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Basic & Applied Sciences**



**Academic Fora**

# CONFERENCE PROCEEDINGS

## BOOK OF ABSTRACTS ECBA-2018

International Conference on  
“Engineering & Technology, Computer, Basic & Applied  
Sciences”  
(ECBA-2018), Osaka, Japan

# **Book of Abstracts Proceeding**

International Conference on  
“Engineering & Technology, Computer, Basic & Applied  
Sciences”  
(ECBA-2018)

**Osaka Japan**

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**International Conference on  
“Engineering & Technology, Computer, Basic &  
Applied Sciences”  
Osaka Japan**

**Venue: Osaka International Convention Center**

**ORGANIZING COMMITTEE**

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# CONFERENCE CHAIR MESSAGE

**Dr. Malika Ait Nasser**

International Conference on “Engineering & Technology, Computer, Basic & Applied Sciences” serves as platform that aims to help the scholarly community across nations to explore the critical role of multidisciplinary innovations for sustainability and growth of human societies. This conference provides opportunity to the academicians, practitioners, scientists, and scholars from across various disciplines to discuss avenues for interdisciplinary innovations and identify effective ways to address the challenges faced by our societies globally. The research ideas and studies that we received for this conference are very promising, unique, and impactful. I believe these studies have the potential to address key challenges in various sub-domains of social sciences and applied sciences.

I am really thankful to our honorable scientific and review committee for spending much of their time in reviewing the papers for this event. I am also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let's break all the discriminating barriers and get free from all minor affiliations. Let's contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

Thank you.

**Dr. Malika Ait Nasser**

Conference Chair

Email: [chair2018@academicfora.com](mailto:chair2018@academicfora.com)

ECBA-2018

## Conference Schedule

**DAY 01 Thursday (December 27, 2018)**

**Venue: Room 1**

<b><i>09:00 am – 09:30 am</i></b>	<b>Welcome Reception &amp; Registration</b>
<i>09:30 am – 09:40 am</i>	Opening Ceremony
<i>09:40 am – 09:50 am</i>	Welcome Remarks – Conference Coordinator Academic Fora
<i>09:50 am – 09:55 am</i>	Introduction of Participants
<i>09:55 am – 10:00 am</i>	Group Photo Session
<i>10:00 am – 10:30 am</i>	Grand Networking Session and Tea Break



**DAY 01 Thursday (December 27, 2018)**

**Session 1 (10:30 am – 12:30 pm)**

**Venue: Room 1**

**Track A: Engineering & Technology, Computer, Basic  
& Applied Sciences**

<b>EEMI-DEC18-102</b>	The Study and Development of Fiber-optic Biosensors by Using Gold Nanoparticles and Performance on Detection of Antigen-Antibody Binding	Dr. Nongluck Houng kamhang
<b>OSA-4128-101E</b>	Development of Risk-based Decision Support System (DSS+R) for Forensic Investigation in Detecting Human Cadaver of Clandestine Graves	Noor Maizura Mohamad Noor

**Track B: Medical Medicine and Health Study**

<b>OSA-4128-105M</b>	Establishment of the Shari'ah Framework for the Application of Somatic Gene Therapy in Human	Zakiah Samori
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**Track C: Business, Economics, Social Sciences and  
Humanities**

<b>IRBEMSH-128-ANI101</b>	<b>Empowering Rural Women Entrepreneur Through Social Innovation Model</b>	<b>Noraida Haji Ali</b>
<b>EBFS-DEC-102</b>	Risk Management Committee and Bank Performance: Evidence from the Adoption of Dodd-Frank Act	Liangliang Jiang
<b>EBFS-DEC-109</b>	Pricing the Electric Scooters: The Evidence from Taiwan	Jin-Long Liu
<b>OSA-4128-104B</b>	The Effects of Person-organization, Person-group, Person-job and Person-supervisor Fit on Retention Tendency	Shang-Chih, Liao

**Lunch Break 12:30-1:30 pm**

**Closing Ceremony**

## List of Conference Attendees

The following Scholars/ practitioners/educationist who don't have any paper presentation, however they will be attending the conference as delegates & observers.

Sr. No	Official ID	Name	Affiliation Details
1.	OSA-4128-105A	Dr Meenakshi Tomar	Royal Australian College of General Practitioners, Australia
2.	OSA-4128-106A	Untung Wahyudi Maryono	DPRD Kota Bogor, Indonesia
3.	OSA-4128-107A	Sofian	DPRD Kota Bogor, Indonesia
4.	OSA-4128-108A	Dr Richard Galluzzo	University of Queensland, Australia

	<b>DAY 02 Friday (December 28,2018)</b>	
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## **City Tour and Shopping Day**

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, COMPUTER, BASIC &  
APPLIED SCIENCES**

# The Study and Development of Fiber-Optic Biosensors by Using Gold Nanoparticles and Performance on Detection of Antigen-Antibody Binding

Nongluck Hounkamhang<sup>1\*</sup>, Sittan Charoensuwan<sup>2</sup>, Channarong Chueaiarrom<sup>3</sup>, Armote Somboonkaew<sup>4</sup>, Ratthasart Amarit<sup>5</sup>

**Abstract** This work aims to study and develop fiber-optic biosensors with gold nanoparticles based on the principle of localized surface plasmon resonance (LSPR). Gold nanoparticles were synthesized via citrate reduction method and were used to coat on glass core fiber through a self-assembly-monolayer prepared by (3-Aminopropyl) triethoxysilane. By comparison, the cladding ranges of fiber between 1 and 2 centimeters. The results found that at 2 centimeters offered a rich-higher sensitivity rather than the other about 10 times. The sizes of gold nanoparticles were compared when coating to the fiber core. The results show that the signal increase when the size of gold nanoparticle decrease, and the sensitivity of the sensor found to be increased. This sensor has sensitivity  $4 \times 10^6$  A.U./RIU by measuring in glycerol with different refractive index in the range of  $3.7 \times 10^{-4}$  to  $2.9 \times 10^{-3}$ . The sensor shows a superior stability and repeatability. Moreover, fiber optic coated with gold nanoparticle was used to detect the interaction of model sample; anti-A and red blood cell (RBCs) A, B, and O. The results found that the sensor has specificity to RBCs-A without unspecific binding signal from other blood samples. The signal increase when increasing the concentration of blood samples. These results provide a great encouragement to develop a fiber optic biosensor as a higher-potential technique in medical application and other fields.

**Keywords:** Localized Surface Plasmon Resonance, Fiber Optic, Gold Nanoparticles

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# **Development of Risk-based Decision Support System (DSS+R) for Forensic Investigation in Detecting Human Cadaver of Clandestine Graves**

Noor Maizura Mohamad Noor<sup>1\*</sup>, Low Mei Yeen<sup>2</sup>, Siti Sofo Ismail<sup>3</sup>, Amirul Harfirie Ahmad Nubli<sup>4</sup>

**Abstract** Locating clandestine graves is crucial when it comes to solving criminal cases. This is because one of the most common method to conceal a homicide is by burying the human cadaver in a soil environment. Current approaches involve the use of Cadaver Dogs and Ground Penetrating Radar (GPR) to locate clandestine graves and soil is traditionally used in forensic science as a critical piece of evidence. However, there exists the possibility of a mistake occurring in distinguishing between the decompositions chemicals of a human and a non-human, thus contributing to false results that lead to risks in making the right decision. Thus, development of a risk-based decision support system (DSS+R) for the purpose of forensic investigation in detecting human cadaver in clandestine graves is proposed. The objective is to implement DSS+R framework to a web-based system called CHAVET. The development consists of the following phases: analyzing current methods, designing a DSS+R framework, integrating the model for forensic investigation, and testing by demonstrating applicability of the system.

**Keywords:** Crimes, Criteria, Decision Making, Risk, Framework, Lipid

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## **TRACK B: MEDICAL, MEDICINE AND HEALTH SCIENCES**

# Establishment of the Shari'ah Framework for the Application of Somatic Gene Therapy in Human

Zakiah Samori<sup>1</sup>, Fadilah Abd Rahman<sup>2</sup>

**Abstract** Human gene therapy is best known as a transfer of nucleic acids to either the somatic cells or germ cells of an individual. It introduces genetic materials which have therapeutic purpose ranging from inherited genetic disorders to certain malignancies and infectious diseases. This medical scientific breakthrough has received lucrative demand worldwide as it offers potential treatment to cure genetic diseases in human at the molecular level. Since then, thousands of people have already participated in the trials thus it is likely to be part of medical practice in the future. Despite of the tremendous benefits that it promises, this new biomedical technology has given rise to several contentious issues from the ethical and religious point of view. Since it comprises of two different therapies namely somatic and germ line gene therapy, each involves different procedures thereby poses different legal ruling and decision. This study attempts to propose a complementary model of the Shari'ah framework on the human gene therapy with special reference to the somatic gene therapy. This proposed framework is designed and developed to fulfil the lacuna of the Shari'ah Framework on the application of the somatic gene therapy after an in depth study of its position from the Shari'ah point of view. In achieving this, a detailed analysis and outlook into the Qur'anic evidences along with the Hadith of the Prophet Muhammad pbuh were carried out. Following this, its position from the pragmatic approach of the Maqasid al-Syariyyah (Objective of the Shari'ah) and the Qawa'id Fiqhiyyah (Islamic Legal Maxims) is also analysed in further detail. This model of Shariah Framework would serve as the ethical basis for the application of somatic gene therapy in Malaysia and beyond (particularly Muslim countries) especially for Muslim doctors, scientists and Muslims at large. For Muslim countries such as Malaysia where Muslims makes the majority of the population and Islam as the official religion in Article 3 of its Federal Constitution, this framework is deemed to be important reference in providing the essential guidelines on the permissibility of this therapy. Consideration of the position of Somatic Gene Therapy from the Shari'ah perspective is undeniably crucial in any attempt to regulate Somatic Gene Therapy in any Muslim countries in the future.

**Keywords:** Somatic Gene Therapy, Shari'ah Framework, Islamic Principles Maqasid Syariyyah Qawaid Fiqhiyyah

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## **TRACK C: BUSINESS, ECONOMICS, SOCIAL SCIENCE & HUMANITIES**

# Empowering Rural Women Entrepreneur through Social Innovation Model

Noraida Haji Ali<sup>1\*</sup>, Suriyani Muhamad<sup>2</sup>, Masita Masila Abdul Jalil<sup>3</sup>, Mustafa Man<sup>4</sup>

**Abstract** Empowering rural women through innovation has become a vital focus in the developing world. Today, the world experienced a dynamic change in technologies, economies and societies which also give effects to lives of rural women. Innovation through new ideas, products and practices increasingly seen as a force for social change. Innovation and women's empowerment are rarely discussed within the same context but each has essential values for human progress. This paper discusses how the social innovation model can help rural women especially in B40 group to develop their skills of marketing to grow their business. Social innovation model provide a better opportunities for entrepreneurs to improve their business strategy. The rural women who are non-computer literate group, need primary attention in developing their awareness and necessary skills towards social media. The use of internet technology provides better opportunities for entrepreneurs to develop their business strategy and thereby creating good business reputation. E-business can grow more than 100% if the right strategy and business model are used. Entrepreneurs who want to venture into this business via the internet, need to have knowledge and ICT basic skills and strong interest. This model could empower the targeted marginalized group with the knowledge of information engineering, increase their awareness and utilization of ICT in their everyday actions. The main focus in this study is to educate and empower the rural women (B40 Group) using ICT in improving their livelihood resiliency.

**Keywords:** Empowering Women, Social Innovation, Entrepreneurship, E-Business

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# **Risk Management Committee and Bank Performance: Evidence from the Adoption of Dodd-Frank Act**

Liangliang Jiang\*

**Abstract** This paper tests the effect of the establishment of risk management committee on bank risk, bank loan performance and bank value. The Dodd Frank Act of 2010 provides us with quasi-experimental variation on risk management committee establishment that facilitates identification. We present two identification methods: (1) identifying the risk management committee effect using an instrumental variable that is based on the difference-in-differences; and (2) testing the risk management committee effect using the \$10 billion assets as a cutoff and employing the fuzzy regression discontinuity design. We find that the establishment of risk committee has effectively reduced bank risks, including total risk, tail risk, residual risk, and asset risk. The risk committee is also beneficial to firm value increment and non-performing loan reduction. In addition, we find that the risk reduction effect from the risk management committee is more pronounced among asset diversified banks.

**Keywords:** Dodd-Frank; Risk Management Committee

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# Pricing the Electric Scooters: The Evidence from Taiwan

Pen-Jen Tsai,<sup>1\*</sup> Jin-Long Liu<sup>2</sup>

**Abstract** The purpose of this study is to examine the pricing strategy of electric scooters in Taiwan. **Introduction:** Air pollution has been the most environmental risk factor to health which is attributed to one of nine deaths annually (WTO, 2016). To mitigate the negative impacts of the health, one of the priority management policies is to encourage the uses of cleaner and low-emission vehicles as transportation. In Taiwan, about 15 millions of gasoline-type scooters are owned by individuals and used as the regular transportation vehicles. The heavy uses of gasoline-type scooters have created a serious air pollution problem that affects the residential health. Starting from 2009, Taiwan government launched a series of projects to promote the manufacturing and to subsidize the purchases of electric scooters. **Methodology:** By collecting the current marketing data on the sales of electric scooters, we adopted the hedonic pricing method to estimate the relationship between the prices and attributes of electric scooters. **Results:** Based on the 199 observations of electric scooters, our results indicate that the better performances provided, such as cruising range, climbing ability and horsepower, has the positive relationships with the prices. In addition, the longer the charging times and the lower the dominance have the negative impacts on the market prices. Furthermore, those estimates are statistically significant at 1% levels and are consistent with the expectations. **Conclusion:** Our research is the first study to examine the relationship between the prices and characteristics of electric scooters in Taiwan. Our empirical results provide the information that can be used to enhance the decision making on the pricing strategies on the market of electric scooters.

**Keywords:** Hedonic Pricing Method, Electric Scooters

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# The Effects of Person-Organization, Person-Group, Person-Job and Person-Supervisor Fit on Retention Tendency

Huo-Tsan Chang<sup>1</sup>, Shang-Chih, Liao<sup>2\*</sup>, Min-Chih, Miao<sup>3</sup>,  
Xiu-Hui, Huang<sup>4</sup>, Hung-Ming Hsu<sup>5</sup>

**Abstract** In global markets of high-tech industry, faced fierce competition, enterprises are devoted to following the pace accelerating the speed of technological advancement. R&D capability has been in a dominant position. Therefore, how to retain talents with the required R&D skills and knowledge becomes the focus for management, which is also the subject of the current research. Based on the fit and person-in-situation theory, this study investigated the effect of each variable on retention tendency to propose a more comprehensive fit research framework. Taking the semiconductor manufacturing industry in Taiwan as the research population, we conduct the survey through questionnaires sampling R&D personnel in 15 manufacturers. A total of 300 questionnaires were sent out, with the matched samples were valid for a response rate of 72%. To all R&D personnel, the findings of this study indicate that: 1. Person-organization fit is positively related to retention tendency. 2. Person-group fit is positively related to retention tendency. 3. Person-job fit is positively related to retention tendency. 4. Person-supervisor fit is positively related to retention tendency. 5. Under the R&D personnel's multidimensional fits, the person-organization, person-job and person-supervisor fits have significantly positive effects on the retention tendency, but person-group fit has no significant effect. Thus, we proposed some practical management implications based on our findings.

**Keywords:** Person-Organization Fit, Person-Group Fit, Person-Job Fit, Person-Supervisor Fit, Retention Tendency

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