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BOOK OF ABSTRACTS

IEAS-17

International Engineering, Mathematics & Applied Sciences Conference December 16-17 / Barcelona - Spain

Organizaed by



ACADEMIC RESEARCH AND SOLUTIONS SOCIEDAD LIMITADA

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Book of Abstracts of the International Engineering, Mathematics & Applied Sciences Conference

IEAS-17

Edited by

Prof. Dr. Perez M.

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Welcome to Academic Research and Solutions Sociedad Limitada (ARS)

ARS provides an ideal academic platform for researchers to present the latest research findings and describe emerging technologies, and directions in Social Sciences, Business Management, Engineering and Natural Science issues. The conference seeks to contribute to presenting novel research results in all aspects of Social Sciences and Engineering. The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of Engineering, Social and Applied Sciences. It also provides the premier interdisciplinary forum for scientists, engineers, and practitioners to present their latest research results, ideas, developments, and applications in all related areas. The conference will bring together leading academic scientists, researchers and scholars in the domain of interest from around the world. Our oncoming events of the successful conference series focusing on Engineering and Social Sciences. Hence, the scientific program focuses on current advances in the research, production and use with particular focus on their role in maintaining academic level in Engineering, Social & Applied Sciences and elevating the science level. The conference's goals are to provide a scientific forum for all international prestige scholars around the world and enable the interactive exchange of state-of-the-art knowledge. The conference will focus on evidence-based benefits proven in clinical trials and scientific experiments.

Best Regards, Chairman of Conference Prof. Dr. T.I.K.



IEAS-17

International Engineering, Mathematics & Applied Sciences Conference SALLES HOTEL PERE IV, BARCELONA - SPAIN

PROGRAM SCHEDULE



Conference Schedule

DAY 01 Saturday (December 16, 2017)

Venue: Salles Hotel, Barcelona, Spain

09:00 am - 09:30 am	Welcome Reception & Registration
09:30 am - 09:40 am	Opening Ceremony
09:40 am - 09:50 am	Welcome Remarks - Dr. Perez M. - Conference Coordinator
09:50 am - 09:55 am	Introduction of Participants
09:55 am – 10:00 am	Group Photo Session
10:00 am – 10:30 am	Grand Networking Session and Tea Break

DAY 01 Saturday (December 16, 2017)

Session 1 (10:30 am - 12:00 pm)

Venue: Room 1

Session Chair: Dr. Perez M.

Track A: Business, Economics, Social Sciences and Humanities

Point of Discussion	Presenter
Computation of a Customer Satisfaction Index for the Accommodation Sector and an Examination of its Antecedents	Dr. Robin Nunkoo
Gift-Gining and Re-Gift Giving Behaviours on Turkish Consumers	Hanifi Murat Mutlu
The Role of Fair Trade on Young Consumers Purchasing Behavior	Hasan AKSOY
Examining of Health Tourism Development within the Tourism Movements	Assoc. Prof. Dr. Ebru Tarcan İçigen
Choosing Direct Charitable Donation over Cause-Related Marketing: Is It True in China?	Prof. Miao Zhao
Social Media As A Tool of Young Employees Development	Pawel Luczak
A Sufi Reflected by the Prophet Mohammad's Human Love Thought: Abul-Hasan Kharakani	Alparslan KARTAL

Lunch Break (12:00 - 01:00pm)

DAY 01 Saturday (December 16, 2017)

Session 2 (01:00 pm - 03:00 pm)

Venue: Room 1

Session Chair: Dr. Perez M.

Track B: Engineering & Technology, Computer, Basic & Applied Science

Point of Discussion	Presenter
Determination of an Optimized Weighting Factor of Liver Fat Percentage Imaging Techniques Accuracy on Non-Alcoholic Fatty Liver Disease	Seung-Man Yu
Canonical Reduction of Self-Dual Yang-Mills Theory to some Nonlinear Evolution Equations to Inhomogeneous nonlinear Schroödinger and Exact Solutions	Gharib Mousa Gharib
Bicarbonate-enhanced Photocatalytic Oxidation of Organic Compounds by W03/H202 System under Visible Light Illumination	Hak-Hyeon Kim
Chemical Actinometry and Bio-dosimetry for Determination of UV Fluence in Pilot- scale Disinfection System	Taewan Kim

Closing Ceremony (03:00 - 03:15)







2nd Day (December 17, 2017)

All respective guests are free to conduct their own sightseeing and tour. The second day of the event is reserved for this memorable purpose.







TRACK A: ENGINEERING TECHNOLOGY AND APPLIED SCIENCES



Determination of an Optimized Weighting Factor of Liver Fat Percentage Imaging Techniques Accuracy on Non-Alcoholic Fatty Liver Disease

Seung-Man Yu*

Abstract The aim of this study was to determine accurate weighting factor that are required for precise quantification of high fat diet non-alcoholic fatty liver, when the 6-point interference Dixon fat percentage imaging techniques is used, by analyzing changes in WFs of liver LP. We manufactured phantom series which comprised four test tubes, oleic, linoleic and two soybean oil for the repeatability test, and we studied repeatability of the 6-point interference Dixon fat percentage imaging measurements of fat percentage in response to weighting factor changes. Individual lipid proton related weighting factors were calculated for oleic, linoleic, and soybean oil based on the concentration ratios of the 7 peak lipid protons integrated areas. With four weighting factors being applied, 10 fat percentage images were acquired each weighting factor using the 6-point interference Dixon fat percentage imaging techniques, and the acquired images were compared for analysis. Ten male 8-weeks-old Sprague-Dawley weighing 100-150g were used base-line MRI and MRS data were already acquired before fed the high fat diet 60% and acquired MRI and MRS data every 2weeks for 8weeks as the schedule of 1H-MRS experiments. The 7 lipid protons were quantitatively analyzed, and Spearman test was used for correlation analysis on different LP concentrations. The 0.9 ppm lipid proton had a statistically significant positive correlation with the 1.3ppm and a significant negative correlation with the 1.6, 2.25 and 2.7 ppm lipid proton. The 1.3 ppm LP showed a negative correlation with the LPs of 1.6, 2.03, 2.25 and 2.7 ppm, and the 1.6 ppm LP showed a positive correlation with the LPs of 2.03, 2.25 and 2.77 ppm. We confirmed the importance of accurate weighting factors in the calculation of 6-point interference Dixon fat percentage imaging techniques on phantom experiment. If weighting factor of liver parenchyma lipid proton, which is specific to each liver disease, is applied, the accuracy of 6-point interference Dixon fat percentage imaging techniques can further increase.

Keywords: Imaging Techniques, Optimization, Dixon.

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Canonical Reduction of Self-Dual Yang-Mills Theory to some Nonlinear Evolution Equations to Inhomogeneous nonlinear Schro "dinger and Exact Solutions

Gharib Mousa Gharib*

Abstract The (constrained) canonical reduction of four-dimensional self-dual Yang-Mills theory to two-dimensional inhomogeneous nonlinear Schro'dinger equation are considered. On the other hand, other methods and trans-formations are developed to obtain exact solutions for the original two-dimensional inhomogeneous nonlinear Schrodinger equation. The corresponding gauge potential A_{μ} and the gauge field strengths $F_{\mu\nu}$ are also obtained. New traveling wave solution for inhomogeneous nonlinear Schro dinger equation are obtained by using the Backlund transformations with the aid of Mathematica.

Keywords: Nonlinear Evolution Equations, Yang-Mills Theory, Gauge field Theories.

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Bicarbonate-enhanced Photocatalytic Oxidation of Organic Compounds by WO3/H2O2 System under Visible Light Illumination

Hak-Hyeon Kim¹, Jaemin Choi², Hongshin Lee³, Jiwon Seo⁴, Min Sik Kim⁵, Taewan Kim⁶, Ki-Myeong Lee⁷, Hyeongjin Jeong⁸, Changha Lee^{9*}

Abstract Tungsten(VI) oxide (WO3) has been studied as a photocatalyst for oxidative degradation of organic contaminants. However, WO3 alone is not effective in oxidizing contaminants due to the fast recombination of electron and hole pairs. The addition of hydrogen peroxide (H2O2) can inhibit the electron-hole recombination by trapping electrons from the photo-excited conduction band, resultingly improving the production of hydroxyl radical (•OH) in the valence band. Through this mechanism, the oxidative degradation of organic contaminants by illuminated WO3 can be accelerated by H2O2. In this study, it was found that the addition of bicarbonate ion (HCO3②) further enhances the degradation of organic contaminants by illuminated WO3/H2O2 system. Interestingly, HCO3②, generally known as a •OH scavenger, increased the production of •OH by illuminated WO3/H2O2, which was evidenced by experiments using •OH probe compounds and electron paramagnetic resonance (EPR) spectroscopy. All photocatalytic experiments were carried out under visible light illumination (② > 400 nm).

Keywords: Tungsten Oxide, Photocatalyst, Bicarbonate, Visible Light, Oxidative Degradation.



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Chemical Actinometry and Bio-dosimetry for Determination of UV Fluence in Pilot-Scale Disinfection System

Taewan Kim¹, Jiwon Seo², Hak-Hyeon Kim³, Junghun Lee⁴, Donghyun Lee⁵, Min Sik Kim⁶, Ki-myeong Lee⁷, Hyungjin Jung⁸, Changha Lee^{9*}

Abstract Ultraviolet (UV) disinfection has been widely used and studied as an effective technology to inactivate pathogens in water. Unlike chemical disinfection using chlorines and ozone, UV disinfection does not produce harmful disinfection byproducts. Since the IT values (product of UV intensity and time required for log inactivation of microorganisms) are known for many microorganisms, the microbial inactivation efficacy of UV disinfection systems can be quantitatively estimated by determining UV fluence. Computational fluid dynamics (CFD) modeling is routinely used to predict the UV fluence. However, the simulation by CFD modeling can have less reliability compared to the methods by experimental measurements. Biodosimetry using test microorganisms can be an option to experimentally measure the UV fluence, but it also has limitations regarding cost, accuracy, and large-scale application. Chemical actinometry can be an alternative to assess the UV fluence in disinfection systems. In this study, uridine was selected as a chemical actinometer. UV fluence was quantified and compared in a lab scale disinfection system using both biodosimetry and chemical actinometry using uridine. Uridine was also applied to measure the UV fluence of a full-scale disinfection system for an outdoor floor fountain.

Keywords: Chemical Actinometry, Bio-dosimetry, UV Fluence.



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TRACK A: BUSINESS, ECONOMICS, SOCIAL SCIENCES & HUMANITIES



Examining of Health Tourism Development within the Tourism Movements

Ebru TARCAN İÇİGEN*

Abstract Today people participate in tourism for various reasons. One of the reasons for people to participate in the tourism is the health. This kind of tourism, called health tourism, has been developing all over the world. The participation of people in the tourism for the purpose of getting health services has caused an increase in the quality and quantity of the institutions and enterprises that can serve in the field of health tourism in the countries that accept tourists. The main purpose of this study is to examine the development of health tourism, which emerges from the combination of health care and holiday facilities, in Antalya. For this purpose, a literature survey has been conducted on the subject and the present situation on health tourism have been examined through secondary sources.

Keywords: Tourism, Health Tourism, Antalya.

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Choosing Direct Charitable Donation over Cause-Related Marketing: Is It True in China?

Miao Zhao^{1*}, Yimin Zhu²

Abstract Developmental psychology is a relatively new science, but the continued pursuit of its study has led to many conclusions and insights on the development of humans. The study of child development has been particularly investigated, allowing people to realize and facilitate the transformations that occur from infancy through childhood through adolescence. First, I will examine cognitive development, or the development of mental and motor skills. I will also describe Cognitive development; it is based over in terms of two of the most well known theories on the subject: Jean Piaget's four stages of cognitive development and the information processing theory. The second aspect of child development that is examined is physical development. Physical development starts from the day of birth and advances rapidly. Changes can be seen weekly in infanthood and, though the process of physical development slows drastically, development continues into adulthood. The third aspect of development that I will examine is social and emotional development. Humans go from birth, where they only possess four innate emotions, to adolescence, where they face a complicated quest for identity. Although this is an overview of child development, it is important to remember that each theory in child development has its strengths and weaknesses and each theory has been subject to both affirmations and criticisms. Another thing to think about while going through this article is the importance of outside factors on a child's development. For example, children's development is affected by the historical time in which they lives, the culture they belong to, any social or demographic changes that take place in their culture, their family situation, and many other factors. Also, while development is explained in this article by age group, these ages do not represent definite marks as to where a child should be at a specific age, and are instead rough guidelines to the typical progression of child development.

Keywords: Cause-Related Marketing, China, Charitable Donations.



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Computation of a Customer Satisfaction Index for the Accommodation Sector and an Examination of its Antecedents

Dr. Robin Nunkoo*

Abstract Accommodation is one of the largest components of the tourism sector. The accommodation services market is characterized by ever rising level of competition among the service providers. Customers are therefore provided with a range of accommodation choices and thus, have higher expectations. Despite the practical usefulness of a national customer satisfaction index, there has been no attempt to develop one for the South African accommodation sector. The purpose of this research is therefore to develop a South African Accommodation Customer Satisfaction Index (SAACSI) using data collected from 672 travelers staying at the various accommodation establishment located in the different provinces of South Africa. Five service quality dimensions of accommodation services were found to have a significant positive direct effect on customer satisfaction at the 5% level of significance, namely, accommodation infrastructure, expertise of employees, room quality, safety and security and waiting time. Among these, the ones having the strongest influence on overall satisfaction level of customers aver to be waiting time ($\beta = 0.219$), followed by room quality (β = 0.161), expertise of employees (β = 0.160) and accommodation infrastructure ($\beta = 0.156$). The computed SAASI score of 79.9 out of 100 compares favourably with that of customer satisfaction index scores for the tourism and hospitality sector. For example, the American Customer Satisfaction Index (AMSI) score with regards to the hotel industry as at year 2015 was 75, which lower than the SAASI by 4.9. For Singapore the national customer satisfaction index for hotels in 2015 is 70.8 (ISE, 2015) even lower than for the US. These positive benchmark findings are indeed very encouraging for the South African accommodation industry and it is recommended that this is communicated to major stakeholders.

Keywords: Satisfaction, Loyalty, Accommodation, Hotels.

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Gift-Gining and Re-Gift Giving Behaviours on Turkish Consumers

Hanifi Murat Mutlu*

Abstract Gift-giving behavior is not only a transactional act but also a reflection of a multifaceted behavior and cultural tradition involving various social motives. The aim of this study is to empirically examine Turkish consumers' gift giving and re-gift behavior with a sample from Turkey. The situational factors of gift-giving behavior, value, time, and ties between parties are considered as research variables. The studies on gift giving and re-gift behaviors are mainly based on the use of qualitative research methods, but this study tests the research model with data from quantitative methods that can provide access to larger examples. The research is concluded with the discussion of the empirical findings of the gift giving behavior and re-gift behavior of the Turkish consumer.

Keywords: Gift-Giving, Re-Gift Giving, Consumption, Customer Behaviors.

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The Role of Fair Trade on Young Consumers Purchasing Behavior

Hasan Aksoy*

Abstract Extreme poverty remains a persistent problem across the globe. Academics, practitioners, politicians, and activists have sought ways to address this problem. Traditional approaches that deals with poverty have centered especially around international trade. International trade has often been used to increase the economic standing of an impoverished country. Trade has the potential to increase a country's economic situation. However, it does not necessarily reduce poverty. Fair Trade is one of those approaches that seeks to balance the inequalities of traditional trade and provide a market where those on the bottom can participate more fully and fairly in economic enterprise. It contributes to sustainable development by offering better trading conditions to and securing the rights of, marginalized producers and workers. This study investigates the state of the alternative form of trade known as Fair Trade. The purpose of the study was to understand and predict young Turkish consumers' purchase behaviors related to fair trade products. Data were collected via web-based and printed surveys from a random sample of college students. The webbased surveys have published online and the link is sent only to college students. Printed surveys are also delivered to the college students. Totally, two hundred completed surveys were used for the statistical analysis. The collected data was analyzed by using SPSS.18 and AMOS statistical programs and structural equation model.

Keywords: Fair Trade, Young Consumers, Purchasing Behavior.

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Social Media as A Tool of Young Employees Development

Pawel Luczak*

Abstract Employee development is one of the key processes constituting human resources management. Due to rapid progress in technology and accessibility of internet, a significant part of human activity is being transferred to the virtual world. One of the most popular tool used in the internet is social media. It is beyond any discussion that the role of internet and social media in employees development is increasing. Social media offer clear advantages for teaching employees from new generations (like Y or Z). Attributes such as openness, collaboration, and user-generated content, combined together with social mediaś increasing popularity among young employees are the reason why use of social networks in human resources development garner substantial interest among employers. The author of the paper attempts to analyse the method in which social media are used as tools for supporting young employees development.

Keywords: Social Media, Human Resources Development.

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A Sufi Reflected by the Prophet Mohammad's Human Love Thought: Abul-Hasan Kharakani

Alparslan Kartal*

Abstract One of the first regions in which Turks enter Anatolia is Kars and its vicinity. Before the Seljuk Sultan Alparslan's Malazgirt Victory (1071), Abu'l-Hasan Kharakani (963-1033) has migrated from Iran to the Kars region. The reason for his advent of Kars is spreading the tolerance and universal values of Islamic religion to these lands. At the beginning of the 11th century when the Turks had not yet fully entered Anatolia, Abu'l-Hasan Kharakanî was illuminating people in Kars, where people from different religions were living together. He was a great sufi, and his greatest goal was to make people believe in God and meet their needs. Those sentences belong to him: "God! Under all circumstances I am the servant of you and your Messenger, the servant of the believers! "The greatest goodness; to serve the servant of Allah without feeling tired and weary". This human love of Kharakani, who finds respect for all people to be the slaves of the same God, is one of the main features of Anatolian Sufism. This understanding, which Harakani laid the foundation for and continued by the Anatolian Sufis, ensured that very different nations would live together harmoniously in these lands. In this study, Abu'l-Hasan Kharakani's understanding of mysticism in general and tolerance and human love in particular will be examined. Examples of ethics of coexistence in his own period will be included. It is also argued how Kharakani's understanding of tolerance means for today and how it constitutes exemplary.

Keywords: Abu'l-Hasan Kharakanî, Anatolian Sufism, Co-Existence, Human Love, Tolerance.

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