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RESS- 2019

International Conference on Research Challenges in Engineering, Information Technology, Software & Applied Sciences

November 04-05, 2019/ Singapore

Proceedings of International Conference on Research Challenges in Engineering, Information Technology, Software & Applied Sciences (RESS)

Conference organized by:

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 Research Challenges in Engineering, Information Technology, Software & Applied Sciences(RESS). 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.

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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.

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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.

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Conference Schedule

International Conference on Research Challenges in Engineering, Information Technology, Software & Applied Sciences (RESS)

Hotel Grand Pacific Singapore
November 04-05, 2019

09: 00 am - 09: 20 am	Registration and Reception
09: 20 am - 09: 30 am	Introduction of Participants
09: 30 am - 09: 40 am	Inauguration and Opening address
09: 40 am - 09: 50 am	Grand Networking Session
09: 50 am - 10: 00 am	Tea Break

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International Conference on Research Challenges in Engineering, Information Technology, Software & Applied Sciences (RESS)

Day 01: Monday
November 04, 2019

Session 01: (10: 00 am 11: 10 am)

Track A: Business, Social Sciences and Humanities

Presenter Name:Pavel Krakora
Reference ID: OBMES-NOV-005
Paper Title: Historical Consciousness in the Context of History and Civic Education

Presenter Name: Jingwei Guo
Reference ID: OBMES-NOV-009
Paper Title: Marketization and FDI in China: Relationship and Heterogeneity

Presenter Name: Syafia Madani Ashari & Ferinda Nafisa
Reference ID: SABS-NOV-105 & 105A
Paper Title: Nexus of Financial Inclusion and Financial Stability: The Case Asean-5

Presenter Name: Nia Yustiana & Anan Wiranto
Reference ID: SABS-NOV-106 & 106A
Paper Title: Chinas Economic Spillover to Asean-6 Economies: Before and after Renminbi International-ization

Track B: Engineering Technology & Applied Sciences

Session 02: (11: 10 am 12: 00 pm)

Presenter Name: Dr. Eleonora E. Claricia
Reference ID: RESS-NOV19-001
Paper Title: Internet of Things- Architectured Water Quality Monitoring System with Phytoremediation System Using Water Quality Index Method

Presenter Name: Mr. Leorando E. Rafael
Reference ID: RESS-NOV19-003
Paper Title: Implementing Kaizen Projects and Analytical Methodologies in Improving the Organizational Performance of Select Industries in the Philippines

Presenter Name: Atty. Rudolph Val Guarin
Reference ID: RESS-NOV19-005
Paper Title: Implementing Classification Techniques in Predicting Incidents in a Higher Education Institution in the Philippiness

Lunch Break & Closing Ceremony

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Conference Attendees

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

Participant Name: Monica Hince

Reference ID: SIN-1119-101MA

Country: University of Newcastle, Australia

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International Conference on Research Challenges in Engineering, Information Technology, Software & Applied Sciences (RESS)

Day 02: Tuesday
November 05, 2019

Conference second day is reserved for participants own tourism activities.

Track A: Business, Social Sciences and Humanities

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Historical Consciousness in the Context of History and Civic Education

Pavel Krakora *
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The study is focused on the issue of historical consciousness and its reflection in contemporary history (partly also civil) education, focusing on general (world) contemporary history. Historical consciousness is one of the key areas of history didactics. The concept of historical consciousness appears for the first time more clearly and is formulated in the German speaking area, in the work of the philosopher (phenomenologist and hermeneutics) Hans-Georg entitled The Problem of Historical Consciousness from the end of the 1960s. In the context of history, respectively teaching of the history, the historical consciousness plays a main role. It belongs to the most used terms of the contemporary historical science, but also to the least defined from the content perspective. It is created on the basis of presenting the past, it allows the person to be oriented in the world and it is grounded in everyday life experiences. Sometimes it is considered as a merging of two basic axes determining the perception of the historical reality the rational and emotional axis, the result of which is the gradually conscious behaviour. The text also briefly deals with the partial outputs of research carried out in the area of Central Eastern Europe (with regard to the Czech Republic, Slovakia, Poland and partly also Germany), which primarily focuses on the use of historical dimension in the process of civic education. Research attention will also be paid to the extent to which history and civic education can influence or cultivate the historical consciousness of students and teachers and to what extent it is reflected in the process of shaping their national identity.

Index Terms: Consciousness, Identity, Civic Education

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Marketization and FDI in China: Relationship and Heterogeneity

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As the process of marketization gradually takes place in China after 1978s initiation of the reform and opening-up policy, FDI which is attracted by Chinas preferential policies become the main driving force of Economic growth, this paper tries to identify the determinants of FDI from the prospective of marketization, based on provincial panel data ranged from 2000-2017 in China, two-way-fixed effect model shows that regional marketization is one of the key driving forces of FDI in China, we identified a significant positive effect among those two variables, besides that, we also find that this relationship exists huge regional heterogeneity in China, more specifically, Eastern regions with higher development shows a stronger relationship, while in less developed western regions, this relationship is less significant. We also explores the heterogeneity from the time periods, the results show that 2002 is one of the turning point of relationship among marketization and FDI. Our results provide us with further evidence that helps us to understand Chinas economic growth.

Index Terms: FDI, Marketization, Heterogeneity, Economic Growth, Fixed Effect Model

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Nexus of Financial Inclusion and Financial Stability: The Case Asean-5

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The financial sector has an essential role in stimulating and maintaining economic sustainability because of its function as an intermediary institution channeling funds from surplus units to deficit units. When the financial system is unstable and does not function properly, it will hamper the distribution of funds so that it could disrupt the economy one of the ways to improve financial stability is through financial inclusion. After the 2008 global financial crisis, financial inclusion became an essential agenda for countries in ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore, and Thailand). Only several people can access financial services. It is recorded around 80% of people in ASEAN, i.e., Indonesia, the Philippines, and Vietnam, are still classified as unbanked people. Higher financial inclusion will lead to reinforcing the deposits and credit that could accelerate the intermediation function of the financial system. In contrast, increasing financial inclusion requires participation from various walks of life. Financial inclusion is expected to have a positive impact on financial stability. Still, it does not rule out the possibility that the effects of financial inclusion on financial stability are adverse. Therefore, the purpose of this study investigates the relationship between financial inclusion and financial stability by using panel data from ASEAN-5 countries in 2004-2016. The data were collected on the various dimensions of financial inclusion, i.e., penetration, access, and usage dimension, while Bank Z-Score is used to measure financial stability. In this study, Ordinary Least Square method analysis is applied to answer the main research question. The results of this study indicate that financial inclusion correlates with financial stability through ATM, a bank account of deposit, and outstanding credit.

Index Terms: Financial Inclusion, Financial Stability, ASEAN-5.

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Chinas Economic Spillover to Asean-6 Economies: Before and After Renminbi Internationalization

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In recent years, China become the second largest economy in the world. Therefore, China has an important role in the Asia and Global Economy. Chinas rapid economic growth is the reason why Renminbi (China currency) becomes an international currency. On October 2016, Renminbi was recognized by International Monetary Fund (IMF) as an international currency by including it in global reserve currency (Special Drawing Right). Furthermore, Renminbi is in the top 10 traded currencies in the world even in Asia. In global trade, China has trade relation with various country, so it can provide benefit for country that have economic relations with China especially countries in Southeast Asia which is a member of ASEAN-China Free Trade Area (ACFTA). The purpose of Renminbi Internationalization is to increase Chinas economic growth and spillover from China to ASEAN. Chinas economic spillover to ASEAN has been growing in the few past years through financial linkage and trade linkage. This paper examines China's economics spillover to ASEAN-6 (Singapore, Malaysia, Thailand, Philippines, Indonesia and Laos) before and after Renminbi internationalization through both trade and financial linkage. We use ratio of ASEAN-6s exports and imports to China to its total exports and imports as a proxy of trade linkage and ASEAN-6s Stock Price Index as a proxy of financial linkage, while we use claim and share of Renminbi in global foreign exchange reserve as moderator variable to find out whether the Renminbi internationalization can strengthen Chinas economic spillover to ASEAN-6 or not. Thus, we use Moderated Regression Analysis and Panel Least Square method in 6 ASEAN countries from 2012:Q1-2018:Q4. The result indicate that Renminbi Internationalization can strengthen Chinas economic spillover to ASEAN-6 economies that can be seen through trade linkage with an increase in imports and through financial linkage with an increase in Stock Price Index.

Index Terms: Renminbi Internationalization, Trade Linkage, Financial Linkage, Stock Price Index, Economic Spillover

Track B: Engineering Technology & Applied Sciences

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Internet of Things- Architectured Water Quality Monitoring System with Phytoremediation System Using Water Quality Index Method

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The archipelagic nature of the Philippines makes its fishing industry as one of the drivers of its national economy. In today's onslaught of industrialization, climate change and sprawling impacts of urbanization, watercourses and tributaries are strained due to water pollutions. This paper presents the design and implementation of IoT Phytoremediation System as a water bioremediation approach to improve water quality in terms of Biochemical oxygen demand, pH, Phosphate, Nitrate and Coliform parameters. A descriptive developmental research design was utilized by the researchers. The Smart IoT phytoremediation system was deployed using IoT Architecture and wireless sensor networks (WSN) utilizing rhizo-filtration to reduced and removed heavy metals. The National Sanitation Foundation Water Quality Index Method was utilized to test the water quality after the remediation. On the basis of the results, the system can remediate water and improve its quality based on the Q-value before going back to waterlines, rivers, and seas. The researchers recommend that further studies could be done using other water parameters, and deploy a wireless sensor network system to provide real-time control and monitoring.

Index Terms: Smart IoT, Phytoremediation System, Water Quality, Water Quality Index Method

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Implementing Kaizen Projects and Analytical Methodologies in Improving the Organizational Performance of Select Industries in the Philippines

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Leorando E. Rafael[3]
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The business and industrial sector has faced many challenges due to the Fourth Industrial Revolution (4IR). The landscape of 4IR has put business and industries to transition to cyber-physical systems, improve its business processes, and utilized well-advanced and top of the line technologies including automation and artificial intelligence application. This paper provides the type of Kaizen Projects deployed in business and industries as an innovation to position their companies in the competition. It also details the opportunities being explored by the junior management, senior leadership teams, and management committee by utilizing analytical tools including forecasting and predictions, Big Data and business analytics. On the basis of the findings, the researchers concur that the ramifications brought by the Fourth Industrial Revolution have posed significant impacts to business and industries to identify areas for improvement, deploy practical innovations, and improve their performance.

Index Terms: Kaizen Projects, Business Analytics, Big Data, Predictive Analytics, Forecasting Technique

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Implementing Classification Techniques in Predicting Incidents in a Higher Education Institution in the Philippines

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JRa, Mary Ann Taduyo[2]
Atty. Rudolph Val Guarin[3]
Dr. Mengvi Gatpandan[4]
Dr. Paulino Gatpandan[5]
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The academic success of the student in the university heavily relies on the curricula and student development programs. In this milieu, the increasing demand for designing, implementing, monitoring and controlling of major and minor violations of the students' demands formative, reformative, rehabilitative, and restorative remediation programs. This paper presents the implementation of classification technique in predicting incidents, develop a predictive model, and implement the model in a recommender system. The researchers utilized a Descriptive Developmental research design. During the development, business rules, use cases and processes of an HEI were used in developing the recommender system and evaluated using ISO 9126 for Software Quality. The developed predictive model was tested using Classification and Regression (C&R) Tree, C5.0, Quest Tree, Logistic Regression, random tree and Classification technique. On the basis of the findings, the Classification Technique was adopted since it had a higher accuracy rate. The recommender system helped improve employees in incident resolutions, productivity and efficiency, and have provided a significant reduction of students major and minor offences based on the classifiers using the Chi-square Automatic Interaction Detector (CHAID) Algorithm. The researchers recommend that further studies and empirical investigation be conducted on the analytical reports, and other data mining techniques may be used to further improve the system, processes, and student services.

Index Terms: Classification Techniques, Predictive Analytics, Incident Management, CHAID

Upcoming Events

https://aet-forum.com/paet-december-2019/

https://aet-forum.com/cita-december-2019/

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