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CONFERENCE PROCEEDINGS

BOOK OF ABSTRACTS
ECBA-2020

Manila Philippines

February 2020

International Conference on

"ENGINEERING & TECHNOLOGY, COMPUTER, BASIC & APPLIED SCIENCES"

Book of Abstracts Proceeding

INTERNATIONAL CONFERENCE ON

"Engineering & Technology, Computer, Basic & Applied Sciences"

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Proceedings of the International Conference on

"Engineering & Technology, Computer, Basic & Applied Sciences"
Manila Philippines

Disclaimer

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**International Conference on
"Engineering & Technology, Computer, Basic &
Applied Sciences"**

**Manila Philippines
Venue: Hotel H2O Manila (Meeting Room 2, 3rd
Floor)**

ORGANIZING COMMITTEE

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CONFERENCE CHAIR MESSAGE

Dr. Sharon

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. Sharon
Conference Chair
Email: chair@afaresearch.com
ECBA-2020

CONFERENCE SCHEDULE

CONFERENCE DAY: SATURDAY
CONFERENCE DATE: FEBRUARY 08 2020

VENUE: HOTEL H2O MANILA (MEETING ROOM 2, 3RD FLOOR)

9:00 am – 9:20 am	Welcome Reception & Registration
9:20 am – 9:30 am	Opening Ceremony
9:30 am – 9:40 am	Welcome Remarks – Conference Coordinator AFA Research
9:40 am – 9:45 am	Introduction of Participants
9:45 am – 9:50 am	Group Photo Session
9:50 am – 10:00 am	Grand Networking Session and Tea Break

CONFERENCE DAY: SATURDAY
CONFERENCE DATE: FEBRUARY 08 2020
SESSION I: 10:00 AM–12:00 PM

TRACK A: ENGINEERING & TECHNOLOGY, COMPUTER, BASIC & APPLIED SCIENCES

MNEAFA-FEB2020-101	Clean Water for All: Insights from Northern Mindanao, Philippines	Maria Luisa Baiño Salingay
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MNEAFA-FEB2020-105	Aircraft Impact on Concrete Target Using Finite Element Analysis Software	Thomas Kang

LUNCH BREAK (12:00 PM – 01:00 PM)
CLOSING CEREMONY

2ND DAY: SUNDAY
DATE: 09 FEBRUARY, 2020

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 AND TECHNOLOGY, COMPUTER, BASICS AND APPLIED SCIENCES

Clean Water for All: Insights from Northern Mindanao, Philippines

Maria Luisa Baiño Salingay[1*], Phil Torio[2], Assela Pathirana[3], Chris Zevenbergen[4]

Abstract: Water is the most underrated resource. The current water services are under-priced that the price of water failed to reflect the actual infrastructure investments and the cost of production of supplying water. Rethinking the value of water is necessary. This paper aimed to compare and analyze the practices of water utilities in providing water supply in the concept of water for all. Random surveys were conducted in four communities in Northern Mindanao. There were 200 respondents in the urban communities of Macabalan and Consolacion, in Cagayan de Oro City, and 100 respondents in the rural farm communities of Manolo Fortich and Mt. Kitanglad Mountain Range. The surveys were based on the following: 1.) water consumption, 2.) tariffs, 3.) perception on water quality, 4.) water-related diseases and 5.) willingness to pay. Urban communities consumed more water at higher tariffs than those living in the rural areas. Respondents know the importance of clean water as this will affect their health. Within a year, of the total population surveyed, 3% experienced skin diseases and 8 % diarrhea. Higher percentages were experienced in the urban communities and most of them buy bottled water for drinking purposes. Urban respondents are willing to pay more for clean drinking water. Rural respondents, especially in farms subsidize by privates companies, consumed more water and pay much less. Paying less should not be a reason to overuse water. It is recommended that local water distributors with the assistance of the local government units, should re-evaluate the value of water. Aside from the cost of operation, and investment of infrastructures, environmental cost should be included. The value of water will be well appreciated if the consumers are made aware of the actual cost of water. This will avoid misusing water resource that is actually given for free.

Keywords: Value of Water, Water Tariff, Water Services, Willingness to Pay

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A Semantic Web Service Retrieval Approach that Combines Semantic Matching with Quality of Service Matching

Pornthip Liewtrakul[1*], Katawut Kaewbanjong[2]

Abstract Web services have been utilized in many sectors such as educational, business, and government sectors. Examples are the tax information system of the Bureau of Internal Revenue and any kind of utility payment system and student achievement report system. Today, there are a large number of various web services on the Internet, creating a difficulty in performing search and a problem of selection. For this reason, the author proposes a new web service search system that exploits the information structure of OWLS documents which consists of information from service history class, service model class, and basic service class. This information is used to construct indexes and their individual weights which are used to compare the level of similarity between a semantic query from a user and each web service by a vector space model. Then, the result is used in a web service selection procedure based on a formal concept analysis. A web service is selected through the structure of a concept lattice of Qos consisting of service availability and response time. Experimental results show that this proposed system provided an average accuracy of 71.9%. Moreover, it can provide alternative web services that are closely related to the query in order for the user to have flexibility in utilizing the search results.

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Improve Quality and Efficiency of Textile Process using Data-driven Machine Learning in Industry 4.0

Chia-Yun Lee[1*], Jia-Ying Lin[2], Ray-I Chang[3]

Abstract The capabilities of self-awareness, self-prediction and self-maintenance are important for textile factory in Industry 4.0. One of the most important issue is to intellectualize the way of setting operation parameters as the cyber-physical system (CPS), instead of using traditional trial and error method. To achieve these goals, this paper focus on the relationship between key operation parameter and defect for machine learning to design an operation parameters recommender system (OPRS) in the textile industry. From the perspective of data science, this paper integrates historic manufacturing process data such as machine operation parameters from warping, sizing, beaming and weaving process, and management experience data such as textile inspection results from quality control section. Then, the regression models are applied to predict the textile operation parameters. This research also use the classification models to predict quality of textile. Based on the ten-fold cross-validation testing, experimental results show that our model can achieve 90.8% accuracy on quality level prediction and the best regression model for predicting weaving operation parameters can reduce the mean square error (MSE) to 0.01%. By combining the above two models, proposed OPRS can provide a completed analysis data of operation parameters. It provides good performance when comparing with previous stochastic methods. As the proposed OPRS can support technician setting operation parameters more precisely even for a new type of yarn, it can help to fix the tech skills gap in the textile manufacturing process.

Keywords: Machine Learning, Industry 4.0, Cyber-Physical System, Process Improvement.

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A Rule-Based Recommendation Model for Selecting Classifiers in WEKA Based on User Specifications

Hussein Azeez[1*], Chidchanok Lursinsap[2]

Abstract Machine learning field has many different algorithms; selecting an algorithm for non-expert user and aiming for maximizing empirical performance could be a difficult task. We examine the problem of selecting an algorithm based on the user specifications, for instance, training speed, memory usage, and interpretation. Specifically, the model considers the classification problem in the range of 20 different models (18 based classifiers, 2 meta-methods) arising from 10 different families (Bayesian, Decision trees, Rule-based methods, Nearest neighbor methods, Logistic and, multinomial regression, Neural networks, Support vector machines, Boosting, Bagging, and other ensembles), all implemented in WEKA. We evaluated our approach on 10 datasets from UCI repository, we show classification outcomes better than or similar to a previous work that addressed the similar problem.

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Aircraft Impact on Concrete Target Using Finite Element Analysis Software

Thomas Kang[*]

Abstract The major concerned objective of this paper is to suggest analytical methods to simulate the projectile impact on concrete target using the finite element software of ANSYS LS-DYNA. The concrete is a principal material that has been comprehensively used in the field of civil and architectural engineering including from high-rise structures to long-span bridges. Not only these typically representative buildings, but other structures and national major facilities such as nuclear power plants also have mainly adopted concrete in various ways. These concrete structures should be designed against severe accidents causing structural failure. In this regard, the structural safety of each concrete structure should be evaluated meticulously. The analytical approach is suggested by establishing a numerical model in the software. It is used to simulate actual experiments in the past, aircraft impact experiments conducted by Sandia National Laboratories in 1988.

Keywords: Finite Element Analysis, Aircraft Impact, Numerical Analysis

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Institution Seoul National University

FUTURE EVENTS

You can find the Details regarding our future events by following below:

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Medical, Medicine & Health Science

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VISION

Our vision is to promote research excellence through networking Platform.