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BOOK OF ABSTRACTS

ORMR-18

**International Multidisciplinary Conference on Operational Research
in Engineering, Manufacturing Technologies and Robotics
Nov 24-25 / Athens - Greece**

Organizaed by



ACADEMIC RESEARCH AND SOLUTIONS SOCIEDAD LIMITADA

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Book of Abstracts of International Multidisciplinary Conference on Operational Research in Engineering, Manufacturing Technologies and Robotics

ORMR-18

Edited by

Prof. Dr. Perez M.

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Contact Information:

Address: Calle Alarcon 66, Sant Adrian De Besos 08930, Barcelona, Spain

WhatsApp No: +34 631 100 886

Website: <http://acrsolutions.org>

Email Address: support@acrsolutions.org



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Scientific Committee Member	Affiliation
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Organizing Committee

Organizing Committee Member	Affiliation
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Mr. V.J. Pasola	Contact Person & Organizer
Mr. Juan García	Program Coordinator
Dr. T.I.K	Conference Secretary

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. Perez M.



ORMMR-18

Titania Hotel, Athens – Greece

PROGRAM SCHEDULE



Conference Schedule

DAY 01 Saturday (November 24, 2018)

Venue: Titania Hotel Panepistimiou 52, Athens 10678 – Greece

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 – 10:00 am	Group Photo Session & Ceremony
10:00 am – 10:30 am	Grand Networking Session & Tea Break

DAY 01 Saturday (November 24, 2018)

Session 001 (10:30 am – 01:00 pm)

Track: Business, Management & Economics Studies

Point of Discussion	Presenter
How Inclusive Innovations are Inclusive? Exploring Grassroots Innovations in India	Anjali Lakum
Online Learning Behavior Intentions – Understanding of Quality of Service toward user satisfaction, involvement, and perceived value	Firas Habbal
The effects of a Peer Network Intervention on the social skills of high-functional adolescents with ASD	Stamatina Kalyveza
Are Georgian Teenagers Satisfied with their Body Image?	Magda Rukhadze
Influence of Awareness about Industry 4.0 on SMEs Approach to Human Resources Management	Jaroslav Vrchota

Track: Medical, Medicines & Health Sciences

Frequency Of Musculoskeletal Pain Among The Students Of Vocational School Of Health Services In Adana	Emir Ibrahim ISIK
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Track: Engineering & Applied Sciences

The Research of Direct Mineralization Process of Titanium-Magnesium Production Industrial Wastes	Assoc. Prof. Natalya Kulenova
Optimization of Energy Consumption and Emissions of Greenhouse Gases at Lead-Smelting Production	Viktor SHUMSKIY
Research of Iron Oxidation Process in Sulphate Zink Solutions by Pyrolusite	Zhanar Onalbayeva

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	ATH-4118-101EA	Klaus Foraboschi	Josef-Schlegel-strasse 11, 4020 Linz, Austria
2	ATH-4118-102MA	Dilrukshi De Silva	Waitemata District Health Board. Auckland, New Zealand



2nd Day- (November 25, 2018)

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: ENGINEERING TECHNOLOGY AND APPLIED SCIENCES

The Research of Direct Mineralization Process of Titanium-Magnesium Production Industrial Wastes

N. A. Kulenova^{1*}, Z.M. Akhmetvalieva², S.V. Mamyachenkov³, O.S. Anissimova⁴

Abstract The paper provides results of the research of direct mineralization process of titanium-magnesium production industrial wastes by using rotor vacuum evaporator. Industrial waste used in the research was nontransparent dark brown liquid to greenish, its density - 1,037g/cm³; chloride content - 30,5 g/dm³; pH 6,61. Experimental procedure was as follows: industrial wastes were charged into rotor vacuum evaporator with automatic temperature control. In the course of experimental research the influence of temperature on the process of thermal demineralization was studied. Residual pressure was less than 50 mbar, and process time was 30 minutes. It was found that when the temperature of distillation increases from 40 oC to 70oC, residual output is reduced from 52 % to 11% of the charged industrial wastes mass, and output of condensate almost doubled. The produced condensate can be recommended for the use in the system of internal water circulation at an enterprise.

Keywords: Titanium-Magnesium Production, Industrial Wastes, Mineralization Process, Vacuum Evaporation

^{1,2}East Kazakhstan State Technical University (EKSTU), Kazakhstan, Ust'-Kamenogorsk City, ^{3,4}Ural Federal University (UrFU), Russia, Ekaterinburg City

*Email: 3007kulenova53@gmail.com

Optimization of Energy Consumption and Emissions of Greenhouse Gases at Lead-Smelting Production

Viktor SHUMSKIY^{1*}, Natalya KULENOVA²

Abstract Maintenance of the economic stability of production under the conditions of permanent economic crisis determines the need to increase the energy efficiency of technological processes, and the Kyoto agreement adopted by the international community determines the need to reduce emissions of greenhouse gases into the atmosphere. The solution of these problems is especially relevant for the energy and transport industries as well as for the ferrous and non-ferrous metallurgy, which use technologies with significant consumption of carbon energy resources. The example of this is the lead smelting production, which has undergone a major modernization in recent years. The paper presents the results of model analysis performed using the METSIM software for the specific consumption of carbon energy resources and associated carbon dioxide emissions for the 2 most popular options for modernization of conventional lead production. Comparative estimates of the methods for reduction of the specific consumption of energy resources and the emissions of carbon dioxide in these options are given. The obtained model estimates are correlated with the well-known industrial practice. This allows the use of processes modeling by METSIM as an effective tool for preliminary forecast during the study of optimization options for technologies and industries consuming a significant amount of carbon energy resources with associated emissions of carbon dioxide into the atmosphere.

Keywords: Energy Consumption, Carbon Energy Resources, Greenhouse Gases, Model Analysis, Lead Smelting

¹The Eastern Mining and Metallurgical Research Institute for Nonferrous Metals, Ust-Kamenogorsk, Kazakhstan, ²East Kazakhstan State Technical University, Ust-Kamenogorsk, Kazakhstan

*Email: 3007kulenova53@gmail.com

Research of Iron Oxidation Process in Sulphate Zinc Solutions by Pyrolusite

Zh.S. Onalbayeva^{1*}, N. A. Kulenova², S.V. Mamyachenkov³, O.S. Anissimova⁴

Abstract The paper provides results of researching iron (II) oxidation process in the solution that was produced during atmospheric sulphuric-acid leaching of low-grade zinc concentrates. Experimental procedure was as follows: solution containing, g/dm³: 101,9 – Zn; 21,33 – Fe (Fe²⁺ – 9,4 g/dm³); 2,43 – Cu; 22,3 – H₂SO₄, was heated to the temperature 50-60 °C, and neutralized up to 13-15 g/dm³ on sulphuric acid, and milled pyrolusite (MnO₂) was added. The process was carried out for 60 minutes. It was found that when 150 % of MnO₂ is consumed of theoretically required amount, residual content of Fe²⁺ in solution is less than 0.5g/dm³.

Keywords: Sulphate Zinc Solutions, Iron, Oxidation, Pyrolusite

¹East Kazakhstan State Technical University, Kazakhstan, Ust-Kamenogorsk City, ²Ural Federal University (UrFU), Russia, Ekaterinburg City

*Email: zhanara-05@mail.ru

TRACK: BUSINESS MANAGEMENT AND SOCIAL SCIENCES

How Inclusive Innovations are Inclusive? Exploring Grassroots Innovations in India

Anjali Chandulal Lakum*

Abstract Promotion of inclusive development has been one of the stated aims of the Indian policy since national independence. However, types of strategies and rules implemented in the past and present for the inclusive development but there are many challenges faced by the government. There are many vulnerable populations and poor people which are not formally registered under local laws so the government does not ensure their inclusion in the inclusive development process, even not able to improve their condition of life. Innovation plays an important role in the development of the society. There are also many local social problems which are faced by the rural people but not registered under the inclusive development process. Rather than depending upon the government schemes and policies some individuals and communities are making some innovations to solve the problems they faced in their daily life. The innovators are saying no to the government programmes because they earn more money from this innovation and can make their development. So in recent times, grassroots innovation is considered as inclusive innovation. This paper examines the factors and basic local problems, because of what grassroots innovation cannot become inclusive in nature. Further discussion in on that, can we consider grassroots innovation as inclusive innovation without overcoming such local social problems?

Keywords: Innovations, India.

* PhD Research Scholar, Centre for Studies and in Science, Technology and Innovation Policy School of Social Sciences, Central University of Gujarat, Gandhinagar, Gujarat

* Email: anjalilakum93@gmail.com

Online Learning Behavior Intentions – Understanding of Quality of Service toward user satisfaction, involvement, and perceived value

Firas Habbal*

Abstract Using innovative technologies is a market demand, it reflects the student loyalty and it affects the financial performance on educational institutions as well as students' behavioral intentions. The paper studies users behavior and the relation between users' intentions and the factors affect those intentions. The study builds its results based on assessing the relation between the identified factors across the academic industry. Several factors are also considered and studied in the research model such as value perception, quality of service, and customer satisfaction; the paper studies those factors and how it affects the students' involvement towards performance. The paper study methodology is primary survey and structural modeling to understand the rational model.

Keywords: Online Learning, Service Quality, Perceived Value, Behavior Intentions, Satisfaction

*GIS International Technology LLC, UAE

*Email: habbal.firas@gmail.com

The Effects of a Peer Network Intervention on the Social Skills of High-Functional Adolescents with ASD

Stamatina Kalyveza*

Abstract Developing positive relationships among teenagers affects not only their academic achievements but also their general psychological condition (Sreckovic Hume., Able.,2017; Rubin et al.2009; Wentzel et al 2012). Teenage students who suffer from a disorder within the autistic spectrum, of high functionality without comorbidity with mental retardation, have limited positive social contacts with their peers (Wagner et al 2004). The present study aims at examining whether a specific intervention program helps to improve the social skills of students with a disorder within the autistic spectrum, aged 14 and 15, without comorbidity with mental retardation, who participated in a program that is the application of "Circle of supports" (Mosley Niwano 2007) in greek. It is an internationally accredited structured programm that aims to enhance the social skills of students through a variety of activities, through games and discussions that interchange every time the programm is applied. The multiple baselines across participants with generalisation scenarios through all phases of the experimental procedure (baseline, intervention, maintenance) comprised the design of the research study. In this presentation "Circle of supports" will be presented in detail, as well as part of the study's findings, that support the positive effect of the programm towards the improvement of the social skills of students with disorder within the spectrum of Autism without mental retardation, as well as their typical classmates.

Keywords: Autism-Social Skills-Adolescents-Peer Network-Intervention-Circle Time

*Harokopio University of Athens

*Email: skalyveza@hua.gr

Vanishing Coasts: Towards appropriate response to disappearing coastal resources in selected sites in Miagao, Iloilo, Philippines

Magda Rukhadze*

Abstract Endowed with a coastline that is rich in marine resources on which most of them are dependent, Miagao coastal communities are confronting the threats on their coastal employment opportunities, abundance in goods and services, and the aesthetic enjoyment of the coasts. As found by the Mines and Geosciences Bureau in recent years, there have been observed cases of coastal area loss that have been a major problem to the people living in the said areas. While coastal area loss might have been due to few possible causes, this study characterized and estimated the value of these losses which amounted to a total of PHP 63,713,038.88 through the valuation of lost land, buildings and structures, trees, economic activities, and docking areas by using market price method. This study also characterized and measured psychological impacts due to these losses by using Likert scale that show how attached the study participants were to these losses. Psychological losses which is represented by coastal resource attachment indicated by value and experience resulted to a high level of attachment among study participants which accounted to more than 60%. This study also aimed to provide possible solutions to coastal area loss since there is little funding and adaptation strategies existing in the coastal barangays of Miagao, Iloilo; the willingness-to-pay of the study participants was measured to know how important these adaptation strategies are to them which amounted to an estimate of PHP 3,376,343.89 that could be raised annually. More than 50% were willing-to-pay for adaptation strategies since their reasons reflect that it is for the common good, protection of their families and for affected households as well. The study suggests that the coastal communities, non-government organizations, and government should work together to formulate adaptation strategies that can reduce risk and potential damages, and to address the other problems in the coastal areas.

Keywords: Coastal Area Loss, Market Price Method, Likert Scale, Adaptation Strategies, Willingness-To-Pay

*Tbilisi State University, Georgia

*Email: Magdo997@yahoo.com

Influence of Awareness About Industry 4.0 On Smes Approach to Human Resources Management

Jaroslav Vrchota*

Abstract Innovations in industry are the driving force of every economy, where the role of small and medium-sized enterprises, which are marginally involved in its growth, is irreplaceable. Just enough ability to correctly predict future developments will decide on the future success or failure of these companies at the time of the introduction of Industry 4.0. Where, on the one hand, companies expect productivity gains, cost reductions, greater customization, and on the other hand employees worry about their jobs and artificial intelligence replacements. The aim of the paper is to analyze the relationship of 208 small and medium-sized enterprises in the Czech Republic to Industry 4.0 and their expectations in terms of human resources. Using the Wilcoxon test, the hypothesis of the independence tracking for Industry 4.0 was tested and the expectations of changes in employee structure that was rejected. At the materiality level of $\alpha = 0.05$, it has been shown that SMEs interested in novelty in the industry are not concerned about significant changes in human resources, where extreme cases may also include redundancies. The survey has shown that, on the contrary, the lack of awareness of the companies leads to odd concerns about employees.

Keywords: SMEs, Human Resource Management, Industry 4.0

*University of South Bohemia in České Budějovice, Czech

*Email: vrchota@ef.jcu.cz

TRACK: MEDICINE AND MEDICAL SCIENCES

Frequency of Musculoskeletal Pain Among the Students of Vocational School of Health Services in Adana

Emir Ibrahim ISIK*

Abstract The objective of this study was to investigate the prevalence of musculoskeletal pain of nine different anatomical areas in Vocational School of Health Services' students. 741 participants from nine different subdivisions of VSHS included to the study. Sociodemographic information such as age, gender, height and weight values was recorded. The Turkish version of the Nordic Musculoskeletal Questionnaire score was the main outcome measurement. This questionnaire identified work-related pain or discomfort in 9 parts of the body, including: neck, shoulder, elbow, wrists, upper back, low back, hips/thighs, knee, and ankle. The findings of this study showed the prevalence of musculoskeletal pain were highest on Oral and Dental Health program and Physiotherapy Assistant program. For all subdivisions; students who spend a long period of time on standing position during their educational practices had pain at foot and low back regions; students who spend a long time in fixed (stable) position both standing and sitting, had pain at back and neck regions; students who work with a heavy lifting had low pain at back, upper back and neck regions more frequently. The prevalence of musculoskeletal pain was higher in Vocational School of Health Services' students, especially in the neck, upper back and low back regions.

Keywords: Musculoskeletal Pain, Pain, Vocational School of Health Services (VSHS), College Students

*Abdi Sutcu Vocational School Of Health Services, Cukurova University, Turkey

*Email: eisik@cu.edu.tr

TRACK: ENGINEERING TECHNOLOGY AND APPLIED SCIENCES

The Research of Direct Mineralization Process of Titanium-Magnesium Production Industrial Wastes

N. A. Kulenova^{1*}, Z.M. Akhmetvalieva², S.V. Mamyachenkov³, O.S. Anissimova⁴

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Keywords: Titanium-Magnesium Production, Industrial Wastes, Mineralization Process, Vacuum Evaporation

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Viktor SHUMSKIY^{1*}, Natalya KULENOVA²

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¹The Eastern Mining and Metallurgical Research Institute for Nonferrous Metals, Ust-Kamenogorsk, Kazakhstan, ²East Kazakhstan State Technical University, Ust-Kamenogorsk, Kazakhstan

*Email: 3007kulnova53@gmail.com

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Zh.S. Onalbayeva^{1*}, N. A. Kulenova², S.V. Mamyachenkov³, O.S. Anissimova⁴

Abstract The paper provides results of researching iron (II) oxidation process in the solution that was produced during atmospheric sulphuric-acid leaching of low-grade zinc concentrates. Experimental procedure was as follows: solution containing, g/dm³: 101,9 – Zn; 21,33 – Fe (Fe²⁺ - 9,4 g/dm³); 2,43 – Cu; 22,3 – H₂SO₄, was heated to the temperature 50-60 °C, and neutralized up to 13-15 g/dm³ on sulphuric acid, and milled pyrolusite (MnO₂) was added. The process was carried out for 60 minutes. It was found that when 150 % of MnO₂ is consumed of theoretically required amount, residual content of Fe²⁺ in solution is less than 0.5g/dm³.

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¹East Kazakhstan State Technical University, Kazakhstan, Ust-Kamenogorsk City, ²Ural Federal University (UrFU), Russia, Ekaterinburg City

*Email: zhanara-05@mail.ru

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