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MESSAGE FROM THE MINISTER OF EDUCATION II



Y. B. Dato' Seri Idris bin Jusoh
Minister of Education II, Malaysia

In the Name of Allah, the Beneficent, the Merciful.

Assalāmu 'alaikum and greetings,

I thank the International Islamic University Malaysia for inviting me to write a few lines in the foreword of this programme book – an invitation that I take not but as a great honour. I would also like to congratulate the University and the Faculty of Engineering for organizing the IIUM Engineering Congress 2013 (IEC'13), from July 2nd to July 4th, in Kuala Lumpur. I am certain that this year's IIUM Engineering Congress will see very interesting and pertinent papers in the field of Biotechnology Engineering, Mechatronics Engineering, Mechanical, Automotive and Aerospace Engineering, and Engineering Ethics and Education – a very important and crucial field, yet most often side-lined.

The Ministry of Education and Higher Education are active in the initiatives to make Malaysia as a regional education hub as outlined in the National Higher Education Strategic Plan (NHESP). I believe, academic congresses and conferences organized by institutions of higher learning are directly contributing to the strategic enterprises, which help thrust Malaysia further as an attractive and a competent educational hub.

Finally, it is a great pleasure for me to welcome all of you, especially participants visiting Malaysia for the first time to the beautiful and culturally rich city of Kuala Lumpur. I wish all participants a pleasant stay and a fruitful congress.

A handwritten signature in black ink, consisting of stylized, overlapping letters and a horizontal line at the bottom.

Honorable Dato' Seri Idris bin Jusoh
Minister of Education II
Ministry of Education Malaysia

MESSAGE FROM THE RECTOR, IIUM



Prof. Dato Sri Dr. Zaleha Kamaruddin
Rector,
International Islamic University Malaysia

In the Name of Allah, Most Gracious, Most Merciful.

Assalāmu 'alaikum wa Raḥmatu' Llāh,

On behalf of the International Islamic University Malaysia, it gives me great pleasure to extend to all participants a very warm welcome to Kuala Lumpur and to the IIUM Engineering Congress 2013 (IEC'13). *Ahlan wa sahlān bikum* and *Selamat Datang!*

The organization of this 3-day event would not have been possible if not for the effort, hard work, dedication and commitment of many people in the Engineering Congress organizing committees. I would like to express my utmost gratitude to all of them. I would also like to extend my congratulations to the Dean and the Kulliyah (Faculty) of Engineering for their efforts to having successfully organized the Engineering Congress on an annual basis. The Engineering Congress has been an important milestone for IIUM- Kulliyah of Engineering as the event provides a significant exposure and an important avenue for IIUM engineering staff and students to interact and discuss with local and international engineers, academics, scientists, researchers and students pertaining to the current research work in their respective disciplines. I wish all participants of the IIUM Engineering Congress 2013 a scientifically and academically successful and fulfilling event. For the international participants, do take some time to enjoy the colourful kaleidoscope of this country. I wish you a pleasant and enriching stay in Kuala Lumpur in particular and in Malaysia in general.

A handwritten signature in black ink, appearing to be 'Zaleha', written over a horizontal line.

Professor Dato' Sri Dr. Zaleha Kamaruddin
Rector
International Islamic University Malaysia

MESSAGE FROM CONFERENCE CHAIRMAN



Emeritus Prof. Dato' Wira Ir. Dr. Md. Noor Salleh
Chairman of IEC 2013
Dean of Kulliyah of Engineering
International Islamic University Malaysia

Bismi' Llāhi al-Raḥmāni al-Raḥīm
Assalaamu'alaikum Waraḥmatullaahi Wabarakaatuh

As the Chairperson of the Organizing Committees, it is with great pleasure that I welcome all participants to the IIUM Engineering Congress 2013 (IEC'13).

The IIUM Engineering Congress 2013 is a momentous event because it coincides with the International Islamic University Malaysia's 30th anniversary. This year, IEC'13 comprises of four concurrent international conferences namely:

- (i) The 3rd International Conference on Biotechnology Engineering 2013 (ICBioE'13),
- (ii) The 5th International Conference on Mechatronics (ICOM'13),
- (iii) The 2nd International Conference on Mechanical Automotive and Aerospace Engineering 2013 (ICMAAE'13); and
- (iv) The 3rd International Conference on Engineering Professional Ethics and Education 2013 (ICEPEE).

I urge all participants in the 3-day IEC'13 event to be actively involved, to share ideas, knowledge, and information, and to create and strengthen networking to facilitate further progress in the respected fields.

I take this opportunity to express my heartfelt appreciation to all who are involved for their tireless hard work and dedication in organizing IEC'13. Only Allah in His limitless Grace and Munificence can truly recompense your efforts. For the participants, let me again offer my heartfelt welcome to all of you and wish you a fruitful congress and conference.

Thank you, *terimakasih wa shukran jazīlan*.

A handwritten signature in black ink, appearing to read 'Wira Noor Salleh', with a large, sweeping flourish at the end.

Professor Emeritus. Dato' Wira Ir. Dr. Md. Noor Salleh
Dean of Kulliyah of Engineering, IIUM
Chairperson, IEC'13

CONGRESS ORGANIZING COMMITTEES

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Co-Chairman	Erry Yulian Triblas Adesta
Secretary	Syed Tahir Syed Mohamed
Co-Secretary	Sharifah Junita Syed Idrus
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	Nor Azura Aini @ Abas
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	Siti Nor Alhana Ismail
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	Muhammad Mahbubur Rashid
	Aisha Hassan Abdalla
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	Azman Bahaudin
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	Hafizul Zikri Ahmad Bakhtiar
	Zuhairi Ariffin
	Ahmad Suhairi Mat Jebah
	Fadzil Rizal Salehuddin
	Radzuan Saedin
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	Syed Mohd. Khairudin Syed Ali
	Shahlan Dalil
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	Maizirwan Mel
	Dzun Noraini Jimat
	Yasir Mohd Mustafah
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	Zaki Zainudin
	Nahrul Khair Alang Rashid
	Anis Nurashikin Nordin
	Ma'an Fahmi Rashid Al Khatib
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Co-Chairman	
Secretary	
Co-Secretary	
Treasurer	
Chairman of ICBIOE '13	
Chairman of ICOM '13	
Chairman of ICMAAE '13	
Chairman of ICEPEE '13	
Members	
Venue/Food	
Registration	
Publication	
Invitation	
Webmaster	
Audio Visual	
Souvenir	
Sponsorship	

Publicity/Promotion	Mohammad Nurul Alam Hawlader (Head) Ahmad Tariq Jameel Jamal Ibrahim Daoud Tanveer Saleh
Banners/Buntings/Logistics	Zahir Hussain Syed Meera (Head) Sanadi Subhi Mohd. Faisal Mohd. Room
Opening Ceremony and Ushering	Syed Tahir Syed Mohamed (Head) Sharifah Junita Syed Idrus Nur Zafirah Mohd. Rodzi Siti Salwiah Shukri Sharifah Hussain Foziah Baharom Noor Hidayah Arasad Mariyana Mhd. Nawi
Gimmick	Ahmad Hidayat Ahmad Sabi@Ahmad Saufi Azliza Embong (Head) Zulkifli Zainal Abidin
Social Tour Transportation	Mohd Raziff Mat Hasan (Head) Mohd Raziff Mat Hasan (Head) Yusni Yusop Mohd. Zaman Dewah Rethauddin Abdul Hamid Mohammad Noor Zainal Abidin

OPENING CEREMONY



Opening Ceremony

Date: 2 July 2013

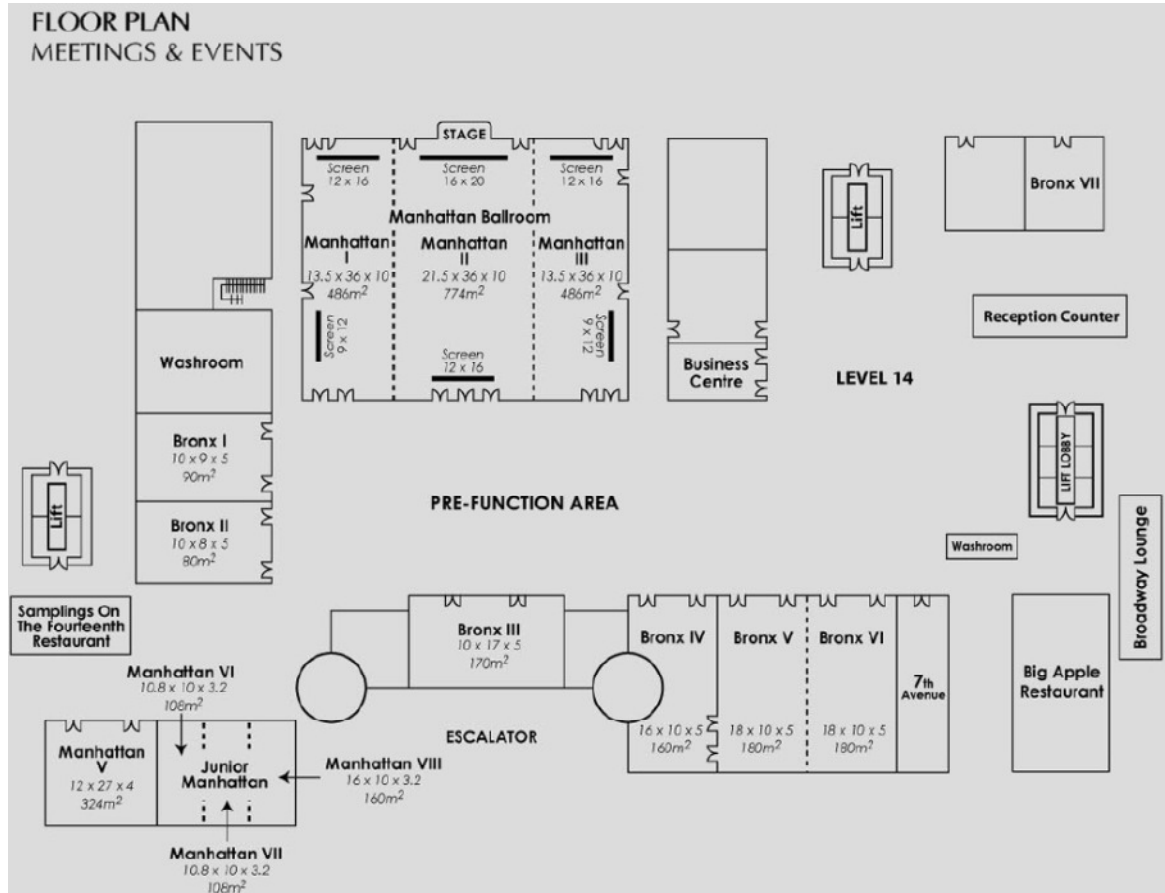
Venue : Berjaya Times Square Hotel, Kuala Lumpur

8:00 am	:	Registration of Participants
8:30 am	:	Arrival of Guests
8:45 am	:	Arrival of IIUM Top Management
9:00 am	:	Arrival of Guest of Honour, YB Dato' Seri Idris bin Jusoh, Minister of Education II
9:10 am	:	Al-Quran Recitation
	:	Remarks by the Chairman of IIUM Engineering Congress 2013
	:	Welcoming Address by the Hon. Rector, IIUM
	:	Speech & Opening Ceremony by YB Dato' Seri Idris bin Jusoh
	:	Presentation of Certificates to Sponsors
	:	Press Conference
10:00 am	:	Refreshments



IEC'13 VENUE

BERJAYA TIMES SQUARE HOTEL - KUALA LUMPUR



Legend:

- ICOM'13: Manhattan IA, IB and IC
- ICBioE'13: Bronx IV, Bronx V, Manhattan VIIIA, Manhattan VIIIB
- ICEPEE'13: Manhattan VII
- ICMAAE'13: Manhattan VA, VB, VI

Colour codes:

	ICOM'13
	ICBioE'13
	ICEPEE'13
	ICMAAE'13

IEC'13 PROGRAMME

Day 1: Tuesday 2 July 2013				
08.00 - 09.00	Registration			
09.00 -10.00	Opening Ceremony			
10.00 -10.30	Tea Break			
10.30 -11.20	Congress Keynote Speaker #1 Title: 3Ws: WATER, WEALTH, WISDOM Prof. Dato' Seri Ir. Dr. Zaini Ujang Secretary General II, Ministry of Education, Government of Malaysia Venue: Manhattan III Chairperson: Prof. Dr. Zahangir			
11.20-12.10	Congress Keynote Speaker #2 Title: The Structured Intelligence Approach (SIA) for the Modeling of Intelligent Behaviour Prof. Dr. SC. Techn. Essam Badreddin Head of the Automation laboratory University of Heidelberg, Germany Venue: Manhattan III Chairperson: Prof. Dr. Rini Akmeliawati			
12.10-1.00	Congress Keynote Speaker #3 Title: Recent Advances in Adsorption Desalination and Cooling Prof. Ng Kim Choon National University of Singapore Department of Mechanical Engineering Venue: Manhattan III Chairperson: Prof. Dr. MNA Hawlader			
13.00 - 14.00	Prayer and lunch break			
14.00 - 14.50	Congress Keynote Speaker #4 Title: Islamic Ethics and Globalization Prof. Mohammed Zeki Khedher Department of Electrical Engineering Faculty of Engineering and Technology Jordan University, Amman - Jordan Venue: Manhattan III Chairperson: Assoc. Prof. Nassereldeen A. Kabbashi			
15.00- 16.20	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
16.20-16.35	Tea Break			
16.35-17.35	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
20.00-22.00	Conference Dinner			
Day 2: Wednesday 3 July 2013				
09.00 -10.30	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
10.30-11.00	Tea Break			
11.00 - 13.00	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
13.00-14.00	Prayer and Lunch break			
14.00-15.00	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
15.00-15.30	Tea Break			
15.30-17.30	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13

Day 3: Thursday 4 July 2013				
09.00 - 10.30	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
10.30-11.00	Tea Break			
11.00 - 13.00	Parallel Conferences			
	ICOM'13	ICBioE'13	ICEPEE'13	ICMAAE'13
13.00-13.30	Closing of Conferences			



PROF. DATO' SERI IR. DR. ZAINI UJANG

Secretary General II, Ministry of Education, Government of Malaysia
(Professor of Environmental Bioengineering)
Universiti Teknologi Malaysia
81310 Skudai Campus, Johor, Malaysia

Biography:

Prof. Zaini Ujang is a professional environmental engineer cum scientist who integrates studies on water ecology with engineering systems towards pollution control and sustainability, especially with reference to river rehabilitation in developing countries. His interest in the field leads him to collaborate with leading scholars worldwide, particularly in membrane bioreactor, granulation process and biofouling control. At present he is leading the oldest technical university in Malaysia and South East Asia, Universiti Teknologi Malaysia. He also sits on various boards, such as the Chemical Companies of Malaysia (CCM), Institute of Sultan Iskandar for Urban Habitat and High Rise Buildings, private universities Multimedia Technology Enhancement Operations Sdn Bhd (METEOR) and Chair of Proton Technology Advisory Council, a leading car manufacturer in South East Asia. For his remarkable contribution to the nation, he became the first recipient of the prestigious Malaysia Merdeka Award 2009 for the category of Outstanding Scholastic Achievement. He has been conferred the Darjah Seri Setia Tuanku Muhriz Yang Amat Terbilang (SSTM) award by His Royal Highness Yang Di-Pertuan Besar Negeri Sembilan Darul Khusus in conjunction with the Birthday of the Yang Di-Pertuan Besar Negeri Sembilan on 14 January, 2013. He also has conferred the Panglima Jasa Negara (PJN) award by His Majesty Yang Di-Pertuan Agong in conjunction with the Birthday of the Yang Di-Pertuan Agong on 2 June, 2012. He is the "Tokoh Maal Hijrah 1433H" of Negeri Sembilan 2011. Zaini obtained his B.Eng. (Chem. Eng.) from UTM, and MSc and PhD in environmental engineering from University of Newcastle, UK. He is also an alumni of the Harvard Business School (AMP 177), a Fellow of the Academy of Science Malaysia, Senior Advisor to the Prince Khalid bin Sultan Chair on Water Research, King Saud University, Chairman of the Environmental Quality Council, Malaysia and Fellow of the Institute of Chemical Engineers, UK. He has been registered more than 20 intellectual property rights, published more than 250 technical papers and 27 books.

3Ws: WATER, WEALTH, WISDOM

This lecture gives a new perspective of the nature, function and management of water and the water industry to modern society after the Fukushima plant nuclear tragedy. Water cannot be regarded as merely a source of drinking, treatment and irrigation but it is also a source of wealth and economic sustainability. The development of current water science and technology could address water crisis in a more effective and productive manner irrespective of geographical borders or socio-economic status. From a holistic perspective, knowledge and ability to manage water can also enhance interest and commitment toward sustainability.

of optics and electronics). The concept of hardware/software co-design also started in these years. The third and the last stage can also be considered as the start of the mechatronics age and starts with the early nineties. The most notable aspect of the third stage is the increased use information technology and computational intelligence in mechatronic products and systems. It is now possible to have man-made.

IEC'13 KEYNOTE SPEAKER 2



PROF. DR. SC. TECHN. ESSAM BADREDDIN

Head of the Automation laboratory
University of Heidelberg, Germany

Biography:

He earned his Swiss Diploma (Dipl.Ing. ETH) in Electrical Engineering, the Doctor of technical sciences (Dr.sc.techn.) in Control Theory and Habilitation (Habil.) in Mechanical Engineering, all from the Swiss Federal Institute of Technology, Zurich (ETHZ), Switzerland. Then, he served in the industry at Contraves-Zurich as an R&D System Engineer in the air defence sector, where he also holds several international patents (Silver Dollar awarded). Returning to the ETH-Zurich, to found and lead the first robotics research group and build, one of if not, the first autonomous mobile robot of an industrial scale in Europe and introduce one of the first courses on the design of autonomous mobile robots worldwide. As Deputy Chair for Risk&Safety Technology, he led the research group for risk and safety modeling& assessment at the ETH-Zurich. In Japan, he served as a Monbushu (Ministry of Higher Education) associate Prof. at Toyohashi University of Technology before he moved to Germany to establish and lead the Automation Laboratory at the Institute of Computer Engineering at the University of Mannheim; currently at the University of Heidelberg. Prof. Badreddin's research interests span process control, robotics, cognitive engineering and dependable hybrid systems.

Among other national and international boards, he is:

- The leader/coordinator of the European project OpenGain
- The leader/coordinator of State project ECOMODIS
- A member of the management committee and financial rapporteur of the European Project IntelliCIS
- A peer-reviewer for the United Nations
- A reviewer of the German Research Foundation (DFG)
- A member of the Japanese-German Cooperation Network HEXAGON

THE STRUCTURED INTELLIGENCE APPROACH (SIA) FOR THE MODELING OF INTELLIGENT BEHAVIOUR

Linguistic definitions of intelligence and intelligent behaviour lack the necessary formalisms that make them useful for rigorous investigations, technical implementations and evaluations.

The Structured Intelligence Approach (SIA) offers a unified formal framework for the modeling, simulation and evaluation of intelligent behaviour as well as for the categorization and comparative studies within the domain of intelligence research.

Intelligence is considered as the problem solving capability under the following basic assumptions:

- there exists at least one solution to the problem; it must not be unique (multiple solutions are welcome!)
- The complexity of the solution can be classified in terms of the space and the time required (for evaluation purposes)
- the solution can be found by means of a deterministic topology; although non-determinism is ruled-out, unpredictability can exist
- the states space of the intelligent agent and the environment, each possess a perceptible & effectible subset

The structure is based on the main building blocks: Innovation, Memory, Learning, and Fusion. The main building blocks are explained and prototypical implementations are discussed. It is shown that this structure can equally be used for the intelligent agent itself (e.g. robot) and the environment ("Intelligence-in-the-loop"). Recent simulation studies for the path-planning problem show the explicit implementations, fruitfulness and the characteristics of the SIA.



PROF. NG KIM CHOON
Department of Mechanical Engineering
National University of Singapore
Singapore

Dr Kim Choon Ng is Professor at the Department of Mechanical Engineering, National University of Singapore (NUS). He did his undergraduate and Ph D from the University of Strathclyde, Glasgow and joined NUS in 1981. He is a Chartered Engineer (C.Eng), IMechE (U.K) and a Registered Professional Engineer, Singapore. He has already five patents and two more currently under consideration. His research areas include Adsorption cooling, desalination, Chiller, Heat Pump and Solar Water Heating System. He received IES Prestigious Engineering Award in 2009 for his research on Adsorption Technology for Desalination and Cooling. He also received three times NUS Excellent Teachers Award. Currently, he is an Associate Editor of Heat Transfer Engineering – International Journal (Taylor & Francis). In the area of research and teaching, Prof Ng has made tremendous contributions.

RECENT ADVANCES IN ADSORPTION DESALINATION AND COOLING

Is there a practical cycle for desalination that operates at specific energy consumption close to the thermodynamic limit?
If yes, by how much higher would the specific energy consumption be?

The conventional desalination processes such as the MSF, the MED, the ROs, etc., have energy consumption levels that far exceed the thermodynamic limit (typically at 0.78 kWh/m^3) by as much as 3.5 to 8 times. It has been reported that the present challenge in energy efficiency for the desalination industry is to have a specific energy consumption of 1.5 kWh/m^3 . In this presentation, the author shares an efficient adsorption (AD) cycle that is capable of extracting low temperature waste heat typically at 55° to 85°C and converting the recovered energy into two useful effects, namely high grade water and cooling. Such a low temperature waste heat is available in abundance, either from the renewable sources such as solar/geothermal sources or exhaust of industrial processes, for which if not recovered is usually purged into the ambient. The low temperature waste energy sources are usually deemed as a free energy source which is non-payable.

The performances of a prototype AD plant of NUS are presented for assorted heat source, cooling and chilled water temperatures, and the measured results are reported in terms of the specific daily water production (SDWP) and the specific cooling capacity (SCP). Besides being environmental-friendly, the advanced AD cycle consumes only 1.38 kWh/m^3 ;– the lowest specific energy consumption ever reported for desalination. Another advantage of the AD cycle is the low maintenance cost as there is almost no major moving part. Using a life-cycle prediction, the unit cost of water production by a large-scale AD cycle is $\text{US}\$0.6/\text{m}^3$ and this cost is the lowest when compared to the other conventional methods. The author also presents the hybridization of the AD cycle to other desalination and cooling methods so as to improve their energy efficiency.

IEC'13 KEYNOTE SPEAKER 4



PROFESSOR MOHAMMED ZEKI KHEDHER

Department of Electrical Engineering
Faculty of Engineering and Technology
Jordan University
Amman - Jordan

Email: khedher@ju.edu.jo

Received B.Sc. in Electrical Engineering from University of Baghdad, Iraq in 1965 and Ph.D. from Sheffield University, U.K. Worked at Mosul University as a staff member and became a professor in 1981. Worked in Industry in Iraq 1981-1992. Since 1992 till now he is a Professor in the Department of Electrical Engineering, Faculty of Engineering at Jordan University, Amman Jordan. Published 20 scientific including Islamic books and more than 80 papers. He is a Life Senior Member of IEEE and member of IET. Member of International League of Islamic Literature.

ISLAMIC ETHICS AND GLOBALIZATION

Ethics has been an essential part of moral values of the humanity over ages. There has been interest in ethical aspect of science and technology for several decades. Science, engineering and technology should serve the wellbeing of humankind. The new technology has a dual potential (to be used for the good or for evil purposes). All type of technology can be used for beneficial or harmful purposes. It can serve to foster the wellbeing of human kind and to make it flourish and reach a higher level of development; or it can be used to subdue, enslave, and de-humanize humans physically, intellectually, and emotionally. The danger of using engineering and technology to harm humans is real.

Engineering ethics is an important issue nowadays. During many decades of glorious Islamic civilization, implementation of Islamic ethics in science, engineering and technology as well as day to day life was practised. The contribution of Islamic ethics in engineering to globalization can do betterment to the relations among nations and mutual cooperation.

The lecture shall emphasize on: Islamic principles in fighting poverty, equality among human being, respecting environment, respect of human being, perfection in performing duties, safety, etc. All these and many others give an idea about the main issues in ethics of engineering according to Islam which may give better understanding to engineers of their duties towards their nation and towards the whole humanity.

Islamic ethics principles in engineering can contribute to the globalization. However this contribution can be better shown by live actions of Muslim engineers rather than by talks.

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ICOM'13
ICOM'13

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MESSAGE FROM THE CHAIRMAN OF ICOM'13



ASSOC. PROF. DR. MD. RAISUDDIN KHAN
Chairman
International Conference of Mechatronics Engineering (ICOM 2013)

Assalamu'alaikum Warahmatullahi Wabarakatuh

On behalf of the organizing committee, it is truly an honour to have the opportunity to welcome you to ICOM'13, the 5th International Conference on Mechatronics, with the theme "Mechatronics: Sustainable Development through Innovative Solutions." This conference forms as part of IIUM Engineering Congress (IEC) 2013, the yearly event conducted by the Kulliyah of Engineering, IIUM.

ICOM is a bi-annual conference which aims to serve as a platform for exchange of ideas on advances in Mechatronics and their applications as well as to foster research networks and worldwide collaborations.

This year the conference has successfully attracted more than 150 full papers, from which after going through peer reviewing processes, only 130 of high quality papers are selected for presentation.

Lastly, I would like to give my sincere appreciations to all participants, members of the organizing committee and the advisory committee, reviewers, keynote speakers as well as sponsors that have contributed to make this conference a successful one.

Wassalam

ASSOC. PROF. DR. MD. RAISUDDIN KHAN

Chairman

Md. Raisuddin Khan

Secretariat

Md. Mozasser Rahman

Shahrul Naim Sidek

Muhammand Mahbubur Rashid

Technical Committee

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Momoh Jimoh E. Salami

Nahrul Khair Alang Md. Rasyid

Rini Akmeliawati

Roslizar Mat

Asan Gani Abdul Muthalif

Wahju Sediono

Salmiah Ahmad

Iskandar Al-Thani Mahmood

Yasir Mohd Mustafah

Moinul Bhuiyan

Tanveer Saleh

Zulkifli Zainal Abidin

Nadzril Sulaiman

Hazlina Md Yusof

Publication Committee

Rini Akmeliawati

Winda Astuti

Md. Mahbubur Rashid

Zulkifli Zainal Abidin

Moinul Bhuiyan

Salmiah Ahmad

Tanveer Saleh

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Roslizar Mat Ali

Azmi Hassan

Sharifah Junita Syed Idrus

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Shahrul Naim Sidek

Nadzril Sulaiman

Siti Fauziah Toha

Transportation

Iskandar Al-Thani Mahmood

Nasrul Faizin Ab. Rashid

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Norsinnira Zainal Azlan

Hazlina Md. Yusof

Mohd . Yazid Ahmad

Hasmawati Nasardin

INTERNATIONAL PROGRAM ADVISORY

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Agbinya J.I. (Australia)
Agus Budiyo (Korea)
Ali Chekima (Malaysia)
Bernard Courtois (France)
Essameddin Badreddin (Germany)
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Hishamuddin Jamaluddin (Malaysia)
Ishkandar Baharin (Malaysia)
Jacky Baltes (Canada)
K M Ebrahimi (UK)
Kazi Mujibur Rahman (Bangladesh)
Kim Jong-Hwan (Korea)
M.A. Rashid (New Zealand)
M. Nasir Uddin (Canada)
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Musa Aibinu (Nigeria)
Musa Mailah (Malaysia)
Nazar Elfadil Mohamed (Saudi Arabia)
Nazim Mir Nasiri (Malaysia)
Poo Aun Neow (Singapore)
Riza Muhida (Indonesia)
Ryojun Ikeura (Japan)
Shamsuddin Mohd Amin (Malaysia)
Toshio Fukuda (Japan)

CONFERENCE TOPICS

Mechatronics systems
Mechatronics application
Intelligent system
Control and Instrumentation
Signal and image processing
Machine vision
Robotics and automation
Manufacturing mechatronics
Smart materials and structures and applications
Active vibration control
Computer and information technology
MEMS and NEMS
Biomechatronics and rehabilitation engineering
Mechatronics Education
Autonomous system
Energy and sustainability
Transportation system
Green mechatronics (G-Mechatronics)
Other topics

REVIEWERS

Abbas Karimi
Ahmad Fadzil Ismail
Akhtaruzzaman Akhter
Amir Akramin Shafie
Andi Adriansyah
Asan Muthalif
Aseef Iqbal
Chee Fai Tan
Chockalingam Aravind Vaithilingam
Davood Mohammadi Souran
El Mehdi Bouhabba
Fadhlan Hafiz Helmi Kamaru Zaman
Hafsa Sabrina
Hairi Zamzuri
Hamzah Ahmad
Hazlina Md Yusof
Iskandar Al-Thani Mahmood
M.M Rashid
Mahmud Iwan Solihin
Md Mozasser Rahman
Md Noman
Md Rafiqul Islam
Md. Raisuddin Khan
Mohammed Alfaqawi
Mohd Khair Hassan
Mohd Zarhamdy Md Zain
Moinul Bhuiyan
Momoh-Jimoh Salami
Naim Sidek
Rini Akmeliawati
Sheroz Khan
Siti Fauziah Toha
Tanveer Saleh
Wahju Sediono
Wan Khairunizam Wan Ahmad
Yasir Mohd Mustafah
Zainah Md Zain
Zulkifli Zainal Abidin

**PROF. DR. IVEN M. Y. MAREELS**

Professor, IEEE Fellow

Dean of Engineering

University of Melbourne, Australia

Iven Mareels obtained the (ir) Masters of Electromechanical Engineering from [Gent University Belgium](#) in 1982 and the PhD in Systems Engineering from the [Australian National University](#), Canberra, Australia in 1987. Since 1996, he is a Professor of Electrical and Electronic Engineering in the [Department of Electrical and Electronic Engineering](#), the [University of Melbourne](#). In June 2007, he became Dean of the [School of Engineering](#), the University of Melbourne. Previously he was a Reader at the Australian National University (1990-1996), a lecturer at the [University of Newcastle](#) (1988-1990) and the University of Gent (1986-1988).

In 2013 he received The Asian Control Association Wook Hyun Kwon Education Award. He was a recipient of a 2008 Clunies Ross Medal, Academy of Technological Sciences and Engineering for his work on Smart Irrigation Systems, work that was also featured at the 2005 IFAC World Congress in Prague as a semi-plenary. In 2007 he received the inaugural Vice-Chancellor's Knowledge Transfer Excellence award from the University of Melbourne. In 2005, he was named IEEE CSS Distinguished Lecturer, and in 1994 received the Vice-Chancellor's Award for Excellence in Teaching from the Australian National University. He was a co-editor in chief of Systems & Control Letters till December 2007.

He is a Fellow of the Royal Flemish Academy of Belgium for Science and the Arts, (KVAB). He is Fellow of the Academy of Technological Sciences and Engineering, Australia, a Fellow of the Institute of Electrical and Electronics Engineers (USA), a member of the Society for Industrial and Applied Mathematics, a Fellow of the Institute of Engineers Australia. He is registered as a Corporate Professional Engineer and he is a member of the Engineering Executives chapter of Engineers Australia. He is a founding member of the Asian Control Association. He is a member of the organising committee of the Mathematical Theory in Networks and Systems conference. He is registered with the Institute of Engineers Australia as a professional engineer. He is the Chair of the Technical Board of the International Federation of Automatic Control (and ex-officio Vice-President) for 2008-2014.

He is a Member of the Board of the Bionic Ear Institute (1998-), and chairs its Scientific Review Committee, a Member of the Board of SPIRE (2002-2010), a Member of the Board of Bionic Vision Australia (2009-) and a Member of the Scientific Advisory Committee for the Melbourne Neuropsychiatry Centre (2009-) and a Member of the Steering Committee for the Centre for Neural Engineering (2009-) and a Board Member of the Neuro Sciences Institute of the University of Melbourne. He is also on the Advisory Board for the IBM Research Laboratory in Melbourne, Australia.

He has extensive experience in consulting for both industry and government. He has strong interests in education and has taught a broad range of subjects in both mechanical and electrical engineering curricula. He was one of the main developers (1990-1996) of the Bachelor of Engineering at the Australian National University and one of the architects (2006-...) of the Master of Engineering education at Melbourne.

His research interests are in adaptive and learning systems, nonlinear control and modelling. At present his research focuses on modelling and controlling of large scale systems, both engineered as well as natural systems, such as large scale networks for water and power transmission and the brain.

Iven Mareels has published 5 books, 120 journal publications, 16 book chapters and 230 conference publications. He holds 15 international patents. He has supervised to completion 35 PhD students, 10 ME students and is currently supervising 5 PhD students.

SMARTER WATER MANAGEMENT: A SYSTEMS ENGINEER'S PERSPECTIVE

According to the last 3 World Water Reports, the world is headed for a water crisis: by 2030, more than 2 billion people would not have access to the bare minimum amount of clean water for sanitation and health, a mere 50 liters of water a day. The latest US defence paper is worried about the potential of water wars. The World Water Group claims in its "Towards 2030" report that the world is managing itself to economic water shortages.

How can this be? Our planet is endowed with an enormous quantity of water. Every year the sun transports in the hydro-cycle more than 100 times the fresh water needs for all life on earth.

Certainly, it is not the volume of water that is the issue, but its temporal and spatial distribution which is simply no longer matched to the developing needs. The task of providing water at the right time and the right place is indeed becoming harder than ever; because of climate change's severe impact on the spatial and temporal distribution of water; unprecedented urbanisation, and population growth. Add to this the need to achieve the millennium goals: eradicate poverty, improve health and well-being, and in general improve the standard of living across the globe, all of which are predicated on ample water, and the challenge becomes clear.

From a systems engineering point of view, the approach to good water management is clear: measure, model, and then manage. On a global scale, it is fair to say that water is poorly (or not) measured. For most water basins there is no water balance. It should therefore come as no surprise that water management is in crisis.

In this talk, an approach to measure-model-manage for large scale irrigation systems is described. This approach was developed in the late 90s at the University of Melbourne in collaboration with a water company: Rubicon Water. It provides for a systematic approach to measurement, modeling, and management of water in service of the bulk water transport, in particular irrigation systems. Large scale systems have been deployed in Australia and the USA, with smaller scale implementations in Spain, Italy, Chile and China. Novel, self-calibrating, water flow measurement systems, and water flow actuators are described. (Self-calibration is an essential feature in any system with of the order of 100k measurement points, and 10k actuators.) Adaptive models for water transport, and control for managing both demand and supply of water are presented. A number of open questions are described, as well as limitations inherent in large scale systems.

In the next phase of the development of the technology is the issue of water productivity, and how regional water productivity (on the scale of a water basin) can be pursued. This will be essential to avoid an economic water shortage.



PROF. DR. MUHAMMAD B. TRABIA

Professor of Mechanical Engineering,
Associate Dean for Research,
Graduate Studies, and Computing,
University of Nevada, Las Vegas, USA

Mohamed B. Trabia received his B.S. and M.S. in Mechanical Engineering from Alexandria University, Egypt, in 1980 and 1983 respectively. He was awarded his Ph.D. in Mechanical Engineering from Arizona State University, USA in 1987. Since 1987, he was with the Department of Mechanical Engineering at the University of Nevada, Las Vegas (UNLV). He was promoted to the ranks of Associate Professor and Professor in 1993 and 2000 respectively. He served as the Chairman of the Department from 2002-2008. He also served as the Academic Affairs Fellow at UNLV (Office of Provost) from 2008-2010 where he coordinated efforts of UNLV reaccreditation. Since 2010, he is the Associate Dean for Research, Graduate Studies, and Computing at the Howard R. Hughes College of Engineering.

Dr. Trabia's research interests include Fuzzy Logic Control, Modelling and Simulation of Dynamic Systems, Design and Optimization of Mechanical System, and shock mitigation of electronic components within projectiles and military vehicles. His research resulted in over 150 journal and conference technical papers. His research activities were funded by multiple agencies and industries including US Department of Energy, Los Alamos National Lab, Sandia National Lab, US Department of Defence, and Hyundai Rotem. Dr. Trabia is a Fellow of the ASME. He served as a member of organizing committees of several technical conferences. He was recently appointed as ABET Program Evaluator.

SMART FINGER-WEARABLE ASSISTIVE DISPLAY FOR THE WELL-BEING OF THE BLIND AND VISUALLY IMPAIRED

Smart assistive technologies are critical to the well-being of the blind and visually impaired (BVI). In order to provide them with the ability to 'see', the BVI need assistive tactile displays that are adaptive, sensorized, individualized, and portable. Currently available tactile assistive displays are not equipped with features that permit the BVI to 'see' anytime and anywhere, conveniently.

The objective of this collaborative project is to develop a low-cost electrical Braille display that is scanning-style, individual-centered, and smart finger-wearable; this device is based on electrical stimulation, and has both sensing and adaptive actuation/rendering functions. Called E-Braille, this technology will allow the BVI to conveniently perform important tasks, such as reading, writing, typing in Braille, printing text, browsing the Internet, engaging in online conversations, and perceiving graphics. Further, combined with cyber-infrastructure network technology, E-Braille will allow the BVI to conveniently access more documents, books, and libraries, anytime and anywhere. The main contributions of the proposed work are to: (1) develop a finger-wearable electrotactile Braille display device to aid and expand the reading ability of the BVI; and (2) build a novel biomedical test bed to investigate human tactile perceptions and study BVI health informatics. These contributions will lead to establishing a user-friendly and networked healthcare infrastructure for the BVI. The success of this project will facilitate research to aid the BVI and also will advance our fundamental understanding of electrotactile mechanisms. The major research focus is the development of a smart, individual-centered, and electrotactile-based Braille display for the BVI, known as E-Braille, which is unique as a finger-wearable electronic device, and will conveniently provide the BVI

unlimited access to the information world. The display also will be the first of its kind to include online identification of individual tactile preferences as well as the ability for adaptive tactile tuning/rendering for individuals. Currently available Braille rendering displays do not have these features.

This research project aims to advance the state of the art in portable "seeing" assistive devices for the BVI. It will accomplish this goal through the development of E-Braille, an affordable and innovative electrical stimulation-based Braille tactile display. This system will offer fast, refreshable information exchange. The proposed adaptive and sensorized E-Braille system and its methodologies will dramatically improve the quality of life of the BVI by allowing them to live more independently and with greater ease.

Parallel Technical Session I, Tuesday 2 July 2013: 15.00 – 16.15				
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45	15.45 – 16.00	16.00 – 16.15
IA: Automated System				
Chairperson: Prof. Dr. Azmi Hassan		Co-chair: Dr. M. Mahbubur Rashid		Venue: Manhattan IA
Nonlinear Control with Extended Kalman Filter Design for Vehicle Trajectory Tracking <i>Muhammad Aizzat Zakaria, Hairi Zamzuri, Rosbi Mamat, Saiful Amri Mazlan</i> Malaysia	ANFIS -Based Navigation for HVAC Service Robot with Image Processing <i>Zoolfadli Salleh , N.K Alang Md Rashid, Y. Mohd Mustafa</i> Malaysia	Improved 3D Limit-Cycle Navigation Method For Path Planning Quad-Rotor <i>Fajril Akbar , Yasir Mohd Mustafah</i> Malaysia	Colour-based Object Detection and Tracking for Autonomous Quadrotor UAV <i>Hani Hunud A. Kadouf,, Yasir Mohd Mustafah</i> Malaysia	Design and Development of Mopping Robot-'HotBot' <i>M. R. Khan,, N. M. L. Huq, M. M. Billah, S. M. Ahmmad</i> Malaysia
IB: Manufacturing Mechatronics				
Chairperson: Dr Moinul Bhuiyan		Co-chair: Dr. Mozasser		Venue: Manhattan IB
Modelling the surface roughness behaviour of an EDMed workpiece with different tool electrodes using DoE <i>M B Ndaliman, A A Khan, M Y Ali and M A Mohammad Hambiyah</i> Malaysia	A NURBS interpolator based on axis dynamics of machine Tools <i>Davoud Karimi Mohammad Javad Nategh</i> Iran	Application of NURBS weight tuning algorithm to CNC machining of blended successive short line segments <i>Davoud Karimi Mohammad Javad Nategh</i> Iran	Effect of Vibrational Parameters on the Stability of Vibration Turning Process In Time Domain <i>M. Shankayi, M.J. Nategh, H. Soleimanimehr</i> Iran	Development of a High Hertz-Stress Contact for Conventional Batch Production Using a Unique Scribing Technology <i>M.M.I. Bhuiyan, T. Alamgir, M. Bhuiyan, M. Kajihara</i> Malaysia
IC: Artificial Intelligent Techniques				
Chairperson: Dr.Siti Fauziah		Co-chair: Dr. Zawzaw Htike @ Muhd. Yusuf		Venue: Manhattan IC
Artificial Intelligence Based Technique for BTS Placement <i>Alenoghena C. O, Emagbetere J. O, Aibinu A. M</i> Nigeria	Fuzzy modeling and control of rotary inverted pendulum system using LQR technique <i>M A Fairus, Z Mohamed and M N Ahmad</i> Malaysia	An Examination of Application of Artificial Neural Network in Cognitive Radios <i>H Bello Salau,2 E. N. Onwuka and A. M. Aibinu</i> Nigeria	Hybrid pid and pso-based control for electric power assist steering system for electric vehicle <i>R A Hanifaha, S F Tohab, S Ahmad</i> Malaysia	Human Identification at a Distance Using Body Shape Information <i>Nahrul Khair Alang Md Rashid, Mohd Faid Yahya and Amir Akramin Shafie</i> Malaysia

Parallel Technical Sessions II, Tuesday 2 July 2013: 16.35 – 17.35				
16.35 – 16.50	16.50 – 17.05	17.05 – 17.20	17.20 – 17.35	
IIA: Mechatronic System				
Chairperson: Dr. Yasir Mustafah		Co-chair: Dr. Nahrul Kahir		Venue: Manhattan IA
<p>Optimal Performance of a Nonlinear Gantry Crane System via Priority-based Fitness Scheme in Binary PSO Algorithm</p> <p><i>Hazriq Izzuan Jaafar, Z. Mohamed, Amar Faiz Zainal Abidin, J.J. Jamian</i> Malaysia</p>	<p>Cauchy Integral Formula</p> <p><i>M Azram and F A M Elfaki</i> Malaysia</p>	<p>A Cooperative and Competitive Workshop in Mechatronics Education</p> <p><i>Stefan Krebs, Sebastian Schmidt, Sven Matthiesen, Soren Hohmann</i> Germany</p>	<p>Feasibility of using a humanoid robot to elicit communicational response in children with mild autism</p> <p><i>Norjasween Abdul Malik,, Syamimi Shamsuddin, Hanafiah Yussof, Mohd Azfar Miskam and Aminullah Che Hamid</i> Malaysia</p>	
IIB: Biomechanics and Rehabilitation Engineering				
Chairperson: Assoc. Prof. Dr. Shahrul Naim		Co-chair: Dr. Nadzril		Venue: Manhattan IB
16.35 – 16.50	16.50 – 17.05	17.05 – 17.20	17.20 – 17.35	16.35 – 16.50
<p>Centre of Gravity (C.O.G)-Based Analysis on the Dynamics of the Extendable Double-Link Two-Wheeled Mobile Robot</p> <p><i>M T Abdul Rahman, S Ahmad, R Akmeliawati, T Altamas and A Aula</i> Malaysia</p>	<p>MEMS and EFF Technology based Micro Connector for Future Miniature Devices</p> <p><i>M.M.I. Bhuiyan, T. Alamgir, M. Bhuiyan, M. Kajihara</i> Malaysia</p>	<p>Investigation of surface roughness in micro-electro discharge machining of nonconductive ZrO₂ for MEMS application</p> <p><i>A Sabur, A Moudood, M Y Ali, M A Maleque</i> Malaysia</p>	<p>Lower-Limb Rehabilitation Robot Design</p> <p><i>E M Bouhabba, A A Shafie, M R Khan, and K Ariffin</i> Malaysia</p>	<p>An Investigation of Fatigue Phenomenon in the Upper Limb Muscle due to Short Duration Pulses in an FES system.</p> <p><i>Jannatul Naeem, Amelia Wong Azman, Sheroz Khan and Yasir Mohd Mustafah</i> Malaysia</p>
IIC: Artificial Intelligent Techniques				
Chairperson: Dr. Salmiah Ahmad		Co-chair: Dr. Tanveer Saleh		Venue: Manhattan IC
<p>Fuzzy Logic Controller Design for A Robot Grasping System with Different Membership Functions</p> <p><i>Hamzah Ahmad, Saifudin Razali, and Mohd Ruslim Mohamed</i> Malaysia</p>	<p>An intelligent scorpion detection system</p> <p><i>Elijah Joseph Musa Aibinu Bala Sadiq Momoh Salami</i> Nigeria</p>	<p>Optimized Neural Network Model for a Potato Storage System</p> <p><i>Adeyinka Abdulquadri Oluwo, Raisuddin Md Khan, Momoh J. E. Salami, Marwan A. Badran</i> Malaysia</p>	<p>Effect of tuber skin on thermal properties of whole tubers of potato and sweet potato</p> <p><i>Adeyinka Abdulquadri Oluwo, Raisuddin Md Khan, Momoh J. E. Salami</i> Malaysia</p>	<p>Speech Analysis Based On Image Information from Lips Movement</p> <p><i>Kamil S. Talha, Khairunizam Wan, S.K.Za'ba, Zuradzman Mohamad Razlan and Shahrman A.B</i> Malaysia</p>
Conference Dinner				
20:00- 22:00				

ICOM Keynote Sessions, Wednesday 3 July 2013: 09.00 – 10.30	
09.00 – 09.45	09.45 – 10.30
Keynote Session 5 & 6	
Chairperson: Assoc. Prof. Dr. Asan Gani A. Muthalif Co-chair: Assoc. Prof. Dr. Nahrul Alang Venue: Manhattan I	
Prof. Mohamed B. Trabia	Prof. Iven Y. M. Mareels

Parallel Technical Sessions III, Wednesday 3 July 2013: 11.00 – 13.00				
11.00 – 11.15	11.15 – 11.30	11.30 – 11.45	11.45 – 12.00	12.00 – 12.15
IIIA: Robotic and Automation				
Chairperson: Dr. Amir A Shafie Co-chair: Dr. Norsinnira Venue: Manhattan IA				
Development of a Novel Locomotion Algorithm for Snake Robot <i>Raisuddin Khan, Md. Masum Billah, Mitsuru Watanabe and A.A. Shafie</i> <i>Malaysia</i>	A path follower with smooth actuation <i>Farid Gulmammadov</i> <i>Turkey</i>	Mechanical Design and simulation of two-wheeled Wheelchair using SolidWorks <i>T M Altalmas, , S Ahmad, A Aula, R Akmeliawati, and S N Sidek</i> <i>Malaysia</i>	A Qualitative Approach To Mobile Robot Navigation Using Rfid <i>Mahbuba Hossain, Muhammad Mahbubur Rashid</i> <i>Malaysia</i>	Motion Control of Extendable Double-Link Two Wheel Mobile Robot through CoG Manipulator <i>Muhammad Taquiuddin Bin Abdul Rahman, Salmiah Ahmad</i> <i>Malaysia</i>
12.15 – 12.30	12.30-12.45	12.45-13.00		
Development of a Tentacle Propulsion Technique of Underwater Application <i>T. Alamgir, M. M. Rashid, M. R. Khan</i> <i>Malaysia</i>	Development of real-time ground control station for Unmanned Aerial Vehicles (UAVs) <i>Ahmed Galaom, Salah Ali, Rini Akmeliawati</i> <i>Malaysia</i>	Fuzzy Modelling of Synchronous Machine via Takagi Sugeno Fuzzy Model. <i>Budiman Azzali Basir, Mohammad Noh Ahmad and Abdul Rashid Hussain</i> <i>Malaysia</i>		

IIIB: MEMS and NEMS				
Chairperson: Assoc. Prof. Dr. Anis Nurashikin		Co-chair: Dr. Tanveer Saleh		Venue: Manhattan IB
11.00 - 11.15	11.15 - 11.30	11.30 - 11.45	11.45 - 12.00	12.00 - 12.15
<p>Design of Two-Stage CMOS Amplifier for MEMS Resonator</p> <p><i>M S M Taufik, A A Zainuddin, A N Nordin, M S Pandian</i> Malaysia</p>	<p>DESIGN OF THE SUSTAINING CIRCUIT FOR MEMS BASED OSCILLATOR</p> <p><i>Jamilah Karim, Ahmad Anwar Zainuddin, Anis Nurashikin Nordin, A.H.M. Zahirul Alam</i> Malaysia</p>	<p>Design and Simulation of Clamped-Clamped and Clamped Free Resonators</p> <p><i>A. Anwar Zainuddin A.N. Nordin, M. Soundara Pandian, Sheroz Khan</i> Malaysia</p>	<p>Design and Development of a Simulator for Modelling Carbon Nanotube</p> <p><i>Soheli Farhana, AHM Zahirul Alam</i> Malaysia</p>	<p>μ-Patterning of Carbon Nanotube (CNT) forest for MEMS applications</p> <p><i>T.Saleh</i> Malaysia</p>
12.15 - 12.30	12.30-12.45	12.45-13.00		
<p>Design and Fabrication Stable LNF Contact for Future IC application</p> <p><i>M.M.I. Bhuiyan, Sayem Ahmed, M. Bhuiyan, M. Kajihara</i> Malaysia</p>	<p>Optimized Real Time PID Control for Steam Distillation Based Induction Heating System of Essential Oil Extraction Process</p> <p><i>Zuraida Muhammad Zakiah Mohd Yusoff Mohd Hezr Fazalul Rahiman Mohd Nasir Taib</i> Malaysia</p>	<p>A Survey of Bandwidth Utilization: Case Study of Federal University of Technology Minna</p> <p><i>Haq, . Bello-Salau, A. M. Aibinu and E. N. Onwuka</i> Nigeria</p>		
IIIC: Intelligent System				
Chairperson: Dr. Wahyu Sediono		Co-chair: Dr. Zulkiffli		Venue: Manhattan IC
11.00 - 11.15	11.15 - 11.30	11.30 - 11.45	11.45 - 12.00	12.00 - 12.15
<p>Prototyping of a Situation Awareness System in the Maritime Surveillance</p> <p><i>D O D Handayani, W Sediono, A Shah</i> Malaysia</p>	<p>Quality Monitoring System For Multistage Manufacturing Using Cascade Quality Prediction Model</p> <p><i>Fahmi Arif, Nanna Suryana, Burairah Hussin</i> Malaysia</p>	<p>Intelligent Control of Wet Scrubbing Process for Industrial Air Pollution</p> <p><i>B. A. Danzomo, M. J. E. Salami and M. R. Khan</i> Malaysia</p>	<p>Hierarchical Self Organizing Map for Novelty Detection using Mobile Robot with Robust Sensor</p> <p><i>M.N.A.H Sha'abani, M.F Misko, H. Sakidi</i> Malaysia</p>	<p>A Qualitative Review for Wireless Health Monitoring System</p> <p><i>Atika Arshad, Ahmad Fadzil Ismail, Sheroz Khan, AHM Zahirul Alam, Rumana Tasnim, Syed Samnan Haider, Mohammed M. Shobaki and Zeeshan Shahid</i> Malaysia</p>

12.15 - 12.30	12.30-12.45	12.45-13.00		
Transforming Human Gait for Signature Signals Characterization <i>Atika Arshad, AHM Zahirul Alam, Sheroz Khan, Ahmad Fadzil Ismail, Rumana Tasnim, Mohammed M. Shobaki, Syed Samnan Haider and Zeeshan Shahid</i> <i>Malaysia</i>	Development of Novel Dirham Coins Detection System <i>Mohamad Ghazali Bin Ameer Amsa, Abiodun Musa Aibinu And Momoh Jimoh E. Salami</i> <i>Malaysia</i>	Two degrees of freedom control of a ball and beam system <i>Rini Akmeliawati N. N. Abdul Aziz M. I. Yusoff</i> <i>Malaysia</i>		

Parallel Technical Sessions IV, Wednesday 3 July 2013: 14.00 - 15.00				
14.00 - 14.15	14.15 - 14.30	14.30 - 14.45	14.45 - 15.00	
IVA: Computer and Information Technology Chairperson: Dr. Md Rafiquiul Islam Co-chair: Dr. Khaizuran Abdullah Venue: Manhattan IA				
Automate Locate and Search the Fiducial Marks of LED Wafer Image <i>Jr-Wei Chen, Chih-Chin Wen and Chuen-Horng Lin</i> <i>Taiwan</i>	Analysis of Shot Boundary Based on Color and Texture Features of Frame <i>Chuen-Horng Lin, Kei-Ham Teng, Yu-Ching Lin and Li-Jung Fu</i> <i>Taiwan</i>	Cascaded Kalman Filters for Error Estimation and Compensation of Inertial Navigation System Fusing Optical and Inertial Sensors <i>Nargess Sadaghzadeh Nokhodberiz, Leila Mekacher Zouaghi, Achim Wagner, Eugen Nordheimer, Javad Poshtan, Essameddin Badreddin</i> <i>Germany</i>	An Investigation of Interference Coordination in Heterogeneous Network for LTE-Advanced Systems <i>Mohammad K. Hasan, A.F. Ismail, Aisha H. Abdalla, Khaizuran Abdullah, H.A.M. Ramli</i> <i>Malaysia</i>	
IVB: Instrumentation and Control Chairperson: Dr. M. Mahbubur Rashid Co-chair: Dr. Teddy Gunawan Venue: Manhattan IB				
Energy Optimization of Brushless DC Motor in Electric Power-Assisted Steering <i>Kumeresan A. Danapalasingam, Md Ridzuan Bin Md Yusof y and Nik Rumzi Nik Idris</i> <i>Malaysia</i>	Adaptive Decentralized Pi Controller With Modified Adaptive Interaction Algorithm <i>S. I Samsudin M. F. Rahmat Norhaliza Abdul Wahab Muhamad Sani Gaya</i> <i>Malaysia</i>	Robust Control Of Nonlinear System Using Mixed Pld With Gravitational Search Algorithm <i>Sahazati Md Rozali, Mohd Fua'ad Rahmat, Abd Rashid Husain, Amar Faiz Zainal Abidin and Norliza Abd Wahab</i> <i>Malaysia</i>	Human Classification Based on Gestural Motions by Using Components of PCA <i>Azri A. Aziz, Khairunizam Wan, S.K. Za'aba, Shahrman A.B, Nazrul H. Adnan, Asyekin H. And Zuradzman M. R.</i> <i>Malaysia</i>	

IVC: Mechatronic System			
Chairperson: Dr. Iskandar A. Mahmood Co-chair: Dr.Fadly Jashivan Venue: Manhattan IC			
<p>Comparative data compression techniques and multicompression results</p> <p><i>Mohammad Rubaiyat Hasan, Muhammad Ibn Ibrahimy, Md. Noman Habib Khan, Mohammad Meftahul Ferdous</i></p> <p><i>Malaysia</i></p>	<p>Fuzzy Logic based Handoff Latency Reduction Mechanism in Layer 2 of Heterogeneous Mobile IPv6 Networks</p> <p><i>Farhat Anwar, Mosharrof H. Masud, Suhaimi A. Latif</i></p> <p><i>Malaysia</i></p>	<p>Towards Port-Hamiltonian Approach for Modeling and Control of Two-wheeled Wheelchair</p> <p><i>Aul,a R. Akmeliawati S. Ahmad</i></p> <p><i>Malaysia</i></p>	<p>Development of a Web based financial application System</p> <p><i>Mohammad Rubaiyat Hasan, Muhammad Ibn Ibrahimy, S.M.A. Motakabber, Md. Noman Habib Khan, Mohammad Golam Mostafa</i></p> <p><i>Malaysia</i></p>

Parallel Technical Sessions V, Wednesday 3 July 2013: 15.30 – 17.30				
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15	16.15 - 16.30	16.30 - 16.45
VA: Signal and Image Processing				
Chairperson: Prof. Dr. Othman Khalifa Co-chair: Dr. Wahyu Sediono Venue: Manhattan IA				
<p>Time Domain Feature Extraction Technique for earth's electric field signal prior to the Earthquake</p> <p><i>W Astuti, W Sediono, R Akmeliawati, M J E Salami</i></p> <p><i>Malaysia</i></p>	<p>Wavelet Analysis of the earth's electric field signal prior to the Earthquake</p> <p><i>W Astuti, W Sediono, R Akmeliawati, M J E Salami</i></p> <p><i>Malaysia</i></p>	<p>Enhanced distribution channel access in IEEE802.11e for video transmission over WLAN</p> <p><i>Othman O. Khalifa, Abdirisq Mohammed Jama and Moussa Ali Hamdan</i></p> <p><i>Malaysia</i></p>	<p>Principal Component Analysis for the Classification of Fingertips Bending Data for Sign Language Translation Using DataGlove "GloveMAP"</p> <p><i>Nazrul H. Adnan, Khairunizam Wan, Shahrman Ab, Juliana A. Abu Bakar, Zuradzman Mr, Azri A. Aziz</i></p> <p><i>Malaysia</i></p>	<p>Investigation of Three Dimensional Empirical Indoor Path Loss Models for Femtocell Networks</p> <p><i>Alhareth Zyoud Jalel Chebil Mohamed Habaebi Md Rafiqul Islam</i></p> <p><i>Malaysia</i></p>
16.45 – 17.00	17.00 – 17.15	17.15 – 17.30		
<p>Robust Features Of Surface Electromyography Signal</p> <p><i>M.I Sabri.,M.F Miskon,M.R Yaacob</i></p> <p><i>Malaysia</i></p>	<p>Review Of Fruit And Vegetable Grading Sysytem Using Magnetic Resonance Imaging (Mri) Technology</p> <p><i>Wasiu A. Balogun, Momoh-Jimoh. E. Salami And Yasir M. Mustafah</i></p> <p><i>Malaysia</i></p>	<p>Rain Attenuation Analysis using Synthetic Storm Technique in Malaysia</p> <p><i>Ali Lwas Md. Rafiqul Islam Jalel Chebil Mohamed Habaebi Ahmad Ismail</i></p> <p><i>Malaysia</i></p>		

VB: Computer and Information Technology II Chairperson: Dr. Aisha H Abdalla Co-chair: Dr. Salmiah Ahmad Venue: Manhattan IB				
15.30 - 15.45	15.45 - 16.00	16.00 - 16.15	16.15 - 16.30	16.30 - 16.45
A Comparative Signaling Cost Analysis of Macro Mobility Scheme in NEMO (MM-NEMO) With Mobility Management Protocol <i>Shayla Islam, Aisha H. Abdalla, Mohamed H. Habaebi, H.A.M. Ramli, Suhaimi A. Latif, Wan H. Hassan, Mohammad.K. Hasan, Othman O. Khalifa Malaysia</i>	Evaluation of QoS Supported in Network Mobility NEMO Environments <i>Loay Faisal Ibrahim, Aisha-Hassan A. H., Mohamed Hadi Habaebi, Wan Haslina Hassan and Othman O. Khalifa Malaysia</i>	Routing Cost in a New Route Optimization Solution for Nested Mobile Networks <i>Shayma Senan, Aisha Hassan A. Hashim, Wan Haslina Hassan, Akram M. Zeki, Shihab A. Hameed, and Jamal I. Daoud Malaysia</i>	A Cross-Layer Decision for Mobile IP Handover <i>Abdalla M. Hanashi Mohamed Alnas Libya</i>	A Framework for Developing Real-Time OLAP algorithm using Multi-core processing and GPU <i>H. Alzeini, Sh. Hameed, M. Habaebi Malaysia</i>
16.45 - 17.00	17.00 - 17.15	17.15 - 17.30		
Performance Analysis of Multi-Radio Routing Protocol in Cognitive Radio Ad Hoc Networks under Different Path Failure Rate <i>Z Che-aron, A H Abdalla, K Abdullah and W H Hassan Malaysia</i>	Performance Analysis of IIUM Wireless Campus Network <i>Mosharrof H. Masud, Suaimi Abd Latif, Farhat Anwar Malaysia</i>	INVESTIGATION OF GATEWAY SELECTION SCHEMES FOR MANET of NEMO (MANEMO) <i>Z Mahmood , A Hashim, O Khalifa, F Anwar, Sh Hameed Malaysia</i>		
VC: Instrumentation and Control II Chairperson: Dr. Hazlina Co-chair: Dr. Norsinnira Venue: Manhattan IC				
15.30 - 15.45	15.45 - 16.00	16.00 - 16.15	16.15 - 16.30	16.30 - 16.45
Development of Wearable Pulse Oximetry for Telehealth Monitoring System <i>Othman O. Khalifa, Taskia A. Khan and Hajir</i>	Assessment on Tracking Error Performance of Cascade P/PI, NPID and N-Cascade Controller for Precise Positioning of XY Table Ballscrew Drive System <i>L. Abdullah, Z. Jamaludin, N.A. Rafan, J. Jamaludin, T.H. Chiew , S. Maidin</i>	Inductive Loops for Sensing Position as Signature Signals <i>Sofiane Larbani, Dr. Noreha Abdul Malik, Dr. Anis Norashikin Nordin, Dr. Sheraz Khan</i>	Experimental Evaluation of Agricultural Biomass Flow Sensing Behaviour <i>Khalid. S A Al Khateeb, Rumana Tasnim Anika, Sheraz Khan, Musse Mohammad, Atika Arshad, Khalid Hasan, Tawfikur Rahman,</i>	A Study of Pneumatic Conveying of Gas-Solid Flow for Industrial Application <i>Khalid. S. Al-Khateeb, Rumana Tasnim, Sheraz Khan, Musse Mohammad, Atika Arshad, Nazmus Saquib, Mohammed</i>

<i>Muataz Hazzaa Malaysia</i>	<i>Malaysia</i>	<i>Malaysia</i>	<i>Syed Samnan Haider, Mohammed M. Shobaki Malaysia</i>	<i>M.Shobaki, Samnan Haider Malaysia</i>
16.45 - 17.00	17.00 - 17.15	17.15 - 17.30		
Parameter Estimation of a Closed Loop Coupled Tank Time Varying System using Recursive Methods <i>Siti Nora Basir, Hazlina Selamat, Hanafiah Yussof, Nur Ismarrubie Zahari, Syamimi Shamsuddin Malaysia</i>	Simulation And Experimental Analysis Of Dc Motor Acceleration Performance On Prototype Fuel Cell Vehicle Based On Current Control Method <i>S.M.H. Syed Omar, M.H.A. Mohd Fakharuzi, N. Mohd Arshad, T.A. Ward Malaysia</i>	Simplified heat generation model use in Electric Vehicle <i>Nur Hazima Faezaa Ismail, Siti Fauziah Tohaa, Nor Aziah Mohd. Azubaira, Nizam Hanis Md Ishaka, Mohd. Khair Hassan, Babul Salam KSM Ibrahim Malaysia</i>		

Parallel Technical Sessions VI, Thursday 4 July 2013: 09.30 - 10.30				
09.00 - 09.15	09.15 - 09.30	09.30 - 09.45	09.45 - 10.00	10.00 - 10.15
VIA: Computer and Information Technology				
Chairperson: Dr. Teddy S Gunawan Co-chair: Dr Khaizuran Abdullah Venue: Manhattan IA				
Two Dimensional Array Based Overlay Network for Balancing Load of Peer-to-Peer Live Video Streaming <i>F. I. Ibrahimy Md Rafiqul Islam, Farhat Anwar and Muhammad Ibn Ibrahimy Malaysia</i>	Development of Portable Automatic Number Plate Recognition System on Android Mobile Phone <i>Abdul Mutholib, Teddy S. Gunawan¹, Jalel Chebil, Mira Kartiwi Malaysia</i>	Lightweight inter-cluster Synchronization Scheme for Femtocell Network <i>Rashid A. Saeed Omnia Abdulrahman Mohammad Kamrul Hasan Ahmad Fadzil Ismail and Khaizuran Abdullah Malaysia</i>	Evaluation of Mobility Management Protocol in NEMO <i>Mohammed Geaiger, Aisha H. A. Hashim, Ismail El-azhary, Shayla Islam Malaysia</i>	Performance Analysis for NEMO Route Optimization Protocols <i>Haram Ahmed, Aisha-Hassan A. Hashim, Ismail El-azhary, Shayla Islam Malaysia</i>
10.15 - 10.30				
Mobile Multicast In Hierarchical Proxy Mobile IPV6 <i>Azana Hafizah Mohd Aman,</i>				

<i>Aisha-Hassan A. Hashim, Amin Mustafa Malaysia</i>				
VIB: Signal and Image Processing II				
Chairperson: Prof. Dr. Momoh Jimoh Co-chair: Dr. Suhaimi Abd Latif Venue: Manhattan IB				
09.00 - 09.15	09.15 - 09.30	09.30 - 09.45	09.45 - 10.00	10.00 - 10.15
Human Gait Recognition And Classification Using Similarity Index for various conditions <i>Nahid A. Makhdoomi, Teddy S. Gunawan, Mohamed H Habaebi Malaysia</i>	Speech Enhancement using Compressive Sensing <i>Sulong, T. S. Gunawan, O.O. Khalifa, J. Chebil Malaysia</i>	Single Sample Face Recognition Using Illumination-Invariant Local Sub-Blocks <i>Fadhlan Hafiz, A A Shafie, Yasir M Mustafah Malaysia</i>	Mini Cost-Saving Water Treatment Plant for River Inlets <i>Abdul Talib bin Din, V K Kher and C F Tan Malaysia</i>	Efficient Implementation of Real-Time Face Detection Algorithm in MATLAB <i>Ahmad Shah, Suhaimi Abd Latif, Muktar Yakuza Malaysia</i>
10.15 - 10.30				
NEUTRON RADIATION EFFECT ON 2N2222 AND NTE 123 NPN SILICON BIPOLAR JUNCTION TRANSISTOR <i>Myo Min Oo, N K A Md Rashid, J Abdul Karim, M R Mohamed Zin, N F Hasbullah Malaysia</i>				
VIC: Energy and Sustainability				
Chairperson: Dr. Mahbubur Rashid Co-chair: Dr. Amir Shafie Venue: Manhattan IC				
09.00 - 09.15	09.15 - 09.30	09.30 - 09.45	09.45 - 10.00	10.00 - 10.15
The Concept Sustainable Agriculture: Challenges and Prospects <i>M S Abubakar and M L Attanda Malaysia</i>	Model building of thermoelectric generator exposed to dynamic transient sources <i>A Md Yusop, R Mohamed and A Ayob Malaysia</i>	A Comparative Study of Small Voltage Rectification Circuits for Implanted Devices <i>Samnan Haider, Hasmah Mansor, Sheroz khan, Atika Arshad, Mohammed M. Shobaki and Rumana Tasnim Malaysia</i>	Performance characterization of inductive coupling system response <i>Mohammed M. Shobaki, Noreha Abdul Malik, Sheroz Khan, Anis Nurashikin, Samnan Haider, Atika Arshad, Rumana Tasnim, and Foughalia Aissa Malaysia</i>	Testing of Lightweight Fuel Cell Vehicles System at Low Speeds with Energy Efficiency Analysis <i>Muhammad Rizuwan Mustaffa Wan Ahmad Najmi Wan Mohamed Malaysia</i>

10.15 - 10.30				
<p>New Consumer Load Prototype for Electricity Theft Monitoring and Detection System</p> <p><i>Ayodele Isqeel Abdullateef Momoh Jimoh Eyiomika Salami Mohamud Ahmed Musse Malaysia</i></p>				

Parallel Technical Sessions VII, Thursday 4 July 2013: 11.00 - 13.00				
VIIA: Mechatronics System				
Chairperson: Dr. Amelia Wong		Co-chair: Dr. Yasir Mustafah		Venue: Manhattan IA
11.00 - 11.15	11.15 - 11.30	11.30 - 11.45	11.45 - 12.00	12.00 - 12.15
<p>Observer Design via Takagi Sugeno Fuzzy of a Cart-Ball System: LMI approach</p> <p><i>Budiman Azzali Basir, Mohammad Noh Ahmad and Abdul Rashid Hussain Malaysia</i></p>	<p>A Maximum Power Point Tracking Controller for Traffic Light System Powered by Photovoltaic</p> <p><i>Riza Muhida Indonesia</i></p>	<p>Novel design of a Self powered and Self sensing magnetorheological damper</p> <p><i>Mohammad Meftahul Ferdous, M.M. Rashid Malaysia</i></p>	<p>Performance analysis of robust road sign identification System</p> <p><i>N M Ali, Y M Mustafah, and N K A M Rashid Malaysia</i></p>	<p>A Fusion of Sensors Information for Autonomous Driving Control of an Electric Vehicle (EV)</p> <p><i>Hasri Haris, Khairunizam WAN, Shahrman A. and Zuradzman Mohamad Razlan Malaysia</i></p>
12.15 - 12.30	12.30 - 12.45	12.45 - 13.00		
<p>DC-DC Boost Converter for Application in Renewable Energy Generation Inductance as a Boosting Element</p> <p><i>Zeeshan Shahid, Sheroz Khan, AHM Zahirul Alam, Musse Muhamod Ahmed, Siti HazwaniYaacob and Atika Arshad Malaysia</i></p>	<p>Optimization of wireless power transmission for two-port and three-port inductive link</p> <p><i>Samnan Haider, Hasmah Mansor, Sheroz Khan, Atika Arshad, Mohammed M. Shobaki and Rumana Tasnim Malaysia</i></p>	<p>High Quality Acquisition of Surface Electromyography - Conditioning Circuit Design</p> <p><i>Mohammed M. Shobaki, Noreha Abdul Malik, Sheroz Khan, Anis Nurashikin, Samnan Haider, Atika Arshad, and Rumana Tansim Malaysia</i></p>		

VII B: Mechatronics System				
Chairperson: Dr. Moinul Bhuiyan		Co-chair: Dr. M. Mahbubur Rashid		Venue: Manhattan IB
11.00 - 11.15	11.15 - 11.30	11.30 - 11.45	11.45 - 12.00	12.00 - 12.15
<p>Electrical Performances of Commercial GaN and GaAs Based Optoelectronics Under Neutron Irradiation</p> <p><i>D Ahmad Fauzi, N K A Md Rashid, J Abdul Karim, M R Mohamed Zin and NF Hasbullah Malaysia</i></p>	<p>Securing Data by Pseudo Random Noise Generator Using Direct Sequence Spread Spectrum</p> <p><i>Siti Hazwani Yaacob, Sheroz Khan, Mohammad Umar Sadiqi, Zeeshan Shahid Malaysia</i></p>	<p>Analysis of rain fade duration models for Earth-to-satellite path based on data measured in Malaysia</p> <p><i>Hassan Dao, Islam Md. Rafiqul and Khalid A. S. Al-Khateeb Malaysia</i></p>	<p>Optimizing POF/PCF Based Optical Switch for Indoor LAN</p> <p><i>M.M.I. Bhuiyan, Sayem Ahmed, M. Bhuiyan and, M. Kajihara Malaysia</i></p>	<p>Estimation of Rain Fade link budget for C-Band and Ku-Band on the perspective of Bangladesh</p> <p><i>Khorshed Alam, Nazmus Saquib, Noman Habib and Md. Rafiqul Islam Malaysia</i></p>
12.15 - 12.30	12.30 - 12.45	12.45 - 13.00		
<p>Preliminary Analysis of Dust Effects on Microwave Propagation Measured in Sudan</p> <p><i>Elfatih A. A. Elsheikh, Islam Md. Rafiqul, Jalel Chebil, Ahmad F. Ismail and Saad Bashir Malaysia</i></p>	<p>A Discontinuous exponential stabilization of chained form system for an X4-AUV</p> <p><i>Z M Zain, K Watanabe, K Izumi, and I Nagai Malaysia</i></p>	<p>Flank wears Simulation by using back propagation neural network when cutting hardened H-13 steel in CNC End Milling</p> <p><i>Muataz Hazza F. Al Hazza, Erry Y.T. Adesta, and Muhammad Riza Malaysia</i></p>	<p>Surface Roughness modeling for CNC End Milling using Artificial Neural Network</p> <p><i>Muataz H. F. AlHazza and Erry Y.T. Adesta Malaysia</i></p>	



ICBioE'13

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MESSAGE FROM THE CHAIRMAN OF ICBioE'13



ASSOC. PROF. DR. FARIDAH YUSOF

Chairman

International Conference of Biotechnology Engineering (ICBioE 2013)

Assalamu'alaikum Warahmatullahi Wabarakatuh

On behalf of the organizing committee, it is truly an honour to have the opportunity to welcome you to ICBioE 2013, the 3rd International Conference on Biotechnology Engineering with the theme '**INNOVATIVE AND GREEN BIOTECHNOLOGY FOR SUSTAINABLE FUTURE**'. This conference forms as part of IIUM Engineering Congress (IEC) 2013, the yearly event conducted by the Kulliyah of Engineering, IIUM.

ICBioE is a series of conference, organized every other year, as one of the means of bringing together bioenvironmental engineers, biochemical engineers, bioprocess engineers, bio-scientists, policymakers, technopreneurs, industry captains etc. to disseminate their research findings and innovations. It also provides a forum for networking which will enhance peace and prosperity of mankind as well as knowledge for service to improve the quality of life in the Global Village the world has become today. The forum will also provide a platform for entrepreneurs to seek partnership with scientists, engineers etc. to commercialize their invention and products to meet the demands of a globalized world.

This year the conference has successfully attracted more than 170 full papers, from which after going through peer reviewing processes, only 130 of high quality papers are selected for presentation.

Lastly, I would like to give my sincere appreciations to all participants, members of the organizing committee, and members of the advisory committee, keynote speakers as well as sponsors that have contributed to make this conference a successful one.

Wassalam

ASSOC. PROF. DR. FARIDAH YUSOF

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Maizirwan Mel
Zaki Zainudin

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Dzun Noraini Jimat
Aslan Sarif Asrimon
Anuar Ariffin

Journal:

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Shadia Elshishini	Egypt
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CONFERENCE TOPICS

Bioenvironmental engineering
Bioprocess engineering
Biomolecular engineering
Nano-biotechnology
Bio-pharmaceutical engineering
Food and process engineering
Agricultural and natural biotechnology products
Bioinformatics and computer applications in biotechnology
Biomass and Bio-energy
Biomedical sciences and engineering
Biotechnology applications in medicine and health
Biomaterials
Biosensors
Cell Culture Technology

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KEYNOTE SPEAKER 5



PROF. JACKIE Y. YING

Institute of Bioengineering and Nanotechnology
31 Biopolis Way, The Nanos, Singapore 138669
www.ibn.a-star.edu.sg

Jackie Y. Ying received her Ph.D. from Princeton University, and was a NSF-NATO Postdoctoral Fellow and Humboldt Research Fellow at the Institute for New Materials, Germany. She was Professor of Chemical Engineering at Massachusetts Institute of Technology. She is Executive Director of the Institute of Bioengineering and Nanotechnology (IBN), Singapore. Her interdisciplinary research is focused on the synthesis of nanostructured materials for catalytic and biomaterial applications. Prof. Ying has authored over 300 articles, and presented over 350 invited lectures at international conferences.

Prof. Ying has been recognized with a number of research awards, including the American Ceramic Society Ross C. Purdy Award for the most valuable contribution to the ceramic technical literature during 1993, David and Lucile Packard Fellowship, Office of Naval Research Young Investigator Award, National Science Foundation Young Investigator Award, Camille Dreyfus Teacher-Scholar Award, Royal Academy of Engineering ICI Faculty Fellowship, American Chemical Society Faculty Fellowship Award in Solid-State Chemistry, Technology Review TR100 Young Innovator Award, American Institute of Chemical Engineers (AIChE) Allan P. Colburn Award for excellence in publications, World Economic Forum Young Global Leader, and *Chemical Engineering Science* Peter V. Danckwerts Lectureship. She was elected a member of the German National Academy of Sciences, Leopoldina in 2005. She was named one of the "One Hundred Engineers of the Modern Era" by AIChE in its Centennial Celebration. She was the first recipient of the Singapore National Institute of Chemistry-BASF Award in Materials Chemistry. She received the Service to Education Award from the Ministry of Education, Singapore. She led the invention on MicroKit, which received the 2011 Asian Innovation Silver Award from the Wall Street Journal Asia. She is recipient of the International Union of Biochemistry and Molecular Biology (IUBMB) Jubilee Medal in 2012.

Prof. Ying serves on the Advisory Board of the Society for Biological Engineering. She was appointed by the U.S. National Academy of Engineering in 2006 to serve on the blue-ribbon committee that identified the grand challenges and opportunities for engineering in the 21st century. She serves on the Scientific Advisory Board of Molecular Frontiers, a global think tank that promotes molecular sciences.

Prof. Ying also serves on the editorial board of 26 journals, and is the Editor-in-Chief of *Nano Today*. Under Prof. Ying's leadership, *Nano Today* underwent a successful transition from a magazine to a journal, witnessing major increases in the Impact Factor from 5.929 in 2007 to 15.355 in 2011 (Thomson Reuters *Journal Citation Reports*®). *Nano Today* now ranks 2nd among the 66 journals in the ISI Nanoscience and Nanotechnology category, 4th among the 231 journals in the Materials Science (Multidisciplinary) category, and 5th among the 152 journals in Chemistry (Multidisciplinary) category.

Prof. Ying has over 130 primary patents issued or pending, and has served on the Advisory Boards of 6 start-up companies and 1 venture capital fund. One of the spinoff companies that she co-founded, Smart Cells, Inc., has developed a technology platform that is capable of auto-regulating the release of insulin therapeutic depending on the blood glucose levels. Merck acquired Smart Cells, Inc. in 2010, with potential aggregate payments in excess of \$500 million to further develop this technology for clinical trials.

Designing Nanostructured Materials for Catalytic and Biomedical Applications

Nanostructured materials are designed with more and more sophisticated features to fulfill the complex requirements of advanced material applications. This talk describes the synthesis of metallic, metal oxide and semiconducting nanocrystals of controlled size, morphology and architecture. The nanocrystalline building blocks are used to create multifunctional systems with excellent dispersion and unique properties. They are successfully tailored towards applications in pharmaceuticals synthesis, biomass conversion, greenhouse gas sequestration/utilization, fuel cells and biosensing.

Nanocomposites are also developed for biomedical applications. These multicomponent materials can provide simultaneous drug delivery and bioimaging functions as theranostic systems. They can be synthesized with unique carrier materials that offer synergistic therapeutic effects with the drugs to be delivered. In addition, nanostructure processing has been employed in creating synthetic cell culture substrates for the expansion and controlled differentiation of stem cells. Nanotechnology has also been combined with microfabrication to obtain tissue engineering scaffolds and bioartificial assist devices.

KEYNOTE SPEAKER 6



PROF. DR. IFTEKHAR A. KARIMI
 Department of Chemical & Biomolecular Engineering
 National University of Singapore
 4 Engineering Drive 4
 Singapore 117576

Education

PhD (Chem. Eng.), Purdue University, USA 1984
 MS (Chem. Eng.), Purdue University, USA 1982
 BTech (Chem. Eng.), Indian Institute of Technology Bombay, India 1980

Career

Professor (National University of Singapore) 2006-Present
 Adjunct Professor (King Fahd University of Petroleum & Minerals) 2008-2010
 Senior Lecturer/Associate Professor (National University of Singapore) 1997-2005
 Senior Research Engineer (E. I. Du Pont Company, USA) 1991-1996
 Assistant Professor (Northwestern University, USA) 1985-1990

Research Achievements

>110 accepted/published papers in international refereed journals
 US Patent 06232374, 2001 (Commercialized by DuPont USA)
 >150 conference papers/presentations
 >65 graduate students (MSc, PhD, MEng)

Research Grants (> S\$7 million + US\$242,900)

A*Star: ~\$6 million, ARF/NUS: \$460,108, TLIAP: \$96,600, JTC: \$20,000, MPA: \$259,000, USA: US\$242,900

Awards / Honors

2007 Best Paper Award Runner-up (Computers & Chemical Engineering) 10/2009
 Best Paper award (1st Annual Gas Symposium, Qatar) 1/2009
 Faculty of Engineering Commendation List for Teaching 2005-06 1/2007
 Faculty of Engineering Honors List for Graduate Teaching 1/2004
 2002 Best Paper award (Computers & Chemical Engineering) 1/2004
 Autodull Slurry System Accomplishment Award (DuPont) 1994
 Best Manufacturing Technology Award (DuPont) 1994
 Corcoran Award (1991 Best Paper in Chem. Eng. Education, ASEE) 1991
 IBM Faculty Development Award 1985

Research Experience & Interests

My research has been in the broad area of Process Systems Engineering and specifically in the modeling, simulation, analysis, and optimization of chemical, biological, and environmental processes. My current interests are in carbon capture & utilization, systems biology, renewable energy, energy efficiency, water/energy networks, operations planning & scheduling, and supply chain management & logistics. I have led several academic and industry-collaborated research projects in the above areas and secured substantial research funding. I have collaborated/consulted with several international chemical and logistics companies such as Singapore Refining Company, Sumitomo Bakelite, DuPont, Exxon-Mobil, Shell, DHL, Stolt-Nielson, Vopak, Katone- Natsie Sembcorp, Sembawang Utilities and Terminals, Seraya Chemicals, BMT Asia, Berlian Laju Tankers, Odfjell, etc.

GENOME-SCALE MODELING AND OPTIMIZATION FOR BIOTECHNOLOGY APPLICATIONS

While microbes offer several advantages in the production and upgrading of chemicals, fuels, and value-added products and remediation applications, they are often unfavorable in terms of productivity, scale, and cost. A fundamental understanding of the underlying cellular functions is essential to make them competitive on these issues. However, the complexity of and interactions among intracellular/extracellular components, functions, and environments make it difficult to get a holistic and quantitative perspective. Mathematical models such as genome-scale and kinetic models have been used successfully to help explain and quantify cellular phenotypes, provide testable hypotheses, and minimize/guide experimental research. This talk will focus on the basics and development of genome-scale models describing cellular metabolism and their use in various biotechnology applications. We will discuss our work on genome-scale metabolic models for various organisms such as *Zymomonasmobilis*, *Rhodococcuserythropolis*, *Nitrosomonaseuropea*, and *Gordoniaalkankivorans*, with applications in the production of biofuels, desulfurization of fossil fuels, treatment of wastewater, and biotransformation for value-added products. We will present several examples to illustrate how such models can give useful insights into the complex nature and functions of microorganisms.

ICBioE 2013 Parallel Technical Sessions I, Tuesday 2 July 2013: 15.00 – 16.30				
IA: Bioenvironmental Engineering [BEE]				
Chairperson: Prof. Dr. Suleyman Aremu Muyibi		Co-chair: Dr. Raha Ahmad Raus		Venue: Bronx IV
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45	15.45 – 16.00	16.00-16.15
ID 1005: TECHNO-ECONOMIC ASSESSMENT OF BIOGAS TECHNOLOGY IN NIGERIA: A CASE STUDY OF NORTHWEST, KANO STATE <i>Mohammed Lawal Attanda, Mohammed Shu'aibu Abubakar, Mubarak Inuwa and Mohammed Haruna</i> <i>Bayero University, Kano-Nigeria</i>	ID 1007: BIO DIESEL WASTE MANAGEMENT- A REVIEW <i>Omar Bashir Wani, Moina Athar</i> <i>Aligarh Muslim University, India</i>	ID 1008: LANDFILL LEACHATE TREATMENT TECHNOLOGY: A REVIEW <i>Mohd Baharudin Ridzuan¹, Nur Fatimah Mohd Hanafi¹, Zawawi Daud¹, Zulkifli Ahmad¹, Zulfairul Zakariah²</i> ¹ University Tun Hussein Onn Malaysia ² UiTM, Malaysia	ID 1011: COLOR AND COD REMOVAL FROM PALM OIL MILL EFFLUENT (POME) USING RESIN: FIXED-BED COLUMN ADSORPTION <i>Mustapha.Mohammed Bello¹, Luqman Chuah Abdullah², Mohsen Norzaei²</i> ¹ University Kano, Nigeria ² UPM, Malaysia	
IB: Biomolecular Engineering [BME]				
Chairperson: Prof Dr. Mohd. Ismail Abd. Karim		Co-chair: Assoc. Prof. Dr. Mohammed Saedi Jami		Venue: Bronx V
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45	15.45 – 16.00	16.00-16.15
ID 1032: DEVELOPMENT OF POLY (A) -TAILED UNIVERSAL REVERSE TRANSCRIPTION PCR METHOD FOR SEQUENCE –INDEPENDENT AMPLIFICATION OF REARRANGED BOVINE ROTAVIRUS <i>Elham Ahmadi¹, Hoorieh Soleimanjahi Majid Sadeghizadeh², Ali Teimoori¹</i> ^{1,2} Tarbiat Modares University, Tehran, Iran	ID 1033: THE REGULATION OF P73 IN CISPLATIN-INDUCED APOPTOSIS IN OVARIAN CANCER CELLS <i>Shadia Al Bahlani¹ and Benjamin Tsang²</i> ¹ Sultan Qaboos University, Muscat, Oman ² Ottawa Hospital Research Institute and University of Ottawa, Ottawa, Canada	ID 1044: PURIFICATION OF PLASMID DNA USING AFFINITY MEMBRANE FILTRATION <i>Nobuyuki Katagiri, Daisuke Shimokawa, Takayuki Suzuki Eiji Iritani</i> <i>Nagoya University, Japan</i>	ID 1057: PATHWAY ANALYSIS OF GENES AFFECTED IN MCF-7 BREAST CANCER CELLS TREATED WITH RECOMBINANT BROMELAIN <i>Nour Fouz, Azura Amid, Yumi Zuhanis Has-Yu Hashim</i> <i>IUM, Malaysia</i>	
IC: Bioprocess Engineering [BPE]				
Chairperson: Prof. Dr. Parveen Jamal		Co-chair: Dr. Sarina Sulaiman		Venue: Manhattan VIIIA
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45	15.45 – 16.00	16.00-16.15
ID 1135: PREPARATION AND CHARACTERIZATION OF LOW DENSITY POLYETHYLENE/THERMOPLASTIC SAGO STARCH/KENAF CORE FIBER COMPOSITES AND THEIR HYBRID COMPOSITES WITH HALLOYSITE NANOTUBES	ID 1122: OPERATIONS RESEARCH IN PHARMACOECONOMICS: AN OVERVIEW <i>Rasvini Rajendran, Zaitul Marlizawati Zainuddin</i> <i>UTM, Malaysia</i>	ID 1012: GENERATION OF O₂[*] IN [(C₂F₅)₃PF₃] ANION-BASED IONIC LIQUIDS <i>Maan Hayyan¹, Mohd Ali Hashim¹, Farouq S. Mjalli², Inas M. AlNashef³</i> ¹ UM, Malaysia ² Sultan Qaboos University, Oman ³ King Saud University, Saudi Arabia	ID 1014: STAINLESS STEEL SURFACE PROFILE CHANGES DURING USE OF ULTRASOUND WAVES TO CONTROL SOIL FILMS <i>Tirivaviri A Mamvura^{1,2}, Sunny E Iyuke¹, Anthony E Paterson¹</i> ^{1,2} University of the Witwatersrand, South Africa	

Norshahida Sarifuddin ¹ , Hanafi Ismail Zuraida Ahmad ² ¹ USM Engineering Campus, Malaysia ² IUM, Malaysia				
ID: Bionanotechnology Engineering [BNT]				
Chairperson: Prof. Dr. Md. Zahangir Alam		Co-chair: Assoc. Prof. Dr. Ma'an Alkhatib		Venue: Manhattan VIII B
15.00 - 15.15	15.15 - 15.30	15.30 - 15.45	15.45 - 16.00	16.00-16.15
ID 1058: ASSESSMENT OF THERAPEUTIC EFFICACY OF CARBONATE APATITE NANOPARTICLE MEDIATED GENE DELIVERY FOR THE TREATMENT OF BREAST CANCER. Anil Philip Kunnath ^a , Shar Mariam Bt Mohamed ^a , Nagaraj Haleagrahara, Shankara Narayana ^b , Ezharul Hoque Chowdhury ^c ^a IMU, Malaysia ^b James Cook University, Australia. ^c Monash University Sunway Campus, Malaysia	ID 1040: AUGMENTATION OF CHEMOTHERAPEUTIC EFFICACY OF CLASSICAL ANTICANCER DRUGS BY DIFFERENTLY FORMULATED CARBONATE APATITE NANOCARRIERS Snigdha Tiash ¹ , Iekshan Othman ¹ , Rosita Rosli ² , Md. Ezharul Hoque Chowdhury ¹ ¹ Monash University Sunway campus, Malaysia. ² UPM, Malaysia	ID 1039: SORPTION SEPARATION OF BETA-BLOKER PROPRANOLOL FROM AQUEOUS SOLUTIONS BY SURFACE FUNCTIONALIZED MAGNETIC NANOPARTICLES Sudipa Ghosh ¹ , Quek Jee Teck ¹ , M. S. Uddin ² , Hidayat ¹ National University of Singapore, Singapore ² IUM, Malaysia	ID 1066: ELECTROCHEMICALLY ACTIVE BIOFILMS IN BIOELECTROCHEMICAL SYSTEMS AND NANOTECHNOLOGY Shafeer Kalathil, Jintae Lee, Moo Hwan Cho Yeungnam University, Republic of Korea	

ICBioE 2013 Parallel Technical Sessions II, Tuesday 2 July 2013: 16.35 - 17.35

IIA: Bioenvironmental Engineering [BEE]				
Chairperson: Prof. Dr. Md. Zahangir Alam		Co-chair: Assoc. Prof. Dr. Mohamed Elwathig Saeed Mirghani		Venue : Bronx IV
16.35 - 16.50	16.50 - 17.05	17.05 - 17.20	17.20 - 17.35	
ID 1004: POLLUTION LOAD MANAGEMENT TO IMPROVE WATER QUALITY OF SG. PUSU Zaki Zainudin, Noorwahidah Syaira Mohd Said, Mohammed Saedi, Md. Noor Salleh IUM, Malaysia	ID 1015: PREDICTION OF OPTIMAL ADSORPTION OF AQUEOUS PHENOL REMOVAL WITH OIL PALM EMPTY FRUIT BUNCH ACTIVATED CARBON USING ARTIFICIAL NEURAL NETWORK (ANN) R.F. Olanrewaju ¹ and S.A. Muyibi ² IUM, Malaysia	ID 1027: SYNTHESIS OF ZSM-5 ZEOLITE FROM LOW-WATER/FLUORIDE ROUTE FOR THE TREATMENT OF PETROLEUM INDUSTRY EFFLUENT Mutiu K. Amosa ¹ , Ma'an F.R. Alkhatib ¹ , Mohammed S. Jami Dzun N. Jimat ¹ , Owolabi, R. Uthman ² and Suleyman A. Muyibi ¹ , ¹ IUM, Malaysia. ² University of Lagos, Nigeria		
IIB: Biomolecular Engineering [BME]				
Chairperson: Assoc. Prof. Dr. Faridah Yusof		Co-chair: Dr. Noor Illi Mohamad Puad		Venue: Bronx V
16.35 - 16.50	16.50 - 17.05	17.05 - 17.20	17.20 - 17.35	
ID 1065: CAROTENOID BIOSYNTHESIS IN INTACT PLANT AND CALLUS CULTURES OF SELASIH (<i>Ocimum basilicum</i>) Fatimah Azzahra Mohd Zaifuddin, Rashidi Othman, Norazian Mohd Hassan IUM, Malaysia	ID 1073: MUTAGENESIS ON CYANOBACTERIA FOR HIGH CO₂ UPTAKE: A REVIEW Ummi S. Halmi Shari, Azlin S. Azmi, Azura Amid, Raha A. Raus, Suleyman A. Muyibi, Dzun N. Jimat IUM, Malaysia	ID 1150: EVALUATION OF HYPERTHERMIA EFFECT ON VIABILITY BY CRYSTAL VIOLET STAINING, LDH AND TRYPAN BLUE ASSAYS OF HUMAN NORMAL LIVER AND BREAST CANCER CELL LINES Asita Elengoe, Salehuddin Hamdan		

		UTM, Malaysia	
IIC: Bioprocess Engineering [BPE]			
Chairperson: Prof. Dr. Hamzah Mohd. Salleh		Co-chair: Assoc. Prof. Dr. Ir. Zaki Zainudin	
Venue: Manhattan VIII A			
16.35 - 16.50	16.50 - 17.05	17.05 - 17.20	17.20 - 17.35
ID 1017: ALKALI ACTIVATION OF BENTONITE CLAY FOR APPLICATION IN VEGETABLE OIL REFINING <i>Salawudeen T. Olalekan¹, Arinkoola A. Olatunde² and Jimo Monsurat²</i> ^{1,2} <i>Ladoke Akintola University of Technology, Nigeria.</i>	ID 1019: BENCHTOP SCALE STUDY OF RHAMNOLIPID PRODUCTION BY <i>Pseudomonas aeruginosa</i> usm-ar2 <i>Zainatul `Asyiqin Samsu^{1,2}, Nur Asshifa Md Noh¹, Salwa Mohd Saleh Amirul Al-Ashraf Abdullah¹ and Ahmad Ramli Mohd Yahya¹</i> ¹ <i>USM, Malaysia</i> ² <i>MICET, Malaysia</i>	ID 1022: CYTOTOXICITY AND INHIBITION OF NITRIC OXIDE IN LIPO-POLYSACCHARIDE INDUCED RAW 264.7 CELL LINE BY AQUEOUS EXTRACTS OF BROWN SEAWEED <i>A.M. Hamed, Irwandi Jaswir, Azura Amid, Zahangir Alam and Tawakalit Tope Asiyambi-H</i> <i>IUM, Malaysia.</i>	
IIC: Bionanotechnology Engineering [BNT]			
Chairperson: Prof. Dr. Nassereldeen Ahmed Kabbashi		Co-chair: Assoc. Prof. Dr. Abdullah Al-Mamun	
Venue: Manhattan VIII B			
16.35 - 16.50	16.50 - 17.05	17.05 - 17.20	17.20 - 17.35
ID 1099: PREPARATION OF Zn_{0.6}Cd_{0.4}O NANORODS AND ITS CHARACTERIZATION <i>Umer Mushtaq, Souad. A. Mohamad and Raihan Othman</i> <i>IUM, Malaysia</i>	ID 1041: PH-SENSITIVE INORGANIC NANOPARTICLES FOR ENHANCED EFFICACY OF ANTI-CANCER DRUGS IN BREAST CANCER <i>Tahereh Fatemian, Ezharul Hoque Chowdhury, Iekhsan Othman</i> <i>Monash University, Malaysia</i>	ID 1051: EXPRESSION OF FUSED GENE CONSISTS OF VP2 FROM IBDV AND HN FROM NDV IN <i>Escherichia coli</i> <i>Muhammad N.A.A.N.¹, Ahmad-Raus R.², Amin N.M. Syamsiah A. S.⁴, Bakar F.D.A.⁵, Zainuddin N.¹, Ghaza M.S.¹</i> ^{1,2} <i>IUM, Malaysia</i> ³ <i>MARDI, Malaysia</i> ⁴ <i>Veterinary Research Institute, Malaysia</i> ⁵ <i>UKM, Malaysia</i>	

ICBioE 2013 Keynote Sessions 5, Wednesday 3 July 2013: 9.00 - 9.45

Keynote Session 5		
Chairperson: Prof Dr. Mohd. Ismail Abd. Karim		Co-chair: Assoc. Prof. Dr. Mohamed Elwathig Saeed Mirghani
Venue : Bronx V		
DESIGNING NANOSTRUCTURED MATERIALS FOR CATALYTIC AND BIOMEDICAL APPLICATIONS		
<i>PROF. JACKIE Y. YING</i>		
<i>Institute of Bioengineering and Nanotechnology, Singapore</i>		

ICBioE 2013 Keynote Sessions 6, Wednesday 3 July 2013: 9.45 – 10.30			
Keynote Session 6			
Chairperson: Prof. Dr. Mohd. Shahab Uddin		Co-chair: Assoc. Prof. Dr. Mohammed Saedi Jami	Venue : Bronx V
GENOME-SCALE MODELING AND OPTIMIZATION FOR BIOTECHNOLOGY APPLICATIONS			
<i>PROF. DR. IFTEKHAR A. KARIMI</i>			
<i>National University of Singapore, Singapore</i>			
ICBioE 2013 Parallel Technical Sessions III, Wednesday 3 July 2013: 11.00 – 13.00			
IIIA: Bioenvironmental Engineering [BEE]			
Chairperson: Prof. Dr. Md. Zahangir Alam		Co-chair: Assoc. Prof. Dr. Mohammed Saedi Jami	Venue : Bronx IV
11.00 – 11.15	11.15 – 11.30	11.30–11.45	11.45 – 12.00
<p>ID 1180: INITIAL ASSESSMENT OF RUNOFF QUALITY FROM ROADS AND HIGHWAYS IN KLANG VALLEY <i>Mohammad Nor Salleh, Abdullah Al Mamun, Suleyman A. Muyibi, Zaki Zainudin and Azni Idris</i> <i>IUM, Malaysia</i></p>	<p>ID 1016: REMOVAL OF ORGANICS FROM TREATED PALM OIL MILL EFFLUENT USING POWDERED ACTIVATED CARBON <i>Suleyman A.M., Tamrin T., Mohammed Saedi J., and Mutiu K. A.</i> <i>IUM, Malaysia</i></p>	<p>ID 1036: ISOLATION AND SCREENING OF BIO-SURFACTANT PRODUCING BACTERIA FROM DEGRADED PALM KERNEL CAKE UNDER LIQUID STATE FERMENTATION. <i>Shajrat Mir, Parveen Jamal, Md. Zahangir Alam.</i> <i>IUM, Malaysia</i></p>	<p>ID 1029: ELECTROSMOTIC DEWATERING OF GELATINOUS MATERIALS: MODEL DEVELOPMENT AND ANALYSIS <i>Mohammed Saedi Jami¹, T. Tanaka², Fujihara² and M. Iwata²</i> ¹ <i>IUM, Malaysia.</i> ² <i>Osaka Prefecture University, Japan</i></p>
12.00 – 12.15	12.15 – 12.30	12.30-12.45	12.45 – 13.00
<p>ID 1026: TREATMENT OF BIOTREATED PALM OIL MILL EFFLUENT USING POWDERED ACTIVATED CARBON PRODUCED FROM PALM EMPTY FRUIT BUNCH <i>Muti K. Amosa, Mohammed S. Jami, Ma'an F. Alkhatib, Dzun N. Jimat and Suleyman A. Muyibi</i> <i>IUM, Malaysia</i></p>	<p>ID 1152: MECHANISM OF FAT, OIL AND GREASE (FOG) DEPOSIT FORMATION IN SEWER PIPELINES <i>Iman A.F. Husain, Ma'an Fahmi Alkhatib, Asif Hoda, Mohamed Saedi Jammi, Mohamed Elwathiq, Zaki Bin Zainudin</i> <i>IUM, Malaysia</i></p>	<p>ID 1149: EFFECT OF BIODEGRADATION ON THE PHYSICAL PROPERTIES OF PALM OIL MILL EFFLUENT (POME) USING MIXED CULTURE OF FUNGI <i>Abass O. Alade^{1, 2}, Ahmad T. Jameel¹, Suleyman A. Muyibi¹, Mohamed I. Abdul Karim¹, and Zahangir Md. Alam¹</i> ¹ <i>IUM, Malaysia</i> ² <i>Ladoke Akintola University of Technology, Nigeria</i></p>	

IIIB: Biomolecular Engineering [BME]			
Chairperson: Assoc. Prof. Dr. Faridah Yusof		Co-chair: Dr. Nor Fadhillah Mohamed Azmin	
Venue : Bronx V			
11.00 - 11.15	11.15 - 11.30	11.30-11.45	11.45 - 12.00
<p>ID 1077: TRANSITION STATE ANALYSIS OF PYRANOSE 2-OXIDASE FROM <i>PENIOPHORA</i> SP. Ibrahim Ali Noorbatcha, Siti Khairani Ramli, Hamzah Mohd Salleh IIUM, Malaysia</p>	<p>ID 1083: INHIBITION OF MICROBIAL BIOFILM BY PLANT ESSENTIAL OILS AND ITS THERAPEUTIC POTENTIAL Iqbal Ahmad, Huma Jafri, Fohad M Husain, Mohd. Sajjad A Khan Aligarh Muslim University, India</p>	<p>ID 1074: EXPRESSION OF SEGMENT A (OPEN READING FRAME 2) OF INFECTIOUS BURSAL DISEASE VIRUS IN <i>Pichia pastoris</i> Ghazali M.S¹, Ahmad-Raus R², Amin N.M³, Syamsiah A S.⁴, Bakar F.D.A.⁵, Zainuddin N.², Muhammad N.A.A.N¹ ^{1,2}IIUM, Malaysia ³MARDI, Malaysia ⁴Veterinary Research Institute, Malaysia ⁵UKM, Malaysia</p>	<p>ID 1171: APPLICATION OF FILTRATION BLOCKING MODELS TO DESCRIBE FOULING AND TRANSMISSION OF LARGE PLASMIDS DNA IN STERILE FILTRATION Affaro Affandy¹, Eli Keshavarz-Moore², Henk K. Versteeg³ ¹IIUM, Malaysia ²University College London, United Kingdom ³Loughborough University, United Kingdom</p>
12.00 - 12.15	12.15 - 12.30	12.30-12.45	12.45 - 13.00
<p>ID 1172: ANTI-BACTERIAL ACTIVITY AND PHYTOCHEMICAL SCREENING OF <i>MORINGA OLEIFERA</i> LEAVES Eman N. Ali¹, Ghada M. A. Ibrahim², Nosiba Khalid Nasra Imad², Namariq Izzeldeen², Nazik Musa² ¹UMP, Malaysia ²Omdurman Islamic University, Sudan</p>	<p>ID 1109: MOLECULAR DOCKING STUDIES OF PYRANOSE-2-OXIDASE FROM <i>Trametes multicolor</i> Ibrahim Ali Noorbatcha, Tamrin Nuge, Amirulakmal Yusof, Raihan Othman, Hamzah Mohd Salleh IIUM, Malaysia</p>	<p>ID 1161: HOMOLOGY MODELING OF PYRANOSE 2-OXIDASE FROM <i>PHANEROCHAETE CHRYSOSPORIUM</i> Ibrahim Ali Noorbatcha¹, Ahmad Sidqi Harithuddin¹, Siti Khairani Ramli¹, Raihan Othman², Hamzah Mohd Salleh^{1,2} ^{1,2} IIUM, Malaysia</p>	
IIIC: Bioprocess Engineering [BPE]			
Chairperson: Prof. Dr. Hamzah Mohd. Salleh		Co-chair: Assoc. Prof. Dr. Ir. Zaki Zainudin	
Venue : Manhattan VIIIA			
11.00 - 11.15	11.15 - 11.30	11.30-11.45	11.45 - 12.00
<p>ID 1024: DEVELOPMENT OF ANION EXCHANGER MEMBRANE CHROMATOGRAPHY FROM REGENERATED CELLULOSE MEMBRANE BY ATTACHING DIFFERENT SPACER ARM LENGTH OF DIAMINE MONOMER Yue Wei Lee, Syed M. Saufi UMP, Malaysia</p>	<p>ID 1028: FERMENTATION OF CASHEW APPLE JUICE FOR THE PRODUCTION OF BIOETHANOL Evanie D. Deenanath¹, Sunny E. Iyuke¹, Karl Rumbold² ^{1,2}University of the Witwatersrand, South Africa</p>	<p>ID 1031: ULTRASOUND WAVES USED TO CONTROL SOIL FILMS IN THE BREWING INDUSTRY Tirivaviri A Mamvura^{1,2}, Sunny E Iyuke¹, Anthony Paterson¹ ^{1,2} University of the Witwatersrand, South Africa</p>	<p>ID 1034: STATISTICAL SCREENING AND OPTIMIZATION OF FACTORS INFLUENCE LIPASE PRODUCTION FROM PALM KERNEL CAKE USING <i>CANDIDA CYLINDRACEA</i> BY SOLID-STATE BIOCONVERSION Amal Elgharbawy, Md. Zahangir Alam and Hamzah M. Salleh IIUM, Malaysia</p>
12.00 - 12.15	12.15 - 12.30	12.30-12.45	12.45 - 13.00
<p>ID 1038: EFFECT OF INDOLE ON THE PREDATORY ABILITY OF <i>BDELLOVIBRIO BACTERIOVORUS</i> HD100 Mohammed Dwidar and Robert J. Mitchell Ulsan National Institute of Science and Technology, Republic of Korea</p>	<p>ID 1169: STATISTICAL OPTIMIZATION OF BIOETHANOL PRODUCTION FROM EMPTY FRUIT BUNCHES BY A MIXED CULTURE OF YEAST AND FUNGUS Md. Zahangir Alam, Nur Hidayah Zainan, Ma'an Fahmi Al-Khatib IIUM, Malaysia</p>	<p>ID 1140: DESIGN & FABRICATION OF A SIMPLE COST EFFECTIVE SPIN COATER FOR DEPOSITION OF THIN FILM Mohammad Meftahul Ferdous, Muhammad Mahbubur Rashid, MD. Aatur Rahman Department of Mechatronics Engineering IIUM, Malaysia</p>	

IIID: Bionanotechnology Engineering [BNT]			
Chairperson: Prof. Dr. Suleyman Aremu Muyibi		Co-chair: Assoc. Prof. Dr. Ma'an Alkhatib	
Venue : Manhattan VIII B			
11.00 – 11.15	11.15 – 11.30	11.30–11.45	11.45 – 12.00
<p>ID 1021: ELECTROCHEMICALLY ACTIVE BIOFILM MEDIATED BIOHYDROGEN PRODUCTION CATALYZED BY POSITIVELY CHARGED GOLD NANOPARTICLES <i>Mohammad Mansoob Khan, Jintae Lee and Moo Hwan Cho</i> <i>Yeungnam University,</i> <i>Republic of Korea</i></p>	<p>ID 1111: GREEN SYNTHESIS OF SILVER NANOPARTICLES IN CENTRIFUGED NATURAL RUBBER LATEX AND ITS USE OF MAKING ANTIMICROBIAL LATEX FOAM <i>W.G.I.U. Rathnayake¹, H.Ismail¹, A. Baharin Channa R. De Silva³, A.G.N.D.Darsanasiri³</i> ^{1,2} <i>USM, Malaysia</i> ³ <i>Western Carolina University Cullowhee, USA</i></p>	<p>ID 1113: ANTIMICROBIAL ACTIVITIES OF ZnO NANOPARTICLES INCORPORATED NATURAL RUBBER LATEX FOAM <i>W.G.I.U. Rathnayake^{*1}, H.Ismail¹, A. Baharin I.M.C.C.D.Bandara³, Sanath Rajapakse³</i> ^{1,2} <i>USM, Malaysia</i> ³ <i>University of Peradeniya, Sri Lanka</i></p>	<p>ID 1126: SIMULTANEOUS REMOVAL OF ACID BLUE 25 AND LEAD FROM WATER USING CARBOXYMETHYL-β-CYCLODEXTRIN MODIFIED MAGNETIC NANOCOMPOSITES <i>Abu Zayed Md. Badruddoza¹, Zayed Bin Zakir Shawon¹, Kus Hidajat¹, Mohammad Shahab Uddin²</i> ¹ <i>National University of Singapore, Singapore</i> ² <i>IUM, Malaysia</i></p>
12.00 – 12.15	12.15 – 12.30	12.30-12.45	12.45 – 13.00
<p>ID 1127: THE ADSORPTION AND INHIBITION OF ACETYLCHOLINESTERASE AND BUTYRYLCHOLINESTERASE BY GRAPHENE OXIDE AND CARBON BLACK <i>Tina Mesarić¹, Damjana Drobne^{1,2,3} Kristina Sepčić¹</i> ¹ <i>University of Ljubljana, Slovenia</i> ² <i>Centre of Excellence in Advanced Materials and Technologies for the Future (CO NAMASTE), Slovenia</i> ³ <i>Centre of Excellence in Nanoscience and Nanotechnology (CONAN), Slovenia</i></p>	<p>ID 1130: EFFECT OF TiO₂ CONCENTRATION ON PHOTOCATALYTIC DEGRADATION OF REACTIVE ORANGE 16 DYE (RO16) <i>Khaled Mezughi¹, Chedly Tizaoui², Ma'a Fahmi Alkhatib^{3*}</i> ¹ <i>Azzawia University, Libya</i> ² <i>Swansea University, Swansea</i> ³ <i>IUM, Malaysia</i></p>		
ICBioE 2013 Parallel Technical Sessions IV, Wednesday 3 July 2013: 14.00 – 15.00			
VA: Bioenvironmental Engineering [BEE]			
Chairperson: Prof. Dr. Mohd. Shahab Uddin		Co-chair: Assoc. Prof. Dr. Ir. Zaki Zainudin	
Venue: Bronx IV			
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45	14.45 – 15.00
<p>ID 1118: STATISTICAL OPTIMIZATION OF ZINC REMOVAL USING ACTIVATED CARBON AND MAGNETIC BIOCHAR <i>N.M. Mubarak,R.F Alicia, A.B Ayu Haslija and J.Tan</i> <i>UCSI University, Malaysia</i></p>	<p>ID 1139: BIOCONVERSION OF OIL PALM EMPTY FRUIT BUNCHES INTO BIOETHANOL <i>Nurul Adela Bukhari, Nasrin Abu Bakar & Loh Soh Kheang</i> <i>MPOB, Malaysia</i></p>	<p>ID 1151: THE APPLICATION OF PRECAUTIONARY PRINCIPLE IN INTERNATIONAL TRADE LAW AND INTERNATIONAL ENVIRONMENTAL LAW: A COMPARISON <i>Prof. Dr. Abdul Haseeb Ansari</i> <i>IUM, Malaysia</i></p>	

VB: Biomolecular Engineering [BME]			
Chairperson: Prof. Dr. Parveen Jamal		Co-chair: Assoc. Prof. Dr. Maizirwan Mel	
Venue: Bronx V			
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45	14.45 – 15.00
ID 1060: MUSCLE CREATINE KINASE (M-CK), ALDOLASE A AND VOLTAGE DEPENDENT ANION CHANNEL 2 (VDAC2) AS POTENTIAL BIOMARKERS FOR IDENTIFICATION OF ELECTRICALLY STIMULATED CHICKEN MUSCLE <i>Azura Amid, Norshahida Abu samah, Faridah Yusof</i> <i>IIUM, Malaysia</i>	ID 1062: OPTIMIZATION OF CULTIVATION CULTURE CONDITIONS IN <i>Escherichia coli</i> TO ENHANCE THE EXPRESSION OF RECOMBINANT VDAC2 FROM <i>Gallus gallus</i> <i>Nurhidayah Ahmad Hassan¹, Azura Amid¹, Hamza Mohd Salleh^{1,2}</i> <i>^{1,2} IIUM, Malaysia</i>	ID 1174: MOLECULAR DOCKING OF CELLOBIOSE AND CELLOTETRAOSE INTO AN ENDOGLUCANASE FROM <i>Fusarium oxysporum</i> <i>Ibrahim Ali Noorbata, Abdul Aziz Ahmad and Hamzah Mohd Salleh</i> <i>IIUM, Malaysia</i>	ID 1133: POTENTIAL ANTIVIRAL COMPOUND FROM SCHIZOPHYLLUM COMMUNE (MALAYSIA STRAIN) <i>Nur Rahilah Haji Abd Rahman, Raha Ahmad Raus, Maizirwan Mel</i> <i>IIUM, Malaysia</i>
VC: Bioprocess Engineering [BPE]			
Chairperson: Prof. Dr. Irwandi Jaswir		Co-chair: Assoc. Prof. Dr. Abdullah Al-Mamun	
Venue: Manhattan VIIIA			
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45	14.45 – 15.00
ID 1064: ISOLATION AND PURIFICATION OF α-CAROTENE FROM NATURAL RESOURCES AS HPLC STANDARD <i>Fatimah Azzahra Mohd Zaifuddin¹, Rashidi Othman Norazian Mohd Hassan¹</i> <i>^{1,2} IIUM, Malaysia</i>	ID 1071: EFFECT OF CROSS WIND AND NOZZLE ANGLE AND HEIGHT ON PERFORMANCE OF BROADCASTING SPRAYING SYSTEM <i>Nasir S. Hassen, Jamaludin M. Sheriff, Nor Azwadi C. Sidik</i> <i>UTM, Malaysia</i>	ID 1177: A WHOLE-CELL BIOCATALYSIS APPLICATION OF STEROIDAL DRUGS <i>Syed Adnan Ali Shah^{1,2}, Sadia Sultan^{1,2}</i> <i>^{1,2}UiTM, Malaysia.</i>	ID 1178: GREEN CHEMISTRY REACTIONS, USING MICROORGANISMS AS A BIOREACTOR <i>Sadia Sultan,^{1,2} Syed Adnan Ali Shah^{1,2}</i> <i>^{1,2}UiTM, Malaysia.</i>
VD: Bionanotechnology Engineering [BNT]			
Chairperson: Prof. Dr. Nassereideen Ahmed Kabbashi		Co-chair: Assoc. Prof. Dr. Ahmad Tariq Jameel	
Venue: Manhattan VIIIB			
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45	14.45 – 15.00
ID 1045: BIOMECHANICS OF REGULAR STAIR CLIMBING: SLIM VERSUS OBESE <i>Sami F. Almashaqbeh¹, Bahaa W. alsheikh¹, Wan Ab Bakar Wan Abas² and Noor Azuan Abu Osman²</i> <i>¹Yarmouk University, Jordan</i> <i>²UM, Malaysia</i>	ID 1046: PATTERNING BACTERIAL BIOFILMS ON EPITHELIAL CELLS <i>Mohammed Dwidar^a, Brendan M. Leung^a, Toshiyuki Yaguchi^{a,b}, Shuichi Takayama^{a,c} and Robert J. Mitchell^a,</i> <i>^a School of Nano-Bioscience and Chemical Engineering, Ulsan National Institute of Science and Technology, Republic of Korea.</i> <i>^b Nagoya Institute of Technology, Japan.</i> <i>^c University of Michigan, USA.</i>	ID 1047: TWO DIMENSIONAL GAIT ANALYSIS USING MATLAB <i>Sami F. Almashaqbeh, Bahaa W. alsheikh, Dia' A. Albalawneh, Ala'a N.Jaradat, Rawan M. Alkhateeb, Doa'a I.Alzyoud</i> <i>Yarmouk University, Jordan</i>	

ICBioE 2013 Parallel Technical Sessions V, Wednesday 3 July 2013: 15.30 – 17.30

VIA: Bioenvironmental Engineering [BEE]

Chairperson: Prof. Dr. Mohd. Shahab Uddin

Co-chair: Assoc. Prof. Dr. Ahmad Tariq Jameel

Venue: Bronx IV

15.30 – 15.45	15.45 – 16.00	16.00 – 16.15	16.15 – 16.30
<p>ID 1063: SCREENING FOR POTENTIAL BIOSURFACTANT PRODUCED BACTERIA FROM HYDROCARBON-DEGRADING ISOLATES Asia Fadhil Almansoori^{1, 4}, Mushrifah Idris², Siti Rozaimah Sheikh Abdullah³ and Nurina Anuar³ ^{1,2,3}UKM, Malaysia ⁴University of Basrah, Iraq</p>	<p>ID 1164: BIODIESEL PRODUCTION FROM SOLID COCONUT WASTE Sarina Sulaiman¹, Abdul Aziz Abdul Raman² and Mohammed Kheireddine Aroua² ¹IIUM, Malaysia ²UM, Malaysia</p>	<p>ID 1166: PREPARATION OF ZINC DOPED-BIPHASIC CALCIUM PHOSPHATE/ CARBONE NANOTUBES COMPOSITES Gunawan^{1,2}, Iis Sopyan^{1,a}, Maizirwan Mel Suryanto¹ ¹IIUM, Malaysia ²Sriwijaya University, Indonesia</p>	<p>ID 1050: EVALUATION OF DIESEL BLEND FUEL “A Review” Mohammad Saad khan¹, Iqbal Ahmed^{2*}, Ibrahim bin Abdul Mutalib¹, Zulkifli bin Hassan², Azmi Bostum¹, Junaid Akhter³ ¹University Technology PETRONAS, Malaysia ²UiTM, Malaysia ³UTM, Malaysia</p>
16.30 – 16.45	16.45 – 17.00	17.00 – 17.15	17.15 – 17.30
<p>ID 1179: SCREENING OF NOVEL ACIDIFIED SOLVENTS FOR A MAXIMUM ANTIMICROBIAL PEPTIDE EXTRACTION FROM ZOPHOBAS MORIO FABRICIUS Johan Ariff Mohtar, Faridah Yusoff, Najala Mahmoud Hag Ali IIUM, Malaysia</p>	<p>ID 1157: HYDROGEOLOGICAL AND HYDROCHEMISTRY INVESTIGATION IN BARA BASIN: A CASE STUDY OF THE NORTH KORDOFAN, SUDAN Elhag A.B^{*1} and Elzien S.M^{*2} ^{*1}University of Kordofan, Sudan. ^{*2}Alneelain University, Sudan.</p>	<p>ID 1153: INVESTIGATION OF NO₂/NO, SO₂, CO AND VOLATILE ORGANIC COMPOUNDS EMISSION FROM SOLID WASTE IN OGBOMOSO, SOUTH-WESTERN NIGERIA. Jimoda L.A.¹, Adeniran J .A.¹, Sonibare, J.A.², and Ayandiran A.A.¹ ¹Ladoke Akintola University of Technology, Nigeria ²Obafemi Awolowo University, Nigeria.</p>	
VIB: Bioprocess Engineering [BPE]			
Chairperson: Prof. Dr. Mohd. Ismail Abd. Karim		Co-chair: Assoc. Prof. Dr. Maizirwan Mel	
Venue: Bronx V			
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15	16.15 – 16.30
<p>ID 1147: THE EFFECTS OF SELECTED CYTOSTATICS AND THEIR MIXTURES ON TWO PHYTOPLANKTON SPECIES Polona Brezovsek¹, Tina Elerse², Metka Filipic² ¹Ecological Engineering institute, Slovenia ²National Institute of Biology, Slovenia</p>	<p>ID 1137: SOME PROPERTIES OF PROBABILISTIC ONE-SIDED STICKER SYSTEMS Mathuri Selvarajoo¹, Fong Wan Heng², Nor Haniz Sarmin¹, Sherzod Turaev³ ^{1,2}UTM, Malaysia ³IIUM, Malaysia</p>	<p>ID 1143: EFFECT OF SOLUTION PH ON THE SEPARATION OF PROTEINS FROM SKIMMED COCONUT MILK BY SELECTIVE FILTRATION Ng Ching Yin, Abdul Wahab Mohammad, Ng Law Yong UKM, Malaysia</p>	<p>ID 1120: INFLUENCE OF REACTION TEMPERATURE ON THE FLASH PYROLYSIS OF RICE HUSK Norazana Ibrahim¹, Peter A. Jensen², Kim Dam-Johansen² ¹UTM, Malaysia ²Denmark Technical Univesity, Denmark</p>
16.30 – 16.45	16.45 – 17.00	17.00 – 17.15	17.15 – 17.30
<p>ID 1155: EFFECT OF KENAF CONTENT ON STARCH BASED BIOPOLYMER COMPOSITES A. R. Nur Humairah, A. Zuraida, and A. W</p>	<p>ID 1148: THE PHYTOCHEMICAL SCREENING OF PANDANUS ETHANOLIC EXTRACTS Nur Hateikah Othman, Hannis Fadzillah</p>	<p>ID 1165: PRODUCTION OF BAKER'S YEAST FROM DATE SYRUP Siddig H. Ali¹, Salah M. Al-Eid², and Fahad M. Al-jasass³</p>	

Nur Izwah IIUM, Malaysia	Mohsin, Ibtisam Abdul Wahab UiTM, Malaysia	^{1,2} King Faisal University, Saudi Arabia ³ King Abdul-Aziz City for Science and Technology, Saudi Arabia	
VIC: Bioprocess Engineering [BPE]			
Chairperson: Assoc. Prof. Dr. Faridah Yusof		Co-chair: Dr. Raha Ahmad Raus	Venue: Manhattan VIIIA
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15	16.15 – 16.30
ID 1078: SUBSTRATE SPECIFICITY OF FARNESOL DEHYDROGENASE FROM <i>Polygonum minus</i> Nor Ain Shahajar Binti Ahmad Sohdi, Maizom Hassan UKM, Malaysia	ID 1100: DETERMINATION OF OPTIMUM EXTRACTION TIME OF LARGE SCALE MICROWAVE-ASSISTED EXTRACTION BASED ON ABSORBED MICROWAVE POWER Chung-Hung, Chan, Rozita Yusoff, Ngek-Cheng Ngoh UM, Malaysia	ID 1101: DUAL ADAPTATION GENERALIZED PREDICTIVE CONTROL YONG KUEN HO ¹ , HAK KOON YEOH FAROUQ S. MJALLI ² ¹ UM, Malaysia ² Sultan Qaboos University, Oman	ID 1091: FUZZY CONTROL FOR pH AND TEMPERATURE IN THE GLUCOSE ISOMERISATION PROCESS N Abd.Rahman ¹ , M.A.Hussain ² , J Md.Jahim ¹ , S.R.Sheik Abdullah ¹ ¹ UKM, Malaysia ² UM, Malaysia
16.30 – 16.45	16.45 – 17.00	17.00 – 17.15	17.15 – 17.30
ID 1059: PREPARATION AND CHARACTERIZATION OF POLYCAPROLACTONE (PCL) MICROSPHERES FOR CELL CULTURE APPLICATION Mohd Azmir Arifin ¹ , Nurhusna Samsudin ¹ , Maizirwa Mel ¹ , Yumi Zuhanis Has-Yun Hashim ¹ , Hamzah Mohd Salleh ¹ , Iis Sopyan ² ^{1,2} IIUM, Malaysia	ID 1081: PROCESS OPTIMIZATION ON CELL DISRUPTION OF RECOMBINANT BROMELAIN EXPRESSED IN <i>E.coli</i> BL21-AI USING ULTRASONICATION Muhd. Ezza Faiez B. Othman, Azura Amid, Dzun Noraini Jimat, Jamil Aizat Jamaluddin IIUM, Malaysia	ID 1104: COMPARISON OF TOTAL CAROTENOID CONTENT IN FLESH ORANGE, YELLOW, PURPLE AND WHITE SWEET POTATO IN STORAGE TIME Suhair Mohammad Hussein ¹ , Irwandi Jaswir Parveen Jamal ¹ & Rashidi Othman ² ^{1,2} IIUM, Malaysia	ID 1084: SCREENING OF AUTOINDUCTION MEDIUM COMPOSITION FOR OPTIMAL BIOMASS PRODUCTION OF <i>E. coli</i> BL21-AI EXPRESSING STEM BROMELAIN Mohd Jamil Aizat Jamaluddin, Azura Amid, Azlin Suhaida Azmi, Muhd. Ezza Faiez Othman IIUM, Malaysia
VID: Bionanotechnology Engineering [BNT]			
Chairperson: Prof. Dr. Mohd. Shahab Uddin		Co-chair: Assoc. Prof. Dr. Abdullah Al-Mamun	Venue: Manhattan VIIIB
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15	16.15 – 16.30
ID 1030: IMMOBILIZATION OF OIL AND GREASE IN SODIUM ALGINATE GEL AS A POTENTIAL WASTEWATER TREATMENT METHOD Mohammed Saedi Jami ¹ , Hamzah Mohd Salleh ¹ , Zariha Elda Binti Abd Kadir ¹ , Takanori Tanaka ² , Masashi Iwata ² ¹ IIUM, Malaysia ² Osaka Prefecture University, Japan	ID 1115: BIOLOGICAL SYNTHESIS OF ZINC NANOPARTICLES BY FUNGUS SPECIES Ainnur Farhana Ariffin, Ibrahim Ali Noorbatcha and Hamzah Mohd Salleh IIUM, Malaysia	ID 1075: GREEN SYNTHESIS OF GOLD NANOPARTICLES USING <i>Candida cylindracea</i> CULTURE SUPERNATANT Ibrahim Ali Noor Batcha, Saifunnasr Zulkifli, Mohd. Hamzah Salleh IIUM, Malaysia	ID 1048: PURIFICATION OF NUCLEOCAPSID PROTEIN OF NEWCASTLE DISEASE VIRUS FROM RECOMBINANT <i>Escherichia coli</i> Raha Ahmad-Raus ¹ , Faridah Yusoff ¹ , Nurhasma Matchakun ¹ , Syamsiah Aini Shohaimi ² ¹ IIUM, Malaysia ² Veterinary Research Institute, Malaysia

ICBioE 2013 Parallel Technical Sessions VI, Thursday 4 July 2013: 9.00 – 10.30					
VIIA: Bioenvironmental Engineering [BEE]					
Chairperson: Prof. Dr. Suleyman Aremu Muyibi		Co-chair: Assoc. Prof. Dr. Ahmad Tariq Jameel		Venue: Bronx IV	
9.00 – 9.15	9.15 – 9.30	9.30 – 9.45	9.45 – 10.00	10.00 – 10.15	
<p>ID 1001: STUDIES OF LOCALLY EFFECTIVE MICROORGANISMS (EM) TO ENHANCE THE DEGRADATION OF EMPTY FRUIT BUNCHES, POME & CAKE DURING COMPOSTING PROCESS Nassereldeen Ahmed kabbashi, Norzalina Noruldin, Mohammed Elwathig Mirghani IIUM, Malaysia</p>	<p>ID 1123: OPTIMIZATION OF BIOMASS GROWTH OF MICROALGAE <i>BOTRYOCOCUS SUDETICUS</i> GROWN IN POME WASTE WATER Nabila Selmani, Mohamed E.S. Mirghani, Md. Zahangir Alam IIUM, Malaysia</p>	<p>ID 1117: PILOT SCALE PRODUCTION OF LIPASE USING PALM OIL MILL EFFLUENT AS BASAL MEDIUM Devi Ratna Asih, Md. Zahangir Alam, Md. Noor Salleh IIUM, Malaysia</p>	<p>ID 1068: DRINKING WATER TREATMENT BY COAGULATION WITH EXTRACT FROM <i>Moringa oleifera</i> SEED Tetsuji Okuda¹, Wataru Nishijima¹, Mitsumasa Okada² ¹Hiroshima University, Japan ²Open University of Japan, Japan</p>	<p>ID 1079: FOULING IN MEMBRANE BIOREACTORS WITH MICROBIAL AUTOLYSIS CAUSED BY ENDOGENOUS RESPIRATION Tetsuji Okuda¹, Wataru Nishijima¹, Atsunori Ootoshi², Srinivasa Reddy Mallampati³, Satosi Nakai², Mitsumasa Okada⁴ ¹Environmental Research and Management Center, Hiroshima University, Japan ²Hiroshima University ³University of Hiroshima, Japan ⁴Open University of Japan, Japan</p>	
VIIIB: Bioprocess Engineering [BPE]					
Chairperson: Prof. Dr. Mohd. Ismail Abd. Karim		Co-chair: Assoc. Prof. Dr. Maizirwan Mel		Venue: Bronx V	
9.00 – 9.15	9.15 – 9.30	9.30 – 9.45	9.45 – 10.00	10.00 – 10.15	10.15 – 10.30
<p>ID 1042: OPTIMIZATION OF MEDIA COMPOSITION FOR α-AMYLASE PRODUCTION IN LIQUID STATE FERMENTATION OF BITTER CASSAVA BY <i>ASPERGILLUS NIGER</i> Abubakir I. Khalaf, Md. Zahangir Alam and Hamzah M. Salleh IIUM, Malaysia</p>	<p>ID 1112: GCMS-BASED GLOBAL METABOLITE ANALYSIS APPROACH DISTINGUISHES CHO-K1 CELLS CULTURED IN DIFFERENT LEVELS OF SERUM AND GLUTAMINE Yumi Zuharis Has-Yun Hashim, Salfarina Ezrina Mohamad Saberi, Maizirwan Mel, Azura Amid, Raha Ahmad Raus, Vasila Packeer Mohamed IIUM, Malaysia</p>	<p>ID 1106: CO-SOLVENT SELECTION FOR SUPERCRITICAL FLUID EXTRACTION OF ASTAXANTHIN AND OTHER CAROTENOIDS FROM (<i>Penaeus monodon</i>) WASTE Shazana Azfar Radzali¹, Badlisha Sham Baharin¹, Rashidi Othman and Masturah Markom³, Rusli Abdul Rahman¹ ¹UPM, Malaysia ²IIUM, Malaysia ³UKM, Malaysia</p>	<p>ID 1103: PREPARATION OF CROSS-LINKED ENZYME AGGREGATE (CLEA)-LIPASE FROM SKIM LATEX SERUM OF <i>HEVEA BRASILIENSIS</i> Faridah Yusof, Mohd Raziz Firdaus Abd Aziz and Dzun Noraini Jimat IIUM, Malaysia</p>	<p>ID 1163: ISOLATION OF FUNGI PRODUCING CELLULASES FROM COCOA POD (<i>THEOBROMA CACAO L.</i>) Dzun N. Jimat, Nur F.D. Che Husin, Azlin S. Azmi, Raha A. Raus IIUM, Malaysia</p>	<p>ID 1158: QUALITY ASPECTS AND PROXIMATE COMPOSITION OF SOME LEGUMES IN SUDAN Mohamed Elmustafa Osman Elsayed and Razaz Elsayed Omer Ahmed University of Kordofan, Sudan</p>
VIIC: Bioprocess Engineering [BPE]					
Chairperson: Prof. Dr. Irwandi Jaswir		Co-chair: Dr. Nor Fadhillah Mohamed Azmin		Venue: Manhattan VIIIA	
9.00 – 9.15	9.15 – 9.30	9.30 – 9.45	9.45 – 10.00	10.00 – 10.15	10.15 – 10.30
<p>ID 1142: THE STUDY OF CELL ATTACHMENT AND</p>	<p>ID 1053: STUDY OF THE CHEMICAL AND THERMAL</p>	<p>ID 1054: EFFECT OF COMMERCIAL</p>	<p>ID 1141: DEVELOPMENT AND</p>	<p>ID 1170: STUDY OF CENTRAL CARBON</p>	<p>ID 1098: HEALTH BENEFITS OF GUM ARABIC AS</p>

<p>SPREADING ON POLYANILINE AND GELATIN USING ELECTRIC CELL-SUBSTRATE IMPEDANCE SENSING <i>Irmanisha Ibrahim¹, Anis Nurashiki Nordin², and Yumi Zuhanis Has-Yu Hashim¹</i> ^{1,2}IIUM, Malaysia</p>	<p>PROPERTIES OF KENAF BIOMASS BASED-POLYLACTIC ACID (PLA) <i>Nur Aimi Mohd Nasir, Hazleen Anuar, Maizirwan Mel, Rashidi Othman, Nurhafizah Seeni Mohamed, Ahmad Fitrie Mohd Ithnin, Mohd Khairun Anwar Uyup</i> <i>Nur Aimi Mohd Nasir¹, Hazlee Anuar¹, Maizirwan Mel², Rashidi Othman³, Nurhafizah Seeni Mohamed¹, Ahmad Fitrie Mohd Ithnin¹, Mohd Khairun Anwar Uyup^{4,5}</i> ^{1,2,3}IIUM, Malaysia ⁴FRIM, Malaysia ⁵UPM, Malaysia</p>	<p>BROMELAIN ON VIABILITY OF MCF-7 HUMAN BREAST CANCER CELLS <i>Hanan Yahaya Azura Amid, and Noor Illi Binti Mohamad Puad</i> IIUM, Malaysia</p>	<p>IMPROVEMENT OF ANTI-GOUT PROPERTY FROM AQUEOUS-METHANOL EXTRACT OF <i>Morinda elliptica</i> USING CENTRAL COMPOSITE DESIGN <i>Parveen Jamal, Saiful Mohammad Nizam Azmi, Azura Amid</i> IIUM, Malaysia</p>	<p>METABOLISM DURING PLANT CELL SUSPENSION GROWTH USING FLUX BALANCE ANALYSIS (FBA) <i>Noor Illi Mohamad Puad Ferda Mavituna²</i> ¹IIUM, Malaysia ²University of Manchester, UK</p>	<p>NATURAL HALAL FOOD INGREDIENT AND EMULSIFYING AGENT <i>Mohamed Elwathig S. Mirghan Nasreldin Ahmed Kabbashi, Yumi Z. P. Y. Hashim¹ and Ahmad Adam F. Mohamed Elnour</i> IIUM, Malaysia</p>
VIID: Bioprocess Engineering [BPE] Chairperson: Prof. Dr. Parveen Jamal Co-chair: Assoc. Prof. Dr. Mohamed Elwathig Saeed Mirghani Venue: Manhattan VIII B					
9.00 – 9.15	9.15 – 9.30	9.30 – 9.45	9.45 – 10.00	10.00 – 10.15	10.15 – 10.30
<p>ID 1136: PRETREATMENT AND HYDROLYSIS PROCESSES ON CYANOBACTERIA CELLS FOR CARBOHYDRATE PRODUCTION <i>Noraini S., Azlin S.A., Azura A.</i> IIUM, Malaysia</p>	<p>ID 1105: EFFECT OF SEASON AND STORAGE PERIOD TIME TOWARDS ACCUMULATION OF INDIVIDUAL CAROTENOID CONTENT IN PUMPKIN FLESH (<i>Cucurbita moschata</i>) ^{1,3}Norshazila, S., ²Irwandj, J., ³Othman, R., and ²Yumi Zuhanis, H. H. ^{1,2}IIUM, Malaysia ³Universiti Sultan Zainal Abidin, Malaysia</p>	<p>ID 1107: OPTIMIZED MANUFACTURE OF FERROFLUID AND MEASUREMENT OF MAGNETICALLY BIREFRINGENCE AND DICHROISM <i>Jing-Fung Lin, Meng-Zhe Lee, Yi-Qun Lin</i> Far East University, Taiwan</p>	<p>ID 1108: PLANT PROTEIN HYDROLYSATES FROM SOY BEAN AND RICE GRAIN AS A SUPPLEMENT FOR MEDIUM IN HUMAN SKIN FIBROBLAST 1184 CELL CULTURE <i>Amir Abbas Kazemzadeh Farizhandi, Sharifah Annirah Syed Abdul Rahman, Fadzilah Adibah Abdul Majid, Dayang Norulfairuz Abang Zaidel</i> UTM, Malaysia</p>	<p>ID 1110: STATISTICAL OPTIMIZATION OF PROTEIN BUFFER TO PURIFY HYDROLASES FROM THE SKIM LATEX OF <i>HEVEA BRASILIENSIS</i> <i>Nazhirah Mohamed and Faridah Yusof</i> IIUM, Malaysia</p>	<p>ID 1035: DEVELOPMENT OF AVOCADO OIL NANOEMULSION HYDROGEL USING SUCROSE ESTER STEARATE <i>Nagib A Elmarzugi¹, Ahmad M Eid¹, Hesham A M A El Enshasy¹</i> ¹UTM, Malaysia</p>

ICBioE 2013 Parallel Technical Sessions VII, Thursday 4 July 2013: 11.00 – 13.00				
VIIID: Bioenvironmental Engineering [BEE]				
Chairperson: Prof. Dr. Nassereldeen Ahmed Kabbashi		Co-chair: Assoc. Prof. Dr. Ma'an Alkhatib		Venue: Bronx IV
11.00 – 11.15	11.15 – 11.30	11.30–11.45	11.45 – 12.00	12.00 – 12.15
<p>ID 1043: APPROACHES IN THE UTILIZATION OF <i>JATROPHA CURCAS</i> L. AS FEEDSTOCK FOR BIODIESEL SYNTHESIS: A REVIEW <i>Mohammed Nurudeen Ishola, Nassereldeen Ahmed Kabbashi, Md Zahangir Alan, Mohammed Elwathig Mirghani</i> <i>IUM, Malaysia</i></p>	<p>ID 1037: SYSTEMIC STUDY FOR DYE DECOLORIZATION USING BIOSURFACTANTS AND BIOMASS <i>Parveen Jamal, Monawar Munjia, Ma'an Alkhatib</i> <i>IUM, Malaysia</i></p>	<p>ID 1009: REUSE POTENTIAL OF ABLUTION WATER FROM IUM MASJID <i>Abdullah Al Mamun, Suleyman A. Muiyibi and Nur Asilah Bt. Abdul Razak</i> <i>IUM, Malaysia</i></p>	<p>ID 1116: SINTERING BEHAVIOUR OF DENSE ZINC DOPED-BIPHASIC CALCIUM PHOSPHATE CERAMICS <i>Gunawan^{1,2}, Iis Sopyan^{1,a}, Maizirwa Mel¹, Suryanto¹</i> ¹ <i>IUM, Malaysia</i> ² <i>Engineering, Sriwijaya University, Indonesia</i></p>	<p>ID 1003: ANTIBACTERIAL PROPERTY OF MEMBRANE PROCESSED <i>MORINGA OLEIFERA</i> SEED EXTRACT <i>Munirat A. Idris¹, Suleyman A. Muiyibi¹, Mohd. Ismail Abdul Karim¹, Parveen Jamal¹, Hamza Mohd. Salleh¹, and Mohammed Saedi Jami¹</i> ¹ <i>IUM, Malaysia</i></p>
12.15 – 12.30	12.30-12.45	12.45 – 13.00		
<p>ID 1080: CENTRAL COMPOSITE DESIGN OF ZINC REMOVAL FROM MODEL WATER USING CHITOSAN BIOPOLYMER <i>Isam Y. Qudsieh¹, Mohammad E. Mirghani², Nassereldeen A. Kabbashi² and Suleyman Aremu Muiyibi²</i> ¹ <i>Jazan University, Saudi Arabia</i> ² <i>IUM, Malaysia</i></p>	<p>ID 1082: BIOLOGICAL EFFECTS OF WIRELESS TECHNOLOGY POLLUTION <i>Othman O. Khalifa and Md Rafiqul Islam</i> <i>IUM, Malaysia</i></p>	<p>ID 1176: QSAR STUDY OF PLATELET-ACTIVATING FACTOR (PAF) RECEPTOR BINDING ANTAGONIST <i>Nor Hayati Abdullah¹, Ibrahim A. Noorbachcha², Ling Sui Kiong¹</i> ¹ <i>FRIM, Malaysia</i> ² <i>IUM, Malaysia</i></p>		
VIIID: Bioprocess Engineering [BPE]				
Chairperson: Prof. Dr. Irwandi Jaswir		Co-chair: Dr. Azlin Suhaida Azmi		Venue: Bronx V
11.00 – 11.15	11.15 – 11.30	11.30–11.45	11.45 – 12.00	12.00 – 12.15
<p>ID 1049: EXTRACTION AND PURIFICATION OF ANTIFUNGAL COMPOUNDS FROM <i>Piper betle</i> <i>Raha Ahmad-Raus, Parveen Jamal, Amira Surmi, Hafizan Junoh</i> <i>IUM, Malaysia</i></p>	<p>ID 1138: ULTRASONIC-ASSISTED EXTRACTION OF THIOLS FROM GARLIC BULBS <i>Nur Izzah Ismail¹, Yuni Zuhani, Has-Yun Hashim^{1,2}, Parveen Jamal¹, Hamzah Mohd Salleh^{1,2}, Rashidi Othman³</i> ^{1,2,3} <i>IUM, Malaysia</i></p>	<p>ID 1159: USE OF GELATIN IN FOOD AND PHARMACEUTICAL INDUSTRIES: AN ISLAMIC PERSPECTIVE <i>Harmen Shah, Faridah Yusof¹</i> <i>IUM, Malaysia</i></p>	<p>ID 1023: KINETIC STUDY OF ACETIC ACID (VINEGAR) PRODUCTION FROM STAR FRUIT JUICE IN A BIOREACTOR <i>Mohamed Ismail Abdul Karim, Parveen Jamal and Noor Izzaida Binti Kamaruddin</i> <i>IUM, Malaysia</i></p>	<p>ID 1175: PERFORMANCE OF β-GLUCOSIDASE IMMOBILIZED ON CALCIUM ALGINATE BEADS <i>Ahmad T. Jameel, Faridah Yusof, Syaira Johana</i> <i>IUM, Malaysia</i></p>
12.15 – 12.30	12.30-12.45	12.45 – 13.00		
<p>ID 1010: ANTICANCER POTENTIAL OF AGARWOOD DISTILLATE <i>Phirdaous Abbas¹, Yumi Zuhani</i></p>	<p>ID 1055: PRODUCTION OF CELLOBIOHYDROLASE BY STATIC SURFACE LIQUID</p>	<p>ID 1072: PRELIMINARY STUDY ON KINETIC GROWTH OF <i>F. deltoidea</i> VAR.</p>		

<p>Has-Yun Hashim^{1, 2}, Azura Amid¹, Hamzah Mohd Salleh^{1,2}, Parveen Jamal¹ and Irwandi Jaswir^{1, 2} IIUM, Malaysia</p>	<p>CULTURE USING TWO SUBSTRATE AS CARBON SOURCE Norashikin Othman¹, Jamaliah Md. Jahim¹, Abd. Munir Abd Murad², Farah Diba Abd Bakar² ^{1,2}UKM, Malaysia</p>	<p>TRENGGANUENSIS CELL SUSPENSION CULTURE Tajul Afif Abdullah¹, Azura Amid², Noor Illi Muhamad Puad² and Hafsa Jaafar¹ ¹ Universiti Sultan Zainal Abidin Malaysia ² IIUM, Malaysia</p>		
<p>VIIID: Bioprocess Engineering [BPE] Chairperson: Prof. Dr. Hamzah Mohd. Salleh Co-chair: Dr. Dzun Noraini Jimat Venue: Manhattan VIII A</p>				
11.00 - 11.15	11.15 - 11.30	11.30-11.45	11.45 - 12.00	12.00 - 12.15
<p>ID 1131: IDENTIFICATION OF MICROBES IN INOCULANTS FOR AGARWOOD (GAHARU) FORMATION USING MOLECULAR BIOLOGICAL TECHNIQUES Tamrin Nuge¹, Hamzah Mohd Salleh^{1, 2}, Azura Amid¹, Irwandi Jaswir¹, Parveen Jamal¹, Yumi Zuhanis Has-Yun Hashim^{1, 2} ^{1,2} IIUM, Malaysia</p>	<p>ID 1119: STATISTICAL OPTIMIZATION OF MEDIUM COMPONENTS TO IMPROVE THE PRODUCTION OF TETRATHIONATE HYDROLASE FROM THIOBACILLUS FERROOXIDANS Azratul Ashimah Nur Mohd Dom, Faridah Yusof IIUM, Malaysia</p>	<p>ID 1002: STUDIES ON THE PROCESS CONDITION THAT AFFECT THE SIZE OF POLYSTYRENE MICROCARRIER BY AN EMULSION SOLVENT EVAPORATION PROCESS Nurhusna Samsudin¹, Mohd Azmi Arifin¹, Yumi Zuhanis Has-Yun Hashim¹, Maizirwan Mel, Hamzah Mohd. Salleh¹, Iis Sopyan² ^{1,2} IIUM, Malaysia</p>	<p>ID 1006: EFFECTS OF GLUTAMINE AND SERUM ON IGF- DEPENDENT CHO-K1 CELL GROWTH IN T-FLASK Vasila Packeer Mohamed, Yumi Zuhanis Has-Yun Hashim, Salfarina Ezrina Mohmad Saberi, Siti Nuramalis Ibrahim, Azura Amid and Maizirwan Mel. IIUM, Malaysia</p>	<p>ID 1124: RAPID DETECTION OF ETHANOL IN BEVERAGES USING IIUM-FABRICATED PORTABLE ELECTRONIC NOSE Nurul Asyikeen Ab Mutalib¹, Irwandi Jaswir Rini Akmeliawati² ^{1,2} IIUM, Malaysia</p>
12.15 - 12.30	12.30-12.45	12.45 - 13.00		
<p>ID 1125: ENRICHMENT OF FRUIT WASTES WITH WHITE ROT FUNGI UNDER SUBMERGED STATE BIOCONVERSION Parveen Jamal, Olorunnisola K. Saheed, Md. Zahagir Alam, Suleyman Aremu Muyibi and M. Ismail Abdul Karim, IIUM, Malaysia</p>	<p>ID 1114: AGARWOOD DISTILLATE: SAFE FOR ORAL CONSUMPTION Yumi Zuhanis Has-Yun Hashim^{1,2}, Iswadi Idris¹, Abe Hussein M. Gameil¹, Phirdaou Abbas¹, Azura Amid Hamzah Mohd Salleh^{1,2}, Parveen Jamal¹ and Irwandi Jaswir^{1, 2} IIUM, Malaysia</p>	<p>ID 1132: EFFECTS OF PROCESS PARAMETERS ON SPRAY DRYING OF RECOMBINANT BROMELAIN Bala, M., Amid, A., Jami, M. S Mel, M. and Salleh, H. M., IIUM, Malaysia</p>		



ICEPEE'13

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MESSAGE FROM THE CHAIRMAN OF ICEPEE'13



DR. MOHAMED ELWATHIG SAEED MIRGHANI

Chairman

*International Conference on Engineering Professional Ethics and Education
(ICEPEE 2013)*

Faculty of Engineering
International Islamic University Malaysia

Dear respected Keynote Speakers, Paper Presenters, Participants and all guests of ICEPEE 2013.
Assalaamu'alaikum Warahmatullahi Wabarakatuh

It is with great pleasure that we in the Islamization, Values and Ethics in Engineering Sciences Research Group (IVEES-RG) organize the 3rd international conference on engineering professional ethics and educations (ICEPEE'13). IVEES-RG thanks you all for accepting our invitation and coming to participate in ICEPEE'13. IVEES-RG embarks on a multifunction research activity in fields related to engineering ethics, professionalism, technology and education. It is one of the fundamental research clusters towards actualising the vision of the International Islamic University Malaysia (IIUM).

ICEPEE'13 focuses on various aspects of engineering professional ethics and education, with the theme: "Professional Ethics in Engineering Practice for Quality Services". Accepted papers concentrate on ethics in engineering education, religion and ethics, bioethics, philosophy of engineering sciences, social responsibility in engineering practice and engineering education for sustainable development and quality services.

The conference will be addressed by Professor Hussein O. B. Oloyede, Department of biochemistry, Faculty of Science, University of Ilorin, Ilorin, Nigeria, and Professor Mohammed Zeki Khedher, Department of Electrical Engineering, Faculty of Engineering and Technology, Jordan University, Jordan. And of course many outstanding speakers are going to present in various topics on islamization, ethics in life and engineering practice in both English and Arabic tongues.

I would like to confiscate this opportunity to send sincere thanks to all IVEES-RG members as well as all congress committee members, academic and administrative staff of the Faculty of Engineering, IIUM for thoughtfulness kind cooperation.

For the keynote speakers, paper presenters, participants and all guests we wish you nice stay in Kuala Lumpur, Malaysia.

Wassalam Alaikom Warahmatullah

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CONFERENCE TOPICS

Professional Ethics
Professionalism and Ethics in Engineering Education
Religion and Ethics
Bioethics
Philosophy of Engineering Sciences
Ethics for Engineering Based Industries
Scientific Misconduct
Integrating Ethics into Engineering Education
Ethics and Social Responsibility in Engineering
Teaching Ethics in Engineering Curriculum
Teaching Technologies and Engineering Education
Engineering Education Policies and Practice
Internationalization and Globalization of Engineering Education
Collaboration between Universities and Industry
E-learning Technologies in Education
Engineering Education for Sustainable Development
Research in Engineering Education
Enhancing Innovation in Research and Education
Sustainability in Engineering Education and Research
Engineering Technology Transfer
Engineering and Society
Engineering and Environment
Engineering Education and Entrepreneurship
Other Related Topics

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PROFESSOR HUSSEIN OYELOLA BUKOYE OLOYEDE

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Oloyede, Hussein Oyelola Bukoye, is a Professor of Biochemistry and the and Pioneer Vice-Chancellor Fountain University, Osogbo, Nigeria (The University of Nasrul-Lahi-Il- Fathi Society of Nigeria). He had his University education at Ahmadu Bello University, Zaria, Nigeria, where he obtained his B.Sc. Biochemistry in 1976 and M.Sc. Biochemistry in 1981 under the auspices of Kwara State and Federal Government Scholarship respectively. In 1996, Professor Oloyede obtained his Ph.D Food Biochemistry Degree in the Department of Bioscience and Biotechnology, University of Strathclyde, Glasgow, U. K. having secured the University of Ilorin Staff Development and Commonwealth Academic Awards.

Professor Oloyede joined the services of the University of Ilorin, Ilorin Nigeria as a Graduate Assistant in 1977, rose through the ranks to become a Professor in 1995 and delivered his well attended Inaugural Lecture titled "All for the love of Nutrients" on May 26, 2005. He has successfully supervised numerous B.Sc, M.sc. and Ph.D. students, and some of them are Professors today. He is a prolific writer having over 100 publications including monographs, international journal articles, and conference proceedings to his credit. He has travelled extensively presenting scientific papers at National and International conferences, Seminars and Workshops. His areas of Research interests include Food Biochemistry, Nutraceutical, Antioxidants, Environmental and Invertebrate Biochemistry.

At University of Ilorin, Professor Oloyede had held several positions including Head of Department (1997-2002) and was the Dean of the Faculty of Science (2006-2007) and also the Pioneer Dean, College of Natural Sciences and Overseer of the College of Management Sciences Al-Hikmah University, Ilorin (2005-2006), Nigeria. A Lecture titled "O. B. Oloyede Prominent Personality Lecture" was organized by the Faculty and held on 26th April, 2010 in his honour as the best Dean of Science the Faculty produced at the University of Ilorin, Nigeria. He represented his colleagues on various occasions at the senate level on several Committees including the University Admissions Committee, Development committee and the University Selections Board for the appointment of Principal Officers and the Vice-Chancellor. He served at different times as Chairman/Member on the National Universities Commission (NUC) Programmes Accreditation to various Universities.

Prof Oloyede also served as External Examiner for B.Sc, M.Sc and Ph.D. Biochemistry programmes in several Universities in Nigeria, including Ahmadu Bello University, Zaira, Obafemi Awolowo University, Ile-Ife and University of Lagos, and involved in the assessment of academic colleagues for the positions of Readers and Professors in various Nigerian Universities as well as Editor in Chief/Member of Editorial Board of some journals within and outside the country.

Professor Oloyede is a Member of the American Association for the Advancement of Science, New York Academy of Science, Science Association of Nigeria and Nigeria Society for Biochemistry and Molecular Biology (NSBMB) amongst others. As a member of NSBMB, he distinguished himself as a former National Vice-President and was conferred a Fellow of the Nigerian Society for Biochemistry and Molecular Biology (FNSBMB).

He was a member of the Planning and Implementation Committee (PIC) for the establishment of Al-Hikmah University, Ilorin, Nigeria and currently a Member of the PIC for the Proposed Summit University, (The University of Ansar-Ud-Deen Society of Nigeria, Offa). He was appointed by the Kwara State Government as a Member of the Committee on Rationalization of courses in Kwara State Tertiary Institutions in 1997 and Chairman Visitation Panel to Kwara State Polytechnic, Ilorin, Nigeria in 2003. Professor Oloyede is happily married to Hajia Sariyat Bunmi Oloyede and they are blessed with children.

THE NEED FOR RESEARCH COLLABORATION BETWEEN UNIVERSITIES AND FOOD & PHARMACEUTICAL INDUSTRIES: A CASE OF NIGERIA

Universities play crucial roles as the backbone of the society including engagement in basic and cutting edge research. The Universities are important engine for knowledge production, innovation and knowledge-based economy. These activities in the Universities have impact on the society through collaboration with external partners. The activities vary between disciplines, and the impact on society therefore takes on different forms. One of these activities refers to the knowledge spillover through research from the Universities and R&D from the Industries. This collaborative relationship is well established in developed countries. However, with very scanty availability of R & D data, and our experience as academicians in Nigerian Universities, it is evident that most Nigerian companies in this sectors did little or no R & D and do not utilise the expertise in Nigerian Universities in research. The multinationals in Food and beverages and pharmaceutical industries have shown signs of active R & D by the introduction of new products on regular basis. However, most if not all their R & Ds are without collaborations with Nigerian Universities. There are, however, lots of research in Nigerian Universities in the areas of Nutritional Biochemistry, Toxicology, Pharmacology and Phytomedicine which focus on improvement of quality of processed food and pharmaceuticals and addresses management of diseases such as diabetes, hypertension, obesity and malnutrition among others which are yet to be patronised by the relevant industries in Nigeria. The efforts of Nigerian Industries and Universities are yet to be properly coordinated and harnessed for the mutual benefit of both parties for the eventual use of Nigerian people. The Nigerian Government, in recognition of this gap, has tried to put in place intervention schemes like the Student Industrial Work Experience Scheme (SIWES). The academicians are also exposed to the environment with the consequent effect of getting to know the needs of the Industries and therefore influence their research focus. The keynote address intends to give detailed information about the highlights, which will eventually be useful to the society.

Technical Sessions I, Tuesday 2 July 2013: 15.00 – 16.30					
Chairperson: Prof. Dr. M. Azram		Co-chair: Assoc. Prof. Dr. Jamal I. Daoud		Venue: Manhattan VII	
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45	15.45 – 16.00	16.00-16.15	16.15-16.30
ID 4008: Research Ethics and fraud in Engineering: Challenging of scientific misconduct <i>Othman Khalifa</i> <i>International Islamic University Malaysia, Malaysia</i>	ID 4003: Responsibility and Accountability of A Muslim Engineer <i>Rashidah Funke Olanrewaju, Suleyman Aremu Muyibi, and Mistura Sanni</i> <i>International Islamic University Malaysia, Malaysia</i>	ID 4002: ISLAMIC MATHEMATICS <i>M.Azram and Jamal I. Daoud</i> <i>International Islamic University Malaysia, Malaysia</i>	ID 4027: Adoption of Green ICT in IIUM towards Sustainable Environment <i>Mosharraf Hussain Masud and Noreha Abdul Malik</i> <i>International Islamic University Malaysia, Malaysia</i>	ID4090: CONSERVATION OF ENVIRONMENT: NANO-TECHNOLOGY FOR WASTEWATER TREATMENT and BIOREMEDIATION OF ARSENIC IN SOME SELECTED AGRICULTURAL CROPS <i>Mohammad Shahab Uddin, Mst. Fardausi Akhter, and Abu Zayed Md. Badruddoza</i> <i>International Islamic University Malaysia, Malaysia</i>	ID4053: Industrial Waste Disposal into Water Resources: Ethical Evaluation from Islamic Point of View <i>Safa S. Mahmud and Nasseereldeem. A. Kabbashi</i> <i>International Islamic University Malaysia, Malaysia</i>
Technical Sessions II, Tuesday 2 July 2013: 16.35 – 17.35					
Chairperson: Prof. Dr. Nasseereldeem Ahmed Kabbashi		Co-chair: Dr. Rashida Funke		Venue: Manhattan VII	
16.35 – 16.50	16.50 – 17.05	17.05 – 17.20	17.20-17.35		
ID4082:The sustainability factors of Islamic insurance in Sudan in the conventional market <i>Fatima Galal, Zuriah Rahman, and Mohamed Adil</i> <i>University Technology Mara Malaysia, Malaysia</i>	ID 4005: How to Be an Honest Person? <i>Mohamed Elwathig Saeed Mirghani and Mohammed Saedi Jami</i> <i>International Islamic University Malaysia, Malaysia</i>	ID4095: Materials in the Holly Qur'an: The Holy Qur'an Has Informed us Earlier <i>Souad A.M. Al-Bat'hi and Zuraida Ahmad</i> <i>International Islamic University Malaysia, Malaysia</i>	ID4081: Islamic banking and finance : reinforcing ethics and values for the benefit of Muslim society <i>Adeyinka, Dauda Asafa</i> <i>International Islamic University Malaysia, Malaysia</i>		
Technical Sessions III, Wednesday 3 July 2013: 9.00 – 10.30					
Chairperson: Assoc. Prof. Dr. Ahmed Tariq Jameel		Co-chair: Assoc. Prof. Dr. Ma'an Alkhatib		Venue: Manhattan VII	
9.00-9.15	9.15-9.30	9.30-9.45	9.45-10.00	10.00-10.15	10.15-10.30
ID4047: Ethical Perspective and Values in Hazardous	ID4048: Ethics of Trending in Pharmaceutical- &	ID4049: Model for Islamic Ethics for Professional	ID4052: Ethical Evaluation of GMO from an Islamic	ID4093: Bangladesh and	ID4051: Ethics and Intellectual Property

Waste Management <i>Abeir H. M. Gameil and Nassereldeen A. Kabbashi International Islamic University Malaysia, Malaysia</i>	Therapeutic-related Biotechnology <i>Abeir H. M. Gameil and Nassereldeen A. Kabbashi International Islamic University Malaysia, Malaysia</i>	Penetration Testing <i>Mamoon Ashraf Qazi International Islamic University Malaysia, Malaysia</i>	Perspective <i>Safa S. Mahmod and Nasseereldeen. A. Kabbashi International Islamic University Malaysia, Malaysia</i>	Iraq: contribution in science and technology as OIC member <i>Nayeem Md. Lutful Huq Md. Lutful Huq and Abdi O. Shuriye International Islamic University Malaysia, Malaysia</i>	Issues in Scientific Research: A Case Study <i>Mamoon Ashraf Qazi International Islamic University Malaysia, Malaysia</i>
ICEPEE Keynote Session 5, Wednesday 3 July 2013: 11.00 – 12.00					
PROF HUSSEIN OYELOLA BUKOYE OLOYEDE					
Chairperson: Prof. Dr. Suleyman Muybi		Co-chair: Assoc. Prof. Dr Mohammed Elwathig Mirghani		Venue: Manhattan VII	
Technical Sessions IV, Wednesday 3 July 2013: 12.00 – 13.00					
Chairperson: Assoc. Prof. Dr. Raihan Othman		Co-chair: Assoc. Prof. Dr. Shihab A. Hameed		Venue: Manhattan VII	
12.00-12.15	12.15-12.30	12.30-12.45	12.45-13.00		
ID4067: Transgenic Organisms (Chimeras) and their Islamic Evaluation <i>Anke Iman Bouzenita and Mohamed Elwathig Saeed Mirghani International Islamic University Malaysia, Malaysia</i>	ID4080:A Survey of professional ethics among IIUM teachers <i>Nacereddine Boumakel and Slimane Aboulala International Islamic University Malaysia, Malaysia</i>	ID 4038: Profession of Engineering Ethics at Work: Melamine issue as case study <i>Md. Noman habib khan and Nassereldeen A. Kabbashi International Islamic University Malaysia, Malaysia</i>	ID4094: Technological Co-operation among OIC Members: a study <i>Nayeem Md. Lutful Huq Md. Lutful Huq and Abdi O. Shuriye International Islamic University Malaysia, Malaysia</i>		
Technical Sessions V, Wednesday 3 July 2013: 14.00 – 15.00					
Chairperson: Assoc. Prof. Dr. Aisha Abdalla Hasan		Co-chair: Dr. Souad A.M. Albat'hi		Venue: Manhattan VII	
14.00-14.15	14.15-14.30	14.30-14.45	14.45-15.00		
ID4085: Enhancing Higher Education in Computer and ICT with Ethical Principles <i>Shihab A. Hameed International Islamic University Malaysia, Malaysia</i>	ID4084:Toward Enhancing Engineering Graduate Employability Skills with Ethics <i>Shihab A. Hameed International Islamic University Malaysia, Malaysia</i>	ID4097: Tapping into students' passion, curiosity, engagement and dreams: Engineering Educators' Task <i>Zuraida Ahmad, Zahurin Halim, Mohd. Noor Salleh and Ahmad Faris Ismail International Islamic University Malaysia, Malaysia</i>	ID4086:IMPACT OF THECHNOLOGY ON HUMAN'S BEHAVIOR <i>Kamyar Tahmasebpour International Islamic University Malaysia, Malaysia</i>		

Technical Sessions VI, Wednesday 3 July 2013: 15.30 – 17.30							
Chairperson: Assoc. Prof. Dr.Mohamed Elwathig Mirghani				Co-chair: Assoc. Prof. Aisha Abdalla		Venue: Manhattan VII	
15.30-15.45	15.45-16.00	16.00-16.15	16.15-16.30	16.30-16.45	16.45-17.00	17.00-17.15	17.15-17.30
<p>ID4034: مفهوم العلم بين الرؤية التشطيرية الغربية والرؤية التوحيدية الإسلامية</p> <p>طارق الصادق عبدالسلام جامعة القصيم , المملكة العربية السعودية</p>	<p>ID4077: المشكلات الإجتماعية والإضرابات النفسية الناجمة عن تعاطي المخدرات والإدمان وسط الشباب</p> <p>Ahmed MohammedElnour, Ahmed Adam Hassan Mohammedelnour, Mohamed Elwathig Saeed Mirghani, Nasreldin Ahmed Kabbashi, and Albasheir Eltayieb Sallam International Islamic University Malaysia, Malaysia</p>	<p>ID4033: أصول تشريع القانون الاجتماعي في الاسلام</p> <p>طارق الصادق عبدالسلام جامعة القصيم , المملكة العربية السعودية</p>	<p>ID4072: العلاقات الحميمة مع شركاء صناعيين من منظور ديني وأخلاقي شوقي مؤنس و محمد الوائق سعيد ميرغني الجامعة الإسلامية العالمية بماليزيا , ماليزيا</p>	<p>ID4073: الجامعة الإسلامية العالمية بماليزيا كنموذج لتفاح الثقافات في ظل الاسلام شوقي مؤنس و محمد الواثق سعيد ميرغني الجامعة الإسلامية العالمية بماليزيا , ماليزيا</p>	<p>ID4076: الأخلاق النبوية من خلال أشعار الشيخ المكاشفي سعد الدين منصور محمد و سردار ديميردار الجامعة الإسلامية العالمية بماليزيا , ماليزيا</p>	<p>ID4028: المسؤولية الدينية والاخلاقية في الرقابة على المنتجات الحلال في ماليزيا: هيئة JAKIM انموذجا سليمانى ابو لاله و محمد الواثق ميرغني الجامعة الإسلامية العالمية بماليزيا , ماليزيا</p>	<p>ID4096: Professional codes of ethics and standards of professional ethics of obligation and commitment</p> <p>Saifeldeen Elawad International Islamic University Malaysia, Malaysia</p>
Technical Sessions VI, Thursday 4 July 2013: 9.00 – 10.30							
Chairperson: Assoc. Prof. Dr. Jamal I. Daoud				Co-chair: Assoc. Prof. Dr. Shihab A. Hameed		Venue: Manhattan VII	
9.00-9.15	9.15-9.30	9.30-9.45	9.45-10.00	10.00-10.15			
<p>ID 4039: Reducing corruption and developing public services in Bangladesh Through e- Government</p> <p>Md. Noman habib khan and Nassereldeen A. Kabbashi International Islamic University Malaysia, Malaysia</p>	<p>ID4083: Sustainable development safety in Islam</p> <p>Nassereldeen Kabbashi and Fatima Galal International Islamic University Malaysia, Malaysia</p>	<p>ID4092: Islamic Lifestyle In Harmony With Nature</p> <p>Suleyman Muyibi International Islamic University Malaysia, Malaysia</p>	<p>ID4001: ETHICAL ISSUES WHEN USING STATISTICAL ANALYSIS IN RESEARCH</p> <p>Jamal I. Daoud and M.Azram International Islamic University Malaysia, Malaysia</p>	<p>ID4026: ISLAMIC BANKING AND FINANCE: REINFORCING ETHICS AND VALUES FOR THE BENEFIT OF MUSLIM SOCIETY.</p> <p>Asafa, Adeyinka Dauda, International Islamic University Malaysia, Malaysia</p>			



ICMAAE'13

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MESSAGE FROM THE CHAIRMAN OF ICMAAE'13



ASSOC. PROF. DR. MEFTAH HRAIRI
Chairman,

International Conference on Mechanical, Automotive and Aerospace Engineering 2013

Assalamualaikum wa rahmatullahi wa barakatuh

I am particularly delighted to welcome you to Kuala Lumpur and the 2nd International Conference on Mechanical, Automotive and Aerospace Engineering (ICMAAE'13). Once every two years, the department of Mechanical Engineering, IIUM holds an international conference on Mechanical, Automotive and Aerospace Engineering. This year, we are proud and delighted to organize the conference as our fourth conference in the series since 2006. The first two under the International Conference on MEMS and Nanotechnology (ICMN'06 and ICMN'08) and the last two organized under IIUM engineering congress (ICMAAE'11 and ICMAAE'13).

The multidisciplinary nature of mechanical engineering is reflected in the wide variety of topics, such as MEMS and Nanotechnology, Energy, Dynamics and Controls, Structures, Combustion just to mention a few. The main objective of the conference is to provide a platform for exchange of ideas through thought-provoking discussions during keynote addresses, invited lectures and technical presentations. Speakers from the industry will present papers from their perspective to the great benefit of academics and researchers. We hope this conference allows interested colleagues to inspect recent scientific advances, and also causes improvements in the various topics covered by the conference.

We are glad at the favorable response received from the scientific community around the world. My grateful thanks go to the working committee for the conference and all committees and persons involved in organizing this International Conference. I am also grateful to all the reviewers, without whose efforts such a good standard for the conference could not have been attained. My thanks go to all the sponsors and all participants in making this conference a success.

It really gives me great pleasure to offer sincere thanks for your attendance and participation in ICMAAE'13. We wish you every success in your research undertakings and look forward to seeing you at ICMAAE 2015.

Wasalaam

ASSOC. PROF. DR. MEFTAH HRAIRI

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CONFERENCE TOPICS

Mechanical Engineering

- Oil and Gas
- Energy
- MEMS and Nanotechnology
- Modeling and Simulation
- Experimental Techniques and Measurements
- Dynamics and Controls
- Structures and Materials
- Thermo-fluids
- Other topics of interest

Aerospace Engineering

- Aerodynamics and Aeroelasticity
- Aerospace Dynamics and Controls
- Aerospace Propulsion
- Aerospace Structures
- Aerospace Design, Testing, and Performance
- Airworthiness and Certifications
- Experimental Methods and Measurements
- UAV and MAV
- Flight Systems
- Other topics of interest

Automotive Engineering

- Engine and its Systems
- Combustion and Emission control
- Vehicle Structures and Crashworthiness
- Power train
- Vehicle Dynamics and Control
- Alternative Power Systems and Management
- Vehicle Aerodynamics
- Noise Vibration & Harshness
- Experimental Methods and Measurements
- Other topics of interest

· Other Related Topics

REVIEWERS

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Waleed Faris
Waqar Asrar
Yassin Nimir
Yulfian Aminanda



PROF. PHILIPPE A. OLIVIER
Head
Composite Materials and Structures Research Group,
Institut Clément Ader
University of Toulouse, France

Prof. Philippe OLIVIER studies process-induced stresses in polymeric composites since his PhD thesis in 1994. He is a member of European Society for Composite Materials (<http://www.escm.eu.org/index.php>) Council and French Association for Composite Materials Administration Board (<http://www.amac-composites.org/>). He is the head of Composite Materials and Structures Research Group of Institut Clément Ader in Toulouse, France (<http://www.institut-clement-ader.org/>).

PROCESS-INDUCED STRESSES IN POLYMERIC MATRIX COMPOSITES

Residual or process-induced stresses are a one of the main problem to manage during the manufacturing of polymeric matrix composite laminated parts. These stresses depend on several factor such as mould/part interaction, material own characteristics and manufacturing parameters. Process-induced stresses can result in part geometry distortions and/or in modifications of materials strength and toughness. This is why the management of these stresses remains one of the main manufacturing problems to face.

KEYNOTE SPEAKER 6



DR. KIJUNG KWON
Principal Researcher
Aerodynamics Department
Korea Aerospace Research Institute
Daejeon, Korea

Dr. Kwon has over eighteen years experience in experimental aerodynamics. His research interests are in the areas of: Experimental aerodynamics, Wind tunnel testing, and Optical measurements (PIV, PSP). He is also in-charge of the human powered aircraft (HPA) project as a system integrator.

FUTURE TRANSPORTATION SYSTEM – PERSONAL AIR VEHICLE(PAV)

The keynote speech will include survey results on the previous PAV efforts, investigation of the key PAV relevant technologies, and evaluation of the existing PAV configurations. Through the market analysis of the future transportation system, appropriate PAV concepts, operational scenario, and the preliminary PAV market share forecast will be proposed. Based on the key technologies identified and the market analysis results, a strategic technologies development roadmap will be investigated.

INVITED SPEAKER 1



DR. CYRILLE SCHWOB
Chief Technical Officer
Aerospace Malaysia Innovation Centre,
Malaysia

Dr. Cyrille Schwob is the Chief Technical Officer of Aerospace Malaysia Centre, a collaborative Innovation structure bringing together different industry players (such as CTRM, EADS and Rolls Royce) and public or private high level research institutions. In the past, he has been serving EADS Innovation Works – the corporate network of R&T research centre network of EADS - and Airbus for the past ten years. His main area of research there was simulation of complex structures behavior.

AEROSPACE R&T – CURRENT AND FUTURE PERSPECTIVE

As we may expect due to the advanced technology required by Aerospace products, innovation in is vital for the industries engaged in this business. But scientific excellence and development of cutting edge technologies contribute also to global progress and help address the challenges faced by society. Challenges like ensuring mobility while conserving the environment, increasing security without restricting freedom unnecessarily or exploiting the advantages of the cyber and virtual world without compromising data integrity. The talk will describe how these challenges are tackled within the Aerospace industries.

INVITED SPEAKER 2



Md Ridzuan Md Yusof
Head of Advanced Vehicle Research & Technology
PROTON
Malaysia

Md Ridzuan Md Yusof is leading the Advanced Vehicle Research for PROTON and a key figure on the development of technology demonstrator and vehicle electrification projects such as Electric/Hybrid Vehicle and EMAS (Eco-Mobility Advanced Solution).

He has more than 12 years diversify experience in vehicle development specializing in e-drive system integration, advanced control, alternative & energy recovery system as well as technology evaluation and roadmapping. Being the Industrial Advisory Panel (IAP) for several local universities and published technical papers to numbers of conferences as well as being as invited speakers to international forums in area of vehicle electrification. He is also the current Executive Committee of SAE International, Malaysia as well as members to other professional bodies such as IEEE, etc. Recently, the Chairman of Technical Committee for PROTON Green Mobility Challenge (PGMC).

VEHICLE ELECTRIFICATION INITIATIVE FOR GREENER FUTURE

Around the world, Governments are focusing on how to reduce emissions of Greenhouse Gases (GHGs) and how to reduce dependency and consumption of fossil fuel. Malaysia is not an exception to this movement - the Prime Minister had delivered Malaysia stand to reduce its carbon dioxide emission to 40 per cent by the year 2020.

As the world moves towards an eco friendly future, the automotive sector plays a vital role in dealing the emission. Many countries have supported the Hybrid/EV Program as one of the ways to reduce GHGs.

Automotive industry in Malaysia has embarked into several initiatives to support to the greener future, one of which is the development and production of affordable, low maintenance and greener cars.

Vehicle electrification is among the automotive makers' strategy to offer significant fuel economy, emission reduction and e-Mobility for sustainable green mobility solution. Consequently, there are many initiatives to introduce Electric Vehicle such as fleet test vehicle program and green car challenge for public awareness, technology evaluation and analysis of driving behavior as well as customer feedbacks.

13.00 – 14.00 : LUNCH BREAK

Parallel Technical Sessions I, Tuesday 2 July 2013: 15.00 – 16.20

I A: Modeling and Simulation (MS)		
Chairperson: Assoc. Prof. Qasim Shah		Co-chair: Dr. Asif Hoda
Venue: Manhattan VA		
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45
30033 LBM SIMULATION OF FLUID-SOLID FLOW WITH COMPLEX BOUNDARIES Nor Azwadi Che Sidik* (UTM)*, Leila Jahanshaloo, Emad Yazdanpanah	30166 BLACK BOX NONLINEAR MODEL PREDICTIVE CONTROL USING RECURRENT NEURAL NETWORK Moumen Idres * (IIUM)* Mohammad Abdelrahman (IIUM) Muhammad Abdullah (International Islamic University Malaysia)	30140 STABILITY AUGMENTATION SYSTEM BASED LMI'S FOR AIRCRAFT STABILIZATION ATahir EL Hashani* (Tripoli university)*
15.45 - 16.00	16.00 - 16.15	
30147 SATELLITE ORBIT AND ATTITUDE SIMULATOR: DESIGN AND IMPLEMENTATION Mohamed Okasha* (IIUM)*, Mohammad Abdelrahman (IIUM)	30079 NUMERICAL INVESTIGATION OF DISCHARGE COEFFICIENT IN ROTATING RADIAL ORIFICES BASED ON THE INCIDENCE ANGLE Hoa Ha Trong* (Universiti Tenaga Nasional)* Mohd. Azree Bin Idris	
I B: Dynamics and Control (DC) + Aerospace Dynamics and Control (ADC) + Vehicle Dynamics and Control (VDC)		
Chairperson: Dr. Mohammad Abdelrahman		Co-chair: Dr. Fadly Jashi Darsivan
Venue: Manhattan VB		
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45
30148 OPTIMIZATION AND CONTROL OF SEMI-ACTIVE SUSPENSION USING GENETIC ALGORITHM FOR OFF-ROAD FULL VEHICLE BenLahcene Zohir* (IIUM)* Sany Izan Ihsan (International Islamic University Malaysia) Waleed Faris (IIUM) Fadly Jashi Darsivan Ridhuan (IIUM)	30146 LOW EARTH ORBIT DESIGN FOR REMOTE SENSING APPLICATIONS Mohamed Okasha* (IIUM)*; Karim Kamalaldin(IIUM)	30132 NOISE MEASUREMENTS DATA ANALYSIS AND CONTROL OF AIRCRAFT JET ENGINE Gamal Ashawesh* (Tripoli University)* Adel Kurban (University of Tripoli)

15.45 - 16.00	16.00 - 16.15	
<p>30145 COMPARATIVE PERFORMANCE ANALYSIS AND EVALUATION OF ORNITHOPTER FLIGHT DYNAMICS USING PID AND MODEL PREDICTIVE CONTROLLER</p> <p><i>Md Moshir Rahman Farazi* (Islamic University of Technology)*; Abdur Raquib Ridwan (Islamic University of Technology); Kazi Khairul Islam (Islamic University of Technology); Mohammad Wasiuzzaman (Non-government Teachers' Registration and Certification Authority);</i></p>	<p>30121 THE FUTURE OF AIRCRAFT FEEDBACK INFORMATION: THE CHALLENGES OF IMPLEMENTATION</p> <p><i>Wan Mohd Sufian Wan Husain* (UniKL MIAT)* Shahani Aman Shah (UniKL MIAT)</i></p>	
<p>I C: Noise Vibration and Harshness (NVH) + Vehicle Structures and Crashworthiness (VSC) Chairperson: Prof. Dr. AKM Mohiuddin Co-chair: Assoc. Prof. Dr. Mohammed Aatur Rahman Venue: Manhattan VI</p>		
15.00 – 15.15	15.15 – 15.30	15.30 – 15.45
<p>30085 SEMI-ACTIVE VIBRATION DAMPING OF SMART STRUCTURES USING RESONANT SHUNTED PIEZOELECTRICS</p> <p><i>Hiroshi Okubo* (Osaka Prefecture University)*</i></p>	<p>30160 FLUTTER ANALYSIS OF SUPERSONIC WING WITH EXTERNAL STORES</p> <p><i>Nur Azam Abdullah* (IIUM)*, Erwin Sulaeman (IIUM)</i></p>	<p>30124 ASSESSMENT OF CRASHWORTHINESS OF THE FRONTAL PART OF A LOCAL CAR MODEL</p> <p><i>Yassin Nimir* (IIUM)* Kassim Abdullah (IIUM)</i></p>
15.45 - 16.00	16.00 - 16.15	
<p>30069 FLUTTER OF COMPOSITE WING BY FINITE ELEMENT ANALYSIS</p> <p><i>Boo Koon Yan* (UTM)* Gunasegaran Kanesan (UTM) Shuhaimi Mansor () Ainullotfi Abdul-Latif (UTM)</i></p>	<p>30174 ESTIMATION OF FLUTTERING FREQUENCY OF FLOW INDUCED VIBRATIONS IN A THIN CANTILEVER</p> <p><i>Raed Kafafy* (IIUM)* Sany Izan Ihsan (International Islamic University Malaysia) Moumen Idres (IIUM) Abdul Hakim Javid (IIUM)</i></p>	
16.20 – 16.35 : TEA BREAK		

Parallel Technical Sessions II, Tuesday 2 July 2013: 16.35 – 18.20		
II A: Modeling and Simulation (MS)		
Chairperson: Dr. Asif Hoda	Co-chair: Assoc. Prof. Dr. Qasim Shah	Venue: Manhattan VA
16.35 – 16.50	16.50 – 17.05	17.05 – 17.20
30057 NUMERICAL SIMULATION OF SUPERSONIC TURBULENCE FLOW OVER ROTATING BODY <i>Mohammad Alamlee* (Shiraz university)*</i>	30188 SIMULATION OF PRESSURE DROP IN MICRO-CHANNELS WITH DIFFERENT GEOMETRIES <i>Hazli Ab. Manaf (IIUM), Shugata Ahmed (IIUM), Mirghani I. Ahmed, M N A Hawlader (IIUM)</i>	30024 LBM SIMULATION OF THERMAL FLUID-SOLID FLOW IN A PIPE <i>Nor Azwadi Che Sidik* (UTM)* Leila Jahanshaloo ()</i>
17.20 - 17.35	17.35 - 17.50	17.50 - 18.05
30063 NUMERICAL ANALYSIS ON FLOW AND PERFORMANCE OF AN OPEN CROSS-FLOW TYPE HYDRAULIC TURBINE <i>Shou Uehara (Nagoya University), Tomomi Uchiyama* (Nagoya University)*, Haruki Fukuhara (Nagoya University), Shouchiro Iio (Shinshu University), Toshihiko Ikeda (Shinshu University)</i>	30161 NUMERICAL SIMULATION OF A LOW ASPECT RATIO WING AT LOW REYNOLDS NUMBER <i>Syed Mohamed Ali Jaffar* (IIUM)* Sulieman Ali () Ashraf Omar (IIUM) M. Syuhairi M. Husain (Universiti Teknologi Mara Malaysia)</i>	30027 OPTIMIZATION OF CDA CASCADE USING PARAMETERIZATION AND GENETIC ALGORITHM COUPLED WITH CFD <i>Syam Sasidharan* (SVNIT)* Nilesh Salunke (R C Patel Institute of Technology, Shirpur) Vilash Shingares (Pimpri Chinchwad College of Engineering, Pune) Salim Channiwalala (SVNIT, Surat, India)</i>
18.05 - 18.20		
30042 MODELING AND SIMULATION FOR HYBRID BUS DEVELOPMENT <i>Mohamed El-Sayed* (Kettering University)</i>		
II B: Dynamics and Control (DC) + Aerospace Structures (AS) + Thermo Fluids (TF)		
Chairperson: Dr. Fadly J Darsivan	Co-chair: Dr. Mohammad Abdelrahman	Venue: Manhattan VB
16.35 – 16.50	16.50 – 17.05	17.05 – 17.20
30115 BASELINE STUDIES ON THE INFLUENCE OF J2 ON MICRO-SATELLITES FORMATION FLYING IN LOW ORBITS	30182 ACTIVE SUSPENSION CONTROL OF TWO DEGREE OF FREEDOM VEHICLE MODEL USING ROBUST CONTROLLERS	30149 LIFT AND DRAG AUGMENTATION THROUGH IMPLEMENTATION OF A ROUGH SURFACE ON AN AIRFOIL

<p><i>Harijono Djojodihardjo* (Universiti Putra Malaysia)*</i></p>	<p><i>Mohammed Kaleemullah (IIUM); Waleed Faris (IIUM); Yasir Musthafa (IIUM);</i></p>	<p><i>Fairuz Romli (Universiti Putra Malaysia) Abdullah Saad Mahmud* (UPM)* Azmin Shakrine Mohd Rafie (UPM) Ermira Junita Abdullah (UPM)</i></p>
<p>17.20 - 17.35</p>	<p>17.35 - 17.50</p>	<p>17.50 - 18.05</p>
<p>30080 MODELLING OF EQUIVALENT STIFFNESS OF THIN WALLED STRUCTURAL JOINTS <i>Mohd Shukri Yob* (UNISEL)* Shuhaimi Mansor (Universiti Teknologi Malaysia) Razali Sulaiman</i></p>	<p>30112 DESIGN A HEAT PIPE FOR SPACE CRAFT COOLING <i>Ali Elmabruk* (Tripoli University)* Moharrem Shafi (Tripoli University) Munsef Badi (Tripoli University)</i></p>	<p>30059 EFFECTS OF LARGE-SCALE HEATING IN TWO-DIMENSIONAL MIXED CONVECTIVE FLOW OF AIR PAST A SQUARE CYLINDER <i>Nadeem Hasan* (Aligarh Muslim University)* Rashid Ali (Aligarh Muslim University)</i></p>
<p>18.05 - 18.20</p>		
<p>30035 A NOVEL NON-INTRUSIVE TECHNIQUE FOR THE ANALYSIS OF TWO-PHASE SLUG FLOW IN PIPELINES <i>Muhammad Israr (UTP); Morgan Heikal (UTP); Abdul Rashid Abdul Aziz (UTP);</i></p>		
<p>II C: Structure (STRU)</p>		
<p>Chairperson: Assoc. Prof. Dr. Mohammed Ataur Rahman Co-chair: Prof. Dr. AKM Mohiuddin Venue: Manhattan VI</p>		
<p>16.35 - 16.50</p>	<p>16.50 - 17.05</p>	<p>17.05 - 17.20</p>
<p>30025 INCIPIENT DAMAGE OBSERVATION OF SA 516 CARBON STEEL DURING TENSILE TEST USING THE ACOUSTIC EMISSION TECHNIQUE <i>Airee Afiq Abd Rahim* (UKM)* Shahrum Abdullah (UKM) Mohd Zaki Nuawi (UKM) Nordin Jamaluddin (UKM) Mazian Mohammad (UKM)</i></p>	<p>30127 BIODIESEL LUBRICATED WEAR BEHAVIOR OF SURFACE MODIFIED AISI 4340 STEEL <i>Belal Ghazal* (IIUM)* Mohe A.maleque (IIUM)</i></p>	<p>30144 INFLUENCE OF LIGHT WEIGHT COMPOSITE MATERIAL ON PERFORMANCE EVALUATION OF AUTOMOTIVE BRAKE ROTOR <i>Adebisi Abdulmumin* (IIUM)*</i></p>

17.20 - 17.35	17.35 - 17.50	17.50 - 18.05
<p>30171 EFFECT OF SINTERING TEMPERATURE ON HARDNESS AND WEAR OF AL-SiCP AND AL-TiCP COMPOSITES</p> <p>Yassin Nimir* (IIUM)*</p>	<p>30084 EXPERIMENTAL INVESTIGATION ON MACHINING BEHAVIOUR OF DIAMOND INSERT ON TURNING AL6061 ALLOY WITH 10% B4C PARTICLES</p> <p>Edwin David* (Svce)* ANAND RAJEEV (SRI VSENKATESWARA COLLEGE OF ENGINEERING) Mohit Arora (sri venkateswara college of engineering)</p>	<p>30086 CONTROL OF SHORT CARBON FIBER ALIGNMENT IN POWDER INJECTION MOLDED COPPER MATRIX COMPOSITES</p> <p>Irfan Shirazi* (Universiti Teknologi Petronas)* Faiz Ahmad (Universiti Teknologi Petronas) Ali Muhsan (Universiti Teknologi Petronas) Rafi Raza (COMSATS Institute of Information Technology)</p>
18.05 - 18.20		
<p>30187 EXPERIMENTAL INVESTIGATION OF A VERTICAL ROUND FREE TURBULENT JET</p> <p>Jalal Mohammed Zayan* (IIUM)*, Waqar Asrar (IIUM), Asif Hoda (IIUM)</p>		

ICMAAE Keynote Speakers 5 & 6, Wednesday 3 July 2013: 09.00 – 10.30
Venue: Manhattan V

09.00 – 09.45	09.45 – 10.30
<p>Chairperson: Assoc. Prof. Yulfian Aminanda</p> <p>Keynote Speaker #5: Prof Phillippe A. Olivier Head, Composite Materials and Structures Research Group Institut Clément Ader University of Toulouse, France</p> <p>Title: Process-induced Stresses in Polymeric Matrix Composites</p>	<p>Chairperson: Prof. Waqar Asrar</p> <p>Keynote Speaker #6: Prof. Kijung Kwon Principal Researcher Aerodynamics Department, Korea Aerospace Research Institute, Daejeon, Korea</p> <p>Title: Future Transportation System – Personal air vehicle (PAV)</p>

10.30 – 11.00 : TEA BREAK

ICMAAE Invited Speakers Sessions, Wednesday 3 July 2013: 11.00 – 12.00

Venue: Manhattan V

11.00 – 11.30	11.30 – 12.00
<p>Chairperson: Assoc. Prof. Yulfian Aminanda</p> <p>Invited Speaker #1 : Dr. Cyrille Schwob Chief Technical Officer Aerospace Malaysia Innovation Centre, Malaysia</p> <p>Title: Aerospace R&T – current and future perspective</p>	<p>Chairperson: Assoc. Prof. Meftah Hrairi</p> <p>Invited Speaker #2 : Md Ridzuan Md Yusof Head of Advanced Vehicle Research & Technology PROTON Malaysia</p> <p>Title: Vehicle Electrification Initiative for Greener Future</p>

Parallel Technical Sessions III, Wednesday 3 July 2013: 12.00 – 13.00

III A: Thermo-Fluids (TF) + Aerospace Propulsion (AP)

Chairperson: Assoc. Prof. Raed Kafafy

Co-chair: Dr. Sany IZAN Ihsan

Venue: Manhattan VA

12.00 - 12.15	12.15 - 12.30	12.30 - 12.45
<p>3</p> <p>NATURAL CONVECTION OF AIRFLOW AND RADIATION EXCHANGE BETWEEN THE WALL SURFACES WITHIN A SQUARE ENCLOSURE</p> <p><i>Uthai Prasopchingchana* (Burapha University)*</i></p>	<p>8</p> <p>FILM COOLING EFFECTIVENESS FOR CYLINDRICAL AND ROW TRENCHED COOLING HOLES AT DIFFERENT BLOWING RATIOS</p> <p><i>Ehsan Kianpour* (UTM)* Nor Azwadi Che Sidik (UTM) Mazlan bin Abdul Wahid (UTM) Iman Golshokouh (Islamic Azad University of Izeh Branch)</i></p>	<p>30014</p> <p>HEAT TRANSFER ENHANCEMENT OF LAMINAR FLUID FLOW IN SEPARATED REGION USING NANOFUID: A REVIEW</p> <p><i>Hussein Togun* (UM)* Tuka Abdulrazzaq (University of Putra) s.N. Kazi (UM) Ahmad Badarudin (UM) M.K.A Ariffin (University of Putra)</i></p>
12.45 – 13.00		
<p>30047</p> <p>ACTIVATION OF MIXING FOR DENSITY STRATIFIED FLUID WITH JET FLOW</p> <p><i>Shogo Shakouchi* (Nagoya University)* tomomi Uchiyama (Nagoya University)</i></p>		

III B: Structures (STRU)		
Chairperson: Assoc. Prof. Erwin Suleiman Co-chair: Dr. Sayed Muhammad Kashif Venue: Manhattan VB		
12.00 - 12.15	12.15 - 12.30	12.30 - 12.45
30052 LIQUID SURFACE MODIFICATION OF LOW ALLOY STEEL WITH TITANIUM CARBIDE AND CARBON-NANOTUBES HYBRID COMPOSITE POWDERS 646Kamilu Bello* (IIUM)*	30082 SURFACE ROUGHNESS EVALUATION OF HOLES DRILLED IN HIGH SPEED DRILLING OF AUTOMOTIVE ALUMINUM ALLOYS USING UNCOATED, TIALN AND ALTiN COATED CARBIDE TOOLS Ali Akhavan Farid* (Universiti Teknologi Malaysia)* Safian Sharif (Universiti Teknologi Malaysia)	30074 STRESS CORROSION CRACKING OF 300 SERIES AUSTENITIC STAINLESS STEELS IN NATRIUM CHLORIDE SOLUTIONS Meftah Elsaraiti* (Higher Vocational Institute Mi)*
12.45 - 13.00		
30094 REDUCTION OF THE STRESS CONCENTRATION FACTOR FOR A PLATE WITH CIRCULAR HOLE UNDER AXIAL LOADING Miloud Souiyah* (HBCC/KFUPM)*		
III C: Energy (ENE)		
Chairperson: Dr. Moumen Idres Co-chair: Dr. Sanisah Saharin Venue: Manhattan VI		
12.00 - 12.15	12.15 - 12.30	12.30 - 12.45
30066 STUDY PERFORMANCE OF PHOTOVOLTAIC THERMAL SOLAR AIR HEATERS Ebrahim Alfegi* (Azzawia University)*, Alhadi Abosbai (Azzawia University), Ablgasem Elarrami (Higher Institute for the preparation of trainers , Regdalen)	30015 STUDYING THE EXISTENCE OF GRAVITOMAGNETIC FORCE Meftah Elsaraiti* (Higher Vocational Institute Mi)*	30088 DUAL-ROTOR WIND TURBINE Khaled Asfar* (JUST University)*
12.45 - 13.00		
30101 A COMPARATIVE STUDY OF ENERGY SITUATION IN BANGLADESH, INDIA, MALAYSIA AND PAKISTAN Solangi Khalid Hussain* (UM)* Muhammad Mohsin Aman (UM) s.N. Kazi (UM) Ahmad Badarudin (UM)		

13.00 – 14.00 : LUNCH BREAK

Parallel Technical Sessions IV, Wednesday 3 July 2013: 14.00 – 15.00

IV A: Experimental Techniques and Measurement (ETM)		
Chairperson: : Prof. Mirghani I. Ahmed		Co-chair: Prof. Dr. MNA Hawlader
Venue: Manhattan VA		
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45
30013 COMPUTATIONAL COMPARISON OF CORRUGATED FOIL VS. FLAT PLATE BASED ON ADAPTIVE GRID TECHNIQUE Ezzeddin Elarbi* (Tripoli University)*	30119 AN INVESTIGATION ON FACTORS THAT CAUSE ERROR IN REVERBERATION TIME MEASUREMENT (ISO 3382) IN UTHM LECTURER ROOM Azril Azalan* (Universiti Tun Hussain Onn Mal)*	30137 IMPROVEMENT OF SURFACE ACCURACY IN MILLING OF THIN-WALLED STRAIGHT GEOMETRIES Tufan Bera* (Bits Pilani)*
14.45 - 15.00		
30108 SKIN FRICTION MEASUREMENTS USING CLAUSER CHART METHOD AND OIL FILM INTERFEROMETRY Usman Butt* (BTU Cottbus)*		
IV B: Aero + Aerospace Design, Testing and Performance (ADTP)		
Chairperson: Prof. Ashraf Ali Omar		Co-chair: Prof. Dr. Waqar Asrar
Venue: Manhattan VB		
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45
30170 DESIGN AND DEVELOPMENT OF IIUM HOVERCRAFT J. S. Mohamed Ali* (IIUM)*, M.Y.Muhammad Muhaimin(IIUM) , C.N. Muhammad Faizal (IIUM)	30109 COANDĂ JET APPLICATIONS PROGRESS AND DEVELOPMENT Harijono Djojodihardjo* (Universiti Putra Malaysia)* Mohd Faisal Abdul Hamid (Universiti Putra Malaysia) Mohammad Jafari (Universiti Putra Malaysia)	30029 ANALYTICAL AND NUMERICAL INVESTIGATIONS ON THICK AIRFOILS Kutty Mani* (SVNIT)* Rajan Bhatt (SVNIT,surat) Beena Baloni (SVNIT, Surat, India) Salim Channiwala (SVNIT, Surat, India)

14.45 - 15.00		
30040 MATHEMATICAL MODEL FOR GYROSCOPE EFFECTS <i>Ryspek Usubamatov* (UNIMAP)*</i>		
IV C: Modelling and Simulation (MS)		
Chairperson: Assoc. Prof. Yassin Nimir Co-chair: Dr. Mohammed Okasha Venue: Manhattan VI		
14.00 – 14.15	14.15 – 14.30	14.30 – 14.45
30128 NUMERICAL INVESTIGATE ON THE CENTRE-BODIES OF PLENUM CHAMBER IN A SWIRLING FLUIDIZED BED <i>Mohd Al-Hafiz Mohd Nawir* (UTHM, Malaysia)*</i>	30100 SIMULATION OF HEAT TRANSFER TO TURBULENT AIR FLOW IN AN ANNULAR PASSAGE <i>Cheen Sean Oon* (University of Malaya)* s.N. Kazi (University of Malaya) Ahmad Badarudin (University of malaya) Arif Syazwan (University of Malaya)</i>	30102 NUMERICAL STUDY OF NANOFUID HEAT TRANSFER PERFORMANCE IN CLOSED CONDUIT TURBULENT FLOW <i>M. N. M. M. N. M. Zubir (UM) s.N. Kazi* (UM)* Ahmad Badarudin (UM) Emad Sadeghinezhad (UM) Hussein Togun (UM) Mohammad Reza Safaei (UM) Rod Sadri (UM) Oon Seen (UM) samira Gharahkhani (UM)</i>
14.45 - 15.00	15.00 - 15.15	
30019 NUMERICAL STUDY OF THE EFFECT OF COAL DIAMETER ON PULVERIZED COAL COMBUSTION TO REDUCE POLLUTANTS <i>Behnam Rahmanian (, Payam Noor university, Jahr) Mohammad Reza Safaei (UM) s.N. Kazi* (UM)* Emad Sadeghinezhad (UM) Rod Sadri (UM) M. N. M. N. M. Zubir (UM) Arash Karimipour (Najafabad Branch, Islamic Azad University) Ahmad Badarudin (UM)</i>	30190 NUMERICAL INVESTIGATION OF AN IMPINGEMENT FLOW OVER RATCHET SURFACE DUE TO A CIRCULAR WATER JET <i>Khaled Ahmad*(Qatar University), ElSadig Mahdi*(Qatar University), Saud Ghany*(Qatar University), Mohamed Gadala (University of British Columbia)</i>	
15.00 – 15.30 : TEA BREAK		

Parallel Technical Sessions V, Wednesday 3 July 2013: 15.30 – 18.00		
V A: Other Topics of Interest (OT)		
Chairperson: Dr. Jaffar Syed Mohammad Ali	Co-chair: Dr. Kassim Abdullah	Venue: Manhattan VA
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15
<p>30060 TRAJECTORY OF TWO-LINKS PLANAR FOR SIMPLE MECHANISM APPLICATION</p> <p>Siti Nur Hanisah Umar* (USM)* Elmi Abu Bakar ()</p>	<p>30061 AN NH3-H2O SOLAR ABSORPTION COOLED AGRO-FOOD STORAGE ROOM</p> <p>Hatem BENTAHER* (LASEM-ISSIGabès)* Jochen Doll (ISE Fraunhofer institute) Peter Schossig (ISE Fraunhofer institute) Aref Maalej (LASEM -ENIS)</p>	<p>30083 STUDY OF RFID APPLICATION WITH ZIGBEE NETWORK IN SUPPLY CHAIN MANAGEMENT</p> <p>Khalid Hasnan (UTHM) Aftab Ahmed* (UTHM Malaysia)* Qadir Bakhsh (uthm)</p>
16.15 – 16.30	16.30 – 16.45	16.45 – 17.00
<p>30135 A STUDY OF PLATE HEAT EXCHANGER USING CIRCULAR FINS</p> <p>Ratnesh Raj* (Vellore Institute of Technolog)* Sai Krishna Ramani () Satheesh A ()</p>	<p>30184 STUDY OF AIR POLLUTION DUE TO VEHICLES EMISSION IN HIGH VOLUME TRAFFIC: SELANGOR AS CASE STUDY</p> <p>Ihsan , Sany Izan*, Ahmad Fadzil Ahmad Shuhaili (IIUM) Waleed Faris (IIUM)</p>	<p>30021 A HYBRID FINITE DIFFERENCE-ELEMENT METHOD FOR SOLVING THE 3-D ENERGY EQUATION IN NON-ISOTHERMAL FLUID FLOW PAST A STAGGERED TUBE BANK</p> <p>Mahmood Alavi* (Islamic Azad University)*</p>
17.00 - 17.15	17.15 – 17.30	17.30 – 17.45
<p>30129 FLUID STRUCTURE INTERACTION MULTIPHYSICS APPROACH FOR CENTRIFUGAL PUMP'S OPTIMISATION</p> <p>Margarita dufresne* (SOMEFLU)*</p>	<p>30105 CONCEPTS OF TURBOMACHINERY SELECTION FOR OIL AND GAS UPSTREAM FACILITIES PROJECT</p> <p>Harris Abd Rahman Sabri* (Petronas Carigali Sdn Bhd)* Abdul Rahman Abdul Rahim (Universiti Teknologi Malaysia) Haris A Majid (Petronas Carigali Sdn Bhd)</p>	<p>30111 ASSESSMENT OF LIQUEFACTION SYSTEMS' PROCESS PERFORMANCE ON LNG FLOATING EXPORT TERMINALS</p> <p>Samer Gowid* (Qatar University)* Roger Dixon (Loughborough University) Saud Ghani (Qatar University)</p>
17.45 – 18.00		
<p>30113 DESIGN OF EXPERIMENT FOR IMPROVING UNBALANCED BOTTLE THICKNESS PROBLEM; A CASE STUDY AT PERMANIS SDN. BHD.</p> <p>Nolia Harudin* (UNITEN)*</p>		

V B: Combustion and Emission Control (CEC) + Vehicle Aerodynamics (VA) + MEMS and Nanotechnology (MNT)		
Chairperson: Prof. Waleed Fekry Faris		Co-chair: Dr. Mohd Sultan Ibrahim
Venue: Manhattan VB		
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15
<p>30076 A CFD STUDY OF NACA 63415 WITH DEPLOYMENT OF LEADING EDGE AND TRAILING EDGE SURFACE</p> <p>Wan Zaidi Wan Omar* (Universiti Teknologi Malaysia)* Muhammad Multazaam Abd Rahim (Universiti Teknologi Malaysia) Tholuddin Mat Lazim (UTM)</p>	<p>30180 STUDY ON THE EFFECT OF WINDOW OPENING ON THE DRAG CHARACTERISTICS AND STABILITY OF A CAR</p> <p>S. M. Kashif* (IIUM)*; Syed Mohamed Ali Jaffar (IIUM); Mohd Sultan Ibrahim* (IIUM); Ashraf Omar (IIUM)</p>	<p>30092 DEVELOPMENT OF A TECHNIQUE BASED ON ELECTROSTATIC STABILIZATION FOR IMPROVING NANOFUID SUSPENSION STABILITY AT LOW CHARGE POTENTIAL</p> <p>M. N. M. M. N. M. Zubir (UM) s.N. Kazi* (UM)* Ahmad Badarudin (UM) Emad Sadeghinezhad (UM) Hussein Togun (UM) Mohammad Reza Safaei (UM) Rod Sadri (UM) Oon Seen (UM) samira Gharahkhani (UM)</p>
16.15 – 16.30	16.30 – 16.45	16.45 - 17.00
<p>30158 FLOW VISUALIZATION OVER A CIRCULAR PLANFORM WING</p> <p>Ashraf Omar* (IIUM)* sulieman Ali () Syed Mohamed Ali Jaffar (IIUM)</p>	<p>30011 DEVELOPMENT OF A CARBON CAPTURE DEVICE FOR MOBILE EMISSIONS SOURCES</p> <p>Samer Ahmed* (Qatar University)* Said Ali (Qatar University) Ihab Naser (Qatar University)</p>	<p>30159 HOT ISOSTATIC PRESS SINTERED MULTIWALLED CARBON NANOTUBE REINFORCED ALUMINIUM NANO-COMPOSITE</p> <p>Umma Abdullahi* (IIUM)* Mohe A.maleque (iium)</p>
17.00 - 17.15	17.15 – 17.30	17.30 – 17.45
<p>30070 EVALUATION OF AERODYNAMIC DERIVATIVES OF Mk82 BOMB FROM WIND TUNNEL TESTING AND SEMI-EMPIRICAL METHOD</p> <p>Shuhaimi Mansor* (UTM)* Wan Zaidi Wan Omar (UTM) Tholudin Mat Lazim (UTM) Iskandar Shah Ishak (UTM) Abdul Basid Abdul Rahman (UTM) Mohammad Amirullah Shamsudin (UTM)</p>	<p>30051 SKIN FRICTION IMPACTS ON FUEL CONSUMPTION</p> <p>Zambri Harun* (The National Uni. of Malaysia)* Mohd Faruq Abdul Latif (UTEM) Mohammad Rasidi Rasani (UKM) Wan Mohd Faizal Wan Mahmood (UKM)</p>	<p>30044 DETERMINING SMALL DIAMETER PROPELLER EFFICIENCY THROUGH WIND TUNNEL TEST</p> <p>Sallehuddin Muhamad* (UTM)* Muhammad Iyas Mahzan (Universiti Teknologi Malaysia)</p>
17.45 – 18.00		
<p>30189 MECHANICAL SYSTEM DESIGN OF BEETLE MIMICKING ORNITHOPTER</p>		

Ari Legowo* (IIUM, Zahratu Hilali Mohamad (IIUM))		
V C: Structures (STRU)		
Chairperson: Dr. Kassim Abdullah	Co-chair: Dr. Jaffar Syed Mohamed Ali	Venue: Manhattan VI
15.30 – 15.45	15.45 – 16.00	16.00 – 16.15
<p>30012 THE EFFECT OF EDM WITH EXTERNAL MAGNETIC FIELD ON SURFACE ROUGHNESS OF STAINLESS STEEL</p> <p>Mohammed Ndaliman* (IIUM)* Ahsan Khan (IIUM, Malaysia) Mohammad Ali (IIUM, Malaysia) Muath Al-Falahi (IIUM) Haazin Ibrahim (IIUM, Malaysia) Mohad Mustapa (IIUM, Malaysia)</p>	<p>30018 FATIGUE TIME HISTORY ANALYSIS FOR DETERMINING THE STRAIN SIGNAL BEHAVIOUR</p> <p>Mohd Faridz Mod Yunoh & Mohd Yunus* (Universiti Kebangsaan Malaysia)* Shahrum Abdullah (Universiti Kebangsaan Malaysia) Zulkifli Mohd Nopiah (Universiti Kebangsaan Malaysia) Mohd Zaki Nuawi (Universiti Kebangsaan Malaysia)</p>	<p>30169 STUDY OF THE EFFECT OF DIFFERENT CURING SETUPS ON MECHANICAL PROPERTIES OF LOW COST COMPOSITE STRUCTURES</p> <p>S. M. Kashif* (IIUM)* Mohd Sultan Ibrahim (IIUM) M. Abdur Razzak (International Islamic University Malaysia) M. Azram (International Islamic University Malaysia)</p>
16.15 – 16.30	16.30 – 16.45	16.45 - 17.00
<p>30154 UNCONFINED ROCK EDGE IMPACT: A COMPARATIVE CASE STUDY USING LAGRANGE MESH-BASED ELEMENTS AND SMOOTH PARTICLE HYDRODYNAMICS</p> <p>Adib Hamdani* (IIUM)* Qasim Shah (IIUM) S. M. Kashif (IIUM)</p>	<p>30031 DETERMINATION OF CUTTER LOCATION FROM FREE-FORM AND REGULAR-FORM FEATURES FOR MULTI-AXIS CNC MILLING</p> <p>Mohd Hazri Abdul Halim (Universiti Sains Malaysia) Mohd Salman Abu Mansor* (Universiti Sains Malaysia)*</p>	<p>30153 SURFACE MODIFICATION OF COMMERCIAL PURITY-TI ALLOY USING PREPLACED FE-C-SI POWDER MELTED BY TUNGSTEN INERT GAS TORCH TECHNIQUE</p> <p>Sakiru Adeleke* (IIUM)* Mohe A.maleque (iium) Ahmed Md Idriss (IIUM)</p>
17.00 - 17.15	17.15 – 17.30	17.30 – 17.45
<p>30186 PERFORMANCE EVALUATION OF DIAMOND GRITS DURING PRECISION SURFACE GRINDING OF SILICON CARBIDE</p> <p>Konneh , Mohamed*</p>	<p>30185 MECHANICAL PROPERTIES OF HYBRID KENAF-GLASS REINFORCED UPE COMPOSITE UNDER RADIATION CONDITION</p> <p>Atiqah Afdzaluddin* (UIAM)* Mohe A.maleque (IIUM)</p>	<p>30155 INVESTIGATION OF DAMAGE MECHANISM AND FORCE EVALUATION ON CARBON-EPOXY FABRICS LAMINATES DURING DRILLING</p> <p>Nor Farah Huda Abd Halim* (IIUM)* Yulfian Aminanda (IIUM)</p>
17.45 – 18.00		
<p>30138 STUDY OF HARDNESS AND MICROSTRUCTURE OF FE-C-SI-MN-B HARDFACING ALLOY</p> <p>Aaqib Rashad Peer Mohammed* (STUDENT)*</p>		

Parallel Technical Sessions VI, Thursday 4 July 2013: 09.00 – 10.30		
VI A: Modeling and Simulation (MS)		
Chairperson: Dr. Mohammad Abdelrahman		Co-chair: Dr. Mohamed Okasha
Venue: Manhattan VA		
09.00 – 09.15	09.15 – 09.30	09.30 – 9.45
30163 3-D CFD TRANSIENT SIMULATION OF TRANSESTERIFICATION IN STIRRED TANK REACTOR <i>AKM Mohiuddin* (IIUM)* Nabeel Adeyemi (IIUM) Suleyman Muyibi (International Islamic University Malaysia)</i>	30167 THREE-DIMENSIONAL VIBRATION ANALYSIS OF FLUID-FILLED PIPES <i>Moumen Idres* (IIUM)* Isa Kolo (International Islamic University Malaysia) RAED KAFIFY (IIUM) Mohd Sultan Ibrahim (IIUM)</i>	1 MODELING AND SIMULATION OF A QUARTER CAR MODEL WITH A NONLINEAR DAMPER <i>Fadly Jashi Darsivan Ridhuan* (IIUM)* Sharis Shahimi (International Islamic University Malaysia)</i>
9.45 - 10.00	10.00 - 10.15	10.15 - 10.30
30030 NONLINEAR FLIGHT SIMULATION OF LIGHT AIRCRAFT SUBJECTED TO GUST WIND <i>Mohammed Abdulla* (Aeronautical Research Center -)* Tarig Hassan ()</i>	30168 ANALYSIS OF COMPOSITE BOX BEAM WITH PIEZOELECTRIC ACTUATORS USING ANSYS <i>Mohd Sultan Ibrahim (IIUM); Syed Mohamed Ali Jaffar (IIUM); S. M. Kashif (IIUM)</i>	30173 SIMULATION OF WHEEL TYPE FUEL GRAIN IN HYBRID ROCKET MOTOR <i>Raed Kafafy* (IIUM)* Moumen Idres (IIUM) Hanafi Azami ()</i>
VI B: Power Train (PT) + Engines and Systems (ES)		
Chairperson: Prof. Dr. Waleed Faris		Co-chair: Assoc. Prof. Dr. Erwin Sulaeman
Venue: Manhattan VB		
09.00 – 09.15	09.15 – 09.30	09.30 – 9.45
30131 EVAPORATIVE COOLING SYSTEM FOR ELECTRIC VEHICLES BATTERY PACK <i>Ahmad Hilmi Khalid* (IIUM)* Mohammed Aatur Rahman (IIUM) Mohammad Hawlader (IIUM)</i>	30103 EFFECT OF EGR ON THE CHARACTERISTICS OF HCCI ENGINE USING DEE AS AN IGNITION ENHANCER <i>Miller Jothi* (BITS Pilani Dubai Campus)*</i>	30162 DESIGN AND DEVELOPMENT OF A FUEL CELL CAR PROTOTYPE <i>AKM Mohiuddin* (IIUM)*; Mohamed Fadhil Chemani (International Islamic University Malaysia); Mohd Baihaqi Zakaria (International Islamic University Malaysia);</i>
9.45 - 10.00	10.00 - 10.15	10.15 - 10.30

<p>30072 SPRAY CHARACTERISTICS OF A DIESEL-CNG DUAL FUEL JET USING THE SCHLIEREN IMAGING TECHNIQUE</p> <p>Mhadi Ismael* (UTP)*</p>	<p>30041 A CONCEPT OF LARGE OFFSHORE REMOTE TERMINAL (LORT) FOR DEEP SEA FISHING</p> <p>Nuraihan Ismail (UTM);</p>	<p>30037 SURFACE PIERCING PROPELLERS FOR FUEL-SAVING INSHORE FISHING BOATS</p> <p>Ismail Zainol* (UNIKL MIMET)* Omar Yaakob (UTM)</p>
<p>VI C: Other Topics of Interest (OT)</p> <p>Chairperson: Dr. Sanisah Saharin Co-chair: Dr. Moumen Idres Venue: Manhattan VI</p>		
09.00 – 09.15	09.15 – 09.30	09.30 – 9.45
<p>30165 EFFECT OF PIEZOELECTRIC ACTUATION ON DELAMINATION IN FIBER-REINFORCED COMPOSITE BEAMS</p> <p>Mohd Sultan Ibrahim* (IIUM)* S. M. Kashif (IIUM)</p>	<p>30172 MULTI EFFECT DESALINATION FOR LOW TEMPERATURE APPLICATIONS</p> <p>Muhammad Shahzad* (National University of Singapor)*</p>	<p>30176 ALTERNATE APPROXIMATE FUNCTION FOR KERNEL FUNCTION OF OSCILLATING LIFTING SURFACES</p> <p>Layeeq Ahmed* (IIUM)*, Erwin Sulaeman (IIUM)</p>
9.45 - 10.00	10.00 - 10.15	10.15 - 10.30
<p>30177 DESIGN AND OPTIMIZATION OF A MICRO CAPACITIVE PRESSURE SENSOR</p> <p>Kamyar Tahmasebpour (IIUM) Mohammed Shobaki (IIUM) Meftah Hrairi* (IIUM)*</p>	<p>30123 EFFECT OF ELECTRICAL PARAMETERS ON PERFORMANCE OF CU-TIC MIXED CERAMIC COMPACT ELECTRODE IN EDM PROCESS</p> <p>Mohammed Ndaliman* (IIUM)* Ahsan Khan (IIUM) Mohammad Ali (IIUM) Sunday Lawal (Federal University of Technology, Minna, Nigeria) Nurul Farhana Bt. Sulong (IIUM) Ummu Atiqah Khairiya Mohamad (IIUM)</p>	<p>30175 VALIDATION OF PEDESTRIAN HEAD FORM AND LEGFORM IMPACT TESTING UPON HYBRID VEHICLE FRONT END PROFILE</p> <p>Kassim Abdullah* (IIUM)* Kausalyah Venkatasen (IIUM) Shasthri Sivaġuru (IIUM) Qasim Shah (IIUM) Moumen Idres (IIUM) Shaw Voon Wong (MIROS)</p>
10.30 – 11.00 : TEA BREAK		

Parallel Technical Sessions VII, Thursday 4 July 2013: 11.00 – 13.00		
VII A: Aerospace Structures (AS) + UAV		
Chairperson: Dr. Sany Izan Ihsan	Co-chair: Assoc. Prof. Dr. Raed Kafafy	Venue: Manhattan VA
11.00 – 11.15	11.15 – 11.30	11.30 – 11.45
<p>30114 MOTION PLANNING IN UNMANNED AIRCRAFT SYSTEMS (UAS): A REVIEW OF NAVIGATIONAL STRATEGIES</p> <p><i>Yew-Chung Chak* (Universiti Putra Malaysia)* Renuganth Varatharajoo (Universiti Putra Malaysia)</i></p>	<p>30048 COMPOSITE STRUCTURE FABRICATION FOR MICRO UAV USING WET LAY UP TECHNIQUE WITHOUT GEL COAT AND VACUUM BAGGING</p> <p><i>Sallehuddin Muhamad* (UTM)* Muhammad Iyas Mahzan (Universiti Teknologi Malaysia) Mohamed Azlan Suhot (Universiti Teknologi Malaysia) Mohamed Sukri Mat Ali (Malaysia-Japan International Institute of Technology)</i></p>	<p>30120 KINEMATIC AND AERODYNAMIC MODELLING OF QUAD-WING FLAPPING WING MICRO-AIR-VEHICLE</p> <p><i>Harijono Djodihardjo* (Universiti Putra Malaysia)* Alif Syamim Syazwan Ramli (Universiti Putra Malaysia)</i></p>
11.45 – 12.00	12.00 – 12.15	12.15 – 12.30
<p>30164 BIFURCATION ANALYSIS OF RIGID ROTOR SUPPORTED BY NONLINEAR JOURNAL BEARING</p> <p><i>Azrul Zakaria* (Universiti Tenaga Nasional)* Inayat Hussain Jawaid Iqbal (Universiti Tenaga Nasional)</i></p>	<p>30065 NOVEL BIORESINS AND SUSTAINABLE BIOCOMPOSITE STRUCTURES FOR AUTOMOTIVE AND AEROSPACE APPLICATIONS</p> <p><i>Francisco Cardona* (USQ University)* Nathan Manthey (USQ University)</i></p>	<p>30157 NUMERICAL SIMULATION OF THE FLOW AROUND IIUM MICRO AERIAL VEHICLE (IIUM-MAV)</p> <p><i>Ashraf Omar* (IIUM)* Adel Kurban (University of Tripoli) Siti Farhana Binti Jen () Intanfifizieana Binti Mohd Ariff ()</i></p>
12.30 – 12.45	12.45 – 13.00	
<p>30122 IMPROVING SIDE IMPACT PROTECTION BY SPACE FRAME DOORS</p> <p><i>Mohamed El-Sayed* (Kettering University)*</i></p>	<p>30183 AUTONOMOUS MOBILE ROBOT NAVIGATION USING HALL SENSOR AND FUZZY LOGIC CONTROL</p> <p><i>Mohammed Kaleemullah (IIUM); Waleed Faris (IIUM); Yasir Musthafa (IIUM);</i></p>	

VII B: Other Topics of Interest (OT)		
Chairperson: Dr. Mohamed Okasha		Co-chair: Assoc. Prof. Yasin Nimir
Venue: Manhattan VB		
11.00 – 11.15	11.15 – 11.30	11.30 – 11.45
<p>30134 STRATEGY FOR RESOLVING CONFLICTING PRODUCT TARGETS</p> <p>Mohamed El-Sayed* (Kettering University)* Jacqueline El-Sayed (Kettering University)</p>	<p>30151 HIGHER-ORDER MODE CONVERSION OF SYMMETRIC AND ANTISYMMETRIC LAMB WAVES IN PERIODIC PLATES</p> <p>Omar Asfar* (Jordan Univ. of Science & Tech)* Bruno Morvan (University of Le Havre) Jean-Louis Izbicki (University of Le Havre)</p>	<p>30139 COMPARISON BETWEEN SOME SANDWICH PANEL THEORIES FOR PREDICTION OF DYNAMIC PROPERTIES</p> <p>Roxana Davarpanah* (Amirkabir University)* Mojtaba Sadighi () Mohammad Hossein Benvidi () Mahmoud Shakeri ()</p>
11.45 - 12.00	12.00 - 12.15	12.15 - 12.30
<p>30136 MALAYSIAN PERCEPTION AND ATTITUDE TOWARDS GREEN CAR AND GOING GREEN.</p> <p>Rafia Afroz* (IIUM, Malaysia)*</p>	<p>30141 DEVELOPMENT OF GREEN TRANSPORTATION SYSTEM</p> <p>Mohammed Aatur Rahman* (IIUM)* Rafia Afroz (IIUM, Malaysia) Mohammad Hawlader (IIUM)</p>	<p>30156 DESALINATION: CONVERSION OF SEAWATER TO FRESHWATER</p> <p>Mohammad Hawlader* (IIUM)*</p>
12.30 – 12.45	12.45 – 13.00	
<p>30091 A COMPREHENSIVE REVIEW OF FOULING MITIGATION WITH CHEMICAL AND NATURAL FIBER ADDITIVES</p> <p>Emad Sadeghinezhad (UM) s.N. Kazi* (UM)* Mohammad Reza Safaei (UM) Rod Sadri (UM) Ahmad Badarudin (UM aya) M. N. M. M. N. M. Zubir (UM) Cheen Sean Oon (UM)</p>	<p>30117 EXPERIMENTAL INVESTIGATION OF 2-D TURNING DIFFUSER PERFORMANCE BY VARYING INFLOW REYNOLDS NUMBER</p> <p>Normayati Nordin* (Univ. Tun Hussein Onn)* Zainal Ambri Abdul Karim (UTP) Safiah Othman (Universiti Tun Hussein Onn) Vijay Raghavan (3OYL Research & Development Centre)</p>	
VII C: Other Topics of Interest (OT)		
Chairperson: Dr. Mohd. Sultan		Co-chair: Prof. Dr. Waleed Faris
Venue: Manhattan VI		
11.00 – 11.15	11.15 – 11.30	11.30 – 11.45
<p>30178 AN INVESTIGATION OF TEMPERATURE EFFECT ON INCREMENTAL FORMING</p> <p>Salah Echrif (IIUM) Meftah Hrairi* (IIUM);</p>	<p>30022 THE INFLUENCE OF LOADING CONDITIONS ON THE CARRYING CAPACITY OF THIN-WALLED PLAIN CHANNEL COLUMNS</p> <p>Noorfaizal Yidris* (UPM)* Faizal Mustapha (UPM) Rizal Zahari</p>	<p>30032 AN INTELLIGENT MANUFACTURE FOR MILLING OPERATION FOR STEP-NC APPLICATION</p> <p>Noordiana Kassim* (UTHM)* Rafizah Mohd Hanifa (UTHM) Yusri Yusof (UTHM)</p>

<i>(UPM) Mohamed Thariq Hameed Sultan (UPM)</i>		
11.45 - 12.00	12.00 - 12.15	12.15 - 12.30
<p>30043 MONITORING FERROMAGNETIC FAILURE CHARACTERISTICS USING THE SURFACE MAGNETIC FLUX DETECTION APPROACH.</p> <p><i>Wan zulhelmi Wan jusoh* (Universiti kebangsaan malaysia)*</i></p>	<p>30143 THE PERIDYNAMIC FORMULATION OF VISCOELASTIC MATERIALS BEHAVIOUR.</p> <p><i>Muhammad Azim Azizi* (UKM)*</i></p>	<p>30039 DECOMPOSITION ANALYSIS OF PIV FLOW FIELDS.</p> <p><i>Shahzad Munir* (Universiti Teknologi Petronas)* Morgan Heikal (UTP) Abdul Rashid Abdul Aziz (UTP) Azuraieen Jaafar (UTP) Mohana Sundaram (UTP)</i></p>
12.30 - 12.45	12.45 - 13.00	
<p>30179 PENANG BRIDGE LOADING ANALYSIS USING BRITISH STANDARD CODES AND FINITE ELEMENT METHOD</p> <p><i>Mohammed Idres (UPM) Faizal Mustapha (UPM) Meftah Hrairi (IIUM) Erwin Sulaeman (IIUM)</i></p>	<p>30142 PERFORMANCE ANALYSIS OF COGENERATION COMBINED GAS TURBINE AND ORC SYSTEM</p> <p><i>Jamel Orfi* (King Saud University)*</i></p>	

MALAYSIA – TRULY ASIA



With the land size of 329,758 sq km the Federation of Malaysia comprises of Peninsular Malaysia and the states of Sabah and Sarawak on the island of Borneo. Located between 2° and 7° north of the Equator, Peninsular Malaysia is separated from the states of Sabah and Sarawak by the South China Sea. To the north of Peninsular Malaysia is Thailand while its southern neighbour is Singapore. Sabah and Sarawak are bounded by Indonesia while Sarawak also shares a border with Brunei.

Malays who make up about 57% of the 25 million populations are the predominant group in Malaysia, with Chinese, Indians and other ethnic groups making up the rest. Bahasa Melayu (Malay) is the national language but English is widely spoken. The ethnic groups also speak various languages and dialects. The official religion in Malaysia is Islam but all other religions are freely practiced.

Malaysia is blessed with a tropical climate with warm weather all year round. The temperatures ranged from around 21°C (70°F) to 32°C (90°F) and the annual rainfall varies from 2,000mm to 2,500mm. Manufacturing constitutes the largest single component of Malaysia's economy. Tourism and primary commodities such as petroleum, palm oil, natural rubber and timber are other major contributors to the economy.

Malaysia is divided into Peninsular Malaysia (West Malaysia) and East Malaysia. The capital, Kuala Lumpur, lies midway along the West Coast of Peninsular Malaysia. Kuala Lumpur represents the heartbeat of Malaysia, serving as its administration, cultural, commercial and transportation centre.

It all began in the Middle of the 19th century when a group of tin prospectors came to settle around the convergence of the Klang and Gombak rivers. This marked the foundation of Kuala Lumpur and it has been its share of growth and setbacks to become metropolitan centre of today.

With a population of over 1.3 million, Kuala Lumpur is by far the largest city in Malaysia. Malays, Chinese and Indians comprise the main races among others in this multicultural backdrop. This ethnic diversity has shaped the city over the years and is clearly seen in the various cultural customs and religious beliefs, as well as languages, cuisines and architecture.

Better known as KL to the locals, the city is a heady mix of history and culture intertwined with mushrooming skyscrapers and office towers. Kuala Lumpur is one of the best examples of a city that has managed to preserve the best of its cultural heritage and combine it with modern conveniences to offer a wholly unique experience to visitors.

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA (IIUM)



IIUM was established in 1983 to fulfill one of the major aspirations of the contemporary global Muslim community. This yearning of the Ummah is a key element in IIUM's vision statement: "To be an international centre of educational excellence which integrates Islamic revealed knowledge and values in all disciplines and which aspires to the restoration of the Ummah's leading role in all branches of knowledge."

IIUM operates under the direction of a Board of Governors with representatives from the eight sponsoring governments and the Organization of Islamic Conference (OIC). Currently, IIUM is home to over 15,000 students including students from more than 100 countries and 3,000 teaching and administrative staff members.

The university's current physical facilities are located at three sprawling campuses in Gombak, Kuala Lumpur, and Kuantan, and a Matriculation Centre in Petaling Jaya. This is a far cry from its humble beginnings in 1983 when it operated from temporary quarters with 153 students and a handful of lecturers and administrators.

IIUM offers a wide range of academic programmes through its faculties of Science, Laws, Medicine, Engineering, Islamic Revealed Knowledge and Human Sciences, Economics and Management, Nursing and Allied Health Sciences and Architecture and Environmental Design. These are geared towards both skill-building and scholastic attainments and designed in accordance with IIUM's philosophy, which is built upon the belief that knowledge must be pursued and propagated in the spirit of tawhid, as an act of worship, in full recognition that it is a trust which Allah has placed upon mankind. Malaysian graduates of IIUM have performed well in both the public and private sectors. Since 1987 IIUM has been producing about 3,000 graduates annually.



Website: <http://www.iium.edu.my>

KULLIYAH OF ENGINEERING, IIUM



The mission of the Faculty of Engineering is to provide quality engineering education, with sufficient scope to include fundamental and specialized knowledge and practice in engineering and a broad base in management, ethics, and humanities. This will enable our graduates to be ready to serve the current and emerging needs of the society.

Besides being professionally qualified and competent, the graduates will acquire spiritual, intellectual, moral and ethical characteristics towards the development of an integral and harmonious relationship with Allah (the creator), fellow human beings and with the natural environment. The interdisciplinary approach to engineering education not only allows the graduates to solve industrial and human problems; it will also enable them to bring about and manage changes in conformity with the worldview based on the principles of Islam.

Currently, there are eight programmes being offered: Aerospace Engineering, Automotive Engineering, Biotechnology Engineering, Communication Engineering, Computer and Information Engineering, Manufacturing Engineering, Materials Engineering, and Mechatronics Engineering. The faculty is also offering postgraduate engineering programmes leading to MSc. and Ph.D. degrees. At the moment the student population at the undergraduate level stands at 1981 with 200 students at the postgraduate level.

Research and development is one of the primary activities in the Faculty of Engineering and there are excellent facilities, qualified and competent academic staff, and conducive environment which enhance active participation in research activities in various fields of Engineering. To foster research collaboration amongst faculty members, research units and research groups have been established. Presently, there are three research units and fifteen research groups which span various areas of engineering, encompassing both conventional and emerging fields. There are also well equipped Advanced Laboratories to support research and development activities and postgraduate studies. The Faculty of Engineering offers PhD and Master degree programmes. The PhD programme is by research whereas the Master degree programme is conducted in three modes, namely, research only, mixed mode (equal number of credits for both courses and research), and courses only. It offers eight master programmes in the following areas: Automotive Engineering, Biotechnology Engineering, Communication Engineering, Computer and Information Engineering, Electronic Engineering, Manufacturing Engineering, Material Engineering, Mechatronics Engineering. There are also the Executive Master degree programmes by taught courses run by Advanced Engineering and Innovation Centre (AEIC).

 Kulliyah of Engineering IIUM



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and research with values and ethics"

Website: <http://eng.iium.edu.my>

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