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EAIP- 2019

**International Conference on Engineering Management,
Applied Sciences, Information Technology, Industrial &
Production Engineering ((EAIP)
July 02-03, 2019 / Singapore**

Proceedings of International Conference on Engineering Management, Applied Sciences, Information Technology, Industrial & Production Engineering (EAIP)

Conference organized by:



**Research Forum
for Applied Sciences,
Engineering & Technology**

This conference is dedicated to educators all over the world and to the members of the Research Forum for Applied Sciences Engineering and Technology (RFAET) whose passion for teaching, learning, research, and service are helping to transform the academy in many positive ways.

Mission, Vision, and Core Values

Exploration of new research bits of knowledge and an intuitive stage for improving innovation and advancement

Lead the researchers through global communication and collaboration.

Scholastic Innovation, Excellence and Integrity, Insightful Research, Networking, Professional Leadership, Assorted Variety and Equity, Collegiality and Collaboration, Corporate Social Responsibility

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Research Forum for Applied Sciences Engineering and Technology

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Welcome Message

The Research Forum for Applied Sciences Engineering and Technology (RFAET) welcomes you to the International Conference on Engineering Management, Applied Sciences, Information Technology, Industrial & Production Engineering (EAIP).

We are happy you decided to join your colleagues from around the world to explore innovative technologies, pioneering pedagogical strategies, and a sampling of international collaborations that are being used to engage and retain students, researchers and Scholars in the new millennium.

Scientific Committee

Jan Fook, International Centre for Higher Education Educational Research, Leeds Trinity University, UK
Jennifer Bowerman, MacEwan University, Canada
Jo Ann Rolle, Medgar Evers College, The City University of New York, USA
John Davies, Victoria University of Wellington, New Zealand
Julie Baldry Currens from Higher Education Academy, UK
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Justin Henley Beneke, University of Winchester, UK

Acknowledgements

The organizing committee would like to thank all those people who were involved in making the conference a success. A great amount of planning and organizing is required to hold a successful conference, so we are indebted to those who volunteered their time and energy.

We want to thank all the members of the Research Forum for Applied Sciences Engineering and Technology (RFAET) who volunteered their time to help organize the conference.

Conference Description

Research Forum for Applied Sciences Engineering and Technology (RFAET) provides an excellent venue for generating ideas. Conference participants will explore the latest trends, practices, and research in engineering technology and Applied Sciences tracks. The program will emphasize experimentation and pushing the boundaries of higher education.

ENGINEERING TECHNOLOGY

Acoustical Engineering Aerospace Engineering, Agricultural Engineering Biological Engineering and Sciences, Biological Systems Engineering Biomedical Engineering, Bioprocess Engineering Biotechnology, Building Services Engineering Chemical Engineering, Industrial Engineering Information Engineering, Informational Technology Manufacturing Engineering and Technology, Materials Engineering Mechanical Engineering, Mechatronics Nanotechnology and Nanoengineering, Naval Engineering Nuclear Engineering, Technology for Cloud Computing Technology for Community, Technology for Digital Age Technology for Human Use, Technology for Learning Civil Engineering, Computer Engineering Current issues and challenges in Engineering, Electrical Engineering Electronic Engineering, Energy Engineering Environmental Engineering, Food Engineering Genetic Engineering, Geotechnical Engineering Ocean Engineering and Technology, Optical Engineering Petroleum Engineering, Power Engineering Process Engineering, Resource Engineering Sensing Technology, Structural Engineering Systems and Software Engineering, Technology for Big Data Textile Engineering, Thermal Engineering Transport Engineering, Web Engineering Vehicle Engineering

APPLIED SCIENCES

Artificial Intelligence, Architecture, Astronomy, Biological Sciences, Botany, Chemistry, Design, Earth Science, Ecology, Marine Science, Physics, Space Sciences, Life sciences, Computer Sciences, Logic, Mathematics, Statistics, Systems Science, Electrical Engineering, Information, Technology, Industrial Engineering, Mechanical Engineering, Applied Physics, Health Sciences and Medicine, Ceramic Engineering, Computing Technology, Electronics, Energy, Environmental Engineering Sciences, Engineering physics, Environmental Technology, Fisheries Science, Forestry Science, Materials Engineering Micro technology, Nanotechnology, Nuclear, Technology, Optics, Zoology Transportation

Conference Awards

Best Paper Awards

The Organizing Committee will select the best paper considering the recommendations of the Scientific Review Committee based on the relevance to the theme, academic contribution, accuracy of the methodology, clarity of contents.

Best Presentation Awards Sessions

The best presenter in each session will be selected considering the scientific quality, contents, time management, presentation style and level of interaction with the audience. The best presenter in each session will get a certificate.

Best Presentation Awards Students

These awards will be awarded the best presenters selected from the PhD or Master level students' presenters. The selection criteria will be scientific quality, contents, time management and presentation style.

Conference Schedule

International Conference on Engineering Management, Applied Sciences, Information Technology, Industrial & Production Engineering (EAIP)

Hotel Grand Pacific Singapore
July 02-03, 2019

08: 00 am 08: 30 am	Registration and Reception
08: 30 am 08: 40 am	Opening ceremony
08: 40 am 08: 50 am	Welcome Remarks
08: 50 am 09: 00 am	Tea Break



International Conference on Engineering Management, Applied Sciences Information Technology, Industrial & Production Engineering (EAIP)

**Day 01: Tuesday
July 02, 2019**

Session 01: (09:00 am 12: 00 pm)

Track A: Business, Social Sciences and Humanities

Presenter Name: Mathew Farrell Sinaga & Dani Satria Nuraman & Abram Julion Murtama

Reference ID: EESR19-July-102 & EESR19-July-102A & EESR19-July-102B

Paper Title: The Effect of Financial Inclusion on Income Inequality in 33 Provinces of Indonesia

Presenter Name: Resmana Lim

Reference ID: EESR19-July-103

Paper Title: Brain-Computer Interface for Mouse Cursor Control Application Using SSVEP Methods

Presenter Name: Lizzy Novia Dominica & Zeisha Shabrina & Hanna Haifa Octavianie

Reference ID: EESR19-July-105 & EESR19-July-105A & EESR19-July-105B

Paper Title: Effect of Financial Deepening on Income Gap in 6 Countries in Asia

Presenter Name: Essa Al Suwaidi

Reference ID: EPGS19-June-106

Paper Title: An Evaluation on the Factors influencing Happiness at Working Environment in UAE Government Entities: A Literature Review

Presenter Name: Kornkanok Boonsuk

Reference ID: FMIHS-JULY-004

Paper Title: Impact of Leadership Styles (Transformational and Transactional Leadership) on Innovative Working Behavior and Moderating Role of Psychological Empowerment. Study of Government-owned and Private Telecommunication Companies in Thailand

Track B: Engineering & Technology, Computer, Basic & Applied Sciences

Presenter Name: Hsin-Pey Peng

Reference ID: CNEA-JULY19 CEAS101

Paper Title: New Media Not Alone: Multiple Research Trends in Theorising Communication

Presenter Name: Chiu-Cheng Kuo

Reference ID: EAIP-JULY-001

Paper Title: The Effect of Hands-on Practice on Improving the Innovation Ability of High School Students -Smart Safety Socket

Lunch Break & Closing Ceremony



International Conference on Engineering Management, Applied Sciences, Information Technology, Industrial & Production Engineering (EAIP)

**Day 02: Wednesday
July 03, 2019**

Conference second day is reserved for participants own tourism activities.



Track A: Business, Social Sciences and Humanities

Impact of Leadership Styles (Transformational and Transactional Leadership) on Innovative Working Behavior and Moderating Role of Psychological Empowerment. Study of Government-Owned and Private Telecommunication Companies in Thailand.

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Innovation is showing the notable sign of business development nowadays. It is taking importance factor to maintain company stability, lead the market position and increase competitive advantage. In the time of innovative-demanded, executives and human resource have to give precedence to innovation oriented behavior or innovative working behavior to increase both amount and quality of innovation. Leadership has to be properly performed to boost up the behavior via increasing employees psychological empowerment. This empowerment has to be multiplied to build employees believe that they have an ability to handle challenging work task efficiently in an organizational environment. However, there are some different characteristics of government-owned and private companies in Thailand, i.e., procedures, policies or work practices. Thus, the way to apply leadership style needs to consider the nature of organization as well. Therefore, this study is researched with the purpose to investigate an impact of leadership styles (Transformational and Transactional Leadership) on innovative working behavior and moderating role of psychological empowerment, according to the type of company. Organizational members who in charge of telecommunication innovation, i.e. engineer, operator or R&D staff, from 5 government-owned and private telecommunication companies in Thailand are purposive samples. The research data is collected via 5 Likert scale questionnaire and statistical analyzed with SPSS and Structural Equation Model (SEM). The findings of this study express the relationship of leadership styles (Transformational and Transactional Leadership) and innovative working behavior. In addition, mediating effect of psychological empowerment is also explained. All results are separately analyzed for government-owned and private company type. This research will be beneficial to the leader, executive and top-management to imply properly leadership characteristics when innovation and employees psychological empowerment are high-demanded. Furthermore, it also helps to plan organization strategies and human resource development to handle with innovative-globalization era.

Index Terms: Transformational Leadership, Transactional Leadership, Innovative Working Behavior, Psychological Empowerment



The Effect of Financial Inclusion on Income Inequality in 33 Provinces of Indonesia

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Income inequality is one of the problems faced by developing countries including Indonesia. An effort that is believed to be able to overcome this problem is financial inclusion. Financial inclusion is all efforts aimed to eliminate all forms of price and non-price barriers towards people's access to utilize financial services. Higher financial inclusion is expected to encourage easier access to financial services for the communities, especially for low-income people who have limited access to financial services. This study uses the panel least square method with secondary data of 33 provinces in Indonesia from 2015 to 2017. The Gini ratio is used as a proxy for income inequality, while financial inclusion is illustrated by the ratio of outstanding loans of small and medium enterprises to the total outstanding loan at commercial banks. This study aims to see the impact of financial inclusion on income inequality in 33 provinces in Indonesia. The results of this study indicate that inclusion affects negatively and significantly on the gini ratio, which means that the increase in financial inclusion can reduce the income inequality.

Index Terms: Income Gap, Financial Inclusion, Indonesia



Brain-Computer Interface for Mouse Cursor Control Application Using SSVEP Methods

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A Brain Computer Interface (BCI) based on Steady State Visually Evoked Potential (SSVEP) for computer control application using Support Vector Machine (SVM) classifier is presented. For many years, people have speculated that electroencephalographic activity or other electrophysiological measures of brain function might provide a new non-muscular channel that can be used for sending messages or commands to the external world. BCI is a fast-growing emergent technology in which researchers aim to build a direct channel between the human brain and the computer. BCI systems provide a new communication channel for disabled people. Among the many different types of the BCI systems, the SSVEP based has attracted more attention due to its ease of use and signal processing. SSVEP are usually recorded from the occipital lobe of the brain when the subject is looking at a twinkling light source. SVM used in classifying SSVEP based electroencephalogram data with proper features. Based on the experiment utilizing 14-channel Electroencephalography (EEG) device from Emotiv EPOC+, 80 percent of accuracy can be reached using SSVEP-based BCI with Linear SVM Kernel to move mouse cursor into four directions (up, down, left, and right).

Index Terms: Brain Computer Interface, Mouse Cursor Control, Steady State Visually Evoked Potential



Effect of Financial Deepening on Income Gap in 6 Countries in Asia

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The financial sector has an important role in increasing a country's economic growth, but the income gap is one of the main problems in economic growth in various countries. The financial sector has a strong influence on economic development, poverty alleviation and economic stability. This study aims to determine the effect of financial sector deepening on income inequality by using panel data from six countries, namely Malaysia, Indonesia, Philippines, Singapore, China and Korea which are divided into two groups, namely lower middle income countries, namely Indonesia and the Philippines and upper middle / high income, namely Malaysia, Singapore, China and Korea in 2012-2016. By using the Panel Least Squares analysis technique, this study found results that were upper middle / high income; bank assets, money supply, stock traded have a positive effect; lending to the private sector; domestic money bank assets, private sector debt securities and stock market capitalization have a negative effect. Whereas in lower middle income countries; bank assets, money supply, stock market capitalization have a negative effect; stock traded has a positive effect; however, lending to the private sector, domestic money bank assets, government debt and private sector debt does not affect the income gap.

Index Terms: Financial Deepening, Income Gap, Asia



Research Forum
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Engineering & Technology

Track B: Engineering Technology & Applied Sciences



The Effect of Hands-on Practice on Improving the Innovation Ability of High School Students —Smart Safety Socket

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With the development of technology, the use of electricity products is changing with each passing day, bringing many conveniences in people's lives. However, because of the increasing load on the socket, it is easy to produce electrical fires and cause loss of life and property under improper use conditions. In view of this, based on the safe use of the socket, the development and production of smart safety sockets will be carried out by the teachers and students of the higher vocational electrical engineering and the existing equipment and the relevant curriculum concepts. The features of this product include: Monitor the power consumption of the socket, warning and power-off of the over-powered, and remotely control the power supply of the socket in combination with the mobile APP program. The purpose of this study is to cultivate the practical ability of higher vocational students, to use the knowledge and skills learned, to improve the electrical safety of the socket, to prevent electrical fires and to protect the lives and property of the people.

Index Terms: Socket, Electrical Fire, Electricity Monitoring, Safety Socket



New Media Not Alone: Multiple Research Trends in Theorising Communication

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New media emerging as an era of digital revolution, has an essential change in its physical medium. This change has a great influence on human beings lifestyles and also society as a whole. This demonstrates the overwhelming tendency that technology intervenes social influence. This paper upholds a premise that new media, such as, internet possesses subtle but significant effect, especially when new media has developed into portability. According to this, the paper attempts to apply theories borrowed from the fields of information, sociology and psychology to examine the relationship between new media and social influence. It is clear that contemporary communication theories have been expanded based on the nature of new media, such as circular, scattered, and multi-step flow of disperse. Nevertheless, I argue, the theories that are derived from the functions of the medium seem not sufficient to explain the current complexity of communication. In particular, UGC (User Generated Content) has embodied participant communication, which brings forth users' access to the media. This situation leads to an essential transformation of the user's role. The users are becoming the major position in the whole process of communication. This paper concludes that UGC provides great chances for new media users to be the media content creators those who are simultaneously the social members, agents and practitioners. This trend would boost and enlarge significant social changes. Therefore, new media cannot be seen as simply a new-styled communication tool, but a fusion of several different disciplinary dimensions. The research outcome seeks to contribute to future possibilities of interdisciplinary advancement.

Index Terms: Falling Head, Drain Cover, Drainage Structure, Drain Element, Spiral Structure, Free Vortex

Upcoming Events

<http://aet-forum.com/eeee-august-2019/>

<http://aet-forum.com/tiac-august-2019/>

<http://aet-forum.com/cean-september-2019/>

<http://aet-forum.com/cean-september-2019/>

<https://aet-forum.com/emen-october-2019/>

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<https://aet-forum.com/aisc-jan-2020/>

