, E. OP-156, OP-160  
Demir Uslu, Y. OP-096  
Demir, A. OP-040  
Demirbaş, D. OP-097, OP-101  
Demircan Keskin, F. OP-022  
Demirel, D. OP-226  
Demirtaş, M. A. OP-191  
Den Hartigh, E. OP-170  
Dener, M. OP-123, OP-125  
Deniz, E. OP-242  
Deniz, S. OP-075  
Dereli, D. D. OP-066  
Derya, H. OP-094  
Dickel, P. OP-034  
Didi, M. A. PP-31, PP-32, PP-35  
Didier, V. PP-37  
Dijaya, S. OP-030, PP-40  
Dika, A. OP-181, OP-202  
Diri, B. OP-156  
Dirsehan, T. OP-039  
Djamel, B. PP-48  
Djouane, L. OP-157, OP-161  
Dkhichi, F. OP-201, OP-220  
Doğan, E. OP-072  
Doğan, N. OP-145  
Doluca, H. OP-034, OP-054  
Doria, G. PP-10  
Doufnoune, R. PP-23  
Duman, E. OP-128  
Durusu, A. OP-182
- E**  
Eddine, K. N. PP-63, PP-64  
Egaña Muñoz Cobo, B.H de OP-093  
Eker Işcioğlu, T. OP-049  
El Abidine, R. Z. PP-60  
El Amine Bendaha, M. PP-18, PP-19  
El Kechebour, B. OP-116  
El Kouari, Y. OP-201, OP-220  
Elgimari, A. E. OP-180  
Elma, O. OP-182  
Endratno, H. OP-210  
Entezari, Y. OP-060  
Erbelet, E. OP-002  
Erciş, A. OP-076  
Erdem, M. B. OP-083  
Erdil, A. OP-173, OP-183, OP-165,  
OP-173, OP-183  
Erdil, O. OP-015  
Erdoğan, E. PP-16  
Erdoğan, Y. OP-143  
Eren, E. OP-127  
Eren, Ö. OP-052  
Ergun, H. S. OP-110  
Erol, T. OP-114  
Erpolat Taşabat, S. OP-122, OP-179  
Esen, A. OP-049  
Eskizeybek, V. OP-140  
Etlioglu, T. OP-010, OP-012
- F**  
Fadila, D. Y. PP-41  
Fakrache, A. E. PP-61  
Fatiha, Z. PP-31  
Fatima, Y. C. PP-30  
Fatma, L. PP-52, PP-53  
Fatma, M. PP-53  
Fayala, F. OP-200
- Felekoglu, B. OP-190  
Fenni, M. PP-57  
Florian, B. PP-49  
Fouzia, C. PP-04, PP-05  
Fouzia, Z. PP-38
- G**  
Gacar, A. OP-099  
Gadelmavla, D. OP-184, PP-36  
Gani, A. OP-163, OP-166  
Gemici, E. OP-112  
Ghith, A. OP-200  
Gilbert, F. PP-04  
Gökçe, H. OP-088  
Göksu, N. OP-083  
Gonzalez, D. J. D. OP-032  
Gözlü, C. PP-03  
Gucluoglu, T. PP-14  
Guermat, N. PP-21, PP-22, PP-65  
Guessabi, N. OP-142  
Guezzout, Z. PP-23  
Gülaboğlu, M. Ş. OP-195  
Gülerman, N. İ. OP-073  
Gülyaşar, T. PP-02  
Gündüz, M. OP-192  
Güneş, S. OP-082  
Güney, A. PP-36  
Güngör, S. PP-66  
Güngör, Y. OP-165  
Gür, U. OP-148  
Guven Gulhan, U. PP-08  
Güven Özdemir, N. OP-062,§ OP-065  
Güvenilir, B. OP-098  
Güvenilir, F. OP-056  
Guz, T. OP-028, OP-044  
Güzey, Y. OP-238
- H**  
Hacıoğlu, V. OP-092, OP-224  
Haddadi, S. OP-142  
Haddaoui, N. PP-23  
Hajra, A. OP-151  
Hakimi, S. OP-215  
Hamiti, M. OP-181, OP-185, OP-202  
Hamitouche, E. E. PP-24  
Hamouti, N. OP-046  
Hanandeh, E. S. OP-189  
Hancıoğlu, Y. OP-096  
Hanene, L. PP-54  
Harraf, A. OP-102  
Hasani, Z. OP-153  
Hashim, R. B. OP-047  
Hiç, O. OP-043  
Hishamuddin, N. S. OP-171  
Hidroğlu, D. OP-017, OP-050  
Hocaoğlu, E. OP-158  
Houcine, O. PP-48  
Huseynov, N. OP-105
- I**  
Indah Daruis, D. D. OP-171  
Inel, F. PP-47  
Iskender, E. OP-090  
Iskender, Y. OP-090  
Ismail, S. OP-230  
Ismaili, F. OP-121, OP-135, OP-150,  
OP-159
- Iyiola, O. F.
- İ**  
İncekara, A. OP-154  
İnci, I. OP-013, OP-028  
İzmirli Ata, F. PP-20  
OP-095
- J**  
Jamil, T. PP-62  
Januzaj, Y. OP-151, OP-155

- K**
- Kabasakal, İ. OP-022
- Kabukcu, E. OP-113
- Kacar, A. İ. OP-095
- Kaci, I. OP-234
- Kahraman, C. OP-167, OP-172
- Kahraman, E. PP-66
- Kamel, D. PP-53
- Kandemir, Ç. OP-188
- Kanmaz, M. OP-124
- Karabacak, A. OP-039
- Karabıçak, Ç. OP-143
- Karaçetin, D. PP-26
- Karagöz, Ö. OP-141
- Kartal, N. PP-02
- Kaya, B. PP-16
- Kaya, E. OP-094, OP-104, OP-107
- Kaya, H. OP-062, OP-064, OP-065
- Kaya, N. OP-144, OP-146, OP-147, OP-149, OP-237, PP-11
- Kaya, P. OP-114
- Kaya, R. OP-027
- Kaya, S. OP-075
- Kayar, V. OP-088
- Keçecioglu, Ö. F. OP-163, OP-166
- Kekezoglu, B. OP-182, OP-136
- Kesenek, M. OP-163
- Kesim Güven, S. OP-130
- Keskin, H. OP-010, OP-012
- Khaled, C. PP-39
- Khali, M. PP-12, PP-13
- Khamis, N. K. OP-152
- Khan, A. PP-62
- Khan, M. İ. OP-212
- Kharchi, F. PP-33
- Khatima, K. D. PP-51
- Kihal, A. PP-01
- Kiyani, F. OP-139
- Kızılca, M. OP-138, OP-197
- Kızılar, A. R. PP-02, PP-16
- Koç, K. OP-004
- Koc, M. OP-007, OP-117
- Köle, M. OP-109, OP-112
- Konakay, G. OP-053
- Koppers, M. OP-152
- Köse, E. OP-118
- Koska, A. OP-083
- Krim, L. PP-53
- Kulcu, S. OP-246, OP-248
- Kunday, Ö. OP-054
- Kurt, O. E. OP-175
- Kurt, Y. OP-088
- Kuşlu, S. OP-141
- L**
- L'hadi, N. PP-42
- Labied, R. PP-24
- Lacheb, F. PP-34
- Lalaoui, L. PP-15
- Latelli, H. PP-50
- Lhachimi, H. OP-201, OP-220
- Löle, A. OP-130
- Loubna, C. PP-38
- Luma, A. OP-151
- M**
- Maas, N. OP-152
- Makbul, D. S. OP-030, PP-40
- Mango, W. OP-015
- Mansoori, R. A. OP-007
- Maqsood Ul Haque, S. N. S. OP-199
- Marangoz, M. OP-038
- Maroua, B. PP-10
- Mat Isa, N. A. OP-230
- Mazlumoglu, H. OP-195
- Md Deros, B. OP-070, OP-152, OP-168
- Meddah, B. PP-18, PP-19
- Mehdi, Y. PP-24
- Meklati, F. PP-56
- Meklati, F. R. PP-34
- Meribai, A. PP-34
- Merida, A. PP-33
- Meriem, B. PP-53, PP-55
- Meriem, M. PP-56
- Messaoud, G. PP-48
- Mesut, B. OP-193, PP-27
- Miled, W. OP-200
- Miraoui, A. PP-32
- Mohamed, B. H. OP-117
- Mohamed, H. PP-04, PP-05, PP-37, PP-49
- Mohd Sarif, S. OP-230
- Mohd Wahid, S. D. OP-230
- Mokhtar, M. PP-19
- Mollaahmetoglu, E. OP-018
- Mollakuqe, E. OP-185
- Mourad, D. PP-42
- Mücelandili, B. OP-015
- Muzaffar, H. OP-205
- N**
- Nacerddine, H. PP-38
- Nadeem, S. PP-25
- Nadia, T. PP-60
- Nart, S. OP-126
- Nassima, B. PP-37, PP-49
- Nawel, B. PP-53
- Nordin, N. OP-070
- Norouzi, A. OP-131
- Nouani, A. PP-34
- Nouibat, A. OP-221
- Nuawi, M. Z. OP-152
- O**
- Odabaş, N. PP-20
- Okkache, B. PP-30
- Oliveira, S. OP-071, OP-177
- Olowu, O. A. OP-194
- Olukemi Olanrewaju, D. OP-194
- Onar, S. C. OP-167
- Oral, A. OP-134, OP-137
- Ortaköy, S. OP-106
- Ouassila, B. PP-67
- Oudira, H. OP-157
- Oudira, H. OP-161
- Oukarfi, B. OP-201, OP-220
- Ö**
- Önel, A. OP-115
- Özaydin, O. OP-176
- Özbek, E. OP-110
- Özbilgin, I. G. OP-114
- Özçam, I. OP-080, OP-081
- Özcan, B. OP-143
- Özdemir Aydın, G. OP-065, OP-144, OP-146, OP-147, OP-149, OP-237, PP-11
- Özdemir, S. OP-240
- Özdemir, Y. OP-214
- Özden, I. OP-061
- Özdoğan, B. OP-099
- Özer, M. OP-023
- Özgobek, H. R. OP-003
- Özkan, G. OP-190
- Ozkan, O. OP-086
- Özkurt Çokgüngör, H. OP-021, OP-235
- Özsoy, Y. OP-193, PP-27, PP-66
- Öztaysi, B. OP-167, OP-172
- Öztürk, M. OP-024
- Öztürk, Ö. OP-048
- Özyılmaz, A. OP-001
- P**
- Parlar, H. OP-033
- Pineas, E. PP-36
- Priya Rolla, K. OP-067
- R**

## INDEX

- Radia, L. PP-17, PP-42  
 Rahmani, A. OP-185  
 Rajaby, M. E. OP-198  
 Ramaj, V. OP-155  
 Raufi, B. OP-121, OP-135, OP-150,  
 OP-159  
 Roslin, S. M. OP-171  
 Rosly, A. L. OP-171
- S**  
 Saad, M. PP-17  
 Saadia, C. PP-60  
 Safia, T. PP-58  
 Sahekhaini, A. OP-247  
 Saifi, A. OP-157, OP-161  
 Sakiz, B. OP-186  
 Saleemi, S. PP-62  
 Salem, B. PP-52  
 Saliha, B. PP-53  
 Salleh, B. S. OP-247  
 Samur Teraman, S. B. OP-110  
 Sana, B. PP-10  
 Saoula, S. OP-142  
 Saricoban, K. OP-104, OP-107  
 Sarihan, A. Y. OP-126  
 Sari, D. OP-016  
 Sari, M. OP-229  
 Sarnou, D. OP-045, OP-119  
 Sarnou, H. OP-045, OP-119  
 Sayouti, Y. OP-220  
 Schramm, D. OP-152  
 Selamogullari, U. S. OP-182  
 Selimi, B. OP-151  
 Sengun, G. OP-028, OP-044  
 Sevinç, L. PP-16  
 Shabani, L. OP-159  
 Shah, S. M. A. OP-212  
 Shahid, S. OP-178  
 Shahnaz, L. PP-54  
 Shawkataly, R. B. OP-047  
 Shehu, V. OP-244  
 Sher, M. M. OP-178  
 Sikalo, M. OP-014  
 Silme, R. S. PP-25  
 Sindel, D. OP-134  
 Sindel, D. OP-137  
 Slimani, S. PP-29  
 Söner, Ö. OP-164  
 Sönmez, F. OP-176  
 Soualem, A. OP-215  
 Soudani, K. OP-142  
 Soyuer, H. OP-022  
 Soyyigit, S. OP-127  
 Staub, S. OP-126, OP-242  
 Stefan, Z. OP-132  
 Sukadarin, E. H. OP-070  
 Sultan, F. OP-212  
 Susuri, A. OP-181, OP-202
- Ş**  
 Şahin, D. OP-079  
 Şahin, S. OP-103  
 Şeker, A. OP-156, OP-160,  
 Şekkel, M. OP-163, OP-166  
 Şekkel, Z. H. OP-029, OP-089  
 Şencan, S. OP-088  
 Şener, S. OP-092, OP-224
- T**  
 Tağ, M. N. OP-050  
 Tandoğan, M. OP-078  
 Tas, O. OP-139  
 Tekarslan Şahin, Ş. H. OP-193  
 Tekarslan, S. H. PP-27  
 Tekin, M. OP-163, OP-166  
 Tirtouil, A. PP-18, PP-19  
 Topak, M. S. OP-006  
 Toprak, M. OP-001
- Torun, M. OP-036  
 Trento, S. OP-071  
 Tunali, H. OP-044  
 Tuncer Tokur, Ö. OP-059  
 Turan, N. OP-062, OP-064, OP-065,  
 OP-144, OP-146, OP-147,  
 OP-149, OP-237, PP-11  
 OP-009  
 Türker, C. OP-041  
 Türkkan, E. PP-02, PP-16  
 Tüten, A. OP-169  
 Tüzmen Yıldırım, A. OP-169
- U**  
 Ulutan, M. OP-039  
 Utlu, Z. OP-026, OP-103  
 Uyan, Ö. OP-087  
 Uzun, P. OP-170  
 Uzun, R. O. OP-203, OP-239  
 Uzun Kocamiş, T. OP-059
- Ü**  
 Üçler, Ç. OP-175  
 Ünal, M. OP-076, OP-077  
 Ünlü, M. OP-098  
 Üstün, S. OP-203, OP-239
- V**  
 Vayvay, Ö. OP-175  
 Ventura, K. OP-022  
 Vural, G. C. OP-003
- W**  
 Wahiba, M. PP-39
- Y**  
 Yahi, Z. PP-29  
 Yalçıntaş, M. OP-041  
 Yalman, A. OP-134, OP-137  
 Yamina, M. PP-17  
 Yanar Gürce, M. OP-008  
 Yapraklı, T. Ş. OP-077  
 Yavuz, M. OP-082  
 Yıldırım, G. OP-059  
 Yıldırım, Y. E. OP-088  
 Yıldız, A. R. OP-218  
 Yıldız, C. OP-163, OP-166  
 Yıldız, D. OP-238  
 Yıldız, M. PP-02  
 Yıldız, T. OP-223  
 Yılgör, N. OP-165  
 Yılmaz, N. PP-02  
 Yılmaz, G. OP-091  
 Yoldaş, Y. B. OP-136  
 Yousaf Jamil, M. Y. OP-068, OP-069  
 Yurdakul, Y. OP-020  
 Yurttadur, M. OP-009, OP-016, OP-057,  
 OP-058, OP-088, OP-098  
 OP-211  
 Yürürer, G. PP-04  
 Yves, J. PP-04
- Z**  
 Zaimovic, A. OP-014  
 Zehir, C. OP-109, OP-112  
 Zelinka, E. OP-174  
 Zenuni, X. OP-121, OP-135, OP-150,  
 OP-159  
 Ziani, B. E.c PP-52  
 Ziani, M. OP-228  
 Zohra, M. PP-17



**KUVEYTTÜRK**  
PARTICIPATION BANK INC.

# NEW GENERATION BANKING PLATFORM BY KUVEYT TÜRK: SENİN BANKAN

Senin Bankan is with you wherever you are;  
on your smart phone, your tablet,  
your computer.

Turkey's first  
digital  
interest-free  
banking  
platform

NO  
account  
maintenance  
fee!

NO EFT  
or remittance  
fee!

NO  
branches!



Detailed information and  
application:  
[seninbankan.com.tr](http://seninbankan.com.tr)

**Senin  
Bankan**  
.com.tr  
Yeni nesil dijital banka

f t i /SeninBankan





DAMAT

[www.damattween.com](http://www.damattween.com)

# sinbo

*Akıllı Seçim..*

made in  
**TURKEY**



EVĐEN EVE ÜCRETSİZ TEKNİK SERVİS



444 66 86

sinbo.com

 sinboturkiye

 sinboturkey

 sinboturkiye

# KURUMSAL TARİFENİZ YURT DIŐINDA DA GEÇERLİ

Günlük sadece 16,90 TL



İnternet, DK ve SMS'in bir arada olduđu tüm faturalı paketlerde geçerlidir.



**TURKCELL**

TURKCELL'LE BAĞLAN HAYATA

İnternet, dakika ve SMS'i bir arada içeren paketlerdeki müşteriler, geçerli ülkelerde, otomatik olarak günlük ek 16.90 TL'ye her yöne dakikaları ile bulunduğu ülkeyi ve Türkiye'yi arayabilir; internet ve SMS'lerini kullanabilirler. Yurt içi tarifeye ek paketler kapsam dışıdır. Paket faydaları bittiğinde aşım ücretlendirilecektir. Her yurt dışına çıkışta kullanımla aktif olur, sadece kullanım olan gün ücretlendirilir. Günlük ücret Türkiye saatine göre 24.00'a kadarki kullanımı kapsar. Ücretlendirme periyodu 60 sn/1 MB'dır. İptal için IPTAL SUPER YURTDISI yazıp 2200'a gönderilir. Turkcell'in, koşullarda değişiklik hakkı saklıdır. Detaylar: [www.turkcell.com.tr](http://www.turkcell.com.tr)

# Giriřimcilięe yeni bařlayanlar Halkbank'a!

Giriřimci Kredisi almak isteyen  
tüm giriřimcileri řubelerimize bekliyoruz.

Ali

yeni

fikir

bul

Oya

kendi

iřini

kur

Kaya

giriřimci

ol