IRESTM-2017

International Conference on Innovative Research in Engineering Sciences, Technology and Management

Hong Kong

October 12-13, 2017

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International Conference on Innovative Research in Engineering Sciences, Technology and Management (IRESTM)

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Conference Theme: Providing a platform to Researchers to talk about Dynamics and Prospects in Engineering and Technological Fields.

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CONFERENCE TRACKS

- Basic Science
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- Business and Management Studies
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- Power Generation, Transmission and Distribution
- Power System Engineering

CONFERENCE CHAIR MESSAGE

Ms. Mei Shu Lai

"International Conference of Engineering Science Research and Development Board" is a platform that thrives to support the worldwide scholarly community to analyze the role played by the multidisciplinary innovations for the betterment of human societies. It also encourages academicians, practitioners, scientists, and scholars from various disciplines to come together and share their ideas about how they can make all the disciplines interact in an innovative way and to sort out the way to minimize the effect of challenges faced by the society. All the research work presented in this conference is truly exceptional, promising, and effective. These researches are designed to target the challenges that are faced by various sub-domains of the social sciences and applied sciences.

I would like to thank our honorable scientific and review committee for giving their precious time to the review process covering the papers presented in this conference. I am also highly obliged to the participants for being a part of our efforts to promote knowledge sharing and learning. We as scholars make an integral part of the leading educated class of the society that is responsible for benefitting the society with their knowledge. Let's get over all sorts of discrimination and take a look at the wider picture. Let's work together for the welfare of humanity for making the world a harmonious place to live and making it flourish in every aspect. Stay blessed.

Thank you.

Ms. Mei Shu Lai
Conference Chair
Email: contact@esrdb.com

CONFERENCE SECHDULE

ESRDB-ANISSH-2017

Venue: Hotel Jen Hong Kong 508 Queens Road West, Hong Kong

Time: Registration & Kit Distribution (9:00 am - 9:30 am)
Day:Thursday
Date: October 12, 2017

Venue: Room 1

09:30 am - 9:40 am	Introduction of Participants
09:40 am - 09:50 am	Inauguration and Opening address
09:50 am - 10:00 am	Grand Networking Session

Tea/Coffee Break (10:00 am- 10:30 am)

DAY 01 Thursday (October 12, 2017)

Presentation Session (10:30 am - 12:30 pm)

Venue: Room 1
Session Chair: Ms. Mei Shu Lai
Track A: Social and Community Business, Economics, Social Sciences and Humanities

Presenter Name	Manuscript Title	Paper ID
Yao Hua Tang	An Examination of Offshore Income Shifting Participants	HKS-4107-101
Nur Islami	The Use of Geoelectrical Resistivity and Geostatistics Methods to Investigate the Groundwater Potential in Peat Land Area, Riau, Indonesia	IRESTM-OCT-HK103
Eko Siswoyo	Photoelectrochemical Characterization of Dye Sensitized Sollar Cell (DSSC) based on MnO2 Concentration of fabricaton nanoparticle ZnO using Anthocyanin of the Sweet Potato Extract as Dye Sensitizer	IRESTM-OCT-HK104
Ratna Wulandari Noor Azizi	Photoelectrochemical Characterization of Dye Sensitized Sollar Cell (DSSC) based on MnO2 Concentration of fabricaton nanoparticle ZnO using Anthocyanin of the Sweet Potato Extract as Dye Sensitizer	IRESTM-OCT-HK104C
Retno Mawarini Sukmariningsih	Small Medium Enterprises (SMEs) Empowerment through Traditional Market Protection	IRESTM-OCT-HK105
Annie Chen	Executing Effectiveness on Anti-Money Laundering Regime by Financial Institutions in Taiwan	IRESTM-OCT-HK106
Hsu, Shun-Fa	A Preliminary Study of Talent Development Platform and Competency Indicators for Big Data Analysts in Taiwan	MBSHR-107-ANI109
Ritthiwut Puwaphat	Ozone Generation to Inhibit Longkong Ripening	IRESTM-OCT-HK110

Lunch Break & Ending Note: (12:30 to 01:30 pm)

Conference Day 02 (October 13, 2017)

Second day of conference will be specified for touristy. Relevant expenses are borne by Individual him/herself.

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TRACK A

SOCIAL AND COMMUNITY BUSINESS, ECONOMICS, SOCIAL SCIENCES AND HUMANITIES

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An Examination of offshore income shifting participants

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Keywords: Examination, Offshore, Income Shifting Participants

The increasingly aggressive tax avoidance by multinational firms has drawn global political attention. It is estimated that the tax revenue losses from offshore tax abuses is around $100 billion per year in U.S. Despite the significant tax losses, it is difficult to identify whether a firm is actively participating in this practice as firms generally do not disclose their income shifting involvement. Even when it becomes known ex post that a firm has been accused of being tax aggressive, it is hard to determine the dollar amount of the tax benefits by the firmś financial statements. Consequently, how to identify offshore income shifting participants through financial statement analysis is of significance and has important implications for government, investors and policy-makers. Taking advantage of a unique data set obtained from LuxLeaks, this project will develop and validate an expanded model for inferring the likelihood that a firm engages in offshore income shifting.

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The Use of Geoelectrical Resistivity and Geostatistics Methods to Investigate the Groundwater Potential in Peat Land Area, Riau - Indonesia

[1*] Nur Islami, [2] Mitri Irianti, [3] Azhar, [4] Muhammad Nor
[1,2,3,4] FKIP, University of Riau, Indonesia
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Keywords: Aquifer, Geolectrical Resistivity, Geostatistics, Peatland

The peat fire is a most common disaster in the peat land area, Sumatra Island, especially in Riau Province, Indonesia. Some significant obstacles were encountered to stop the peat fire along this time. This study combined the geoelectrical resistivity and geostatistics methods to investigate the possibility of the use groundwater as the water resources for anticipating the early mitigation of the peat fire disaster. A total of 11 geoelectrical resistivity surveys using Schlumberger configuration were employed to collect the subsurface resistivity data. Each survey consisted of 22-26 reading of sounding data with the maximum of 360 m length. The total volume of peat land was predicted using geostatistics based on the geoelectrical resistivity interpretation data. The peat resistivity value is observed ranging from 45 to 60 ohm.m whilst the aquifer shows ranging from 18 to 47 ohm.m. The thickness of peat varies up to 3 m at the northern area, and thinner to the south. The shallow aquifer is found at the depth of 13 m to 18 m. Whilst the deep aquifer is found at the depth of 70 m to 100 m. The depth slice of resistivity map from the surface until 120 m deep was developed using Krigging simulation method and shows the distribution of peat and aquifer clearly. Generally, the groundwater potential is predicted sufficient in order for watering the peat land anytime.

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Photoelectrochemical Characterization of Dye Sensitized Sollar Cell (DSSC) based on MnO2 Concentration of fabricaton nanoparticle ZnO using Anthocyanin of the Sweet Potato Extract as Dye Sensitizer

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[4] Alvin Muhammad Habieb, [5] Gunawan
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Keywords: DSSC, Photo-electrochemical, Efficiency, Energy Bandgap and ZnO/MnO2 Composite

Energy is one of the biggest problems for the future. By looking at the situation, there is a shift towards to new and renewable energy. From several renewable energy solar cells become the most alternative potential energy especially for tropical countries such as Indonesia which had solar radiation ranging from 4.6 kWh/m2 to 7.2 kWh/m2. Dye-sensitized solar cell (DSSC), as solar cells that unexpensive but have high efficiency that can be used for the future alternative. DSSC is a photoelectrochemical-based solar cell in which the light absorption process is performed by dye molecules and the process of charge separation by ZnO semiconductor materials. The aim of this research is to develop DSSC based ZnO-MnO2 Composite film as electrode working. Electrode working was prepared by doctor blade method and characterized by Scanning Electron Microscopy (SEM), X-Ray Diffraction (XRD) and I-V. In addition, there was performed the performance test of DSSC on AM 1.5G with a solar lighting of 100 mW/cm2. The results of ZnO pure film energy band gap, ZnO/MnO2 3% and ZnO/MnO2 6% were 3.28, 2.89 and 2.83 eV respectively. The highest power conversion was 0.0104% in the 6% ZnO/MnO2 sample. This result showed that with the addition of MnO2 to ZnO semiconductor can improve the efficiency of DSSC.

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Executing Effectiveness on Anti-Money Laundering Regime by Financial Institutions in Taiwan

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Keywords: Money Laundering, Financial Institution, Suspicious Activity Report, Terrorism

An implementation of Taiwans prevention of money-laundering facilitates the work of crime prevention. In Taiwans prevention of money laundering, the criminalization of money laundering is significant, as well as establishing reporting systems, such as Suspicious Activity Report (SAR) or Suspicious Transaction Report (STR). Taiwan's Money Laundering Control Act (MLCA) have been legislated since 1996 for criminal obligation and empowers financial institutions reporting requirements. Failure to perform a duty results in subjecting to administrative penalties. In Taiwans financial sector, a little declaration of SAR or STR of financial institutions is a long-term phenomenon. This graduate thesis organizes recent anti-money laundering cases reported by news articles, and utilizes literature review and case analysis to explore the reasons that Taiwan's financial institutions failed to report suspicious transactions, and concludes with recommendations. The founding is that when comparing Taiwan to other countries during the same period, there is a gap of SAR or STR between Taiwan and other nations, and there are numerous factors that caused this phenomenon. Some of these factors included the lack of an effective anti-money laundering system, the lack of authoritys investigations, and the lack of penalties for organizations and individuals involved in money laundering.

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Small Medium Enterprises (SMEs) Empowerment through Traditional Market Protection

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Keywords: Small Medium Enterprises (SMEs), Empowerment, Traditional Market Protection

This study is motivated phenomenon is still weak protection of Small and Medium Enterprises (SMEs), especially in the aspects of the marketing of its products. In Indonesia, the traditional market is a market for micro and medium enterprises (SMEs). The majority of SMEs in marketing their products through traditional markets. The purpose of this study is to design a device capable business law protects traditional markets as a key effort of SMEs empowerment. This research method is using a qualitative approach by observation and review of the literature. Observations made in some traditional markets in Banyumas and Semarang city. The results of the study confirm that the rule of law needs to be clear and unequivocal, both at the district, provincial and national governing distance lies between the traditional and modern markets. Legal device serves to protect traditional markets is important as an attempt to empower SMEs. Legal aspect as important tool to protect traditional traditional from modern market pressure.

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A Preliminary Study of Talent Development Platform and Competency Indicators for Big Data Analysts in Taiwan

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Keywords: Big Data Analyst, Talent Development Platform, Competency Indicators, Course-Planning Framework

In the trend of growing amount of data, fastening updates, and varying sources, the demand of big data analysts has been drastically increased. No matter statistical talents, information technology talents, or people with applied abilities, all play important roles in big data groups. As the demand of big data analysts is increasing in Taiwan, big data related training courses appear as training institutes try to meet the trend, and some programs or degree programs are established in universities as well. But how and what the courses and programs should go on does not have a standard as the competency indicators for big data analysts have not been constructed yet. Based on the current situation, this research tried to build an integrated talent development platform and construct competency indicators with 4 dimensions and 21 indicators for big data analysts in Taiwan.

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Ozone Generation to Inhibit Longkong Ripening

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Keywords: Longkong, Ozone, Inhibit Longkong Ripening, Fruit

Longkong is economical fruit of the Southern part of Thailand that the longevity of its shelf life over the maturation is related to respiration and ethylene production. This project is to study the maturation of Longkong under ozone treatment generated from high voltage generator through corona discharge with three conditions over a week of storage: (1) the presence of ozone in chamber, (2) control chamber without ozone and (3) without chamber under the normal condition. This conditions were monitored the effect of ozone toward the respiration, ethylene production, O2 change and CO2 generation. The experiment was carried out after the Longkong was pretreated with 5-min sodium metabisulfite soaking before testing under three conditions. The average of the weight and length of Longkong was reduced lesser than those two conditions. The loss of fruit in the bunch under ozone was significantly higher reserve than that of no ozone chamber and without chamber (p=0.012). The polyphenol oxidase contents in three conditions were tested with polyphenol oxidase ELISA assay kit. Results showed that under ozone treatment the PPO was reduced from 407 U/mL to 320.33 U/mL with significantly differences from the other two treatments. The amount of microbial contaminants were detected through plate count and found that the ozone treatment had less microbial contaminant than control and without chamber condition. The relationships of ethylene production to the longevity of Longkong shelf life were correlated through multivariable regression under ozone and control conditions. Results revealed that under ozone the relation was CH4 = -8772.57 + 495.68 O2 + 530.83 CO2 - 37.854 Temp + 1.15 MR + 117.33 Time R2 =0.8585, while under control was C2H4 =-6425.52 + 467.76 O2 + 205.76 CO2 130.881Temp + 27.14 MR + 50.13Time R2 = 0.982. This study under ozone treatment generated from high voltage generator can be extend the shelf life of Longkong; therefore, this ozone treatment will be applied to use in Longkong container to reducing the maturation over the long logistics.

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