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BOOK OF ABSTRACTS

RFAS-19

2nd International Conference on Research in Engineering and Fundamental Applied Sciences
April 20-21 / Barcelona, Spain

Organizaed by

ACADEMIC RESEARCH AND SOLUTIONS SOCIEDAD LIMITADA

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Book of Abstracts of 2nd International Conference on Research in Engineering and Fundamental Applied Sciences

RFAS-19
Edited by
Prof. Dr. Perez M.

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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. Perez M.

RFAS-19

Salles Hotel, Barcelona-Spain

PROGRAM SCHEDULE

ACADEMIC RESEARCH & SOLUTIONS

Conference Schedule

DAY 01 Saturday (April 20, 2019)

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 – 09:45 am	Welcome Remarks -**Dr. Perez M.**- Conference Coordinator
09:45 am – 09:50 am	Group Photo Session & Ceremony
09:50 am – 10:00 am	Grand Networking Session & Tea Break

DAY 01 Saturday (April 20, 2019)

Track: Business, Management & Economics Studies

Point of Discussion	Presenter
How and What Does the Fox Say?	Senem Üstün Kaya
A Mobile Social and Communication Tool for Autism	Fadi Abu-Amara
An Analyses of Value Added Tax (VAT) Awareness and Perception in Bahrain	Abdullah Hadrami
Sustainable Creative Tourism for fulfilling the gap between Tourists' Expectation and Perception toward the Tourism Routes in the Upper Greater Mekong Subregion: A Case Study of Thailand, Republic of the Union of Myanmar, People's Republic of China, Lao People's Democratic Republic	Supada Sirikudta
BP Environmental reporting in response to Deepwater Horizon Oil Spill: An application of Legitimacy theory	Nahg Abdul Majid Alawi Hussein
Planning in Reverse: A Backward Process for School Improvement	Dr. Ayeshah A. Alazmi
A Behavioral Economics Approach to Sustainability Reporting	Dr. Dirk Beerbaum

Track: Engineering & Applied Sciences

Biomechanical Engineering Determination of the Best Surgical Fixation Method for "Both Column" Acetabular Fractures using Computational Modeling	Assist. Prof. Shaghayegh Bagheri
An Approach Developing to Approximately Calculate Sub-Signal Obtained from Modified Variational Mode Decomposition Method	Arthur Stepchenko

Lunch Break & Ending Note: (01:00 pm - 02:00 pm)

List of Conference Attendees

The following scholars/ practitioners/educationists who don't have any paper presentation, however they will attend the conference as delegates & observers.

No	Official ID	Name	Affiliation Details
1	04-GHSM19-114A	Dr. Tomi Wallin	Mehilainen Toolo Helsinki, Medical Center, Finland
2	BAR-349-101MA	Farag An Khalifa Enwaje	Libyan Swiss Medical Center
3	BAR-349-102MA	Dr. Christopher D. Liessmann	Greenslopes Anaesthesia Services
4	BAR-349-103MA	Dr. Ahmed Wehbeh	Mimar Center, Beirut, Lebanon
5	BMCR-APR-105A	Faisal Alsamaani	Victoria University in Melbourne



2nd Day (Sunday 21, 2019)

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: ENGENEERING TECHNOLOGY AND APPLIED SCIENCES

Biomechanical Engineering Determination of the Best Surgical Fixation Method for "Both Column" Acetabular Fractures using Computational Modeling

Z. Shaghayegh Bagheri[1*], Mina S.R. Aziz[2], Emil H. Schemitsch[3], Radovan Zdero[4]

Abstract Introduction. Acetabular fractures are becoming more common globally. The largest retrospective investigation on acetabular injuries reviewed 1309 patient records during 1980 to 2007 and showed that younger patients under 60 years of age experience acetabular fractures 4.5 times more frequently than older patients over 60 years of age. Almost 80"complex" (i.e. "associated") with multiple fragments and/or fracture lines. Combined results from the only previous epidemiological studies on acetabular fractures reveals that the most common subtype is the both column (BC) injury, which comprises 40fractures. However, only one very limited biomechanical investigation exists on BC acetabular fractures. Thus, the purpose of this study is to use computational modelling in order to find the best biomechanical method for BC acetabular fractures out of the ten surgical methods that have been reported in the clinical literature. Methods. BC fractures were modeled and repaired with all the ten BC fixation methods reported in the literature involving various combination of metal plates and lag screws. Previously validated FE model was used to apply a clinically realistic hip force of 2207 N (i.e. 3x body weight for a 75 kg person) oriented at 45 degrees superomedially and 20 degrees posteriorly in the sagittal plane to simulate single-leg stance during walking. Results. Preliminary results of the fixation method capable of providing the highest construct stiffness, the highest construct failure strength, and the lowest interfragmentary motion compared to other repair methods is selected as the most mechanically stable way to fix BC fracture. Conclusion. This is the first biomechanical study to identify the best surgical repair method for BC acetabular fractures among the ten surgical repair methods reported in the literature.

Keywords: Biomechanical analysis- Acetabular fractures- Computational modelling- Finite element analysis.

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An Approach Developing to Approximately Calculate Sub-Signal Obtained from Modified Variational Mode Decomposition Method

Arthur Stepchenko*

Abstract Analysis and forecasting of the life cycle of vegetation are essential in planning agricultural work as well as monitoring of agricultural crops and forecasting their productivity. In practice, vegetation indices are often used that are calculated from the values of satellite image pixels like normalized difference vegetation index (NDVI). Forecasting of this index in precision agriculture allows indicating problems which are related to agricultural crop growth in time and make timely decisions about necessary measures to fix these problems. In recent years, a series of signal processing methods such as signal decomposition techniques based on spectral analysis is widely used in time series forecasting tasks. These methods are used in time series forecasting tasks for data preprocessing, obtaining multiple derived time series or sub-signals from original time series. Variational mode decomposition (VMD) is a modern decomposition method that can be used for time series decomposition. However, it is a non-causal method, and not suitable for time series forecasting, if all historical observations of time series are fed into VMD method. In this paper, the sub-signal approximation approach is developing. First of all NDVI time series is fed into a modified VMD method and sub-signal is obtained. Then a developed approach is used in order to get approximately calculated sub-signal values. NDVI time series is forecasted using as input data historical observations of the NDVI time series and an approximated sub-signal and then using only historical observations of the NDVI time series.

Keywords: Approximation; Interpolation; Normalized Difference Vegetation Index; Variational Mode Decomposition.

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TRACK: BUSINESS MANAGEMENT AND SOCIAL SCIENCES

How and What Does the Fox Say?

Senem Üstün Kaya*

Abstract Since, literature is created through language and language is enhanced by literature, the link between literature and language is inevitable. 'Linguistics' is the scientific study of the structure and the elements of language while literature deals with the artistic body of language. The study of literature is a part of an aspect of linguistics, which provides the proper data for the critic. The details of a language used in a literary text provide readers a literary insight while interpreting the meaning. The linguistic analysis of a literary text involves phonology, morphology, semantics, syntax and stylistics. As a combined concept, 'Literary Linguistics' (Stylistics) is the study of literature from a linguistic perspective via linguistic codes. Therefore, it would be proper to indicate that Stylistics is not only interested in the meaning of a text but also in how the meaning is achieved. This study aims at examing the relationship between linguistics and literature in D. H. Lawrence's The Fox. Within this scope, in the first part of the study, the focus is on the link between linguistics and literature. Second part involves the lexical study of the novella The Fox, and finally, the study concludes to what extend linguistic analysis contributes to stylistic study of a literary text.

Keywords: Stylistics, Linguistics, D. H. Lawrence, linguistic data, lexical study.

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A Mobile Social and Communication Tool for Autism

Heba Mohammad[1*], Fadi AbuAmara[2]

Abstract Autism is a complex neurobiological disorder that is prevalence worldwide. Most autistic children have weak communication and social skills. This research aims to develop and test a mobile application, named MyVoice, that supports Emirati Autistic children. The proposed design and features are discussed and a protype is evaluated and tested by two therapists and an autistic child. Experimental results indicate a positive feedback in terms of ease of use, aesthetic, and simplicity. Parents of the autistic child are satisfied with different features such as the alert notification. Results also indicate that autistic children need about one week to easily interact with MyVoice.

Keywords: Assistive technologies; autism; social skills; learning; mobile application.

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Planning in Reverse: A Backward Process for School Improvement

Dr. Ayeshah A. Alazmi*

Abstract Strategic planning has been the tool utilized to formulate order for schools to move forward. Planning in reverse is an innovative new process that may replace traditional static strategic planning in school. Indeed, the effect of change and the increasing rate of change have caused a need to fundamentally alter the process used by schools to remain viable into the future. Therefore, this paper aims at providing an understanding of planning in reverse process in school setting. Based on a review of the literature, this paper argues that planning in reverse process is designed to make schools more successful by altering the perspective used in the strategy process. The paper suggests that this process involves starting a plan at the end goal and then working through required steps in reverse-chronological order, and is commonly advocated by practitioners as a tool for developing realistic plans and improvement. As counterintuitive as it may seem, working backwards in this way can give schools a much clearer picture of what and how much must be accomplished during each phase of their strategic plan and help them to identify and avoid unnecessary activities. Finally, this paper will help educators to understand how to properly incorporate the new process of planning in reverse on school improvement planning.

Keywords: Planning, reverse, improvement, school.

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A Behavioral Economics Approach to Sustainability Reporting

Dirk Beerbaum[1*], Julia M. Puaschunder[2]

Abstract Globalization has led to an unprecedented correlation of massive global systems causing systemic risk to increase exponentially (Centeno et al., 2013). 10 years after the global financial crisis, what are the lessons learned, what was improved and what still needs to be accomplished? The crucial question remains: has the global financial system and with that the world become less susceptible for a reoccurrence of a financial crisis? What are the factors to achieve a sustainable finance architecture with stable economic markets? In the aftermath of the 2008/09 world financial downturn the interest in understanding non-financial factors and interplay to financial markets increased. A system can only be sustainable if inequality, governance and environmental sustainability is surmounted. According to Beyer et al., significant progress was made in the modelling, as the Global Financial Crisis revealed shortcomings in the model strategy (Beyer et al., 2017). The question arises if also progress is made on social responsibility investing in the securities, selected for social environmental ethical and institutional aspects? Based on the EU led High-Level Expert Group on Sustainability (Cullen, 2018) the EU examines how to integrate sustainability consideration into its financial policy framework. The EU plans to develop a classification system ('taxonomy') on what can be considered an environmentally sustainable economic activity. To overcome the climate change challenge, a consensus has a pivotal role to enable to invest in climate friendly investments, which do not turn out to be a false labelling. The global architecture of climate finance is important part of a sustainable finance architecture. Additionally, disclosure regulation is planned that institutional investors integrate ESG (environmental, social and governance) factors into their investment-decision making process. In the absence of a globally integrated financial and non-financial framework, this paper tries to put emphasis back on decision-usefulness of the investor and a Sustainability Taxonomy considering the transparency technology Extensible Reporting Mark-up language (XBRL). This working paper tries to bridge early statements about environment and the responsibility for future generations in the financial service sector(Kipper, 2017).

Keywords: Sustainability Taxonomy, Sustainable Reporting, Finance Architecture, Behavioural Economics, Decision-usefulness and XBRL, Climate Change.

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Potentials and Success Factors of Early Supplier Integration into own Product Development

Wanja Wellbrock*, Daniela Ludin[2], Javier Villalba-Diez[3]

Abstract Value chains have become more and more complex as a result of ongoing globalization and the cost pressure in product production and development. As part of this trends, companies must make far-reaching decisions about vertical integration and early stage supplier integra-tion during product development. Estimations show that 70% to 90% of the value added is already generated by suppliers, especially in the automotive industry. Suppliers play a deci-sive role in how the product is developed and manufactured why a functioning supplier inte-gration in the development process is essential for the success of a product. Thus, it is crucial for a company to know which factors make the collaboration a success and which potentials can arise through the integration of the supplier into the internal development process. The paper focuses on the research question, how a supplier integration into the own develop-ment process can be successfully arranged and what are the main potentials of an early stage supplier integration. The identification of relevant success factors is done by a large-scale lit-erature study including logistics peer reviewed journals since the year 2000. Altogether 36 papers could be identified as relevant for this topic. Overall, five main success factors could be identified, which are detailed in the paper: (1) effi-cient supplier management, (2) strategic partnership and supplier network, (3) overall view of the supply chain, (4) contractual design of the partnership, (5) common interests and goals. The identification of potentials of early stage supplier integration focus on cost reduction, innovation and quality improvement, time-to-market reduction and flexibility.

Keywords: Supply chain management, logistics, supplier integration, success factors, product development.

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An Analyses of Value Added Tax (VAT) Awareness and Perception in Bahrain

Abdullah Hadrami*

Abstract Due to the dramatic changing of oil prices, the Gulf Cooperation Council member states approved to introduce in 2018 a framework agreement of Value-Added Tax (VAT) on goods and services. As the concept of taxation is new in some GCC countries specifically in Bahrain, the implementation of VAT will have a major impact on businesses and taxpayers. But consumers in Bahrain may lack of knowledge on VAT and are not aware of the different aspects related to the implementation of this tax. This study aims to explore the consumers' perception and awareness towards VAT in the Kingdom of Bahrain. The current study employed quantitative approach by surveying a number of individuals living in Bahrain. The study found low awareness among the respondents with regard the implementation of VAT in Bahrain. The results indicated that there is neither positive nor negative perception towards VAT among the participants. Additionally, significant differences were found among the participants when they are grouped according to the level of education and income for awareness and perception towards VAT in Bahrain. Therefore, the researcher recommended the government of Bahrain and the policy makers in Bahrain to bring more effort in designing a mechanism of spreading awareness among the individuals in Bahrain.

Keywords: VAT, Consumer's perception, consumer's awareness, Bahrain.

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Sustainable Creative Tourism for fulfilling the gap between Tourists' Expectation and Perception toward the Tourism Routes in the Upper Greater Mekong Subregion: A Case Study of Thailand, Republic of the Union of Myanmar, People's Republic of China, Lao People's Democratic Republic

Supada Sirikudta*

Abstract The purpose of this research is to study the factors effecting intention to travel and compare the expectation and perception to sustainable creative tourism, of the tourists along the travel route in the Upper Greater Mekong Subregion of Thailand (Chiang Saen), Republic of the Union of Myanmar (Chiang Tung), the People's Republic of China (Chiang Rung) and Lao People's Democratic Republic (Chiang Thong). This research collected 600 samples from both Thai and foreign travelers travelling along the Upper Greater Mekong Subregion route. The results showed that the respondents from 4 countries had overall perception and expectation in travelling along the routes at moderate level, while the intention to travel again in the future was at high level. The most intended travel route is boat route between Chiang Saen in Thailand to Chiang Rung in China, while the most intended future travel destination is Chiang Saen in Thailand, following by Chiang Tung in Myanmar, Chiang Rung in China and Chiang Thong in Laos respectively. There is the different found in comparing between expectations and perceptions towards sustainable creative tourisms factor. The travelers were satisfied in terms of creative economy factor, human interaction factor and travel landscape factor at statistically significant level of 0.05 Travelers from 4 countries had different perceptions towards creative tourism at statistically significant level of 0.01, with tourists from Chiang Tung in Myanmar had the highest perception in sustainable creative tourism, following by Chiang Saen in Thailand, Chinag Thong in Laos and Chiang Rung in China. Furthermore, government sectors and entrepreneurs in travel industries of each countries need to emphasize importance of creative tourisms in the aspects of cultural preservation, environment, authenticity, human interaction and landscape.

Keywords: Sustainable Creative Tourism, Expectation, Perception, Tourism Routes in the Upper Greater Mekong Subregion.

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BP Environmental Reporting in Response to Deepwater Horizon Oil Spill: An Application of Legitimacy Theory

Nahg Abdul Majid Alawi Hussein*

Abstract This study aims to give a picture of BP environmental reporting over eleven years (from 2006 to 2016) and examines the effect of the Deepwater Horizon oil spill on BP environmental reporting to test the application of Legitimacy theory. Content analysis procedures are used to measure the level of environmental reporting for each year by measuring the amount of voluntary corporate environmental reporting stated in the annual report and suitability report using Global Reporting Initiatives (GRI) indicator. The results indicate that BP environmental reporting level was in average. However, BP has increased the environmental reporting in response to the 2010 Deepwater Horizon incident. This study is the first of its kind to be conducted using a longitudinal approach in oil and gas industry. Therefore, these findings are hoped to be used to further improve the environmental reporting in BP and other oil and gas companies in general.

Keywords: Environmental reporting, British Petroleum, Deepwater Horizon oil spill.

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