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Basic & Applied Sciences

**ECBA-2016**

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**JAKARTA, INDONESIA**



# CONFERENCE PROCEEDINGS

## BOOK OF ABSTRACT ECBA-2016

**International Conference on  
“Engineering & Technology, Computer, Basic & Applied  
Science”  
(ECBA-2016), Jakarta Indonesia**

# **Book of Abstracts Proceedings**

**International Conference on  
“ENGINEERING & TECHNOLOGY, COMPUTER, BASIC &  
APPLIED SCIENCE”  
(ECBA-2016)  
Jakarta Indonesia**

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**“Engineering & Technology, Computer, Basic & Applied  
Science  
(ECBA-2016)”**

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**International Conference on**  
**“Engineering & Technology, Computer, Basic & Applied**  
**Science**  
**Jakarta Indonesia”**  
**Venue: Aston hotel priority simatupang Jakarta**

**ORGANIZING COMMITTEE**

**1. Ms Petrel Qiu**

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## **CONFERENCE PROGRAM COORDINATOR MESSAGE**

**Ms. Ani Wahyu**

International Conference on Engineering Technology Basic & Applied Science” 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 honourable 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.

**Ms. Ani Wahyu**

Conference Program coordinator  
Email: [aniwahyu@academicfora.com](mailto:aniwahyu@academicfora.com)  
ECBA-2016

# CONFERENCE PROGRAM

**DAY 01 Saturday (February 13, 2016)**  
**Welcome Reception & Registration**

**9:00– 9:30 am**

**Opening Ceremony (09:30 – 10:00 am)**  
**Venue: Room 1**

|                  |  |
|------------------|--|
| 09:30 – 9:40 am  | Introduction of Participants   |
| 09:40– 9:50 am   | Welcome Remarks – <b>Ms. Ani Wahyu</b> - Conference Coordinator<br>Academic Fora |
| 09:50 – 10.00 am | Group Photo Session  |

**Grand Networking Session and Tea Break (10:00– 10:30 am)**





**DAY 01 Saturday (February 13, 2016)**

**Session 1 (10:30 am – 12:00 pm)**

**Venue: Room 1**

**Session Chair: Melisa Purnamasari Ayuningrat**

**Track A: Business Management Economics and Social Science**

|             |  |                               |
|-------------|--|-------------------------------|
| JKS-226-108 | The Effect of Social Media Experiential Marketing Towards Customers\' Satisfaction (A Study in Chingu Korean Fan Cafe Bandung Indonesia) | Pratama Adi Nugraha           |
| JKS-226-109 | The Impact of Managerial Awareness Towards Green Product Innovation on Performance , Moderated by Green Communication                    | Melisa Purnamasari Ayuningrat |
| JKS-226-103 | Wind Turbine Application in Improving Kampung Bungin Local Community Business to Create Sustainable Development                          | Felly Rihlat Gibran           |

**Track B: Engineering and Technology Study**

|             |  |                  |
|-------------|--|------------------|
| JKE-226-101 | Medium Access Control Efficient Energy Usage for Wireless and Mobile Sensor Networks | Mohd Samsu Sajat |
| JKE-226-102 | A Proposed Algorithm for Scheduling Optimization in Computational Grid               | Mohd Samsu Sajat |

**Lunch Break (12:00 – 1:00pm)**  
**(Closing ceremony)**



## **DAY 02 Sunday (February 14, 2016)**

### **City Tour and Shopping Day**

All participants will be free to carry on their own tourism and shopping activities in Jakarta Indonesia. It's a free day for this purpose



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## **TRACK A: ENGINEERING & TECHNOLOGY**

## Medium Access Control Efficient Energy Usage for Wireless and Mobile Sensor Networks

**Mohd Samsu Sajat<sup>1\*</sup>, Yousef Fazea<sup>2</sup>, Omar Dekkak<sup>3</sup>**

<sup>1, 2, 3</sup> School of Computing, Universiti Utara Malaysia,  
006010 Sintok, Kedah, Malaysia

### Abstract

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Wireless sensor network (WSN) has garnered remarkable attention due to its wide supports for plenty of applications such as, health systems; military based applications, environmental monitoring, tactical system and etc. In Contention-Based MAC protocols related to the energy consumption. This paper provides a critical review on existing wireless and mobile energy efficient medium access control. In addition, this paper presents a performance comparison amongst the reviewed protocols, to guide the reader to select the proper protocol that suited his study.

**Keywords:** Wireless Sensor Network, Energy Efficiency, Mobility, Contention-Based MAC Protocol, Packet Scheduling

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\*All correspondence related to this article should be directed to Mohd Samsu Sajat, School of Computing, Universiti Utara Malaysia, 006010 Sintok, Kedah, Malaysia  
Email: mohdsamsu@uum.edu.my

## A Proposed Algorithm for Scheduling Optimization in Computational Grid

**Omar Dakkak<sup>1</sup>, Suki Arif<sup>2</sup>, Shahrudin Awang Nor<sup>3</sup>, Mohd Samsu bin Sajat<sup>4\*</sup>**

School of Computing, Universiti Utara Malaysia,  
006010 Sintok, Kedah, Malaysia

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### Abstract

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In recent years, the fast evolution in the industry of computer hardware such as the processors, has led the application developers to design advanced software's that require massive computational power. Thus, Grid Computing has emerged in order to handle the computational power demands requested from the application. Quality of service (QoS) in Grid is highly desirable in order to provide a proper service level to the Grid's user(s). Several interactions events are involved in determining the QoS level in Grid such as: Allocating the resources for the jobs, monitoring the performance of the selected resources and the power of performance for the available resources. To allocate the suitable resources for the incoming jobs, a scheduling algorithm has to manage this process. In this paper, we critically review some of these mechanisms in "Grid Computing" environment. In addition, we propose a new scheduling algorithm to improve the QoS, Gap Filling policy will be applied to improve the performance of the priority algorithm. Then, and for better QoS, an optimization algorithm will perform in order to optimize the initial result for further improvement.

**Keywords:** Grid Computing, Scheduling, Proposed Algorithm, Meta-Heuristic

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## **TRACK B: BUSINESS MANAGEMENT & ECONOMICS**

## The Effect of Social Media Experiential Marketing Towards Customers' Satisfaction (A Study in Chingu Korean Fan Cafe Bandung Indonesia)

**Pratama Adi Nugraha<sup>1\*</sup>, Indrawati<sup>2</sup>**

Telkom University

Abstract

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The concept of experiential marketing has been put forward as a new marketing strategy in the modern world, since the existing marketing strategies become insufficient due to the developments of knowledge and communication technologies, such as social media application which make the competition become more tough. The essence of experiential marketing is to build customers' satisfaction through five aspects: Sense, Feel, Think, Act, and Relate. The object of this study is Chingu Korean Fan Cafe Bandung, the reason of choosing this cafe is Chingu Korean Fan Cafe Bandung is a well-known low-cost Korean Cafe and it is very active in campaigning its services through social media compare with competitors. The aim of this research is to examine the effect of experiential marketing on social media towards customer satisfaction. An online survey has been published and 400 valid set of questionnaires has been analyzed. Quantitative-Descriptive analysis, causal study, and multiple regression analysis have been used during the study. This research found that Sense, Feel, Think, Act, and Relate have significant positive influenced to customers' satisfaction partially and simultaneously. Relate become the most influential factor in this research. The study also found that the value of Adjusted R square is 0.468. It means that 46.8% customer satisfaction is explained by the independent variable (Sense, Feel, Think, Act, and Relate). To improve the customers' satisfaction, Chingu Korean Fan Cafe must give positive responses to customers who mention, post, or share something regarding this Cafe in social media. If there are complaints sent through social media, Chingu Korean Fan Cafe should directly contact them by using Direct Message feature in Twitter and Private Message in Instagram to respect customer and treat them more personally, and offer the right solution to the problem

**Keywords:** Social Media, Experiential Marketing, Strategic Experiential Modules, Customers, Satisfaction

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## **TRACK C: SOCIAL SCIENCE AND HUMANITIES**



## Green Product Innovation on Performance , Moderated by Green Communication

Noermijati<sup>1</sup>, Djumilah Hadiwidjojo<sup>2</sup>, Melisa Purnamasari  
Ayuningrat<sup>3\*</sup>

<sup>1, 2, 3</sup> Management Department Faculty of Economic and Business,  
Brawijaya University, Malang, Indonesia

### Abstract

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Environmental awareness has changed the competition, s role and important consideration in developing company's strategies. Managers involved in various activities to minimize environmental impact, such as adopting green product innovation. The aim of this research is analyze the effect of managerial awareness on firm performance which mediated by green product innovation and moderated by green communication. The sample of this research is 26 retails in Malang (hypermarkets and supermarkets categories) which involved in selling organic's products and using environmentally friendly packaging, by using total sampling. According to SEM-PLS analysis, managerial awareness has direct effect on firm Performance ( $p < 0.001$ ,  $\beta = 0.82$ ) and fully mediated by green product innovation ( $p = 0.241$ ,  $\beta = 0.094$ ). On the other hand, green communication is moderate the effect of managerial awareness on firm performance ( $p = 0.15$ ,  $\beta = 0.21$ ). Awareness on environmental issue encourages managers to adopt green product innovation. Green product innovation needs to be balance with green communication. Customer's desire in buying organic's products and using environmentally friendly packaging strongly affected by information's exposure.

**Keywords:** Managerial Awareness, Firm Performance, Green Product Innovation, Green Communication, Retail

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Email: melisaayuningrat@gmail.com, noermijati@yahoo.com

## Wind Turbine Application in Improving Kampung Bungin Local Community Business to Create Sustainable Development

Felly Rihlat Gibran<sup>1\*</sup>, Adi Surjosatyo<sup>2</sup>, Ahmad Dien Warits<sup>3</sup>,  
Nadya Noorfatima<sup>4</sup>  
<sup>1, 2, 3, 4</sup>University of Indonesia

### Abstract

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As an archipelago, Indonesia has numerous coastal areas which have great resource potencies that remain undeveloped. One of them is Kampung Bungin. Located in northern coast of Java Island, this village has a great potency of sea which is likely to be developed for eco-tourism. Previously, a micro scale wind turbine has been successfully implemented and operates properly as an alternative source of electrical energy. However, its utilization has not been maximized. Therefore, in this research, a further wind turbine application scheme is created to fulfill various daily needs such as energy for livelihoods to improve local community lives. In order to achieve this purpose, a strategic collaboration between various institutions is conducted. Each institution conducted programs based on their respective expertise, i.e. conducting surveys to local community, giving business training to improve the local primary livelihood and conducting experiments about applying wind turbine electricity for livelihood alternative energy supply. The results show that 39% of local community work as fisherman which show that fishery is the local primary livelihood. Moreover, due to 30% of locals are not educated and 44% of them only primary graduated, proper trainings such as basic entrepreneurship and seafood products packaging are given. On the other side, experimental results show that the wind turbine not only can reduce diesel fuel emission up to 25% boat but also cover 50% fuel consumption and increase monthly income per capita about 4.33% to 8.75%. Finally, applying systemic thinking scheme to correlate each program can create a sustainable development.

**Keywords:** Community Empowerment, Eco-Tourism, Sustainable Development, Systemic Thinking, Wind Turbine.

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## **FUTURE EVENTS**

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**Business, Economics, Social Science & Humanities (BESSH) Conferences:**

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**Engineering & Technology, Computer, Basic & Applied Science**

**<http://academicfora.com/engineering-conference-home/>**

**Medical, Medicine & Health Science**

**<http://academicfora.com/medical-conference-home/>**

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through networking platform.

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