

## WELCOME TO IACSIT&CBEEES CONFERENCES IN MELAKA, MALAYSIA

*Welcome to IACSIT&CBEEES 2013 Conferences in Melaka, Malaysia. We are confident that over the two days you will get the theoretical grounding, practical knowledge, and personal contacts that will help you build a long-term, profitable and sustainable communication among researchers and practitioners in a wide variety of scientific areas with a common interest in Future Information Technology, Computer and Software Modeling, Nanomaterials and Electronics Engineering; Environment Pollution and Prevention, Food and Agricultural Sciences, Medical, Environmental and Bio-technology.*

- \*All papers for the **ICFIT 2013** will be published in the **JIII** (ISSN: 2301-3745) as one volume, and will be indexed by Ulrich's Periodicals Directory, Google Scholar, EBSCO, Engineering & Technology Digital Library and Electronic Journals Digital Library.
- \*All papers for the **ICCSM 2013** will be published in the **IJMO** (ISSN: 2010-3697) as one volume, and will be indexed by Engineering & Technology Digital Library, ProQuest, Crossref and Google Scholar .
- \*All papers for the **ICNEE 2013** will be published in the **Advanced Materials Research Journal** (ISSN: 1022-6680) as a special issue. **Advanced Materials Research** (ISSN: 1022-6680) is Indexed by Elsevier: SCOPUS [www.scopus.com](http://www.scopus.com) and Ei Compendex (CPX) [www.ei.org/](http://www.ei.org/). Cambridge Scientific Abstracts (CSA) [www.csa.com](http://www.csa.com), Chemical Abstracts (CA) [www.cas.org](http://www.cas.org), Google and Google Scholar [google.com](http://google.com), ISI (ISTP, CPCI, Web of Science) [www.isinet.com](http://www.isinet.com), Institution of Electrical Engineers (IEE) [www.iee.org](http://www.iee.org), etc.
- \*All **ICEPP 2013** papers will be published in the **International Journal of Environmental Science and Development (IJESD)**, ISSN:2010-0264), and all papers will be included in the Engineering & Technology Digital Library, and indexed by EBSCO, CABI, DOAJ, WorldCat, Google Scholar, Cross ref, ProQuest and sent to be reviewed by Ei Compendex and ISI Proceedings.
- \*All papers of **ICFAS 2013** will be published in the Volume of Journal ( **IPCBEES**, ISSN: 2010-4618), and all papers will be included in the Engineering & Technology Digital Library, and indexed by Ei Geobase(Elsevier), CABI, Ulrich's Periodicals Directory, EBSCO, CNKI(中国知网), WorldCat, Google Scholar, Cross ref and sent to be reviewed by Compendex and ISI Proceedings.
- \*All **ICMEB 2013** papers will be published in the **Journal of Medical and Bioengineering (JOMB)**, ISSN: 2301-3796), and all papers will be included in the Engineering & Technology Digital Library, and indexed by EBSCO, WorldCat, Google Scholar, Cross ref and sent to be reviewed by Ei Compendex and ISI Proceedings.

### NOTICE:

- \***Certificate of Participation** can be collected in front of the registration counter.
- \*The organizer will not provide **accommodation**, so we suggest you make an early reservation.
- \*One best presentation will be selected from each session. The best one will be announced when each session ends, and will be awarded the **The Certificate for Best Presentation** at the beginning of the Dinner Banquet.
- \*If you didn't put a formal **photo** in your registration form, please take a formal one inch photo.
- \*The **attendee** should provide the author's authorization or attendee's passport ID when the attendee is none of the authors.

## CONFERENCES AND SPONSORSHIPS

### Conferences:

2013 4th International Conference on Future Information Technology ([ICFIT 2013](#))

2013 3rd International Conference on Computer and Software Modeling([ICCSM 2013](#))

2013 3rd International Conference on Nanomaterials and Electronics Engineering  
([ICNEE 2013](#))

2013 International Conference on Environment Pollution and Prevention ([ICEPP 2013](#))

2013 International Conference on Food and Agricultural Sciences ([ICFAS 2013](#))

2013 International Conference on Medical, Environmental and Bio-technology  
([ICMEB 2013](#))

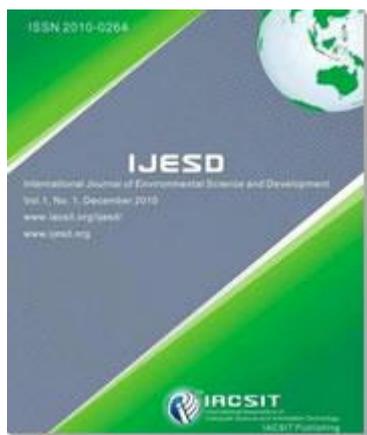
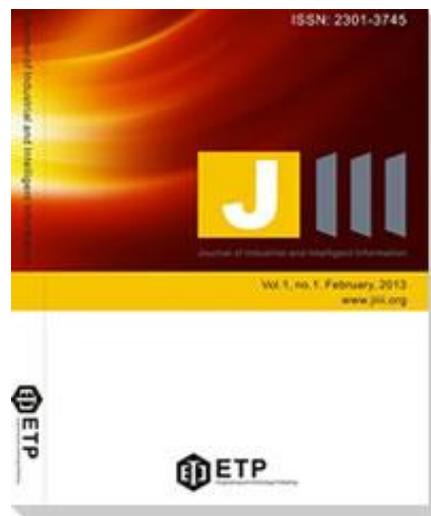
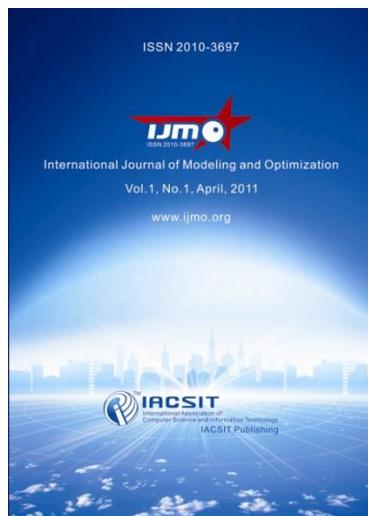


**IACSIT Committee**



**CBEEES Committee**

**Publication:**



**Sponsorships:**



## Simple Version of Conference Schedule

### Saturday, October 5<sup>th</sup> (Lobby)

<b>10:00-17:00</b>	Arrival and Registration
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### Sunday, October 6<sup>th</sup>

<b>9:00 am-10:30am</b>	<b>10:30am -12:30am</b>	<b>13:30pm-16:15pm</b>		<b>16:30pm-18:30pm</b>	
Plenary Speech (IACSIT) Putera Puteri Room	Session 1 (11) ICCSM Putera Puteri Room	Session3 (12) ICFIT Putera Puteri Room		Session 6 ICFIT(5)+ ICNEE(7) Putera Puteri Room	
<b>9:00 am-10:30am</b>	<b>10:30am -12:30am</b>	<b>13:30pm-16:15pm</b>		<b>16:30pm-18:30pm</b>	
Plenary Speech CBEEES Aman Damai Room	Session2 (9) ICMEB Aman Damai Room	Session4 (14) ICEPP Aman Damai Room	Session 5 (12) ICFAS Indah Room	Session 7 (9) ICNEE Aman Damai Room	Session 8 (9) ICFAS Indah Room

## Instructions for Oral Presentations



### **Devices Provided by the Conference Organizer:**

Laptops (with MS-Office & Adobe Reader)

Projectors & Screen

Laser Sticks

### **Materials Provided by the Presenters:**

PowerPoint or PDF files

Duration of each Presentation (Tentatively):

Regular Oral Session: about 10 Minutes of Presentation 2-5 Minutes of Q&A

Plenary Speech: 45 Minutes of Presentation 5 Minutes of Q&A

### **Conference Secretariat Contact:**

ICFIT 2013: [icfit@vip.163.com](mailto:icfit@vip.163.com) ; ICCSM2013: [icasm@vip.163.com](mailto:icasm@vip.163.com); ICNEE 2013:[icnee@iacsit.com](mailto:icnee@iacsit.com)

Tel: 4006-999-648 (中文咨询电话); +86-28-8652-8298 (International)

ICEEP2013: [icepp@cbees.net](mailto:icepp@cbees.net) ; ICFAS2013: [icfas@cbees.net](mailto:icfas@cbees.net) ; ICMEB2013: [icmeb@cbees.net](mailto:icmeb@cbees.net)

Tel: +86-28-86528465 (China Branch)

## Detailed Schedule for Reference

<b>Venue: Putera Puteri Room (Level 5)</b>		
<b>Morning</b> <b>IACSIT</b> <b>ICCSM2013</b> <b>ICFIT 2013</b> <b>ICNEE2013</b>	09:00-09:10	Opening Remarks
	09:10-09:40	Plenary Speech <b>I</b>
	9:40-10:00	Group Photo & Coffee Break
	10:00-10:30	Plenary Speech <b>II</b>
	10:30-12:30	<b>Session 1</b> ICCSM (11)

<b>Venue: Aman Damai Room (Level 5)</b>		
<b>Morning</b> <b>CBEEES</b> <b>ICEEP2013</b> <b>ICFAS2013</b> <b>ICMEB2013</b>	09:00-09:10	Opening Remarks
	09:10-09:40	Plenary Speech <b>I</b>
	9:40-10:00	Group Photo & Coffee Break
	10:00-10:30	Plenary Speech <b>II</b>
	10:30-12:30	<b>Session 2</b> ICMEB(9)

<b>Lunch</b>	12:25-13:15	<b>Venue: The Palette Café</b> Level 4
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<b>Afternoon</b>	13:30-16:15	<b>Venue:</b> Putera Puteri Room <b>Session 3</b> ICFIT (12)	<b>Venue:</b> Aman Damai Room <b>Session 4</b> ICEPP(14)	<b>Venue:</b> Indah Room <b>Session 5</b> ICFAS(12)
	16:15-16:30	Coffee Break		
	16:30-18:30	<b>Venue:</b> Putera Puteri Room <b>Session 6</b> ICFIT(5)+ ICNEE(7)	<b>Venue:</b> Aman Damai Room <b>Session 7</b> ICNEE(9)	<b>Venue:</b> Indah Room <b>Session 8</b> ICFAS(9)

<b>Awarding Ceremony &amp; Dinner</b>	
18:45-19:30	<b>Venue:</b> The Palette Cafe

## Brief Introduction of Keynote Speakers

### **Keynote Speaker I f IACSIT**



**Dr Raj Das**

**University of Auckland, New Zealand**

### **Keynote II of IACSIT**



**Prof. Syed A. R. Abu-Bakar**

**Universiti Teknologi Malaysia**

(More information regarding the Keynote Speakers please visit <http://www.icnee.org/keynote.htm>)

## **Keynote I of CBEEES**



**Prof. Ali Meawad Ahmed**  
**Suez Canal University**

## **Keynote II of CBEEES**



**Prof. Saji Baby**

**Wataniya Environmental Services, Kuwait**

(More information regarding the Keynote Speakers please visit <http://www.icepp.org/keynote.htm>)

## Detailed Schedule

### Saturday, October 5<sup>th</sup> (Lobby)

10: 00– 12: 00 13: 00 – 17: 00	Arrival and Registration
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#### Tips:

After sign, you will collect your conference package in front of the registration desk, including:

**Original Receipt**  
**Journal (Only for Author Attendee)**  
**Representative / Pass Card with Tie**  
**Printed Program**  
**Lunch Coupon**  
**Dinner Coupon**  
**Participation Certificate**  
**Conference Souvenir**  
**Computer Bag**

#### Notice:

- Please kindly be reminded that you should have a check on all these materials as soon as you get the package; if any of them is not included in the package, please let us know at once; If any of them gets lost after the registration, no additional one would be provided. Thanks for your understanding!
- Each regular registration covers only one package. Additional package will be charged.

## Sunday Morning, October 6<sup>th</sup>

IACSIT Group Meeting

**Venue:** Putera Puteri Room

09:00-09:10	<b>Opening Remarks</b> Dr Raj Das
09:10-09:40	<b>Plenary Speech 1:</b> Dr Raj Das University of Auckland, New Zealand <i>Nano-structured Polymers with Controlled Morphology - Processing and Application</i>
9:40-10:00	<b>Coffee Break &amp; Group Photos</b>
10:00-10:30	<b>Plenary Speech 2:</b> Prof. Syed A. R. Abu-Bakar Universiti Teknologi Malaysia <i>Video-Based Surveillance: Opportunities and Challenges from Image Processing Perspectives</i>

CBEEES Group Meeting

**Venue:** Aman Damai Room

09:00-09:10	<b>Opening Remarks</b> Dr. Saji Baby
09:10-09:40	<i>Plenary Speech 1:</i> Prof. Ali Meawad Ahmed Suez Canal University, Egypt <i>Identify Health Risks and Inspection Technique in the Stages of Fish Trading</i>
9:40-10:00	<b>Coffee Break &amp; Group Photos</b>
10:00-10:30	<b>Plenary Speech 2:</b> Dr. Saji Baby, Wataniya Environmental Services, Kuwait <i>Soil Pollution from Oil Exploration, Refineries and Industries, Prevention, Control and Rehabilitation</i>

## Sunday Morning, October 6<sup>th</sup>

### Session 1

ICCSM2013 (11)

**Time:** 10:30-12:30am**Venue:** Putera Puteri Room**Session Chair:** Prof. Eko K. Budiardjo

X001	Modelling Diagnostic Reasoning Based on Mental State Examination <i>Irosh Fernando</i> and Frans A. Henskens University of Newcastle, NSW 2308, Australia
X002	Genetic Algorithm-Based Optimization of 3 <sup>rd</sup> Order Multiple Feedback Low Pass Filter A. A. Wan and <i>S. C. Neoh</i> Universiti Malaysia Perlis, Perlis, Malaysia
X006	Design of a Dual-band Microstrip Antenna by Integrating MOM based Simulation and Frequency-dependent Smith-Chart Model Settapon Malisuwan, <i>Jesada Sivaraks</i> , Pimwarin Thippanya and Noppadol Tiamnara National Broadcasting and Telecommunications Commission
X007	The Probability of Bit Error Due to the Co-existence Interference of PCS1900 and UMTS <i>Jesada Sivaraks</i> and Settapon Malisuwan National Broadcasting and Telecommunications Commission
X008	A Multi-Agent Model for Information Processing in Computational Problem Solving <i>M. A. Teh Noranis</i> and N. Shahrin Azuan University Putra Malaysia
X0011	A Research on the Location for Illumination Component of Poorly Illuminated Face Images in Fourier Spectrum <i>Pin Yang Tan</i> and Haidi Ibrahim Universiti Sains Malaysia
X0013	Implementation of Discoverable Digital Clone Repository for Knowledge Transfer and Improved Productivity <i>Moses L. Gadebe</i> and George E.M. Ditsa Tshwane University Of Technology, South Africa
X0018	Asymmetric and Symmetric Spherical Product Surfaces with both Implicit and Parametric Representations <i>Pi-Chung Hsu</i> Shu-Te University, Taiwan
X1001	The Research on CEP Based on Query Rewriting for CPS <i>Kening Cao</i> , Renfa Li, Fengjuan Wang Hunan University, China
X003	Features Extraction of Electromyography Signals in Time Domain on Biceps Brachii Muscle <i>Wan Mohd Bukhari Wan Daud</i> , Abu Bakar Yahya, Chong Shin Horng, Mohamad Fani Sulaima and Rubita Sudirman Universiti Teknikal Malaysia Melaka
X0019	Behavior Engineering Methodology Enhancement to Support Code Generation Emerson C. Simbolon and <b>Eko K. Budiardjo</b> University of Indonesia, Indonesia

## Session 2

ICMEB2013 (9)

Time: 10:30-12:30am

Venue: Aman Damai Room

Session Chair: Tjokorda Gde Tirta Nindhia

M003	Docking Study of $\beta$ -glucosidase B (BgIB) from <i>P. Polymyxca</i> with Cellobiose and Cellotetrose <i>Nur Shima Fadhilah Mazlan</i> and Nurul Bahiyah Ahmad Khairudin Malaysia-Japan International Institute of Technology
M004	Homology Modeling of Human Sweet Taste Receptors: T1R2-T1R3 <i>Ragheed Hussam Yousif</i> and Nurul Bahiyah Ahmad Khairudin Malaysia-Japan International Institute of Technology
M006	Quality Assessment of Platelet Concentrates Prepared after Whole Blood Overnight Storage <i>Nor Raihan M. Shabani</i> and Huda S. Baqir Department of Medical Laboratory Technology, Universiti Teknologi MARA, Malaysia
M008	Dual Carbon Fermentation for the Production of Inducible Cellobiohydrolase by Recombinant <i>Aspergillus Niger</i> <i>Norashikin Othman</i> , Jamaliah Md. Jahim, Abd. Munir Abd. Murad, Farah Diba Abu Bakar Department of Chemical and Process Engineering, Universiti Kebangsaan Malaysia, Malaysia
M20005	Impact of Flood on Rhizophora Plantation in Batticaloa, Sri Lanka <i>Mathiventhan Thavanayagam</i> and Jayasingam Thangamuthu Department of Botany, Eastern University, Chenkalady, Sri Lanka
M30001	The Effect of Temperature and Pressure on the Self-assembly of Dipalmitoylphosphatidylcholine Using Coarse-Grained Molecular Dynamics Nurul Syahidah Shaari, <i>Roghayeh Abedi Karjiban</i> , and Mahiran Basri Department of Chemistry, Faculty of Science, Universiti Putra Malaysia, Malaysia
M30003	An Analysis of the Corporate Managers Awareness towards the Environment Sustainability in Apparel Industry <i>Lanumodara Dedunu de Zoysa</i> and K.D Gunewardena University of Sri Jayewardenepura /Msc in Management, Sri-Lanka
M30004	Tensile Properties and Biocompatibility of Indonesian Wild Silk <i>Cricula Trifenestrata</i> : A Preliminary Study <i>Tjokorda Gde Tirta Nindhia</i> , Zdenek Knejzlik, Tomas Ruml, Tjokorda Sari Nindhia Department of Mechanical Engineering, Udayana University, Indonesia
M30005	The Effects of Novel AMPK Activator on Human Vascular Endothelial Cells <i>Han-Min Chen</i> , Jiun-Tsai Lin, Cheng-Yi Kuo and Chun-Fang Huang Catholic Fu-Jen University/Department of Life Science, New Taipei City, Taiwan



**12:25-13:15 Lunch Time**

**(Please Bring Your Lunch Coupon to the Restuarant and Enjoy the Lunch)**

**Tips:**

After lunch, 15 minutes for you to have a rest. Please arrive on time to the conference room by 13:30. Thank you!

**Sunday Afternoon, October 6<sup>th</sup>****Session 3**

ICFIT 2013 (12)

Time: 13:30pm-16:15pm

Venue: *Putera Puteri Room*

Session Chair:

IT0004	Genetic Algorithm for Optimization of Design Variables in 4 <sup>th</sup> Order Sallen Key High Pass Filter <b>Kwang Shenq Eu</b> and Siew Chin Neoh UniMAP, Malaysia
IT0006	Exploration of Current Trend on Blur Detection Method Utilized in Digital Image Processing <b>Boon Tatt Koik</b> and Haidi Ibrahim Universiti Sains Malaysia, Malaysia
IT0013	A Development of Computer Programming analyzer: A Case Study on PHP Programming Language <b>Suchot Sinthsirimana</b> and Patcharin Panjaburee Institute for Innovative Learning, Mahidol University, Thailand
IT0014	Customized Casing for Capturing Poorly Illuminated Face Images with Low Level of Reflectance Components <b>Tan Pin Yang</b> and Haidi Ibrahim Universiti Sains Malaysia,
IT0016	Overview of Biomedical Relations Extraction using Hybrid Rule-based Approaches <b>Rabiah Abdul Kadir</b> and Behrouz Bokharaeian Universiti Putra Malaysia, Malaysia
IT0017	New Educational Approach to Direct Experience through Embedded System Design and Implementation <b>Kenji Ohmori</b> , Xiao Fan, and Ryo Mizutani Hosei University, Japan
IT0019	Spectrum-based Fault Localization: A Pair Scoring Approach Patrick Daniel and <b>Kwan Yong Sim</b> Swinburne University of Technology Sarawak Campus, Malaysia
IT0024	A Framework for Developing Boolean Set Implicit Blends from an Existing Union or Intersection Blend in Soft Object Modeling <b>Pi-Chung Hsu</b> Shu-Te University, Taiwan
IT0025	Confidence Interval Estimation of Software Reliability Growth Models based on Ohba's Inflection S-shaped Model Tean-Quay Lee, <b>Chih-Chiang Fang</b> , and Chun-Wu Yeh

	Shu-Te University, Taiwan
IT0027	Adoption of New Information Economics to Achieve Information System Success in IS Outsourcing Implementation <i>Napaporn Petchinda</i> and Settapong Malisuwan Inner Group Organization, Thailand
IT0030	ICT Outsourcing Information Security Risk Factors: An Exploratory Analysis of Threat Risks Factor for Critical Project Characteristics <i>Nik Zulkarnaen Khidzir</i> , Noor Habibah Arshad, and Azlinah Mohamed Infrastructure University Kuala Lumpur, Malaysia
IT0034	Location Estimation of Wireless Sensor Networks Using Spring-Relaxation Technique with Confident Update <i>Thanakorn Prasansri</i> and Chatchai Khunboa Khon Kaen University, Thailand

## Session 4

**ICEPP2013 (14)**

**Time: 13:30pm-16:15pm**

**Venue: Aman Damai Room**

**Session Chair: Dr. SAJI BABY**

P001	Formation of Dangerous Zones Due to Accidental Release of Liquefied Natural Gas in Egypt <i>O. Badr</i> , O. Al-Farouk Mechanical Engineering Department, British University in Egypt, Al-Shorouk City, Cairo, Egypt
P005	Mechanism of Social Vulnerability to industrial pollution in peri-urban Danang city, Vietnam <i>Pham Thi Bich Ngoc</i> Geography Department, University of Social Sciences and Humanities, Vietnam National University Ho Chi Minh City
P008	Concentration of Lead in Saliva of Affected Primary School Children <i>Arweena Iskandar, Siti Nor Ain Seri Masran</i> , Ahmad Razali Ishak Faculty of Health Sciences, University Teknologi MARA (UiTM), Malaysia
P010	Production of Bricks from Shipyard Repair and Maintenance Hazardous Waste <i>Salmaliza Salleh</i> , Md Ghazaly Shaaban, Hilmi B. Mahmud, Kang, J. and Looi K.T. UNIVERSITY OF MALAYA
P012	Biofiltration of VOCs in an Effluent Gas from Zeolite Rotor Concentrator <i>Ching-yi Wu</i> and Ming-Shean Chou National Sun Yat-Sen university, Taiwan
P014	Assessment of Heavy Metals in Leachate of an Unlined Landfill in the Sultanate of Oman <i>Sumaiya Abdul Hameed Al Raisi</i> , Hameed Sulaiman, Fakhr Eldin Suliman, Osman Abdallah Sultan Qaboos University
P015	Conserving Wetlands: Valuation of Indirect Use Benefits of a Wetland of Dhaka <i>Rezwana Rafiq</i> , Md. Shahabul Alam, Md. Mafizur Rahman and Ishrat Islam Bangladesh University of Engineering and Technology

P016	Citizen Assisted Environmental Pollution Measurement in Developing Cities <i>Md Yusuf Sarwar Uddin</i> and Rezwana Rafiq BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)
P10003	Heavy Metal Concentration of Dumpsite Soil and Accumulation in <i>Zea mays (corn)</i> Growing in a Closed Dumpsite in Manila, Philippines <i>Leah Amor S. Cortez</i> and Johnny A. Ching PHILIPPINE NORMAL UNIVERSITY
P20003	Activated Sludge Process Overview <i>B. Ahansazan</i> , H. Afrashteh, N. Ahansazan, Z. Ahansazan. Ministry of Science, Research and Technology of Iran. Valiasr Technical College of Tehran
P30002	Identification of the optimum flow rate for a patented high building integration solar collector <i>C. Cristofari</i> , G. Notton, J.L. Canaletti, C. Lamnatou University of Corsica – University Institute of Technology
P30003	Using of surfactant nanostructures as “green compounds” in corrosion inhibition <i>A. Yousefi</i> and S. Javadian, Department of chemistry, Faculty of sciences, Tarbiat Modares University, Tehran, Iran
P30004	Photocatalytic Degradation of Acid Red 73 Using TiO <sub>2</sub> Nanoparticles Immobilized on Alumina Foam Somayeh Alijani, Mohammad Vaez, <i>Abdolsamd Zarringhalam Moghaddam</i> Tarbiat Modares University
P30005	Optimization of Synthesis Parameters in Photodegradation of Acid Red 73 using TiO <sub>2</sub> Nanoparticles Prepared by the Modified Sol-gel Method <i>Somayeh Alijani</i> , Mohammad Vaez, Abdolsamd Zarringhalam Moghaddam Tarbiat Modares University

## Sunday Afternoon, October 6<sup>th</sup>

### Session 5

ICFAS2013 (12)

Time: 13:30pm-16:15pm

Venue: *Indah Room*

Session Chair: *Ali Meawad Ahmed*

G0001	Homology Modeling of the Chimeric Human Sweet Taste Receptors Using Multi Templates <i>Ragheed Hussam Yousif</i> Universiti Teknologi Malaysia
G0005	Evaluation of Silicate-Based Rocks as Soil Conditioners <i>Mervat Said Hassan</i> , El Toney Mohamed, and Mohamed Kamil Central Metallurgical R & D Institute
G0007	Genetic Variation Analysis of Sinai Chicken and Japanese Quail Populations Using Microsatellite DNA Markers <i>Sami Farrag</i> , Mohamed Soltan, and Ahmed Enab Menofia University
G0016	Trace Metal, Proximate Composition and Anatomical Properties of Four Fish Species Commonly Consumed in Southwestern Nigeria

	Oladunni Olafisoye, Godwin Olutona, and <i>Adelaja Osibote</i> Cape Peninsula University of Technology
G0017	Morphological Characterization and Structural Features for High Drought Tolerance in some Omani Wheat Landraces <i>Ahmed Al Maskri</i> , Mansoor Hameed, and Mumtaz Khan College of Agriculture and Marine science, Sultan Qaboos University
G0020	Salinity effects on Growth, Electrolyte Leakage, Chlorophyll Content and Lipid Peroxidation in Cucumber ( <i>Cucumis sativus L.</i> ) <i>Muhammad Mumtaz Khan</i> , Ruqaya Al-Mas'Oudi, Fahad Al Said and I. Khan College of Agriculture and Marine Science, Sultan Qaboos University
G1006	Effect of Varying Soil and Vermicompost Mixtures on Growing Media and Yield and Quality of Sweet Corn <i>Bijoy Chandra Ghosh</i> , N. Bera, D. Das, and D. K. Swain Indian Institute of Technology Kharagpur, India
G2011	Building and Promoting the System of Chinese Food Security and Public Health: A Study on System Challenge as the H7N9 Virus Booming in China <i>Ye Yu</i> , Suwei Yuan, Jiantao Cao, Feng Yuan, and Jin Ma School of Public Health, Shanghai Jiao Tong University
G2015	The Incidence of Diabetes in Indonesian Young Adults: The Importance of Lifestyle Compared to Family History Lina Antono, Astri Kurniati, Amelinda Angela, <b>Kamalita Pertiwi</b> , and Susana Nutrifood Research Center, PT. Nutrifood
G2020	Effect of Traditional Fermentation as a Pretreatment to Decrease the Antinutritional Properties of Rambutan Seed ( <i>Nephelium lappaceum L.</i> ) Lasekan Olusegun Olaniyi and <i>Shabnam Mehdizadeh</i> University Putra Malaysia
G2023	Market Structure, Conduct, Channel and Margin of Dry Season <i>Okra</i> Vegetable in South-Eastern Nigeria <i>Agbugba Ikechi Kelechi</i> , Nweze Noble Jackson, Achike Anthonia Ifeyinwa, and Obi Ajuruchukwu University of Nigeria
G2027	Effect of Insect Infestation on Carbohydrate, Protein and Phenol Content of Wheat Grains <i>Prachi Singh</i> , Santosh Satya, and S. N. Naik Indian Institute of Technology

## 16:15-16:30 Coffee Break



**Tips:**

- Some attendees may arrive on Sunday, so please kindly be reminded that you can register during the coffee break.
- This is also a good opportunity to communicate with experts in your related field.

**Have a nice time!**

## Sunday Afternoon, October 6<sup>th</sup>

### Session 6

ICFIT2013(5)+ICNEE2013 (7)

**Time: 16:30pm-18:30pm**

**Venue: Putera Puteri Room**

**Session Chair:**

IT0018	A Process for Building Ontology E numbers from Various Database <i>Nurul Aswa Omar</i> , Shahreen Kasim, and Rathiah Hashim Universiti Tun Hussein Onn Malaysia, Malaysia
IT0033	Challenges in Requirements Engineering for Mobile Applications for Disabled – Autism Mutahira N. Tahir, <i>Sehrish Khan</i> , and Arif Raza National University of Sciences and Technology, Pakistan
IT3010	The Mathematical Modeling Research of Interest Allocation in the Third-party Automobile Logistics Partners <i>Liang Han</i> , Ying-chun Sun, and Xiang-mei Si Chang'an University, China
IT3015	Noninvasive Sensor Technology for total Hemoglobin Measurement in Blood <i>Kumar R.</i> and Ranganarhan H. Sathyabama University, India
IT3016	Implementing of Virtual Router Redundancy Protocol in A Private University <i>Joseph Ng Poh Soon</i> , Shaaban Hassan Ramadhan Abdulla, Choo Peng Yin, Wong See Wan, Phan Koo Yuen, Lim Eng Heng SEGi University, Malaysia
W4000	Trends and Developments in the Manufacturing of Polymer Nanofibrils with the Electrospinning Technique <i>Raj Das</i> and Nathaniel J. Burbery University of Auckland, New Zealand
W008	Oxygen Partial Pressure Effect on Nano-Structure and NO Gas Detection Sensitivity of Sputtered MoO <sub>3</sub> Thin Films Kaykhosrow Khojier, <i>Mahsa Fasihnikoutalab</i> and Ghazal Moradi

	Islamic Azad University Central Tehran Branch
W009	Effect of Synthesis Parameters for Lamellar Structured Nanocrystalline Bismuth Phosphorus Oxide Formation Hartini Khairi Osman, Hendrik O. Lintang and <i>Siew Ling Lee</i> UNIVERSITI TEKNOLOGI MALAYSIA
W014	Synthesis and Characterization of Nano-structured Mixed Oxides <i>M Abdus Salama</i> , Suriati Sufianb, and T. Murugesanc Universiti Teknologi PETRONAS
W016	Effects of Synthesis Conditions on the Textural and Morphological Properties of Mesoporous Silica (SBA-15) <i>Sara Faiz Hanna Tasfy</i> , Noor Asmawati Mohd Zabidi, Duvvuri Subbarao, and Maizatul Shima Shahrarun Universiti Teknologi PETRONAS
W017	Modelling the Interatomic Potential of Cubic Zirconia <i>Ibrahim Dauda Muhammad</i> and Mokhtar Awang Universiti Teknologi PETRONAS
W018	Design and Modeling of a CMOS MEMS Gravimetric sensor <i>Mawahib Gafare Abdulrahman</i> , John Ojur Dennis, and Mohd Haris Md Khir Universiti Teknologi PETRONAS

## Session 7

ICNEE2013 (9)

Time: 16:30pm-18:30pm

Venue: Aman Damai Room

Session Chair: Sudha L. K.

W1000	Development of Varied CMOS Ring Oscillator Topologies in 0.13- $\mu\text{m}$ CMOS Technology <i>SOHIFUL ANUAR Zainol Murad</i> , RIZALAFANDE Che Ismail, MUKHZEER Mohamad Shahimin, MOHD FAIRUS Ahmad, and ROHANA Sapawi Universiti Malaysia Perlis
W2001	Hydrophobicity Enhancement of the Polyvinyl Alcohol / Rice Starch Silk Fibroin Films by Glycerol <i>Pusita Kuchaiyaphum</i> , Takeshi Yamauchi, Ruangsri Watanesk and Surasak Watanesk Department of Chemistry, Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand
W2002	Effect of Solvent Composition on the Formation of Hydroxyapatite/Silk Fibroin Composites Prepared Using Sol-Gel Method <i>Suchaya Sriudoma</i> , Hataichanoke Niamsupb, Surin Saipanyac, Ruangsri Watanesk and Surasak Wataneske Chiang Mai University
W2004	Crosslinking Density of Silk Fibroin – Rice Starch Hydrogels Modified with Trisodium Trimetaphosphate <i>Anucha Racksanti</i> , Sorapong Janhom, Sittiporn Punyanitya, Ruangsri Watanesk <sup>1,d</sup> and Surasak Watanesk Chiang Mai University
W3001	Synthesis of Y <sub>2</sub> O <sub>3</sub> Nanoparticles by Modified Transient Morphology Method

	<b>Ahmad Amirabadizadeh</b> and Zobedeh Momeni Larimi Birjand University of Technology, Birjand, Iran
W3002	Structure and Magnetic Properties of Ga Substituted Ni-Ferrites <b>Ahmad Amirabadizadeh</b> , Zobedeh Momeni Larimi, and Saeideh Eghbali Birjand University of Technology, Birjand, Iran
W3005	Capacitance and Glass Transition Temperature of Nano Structured Alumina Polycarbonate Composites. <b>Sudha L. K.</b> , Sukumar Roy and K.Uma Rao Bangalore Institute of Technology
W005	The Influence of Calcination Temperature on the Formation of Zinc Oxide Nanoparticles by Thermal-Treatment <b>Naif Mohammed Al-Hada</b> , Elias Saion, A. H. Shaari, M. A. Kamarudin, and Salahudeen A. Gene University Putra Malaysia
W3008	Homogeneous Deposition Precipitation Method for Synthesis of Carbon Nanofibre based Cu-ZrO <sub>2</sub> Catalyst for Hydrogenation of CO <sub>2</sub> to Methanol <b>Israf Ud Din</b> , Maizatul S. Shaharun, Duvvuri Subbarao, and A. Naeem Universiti Teknologi PETRONAS

## Session 8

ICFAS 2013 (9)

Time: 16:30pm-18:00pm

Venue: Indah Room

Session Chair: Aldwin M. Teves

G2029	Production of Surfactin from <i>Bacillus subtilis</i> ATCC 21332 by using Treated Palm Oil Mill Effluent (POME) as Fermentation Media <b>Mohd Rizal Abas</b> , Abdul Jalil Abdul Kader, Mohd Sahaid Khalil, Aidil Abdul Hamid, and Mohd Hafez Mohd Isa Universiti Sains Islam Malaysia
G3002	Adoption of Cashew Production Technologies by Farmers in the Southeastern Tanzania <b>Kidunda B. R.</b> , Kasuga L. J., Magani S. F., and Mwakanyamale D. F. Naliendele Agricultural Research Institute
G3003	Fermentation of Indian Oil Sardines ( <i>Sardinella longiceps</i> ) Utilizing Languas ( <i>Alipinia Pyramidata Blume</i> ) as Enhancer and Catalyser <b>Myrna C. Bigueja</b> and Luisa M. Lanciso Partido State University, Goa Camarines Sur
G3015	Socio-Economic Characteristics and Poverty among Small-Scale Farmers in Apa Local Government Area of Benue State, Nigeria <b>J. C. Umeh</b> , J. Ogah, and E. C. Ogbanje Department of Agricultural Economics, University of Agriculture
G3016	Antioxidant Property Of Dry and Wet Mill Nanostructured <i>Zingiber Officinale</i> Rosc. (Ginger) Rhizome: A Comparative Study <b>A. Norhidayah</b> , A. Noriham, and M. Rusop Universiti Teknologi MARA (UiTM)
G3019	The Memory Enhancing Effects of The Extract from The Fruit Hull of Mangosteen ( <i>Garcinia mangostana</i> L.) in Healthy Adult Male Rats

	<i>Naiyana Nontamart</i> , Walaiporn Tongjaroenbuangam, and Rungrudee Srisawat School of Biology, Institute of Science, Suranaree University of Technology
G3020	Antihypertensive Effects of <i>Centella asiatica</i> Extract <i>Thida Intharachatorn</i> and Rungrudee Srisawat School of Pharmacology, Institute of Science, Suranaree University of Technology
G2010	Quantitative, Qualitative and Enzymatic Activities of Aerobic Sporforming Bacteria in Foods of Animal Origin <i>Ahmed Hassan Saad</i> and <i>Ali Meawad Ahmed</i> Suez Canal University
G2014	Microbial, Physicochemical and Shelf Life Analysis of Muscovado in Different Packaging Materials at Various Storage Time <i>Karen Luz Y. Teves</i> , Erlinda I. Dizon, Jovita L. Movillon, and <i>Aldwin M. Teves</i> Central Philippines State University

## Sunday Evening, October 6<sup>th</sup>

### Awarding Ceremony & Dinner

**Time:** 18:45-19:30

**Venue:** The Palette Café (Level 4)

### Tips:

The Awarding Ceremony and Dinner will start at **18:45**. Please kindly attend on time with bringing the **Dinner Coupon**.

The Conference Chair / Keynote Speaker will award the Best Presentation Certificates to the winners (One best presentation will be chosen from each session).

**Good Luck!**

## ABSTRACTS FOR YOUR REFERENCE

### ICCSM 2013

X001	Mental state examination is an important aspect of clinical assessment. Clinicians arrive at an overall subjective diagnostic judgment based on the findings of the mental state examination. It is largely an implicit process, which clinicians have learned through their experience, and is therefore, prone to inconsistencies. This paper presents a formal model for arriving at expert clinical judgment based on mental state examination findings, and monitoring the course of illness using parameters derived using the model. The proposed model has been implemented as a clinical tool, which is currently being evaluated in clinical practice. The model has the advantage of improving the reliability and validity of clinical assessment.
X002	Modern IC design industry nowadays demands a lot of engineers to produce circuit design with certain specification of outputs. In order to achieve these specifications, the input parameters need to be optimized. Conventional circuit parameter tuning involves trial and error adjustment which required large amount of time to achieve desired specifications. Furthermore, to build up filter circuits that meeting specification requires experience and knowledge about filter characteristic itself. Intense mathematical knowledge in terms of filter performance calculation might be necessary. This paper proposed Genetic Algorithm (GA) based optimization method for optimizing the design variables of the 3 <sup>rd</sup> order multiple feedback low pass filter. The 3 <sup>rd</sup> order multiple feedback low pass filter is synthesized using LTspiceIV whereas the GA model is developed using MATLAB. There are eight design variables to be optimized for achieving the required output gain, pass-band ripple, and targeted cut-off frequency.
X006	In this study, a dual-band rectangular microstrip antenna is designed for mobile cellular 1.815 GHz and WLAN 2.45 GHz applications by combining the Method of Moments (MOM) based simulation (IE3D) and frequency-dependent Smith-Chart model. The frequency-dependent Smith-Chart model is adopted in this research to reduce an error due to effects of the frequency-dependent characteristics. Considering effects of very high operating frequency in GHz frequency range, frequency-dependent characteristics need to be considered to reduce the calculation error in the design. Specifically, the frequency-dependent characteristic impedance is addressed in length in the algorithm so possibility of errors is mitigated in very high frequencies. The method adopted in this paper can be applied in CAD applications with fast and user-friendly implementations.
X007	The high efficient network is needed to support the rapid growth in mobile networks, since current network PCS1900 (2G) cannot support such a big demand. The objective of the third-generation (3G) UMTS (Universal Mobile Telecommunication System) of wireless communication is to provide high speed wireless communication to support multimedia, large data, and video. However, the co-existence of the two mobile radio systems (PCS1900 and UMTS) which share the same frequency band leads to a major issue. A serious issue of co-existence occurs when the downlink of the system is closer to the frequency bands of the concerned system. The PCS-1900 downlink band (1,930-1,990) and WCDMA (UMTS) uplink band (1,920-1,980) widely overlap, which causes interference between UMTS mobile unit and PCS-1900 base station. Therefore the objectives of this paper is to study the effect from PCS 1900 base station interference on UMTS mobile unit performance in terms of the probability of bit error by developing the Probability of bit error equation of DSS-QPSK from the existing Probability of bit error equation. This paper also evaluates the degradation of UMTS

	mobile unit performance in terms of probability of bit error when the system is interfered by PCS1900 base station.
X008	Problem solving is vital in the computer programming course. It is the earliest topic that is emphasized and more time is allocated to teach the topic. Problem solving requires the problem understanding knowledge that novice students usually lacks. In order to assist novice students in computational problem solving, a multi-agent model is designed. The proposed model is different from existing model in terms of the unique architecture that utilizes agents for information processing, specifically to extract, transform and generate information. Five agents are designed for this purpose namely the GUI, PAC, IPO, Flowchart and Algorithm agents. The model is tested with three different kinds of problem statement and produced correct results.
X0011	Although a face image can be described in illumination-reflectance model, the illumination and reflectance components are not distinctly separated in the frequency domain after the Fourier transformation. In fact, the illumination components of a poorly illuminated face image can be divided into two regions, namely low frequency region and vertical center region. This paper proposed two methods to identify the locations of illumination component in the face images which consist of different subjects and illumination directions. By using inspection method and mean square error (MSE) function, the illumination locations can be determined accurately. The largest location of illumination component discovered via the research will be used as reference parameters to design a customized filter before it is implemented in homomorphic filtering technique.
X0013	Code clone is a result of copy and paste of source codes to solve similar problems. Currently most automated clone detection techniques produce indexed statistical reports showing locations of clones. This paper proposes a Discoverable Digital Clone Repository to enhance Clone Wrapper Detection Technique, to detect, extract and transform clone source code metadata into Clone Family Tree Ontology model stored in Fedora Repository. This is aimed at improving reuse, shareability and reliability of potential clones by software developers and maintenance programmers. The preliminary results show that the Discoverable Digital Clone Repository can store valid Clone Family Tree Ontology which is accessible to developers via Simple HTTP SPARQL queries.
X0018	This paper proposes spherical product functions to define implicit spherical product surfaces. A spherical product function is composed of a contour function and a profile function and its iso-surface's shape is generated by modulating and translating the iso-curve of the contour function through the points on the iso-curve of the profile function. This paper also shows if contour and profile functions are ray-linear, then an implicit spherical product surface can be parameterized and hence have both the advantages of implicit and parametric surfaces. Moreover, this paper proposes ray-linear two-branch and one-branch linear and super-hyperbolic functions that can be used to construct new contour and profile functions with asymmetric or symmetric iso-curves. Based on them, an implicit spherical product surface can has asymmetric or symmetric contour and profile and also has a parametric representation.
X1001	Now we are entering the era of "Big Data", and the important data source of which is Cyber Physical System (CPS) data, those data can hardly be processed by present data processing technology. Complex Event Processing (CEP) is the key part of middleware of CPS, which can process the big data, and context-awareness is an important feature of CEP engine. There are some challenges in context-aware complex event processing for CPS, such as heterogeneous, massive data, distributed event processing, uncertainly; therefore, we propose a distributed context-aware event processing method, based on context representation proposed fuzzy ontology and a distributed multi-level context reasoning method to support uncertainty and linguistic variables in event queries. Based on fuzzy ontology query and similarity based distributed reasoning, complex event query plans are generated and context-aware

	queries are rewritten into context independent sub-queries. Data window is partitioned according to different event patterns and context. The sub-queries are optimized and executed parallel based on data partition. The experiments show that this method can support fuzzy context in CEP and have acceptable performance and scalability.
X003	Electromyography (EMG) is widely used in various fields to investigate the muscular activities. Since EMG signals contain a wealth of information about muscle functions, there are many approaches in analyzing the EMG signals. It is important to know the features that can be extracting from the EMG signal. The ideal feature is important for the achievement in EMG analysis. Hence, the objective of this paper is to evaluate the features extraction of time domain from the EMG signal. The experiment was setup according to surface electromyography for noninvasive assessment of muscle (SENIAM). The recorded data was analyzed in time domain to get the features. Based on the analysis, three features have been considered based on statistical features. The features was then been evaluate by getting the percentage error of each feature. The less percentage error determines the ideal feature. The results shows that the extracted features of the EMG signals in time domain can be implement in signal classification. These findings could be integrated to design a signal classification based on the features extraction.
X0019	Behavior Engineering (BE) is a component and behavioral based system methodology. BE uses Behavior Modeling Language (BML) to models a system. Formal syntax in BML supports automated code generation to the built system. However, no tool exists yet to support it. This paper propose a method in which makes it reliable to support code generation. Rational Unified Process (RUP) terminology such as Workflow, Worker, Activity and Artifacts are used to familiarize the method to people who already familiar to RUP. The suported research target is to apply the BE, so a tool is produced as well to apply the method.

## ICMEB 2013

M003	Beta-glucosidase (3.2.1.21) plays an essential role in the removal of non-reducing terminal glucosyl residues from sacharides and glycosides. Recently, beta-glucosidase has been of interest for biomass conversion that acts in synergy with two other enzymes, endo-glucanase and exo-glucanase. However, there is not much information regarding the molecular interactions of beta-glucosidase with cellobiose. Thus, this study reports on the binding modes between beta-glucosidase from glycoside hydrolase family 1 namely BglB with cellobiose and cellotetrose via molecular docking method. Further analysis on the hydrophobic interactions revealed the key residues involved in forming hydrogen bonds (h-bond) with the substrates. The active residue were identified to be Gln22, Glu167, Glu356, Glu402 and Trp402 .These findings may provide valuable insigths in designing beta-glucosidase with higher cellulose-hydrolyzing efficiency.
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M004	<p>The sweet taste perception in human is mainly due to the specific G protein- copulated heterodimeric receptors (GPCR) T1R2-T1R3 and these receptors gathered in the taste buds of the tongue. The sweet protein acts as an important rule for molecular understanding of the taste mechanisms. Therefore, the Homology modeling of the closely related sweet taste receptors (T1R2-T1R3), is crucial to provide an understanding of the interactions between the sweetens and the receptors. 3A21 and 3Q41 were selected as possible templates for T1R2 and T1R3, respectively based on the phylogenetic evaluations. The models of the target sequences were generated using the program MODELLER V9.10. From the Ramachandran plot analysis it was shown that 79% and 84% of the residues reside in the core region for T1R2 model and T1R3 model, respectively.</p>
M006	<p>The present study focuses to assess the in vitro effect on quality of platelet concentrates (PCs) prepared from overnight-held whole blood (WB). Method: Thirty four units of WB were stored overnight at 20 to 24oC and processed on the following day, and 30 units of WB were processed immediately. Result: The volume of PCs from overnight-held WB on Day 1 was significantly lower. On the same day, the PCs were significantly lower in platelet count but by Day 3 and Day 5, the difference was disappeared. PCs made from overnight-held WB had a significantly higher total red blood count on Day 1, Day 3 and Day 5, and for total white blood count was significantly higher on Day 5. pH was significantly lower on Day 1, Day 3 and Day 5. Sterility test for both groups of PCs give negative results. Conclusion: PRP-derived PCs from overnight-held WB have significantly different in vitro variables as from freshly processed WB. However, based on one-sample t-test comparison with the quality requirement of PCs, the use of the PCs from overnight-held WB was possible as the results of volume, platelet count and pH were significantly higher than the quality requirement and specification.</p>
M008	<p>This study investigates the use of two carbon sources in fermentation for the production of cellobiohydrolase (CBH), an adaptive or inducible enzyme. Selection of carbon source was first done using single substrate cultivation between glucose, maltose and lactose using recombinant <i>A. niger</i> PY11. This recombinant microorganism will produce CBH in high quantity, with maltose acting as its main inducer. Glucose and maltose were selected in dual carbon fermentation, as glucose produce highest biomass 0.32g/ml at day 4<sup>th</sup> and maltose produce 0.42g/ml biomass at day 9<sup>th</sup>. Cultivation of <i>A. niger</i> was done for dual carbon containing sugar glucose and maltose with concentration ratio 1:1. Cultivation with medium containing maltose was done for comparison between single carbon and dual carbon. For dual carbon cultivation, highest biomass form at day 7<sup>th</sup> at 0.44g/ml while specific enzyme activity reached 10.54 U/g at day 8<sup>th</sup>. For single substrate, highest biomass production was recorded at day 9<sup>th</sup> with 0.41g/ml.while specific enzyme activity at day 7<sup>th</sup> at 4.02 U/g.</p>
M20005	<p>Planting mangroves for restoration became popular after the 2004-tsunami in Batticaloa. About 9500 individuals <i>Rhizophora</i> were planted at ten sites around the Batticaloa estuary. Only 8 % plants were remained at the end of 2010. Heavy rain flooded Batticaloa in January and again in February 2011. The followings were recorded one week after the floods: inundation height, each plant height, status of plant shoot (% of green and brown), number of dead plants and salinity of water. Mean height of the first and second inundation were 1.84±0.06 and 1.68±0.08 m respectively. During first inundation, 79 % of the plants had been fully submerged and 21 % partially submerged. During second inundation 24 % of the plants had been fully submerged and 76 % partially submerged. Number of dead plants was 81.3% and 31% during first and second inundations respectively. After first inundation, 52 % of plants had more than 90% of brown-shoot but it was 32% after the second inundation. Salinity was almost zero during inundations. Majority of the isolated individuals were lost whereas majority of the survived plants were from the centre of big patches. Inundation seems to be the main reason for death of plants, but physical forces cannot be overlooked.</p>

M30001	<p>The use of coarse-grained molecular dynamics (CG-MD) technique is a promising tool to explore the time and length scales of real physical system beyond what is feasible with atomistic molecular dynamics (MD). Here, structural and dynamics properties of the bilayer comprising 64 molecules of dipalmitoylphosphatidylcholine (DPPC) in water were investigated using coarse-grained molecular dynamics (CG-MD) simulation method. This was done to explore the effect of temperature and pressure on the self-assembly of DPPC. The models prepared were simulated at the temperatures of 298K and 323K under isotropic and semi-isotropic pressures. The aggregation started from the random configurations followed by forming bilayers in the period of 500 ns for all model systems. Area per lipid, thickness, and radial distribution values were different for each model while the bilayer formation pattern was the same.</p>
M30003	<p>This paper focuses on Sri Lankan apparel manufacturing industry in relation to Global Warming by reviewing the industry contribution to increasing levels of atmospheric Carbon Dioxide (CO<sub>2</sub>) which is the governing factor in global warming. The ultimate objective of this study is to review the Apparel sector organizations in Sri Lanka to determine the extent of fossil fuel burning the sector is responsible and the pragmatic carbon offsetting steps taken by the organizations with commitment. The findings reveal the extent to which the fossil fuel burning is effected and the attitude of the corporate sector in pursuing avenues to reduce the use of fossil fuel. It highlighted that there is indeed a relationship between carbon emission and the burning of fossil fuel used in the generation of electricity. It was also revealed that in order to control the emissions effectively the awareness at corporate level was inadequate. Further, this paper attempts to develop a model of the effect of greenhouse gas in relation to carbon off-setting and carbon neutrality levels. Currently there are around 270 apparel factories in Sri Lanka and 50 apparel companies were selected.</p>
M30004	<p>As it is reported in many publication about successful work of many research in developing biomaterial from <i>Bombyx mori</i> silk which is attract many researchers to observe the possibilities in using different type of the silk other than <i>Bombyx mori</i> for biomaterial. Wild silks which is a silk that is not obtained from domesticated species are become object to explorer for better result for biomaterial. This research focused on Wild silk cocoon of <i>Cricula trifenestrata</i> obtained from Indonesian source. In this study the degumming process to separate the fiber from the cocoon was explored and the result is a separated fiber that is tested for its tensile strength and biocompatibility. It can be concluded that the silk obtained from cocoon of <i>Cricula trifenestrata</i> has good biocompatibility properties. The silk can be prepared by degumming method of boiling in 0.01 M NaOH for 1 hour. The modulus elasticity of the single fiber of <i>Cricula trifenestrata</i> is about 3681 MPa. The ultimate tensile strength is obtained about 162 MPa together with value of failure strain about 0.12.</p>
M30005	<p>Adenosine 5'-monophosphate-activated protein kinase (AMPK) is a key regulator of cellular energy homeostasis and involved in modulating several important cellular mechanism including inflammation. Here we demonstrated that a novel AMPK activator, ENERGI-F704, dose-dependently activated AMPK in human umbilical vein endothelial cells (HUVECs). The pharmacological AMPK inhibitor, compound C, abolished the phosphorylation of threonine 172 residue on AMPK induced by ENERGI-F704. Importantly, ENERGI-F704 treatment did not affect HUVECs viability at the tested concentration. It was also observed that ENERGI-F704 significantly reduced the expression of inflammation cytokine, IL-6, in the high glucose cultured HUVECs during the long culture period. Furthermore, ENERGI-F704 suppressed the high glucose induced monocyte adhesion to HUVECs. Collectively, our data demonstrated that ENERGI-F704 is of use in the application of attenuating the high glucose induced chronic inflammation in endothelial cells.</p>

## *ICFIT 2013*

IT0004	Filter design is complicated especially when advance or higher order circuits are involved. Complex circuit parameters interaction may lead to nonlinearities that require tedious mathematical and theoretical calculations for achieving the design specifications. Thus, expertise is required to study the filter behaviour. This paper suggests a stochastic Genetic Algorithm (GA)-based model to optimize the 4th Order Sallen Key High Pass Filter. The optimization aims to achieve specified range of output gain, cut-off frequency and pass band ripple. The circuit is simulated with LTspice, while the algorithm is developed in Matlab. The results shows that GA has fulfill both input and output requirements of the filter.
IT0006	Detection of blur in digital image, which is commonly preliminary step for de-blurring process, has becoming one of the growing research areas these days and has attracted many attentions from researchers. Research scholars have proposed new methods, or improved blur detection algorithms, based on edge sharpness analysis, low Depth of Field analysis, blind de-convolution, Bayes discriminant function, reference or non-reference block and wavelet based histogram with Support Vector Machine (SVM). The purpose of this paper is to explore the research trends (before year 1993 to year 2012) regarding the usage of blur detection algorithms for digital image processing researches. Because there are thousands of reliable literatures available, the trend is observed from the available online literature alone. Our scope of research has been limited only to search engine of IEEExplore®, ScienceDirect, and Google Scholar database. The searching for literatures will be classified according to their respective keyword for each method being utilized. We observed that low Depth of Field blur detection analysis is currently the most popular method, followed by edge sharpness analysis of blur detection. Google Scholar also has the most abundance source of online literature compared with IEEExplore® and ScienceDirect. Based on the trending graph, we observed that the researches in blur detection method are very positive, showing an overall increasing number of publication from year to year.
IT0013	Competency in computer programming is important not only for the benefit of organizations, industry, and technology, but also for undergraduate students' performance at higher levels of computer science and, more generally, for software engineers. Due to the high importance of computer programming, the strengths and weaknesses of undergraduate students in this subject need to be identified. Weaknesses in particular need to be exposed and remedied to avoid carrying on students' shortcomings to higher school levels or worse in the working environment as professionals. Consequently, this study developed an innovative system named Computer Programming Analyzer (CPA) to evaluate the development and performance of students during computer programming courses. The results showed that the students who participated in the guidance from the CPA could improve their computer programming ability. Moreover, the CPA could be used as a supplement tool for teachers or project leaders to check the progression in computer programming.
IT0014	Before designing a customized filter to improve the performance of homomorphic filtering technique on face images, the locations of illumination component in Fourier spectrum need to be identified. However, the background information of the face images available in the online database may affect the location of illumination component. Thus, a casing is designed to capture poorly illuminated face images with low contribution of reflectance components and dark background so that the exact location of

	illumination components can be identified accurately. This paper presents the specification of the casing and the light source circuit used to control the illumination on the face images.
IT0016	Unstructured text documents are the major source of knowledge in biomedical fields. These huge amounts of information cause very difficult task of extraction or classification. Therefore, there is a need for knowledge discovery and text mining tools in this field. A lot of works have been done on relation extraction in biomedical field. However, each of them was implemented in three major types of techniques separately i.e. co-occurrence, kernel based and rule based methods. There are many variants of these algorithms have been developed but the combination of it has not been verified yet. In this paper we will compare each of those three methods and propose a new combination of relation extraction method between medical and biological entities from biomedical documents. Furthermore, a lot of researches have been done on biomedical binary relation such as protein-protein and gene-protein relations and few researches were on complex relations such as metabolic pathways. However, in this work we will discuss the overview a combination of three methods called as hybrid rule-based to extract complex and simple relations.
IT0017	Direct experience is necessary in the information age, where virtual and indirect experiences are becoming increasingly common. Designing and implementing embedded systems give innovative, effective, and importantly, direct experience to students of computer science and information technology. Communicating sequential processes (CSP), which are effectively implemented by an event-driven and multi-thread processor, have an advantage in understanding the design and implementation of an embedded system because design concepts are implemented in a natural way. We propose a new educational approach, in which a formal development method called incrementally modular abstraction hierarchy (IMAH) is employed. As an example, a line-tracing car is designed and implemented using IMAH.
IT0019	Spectrum-based Fault Localization (SBFL) is a popular fault localization technique that ranks statements in a program according to their suspiciousness to be faulty based on the statement execution records (spectra) of pass and fail test cases. Many SBFL metrics have been proposed with varying accuracies in ranking of faulty statement. In this paper we proposed a new SBFL metric based on a pair scoring approach. We evaluated the performance of the proposed metric and compare it with other existing SBFL metrics. Despite its simplicity, we found the proposed metric outperformed majority of the existing SBFL metrics.
IT0024	In implicit surface, soft object modeling is getting popular because a complex soft object is able to be constructed easily by performing a soft (union) blend on primitive soft objects. Especially soft blend has lower computing complexity than other existing implicit blends because it dose addition operation only. However, in soft object modeling existing implicit blends still do not provide intersection blend containing blending range parameters for generating sequential blends, and precisely only intersection and union blends are developed. In order to solve this problem, this paper proposes two frameworks that can transform an existing union or intersection blend into a new family of Boolean set blending operations, including union, intersection, and difference blends. Based on the proposed frameworks, this paper has transformed scale function, developed from the scale method for an intersection blend, and soft blend, respectively, into two new groups of Boolean set blending operations with blending range parameters. The newly proposed Boolean set operations not only offer blending range parameters for blending range control but also have lower computing complexity and they especially can do bulge elimination in a union blend.
IT0025	Software reliability growth models with confidence intervals (SRGMs) are often utilized in software industry in that they provide useful information for software developers to decide the optimal software release time and to refine the quality of software testing tasks. Most SRGMs, nonetheless, do not have

	transparent explanations for the variance estimation of cumulative software errors. They might not be effective in deducing the confidence interval regarding the mean value function. In such cases, software developers cannot estimate the possible risk variation of software system by using the randomness of mean value function, and it might debase the practicability of applications. In this paper, we utilize Ohba's Inflection S-shaped model to build the SRGM with confidence intervals that can assist the software developers in determining the optimal release time.
IT0027	This research in progress paper aims to study the level of business-IT disconnection between IS outsourcing client and vendor. System Development Life Cycle (SDLC) as a general model for Information System Development and Design is just a formal sequential development guideline for Information System development. However, due to SDLC's inherent deficiency, it does not ensure efficient coordination of interlinked business and software design activities between business management client and information system specialist vendor. In this study, a research model proposed to reveal the relationship between adoption of NIE and system success in IS outsourcing firms. The main objective of this study is to resolve business-IT disconnection between IS outsourcing client and vendor. The results will assist the IS development for IS outsourcing client and vendors.
IT0030	ICT outsourcing is one of the successful strategies implemented to reduce organization's ICT operational cost and to give more priority to their core business rather to ICT operational activities. However, it causes significant risks to the success of the outsourcing ventures especially Information Security Risk (ISR). Therefore, analysis of ISR factors level for ICT Outsourcing project is required to prepare appropriate plan in order to minimize the impact of the risk to organization. The objective of this study is to assess the information security Threat Risks Factor (TRF) severity level for ICT Outsourcing project characteristics through exploratory analysis approach. Questionnaires were distributed to 300 private companies from various industry and government agencies in Malaysia involved in ICT Outsourcing projects. The project characteristics such Projects Type; Number of Service Provider; Outsourcing Strategy, Outsourced Project Percentage; Project Duration; Project Cost; and Project Team Size were analyzed. Thus, TRF severity levels were discovered for ICT outsourcing project characteristics commonly implemented in Malaysia. Results of the analysis reveal the evidence of highly risk ICT outsourcing project characteristics exploited through TRF. Hence, the organization could be able to avoid these ICT outsourcing project profile characteristics in order to minimize the risk and its related impacts. Finally, organizations can re-evaluate potential risks and improve their practices managing information security risk and urgently address information security risks to gain optimum benefits from their ICT outsourcing ventures.
IT0034	Self-localization becomes the main issue for wireless sensor network (WSNs) because WSNs is widely used in various applications that adapt on industries, domestic animal raising and so on. For the low-cost localization and suitable in a real deployment solution, the extra hardware equipment is unsuitable due to its size, power requirement and memory constrain sensor nodes. The Spring-Relaxation localization is a method which can support the requirement of localization. In this paper, we propose the use of a confident value to indicate the correctness of a node's location. Our study shows we can improve the original spring-relaxation distance error by using 40 confidence values.
IT0018	Nowadays, many areas in computer sciences use ontology such as knowledge engineering, software reuse, digital libraries, web on the heterogeneous information processing, semantic web, and information retrieval. However, ontology has still not been used widely in the halal industry. Today, Muslim community still have problem to verify halal status for halal products in the market especially in foods consisting of E number. In this paper, ontology will apply at E numbers as a method to solve problems of various halal sources. There are various chemical ontology and databases found to help this ontology

	<p>construction. The E numbers in this chemical ontology are codes for chemicals that can be used as food additives. With this E numbers ontology, muslim community could identify and verify the halal status for halal products in the market.</p>
IT0033	<p>Autism Spectrum Disorder (ASD) is a brain development disorder caused due to abnormal functioning of brain impacting development activities. Different traditional techniques and methods have been used to communicate with ASD person. Researchers and developers have come up with different innovative ideas to aid ASD patients to communicate with others. As ASD people do not communicate properly so requirement engineers face challenges while gathering requirements from them. This paper focuses on the challenges faced during the requirement elicitation process. As challenges are discussed we have proposed a solution to overcome these problems.</p>
IT3010	<p>At present, the third party logistics in our country is developing rapidly, it also be "The third profit source" of the automobile manufacturing enterprise. Therefore, scientific, reasonable and fair profit distribution model can better encourage member enterprises to reduce logistics cost in guarantee the quality of service. Combining with the third party automobile logistics practical action, on the basis of previous studies, increasing the factor of the performance evaluation to distribution profit, we give the third party logistics enterprise and supplier performance evaluation index. The integrated use of fair theory, Shapley value method, and fuzzy comprehensive evaluation method, the dimensionless and analytic hierarchy process (AHP) to construct the profit distribution model based on four factors of "the cost, contribution, venture, performance" respectively. According to the experts estimate method giving the weight of the four factors and structuring the comprehensive profit distribution model, then list the interest distribution algorithm and the results in detail through an example.</p>
IT3015	<p>Anemia is a globally dreaded health hazard. To reduce the complications due to anemia, Hb level needs to be measured. There are number of methods available for estimating Hb value in blood. Current methods require an invasive and painful needle stick to draw a blood sample. Then it is sent to a laboratory for analysis, with results reported back to the physician later, potentially resulting in diagnosis and treatment delay. There is a requirement for simple method suitable in rural settings. Hemoglobin in blood exhibits the optical properties such as absorption, Transmission and reflection of photons in various proportions based on the wave length of photons. In this discussion photons at appropriate wave lengths (740nm and 805nm) are pumped into the skin on the finger where it is optically least resistant and the Transmitted photons from the Hb content of the blood are received at a photo detector which converts them into electrical signal. Then received signal strength can be calibrated in terms of Hb content in blood. An instrument which is working on this optical property exhibited by Hb is designed. 100 real-time samples are collected at clinical Laboratory; results are compared with standard methods. Early results are encouraging.</p>
IT3016	<p>Network high availability is one of the common problems faced by many university institutions that contribute to operation cost to increase, slow down working speed and increased student's attrition. Virtual Router Redundancy Protocol provide a better way to business continuity and high availability. The main objectives on implementation of VRRP is to create an alternative path, applying virtual routers, implementation of single IP with multiple IP, together with load balancing technique so as to become healthier and not to be overwhelmed by heavy load during operation. VRRP implementation going to be a preminent success for private university, this new finding is going to be very useful to overcome an existing problem and leads to the improvement of services and great benefit to business. To prove workability of VRRP, entirely environment will be simulated using GNS3 network simulator, this will be able to emulate the existing problems hence it can demonstrate the aim and defend the expected objectives.</p>

## *ICEPP 2013*

P001	<p>The main objective of the present investigation is to study the environmental impact due to accidental spill of toxic and flammable liquefied natural gas (LNG) on land. Different case studies of possible accidents in Egypt were considered. US EPA-approved dispersion models were used to estimate the size and location of the formed dangerous zones at different elapsed times from the accident. The growth and decay of the dangerous zones for different concentration levels were also obtained showing them in downwind, crosswind, and vertical directions. In this study the toxicity of natural gas is measured by its concentration causing suffocation to humans while flammability is measure by its lowest concentration in air to cause fire in the presence of an ignition source. Two accidental scenarios of LNG spill from an instantaneous full rupture of a storage tank or a rupture of an external pipe connected to it have been considered. In both cases, constant area or constant thickness of the formed LNG pool were studied. Parametric studies were performed to investigate the effects of wind speed, atmospheric stability, and vertical height on the size of formed dangerous zones.</p>
P005	<p>Industrial development has been defined as the key development paradigm in Vietnam which brings to the country both opportunity and challenge. Although economic growth has been introduced to Danang city since the Hoa Khanh Industrial Zone (HKIZ) was set up, local communities around the HKIZ, such as Hong Phuoc village - the study sites have become more vulnerable due to the industrialization process. In the research, observations, in-depth interviews and focus group discussions were used to collect primary data. The study founds that the community is vulnerable because the HKIZ has made them lack access to local resources, such as livable space, land resources, job and diversity sources of income. The community health is at risk while they lack access to the better healthcare systems. Therefore, the development of industrial activities has given little priority to the maintenance of local livelihoods.</p>
P008	<p>The use of a noninvasive (i.e. saliva) approach to measure heavy metals are seen as a reliable method of investigating heavy elements profile in humans. The main objective of this study is to study the concentration of lead in saliva of affected primary school children. This cross-sectional study was carried out at two different primary schools in Sarawak and specimens were taken from children aged between 7 – 12 years old (n=50). A survey form consisting demographic questions adapted from previous journals was also used to obtain other information. All null hypotheses of this study were rejected since the p-values showed there have a significant association (<math>p &lt; 0.05</math>) for lead concentration between exposed and non-exposed school children while except that for the health risk assessment, where the hazard index (HI) of less than 1 (indicating low risk). There was a mean difference of lead concentration in exposed and non-exposed primary school children. There was an also significant difference for Primary 1, Primary 2 and Primary 5 standard children.</p>
P010	<p>This paper reported on an experimental program to research the effect of using blasted copper slag from shipyard repair and maintenance as replacement of fine aggregates in the sand-cement brick. 20 cubes of cement sand brick mixtures were produced with different blasted copper slag ratio ranging from 0% (for the control mixture) to 60%. All the sand-cement brick mixtures were tested for their compressive strength, density and water absorption at day 28 of air curing. There was a 16.28% improvement in the compressive strength of brick with 20% replacement of copper slag as fine aggregates in comparison with control mixture. However, the addition of higher percentage of blasted copper slag as fine aggregates resulted in reduction of compressive strength but the density was increased. Also, the results of water</p>

	absorption decreased as copper slag ratios in brick increases. The water absorption for 60% of copper slag ratio in brick was the lowest absorption compared to 20% of copper slag to sand ratio in brick. Hence, it is recommended that 0% to 20% of blasted copper slag may be used as a replacement of fine aggregates in order to obtain a good strength and low density of sand-cement brick.
P012	In this study, a biotrickling filter (BF) packed with 32 to 64 liters of wood chips with average sizes 2.03cm×2.25cm, wet packing density 470 kg/m <sup>3</sup> , void fraction 0.57, and specific surface area 300 m <sup>2</sup> /m <sup>3</sup> was tested for the removal of < 10 ppm THC (total hydrocarbon, expressed as methane equivalent) in gases vented from a field zeolite rotary concentrator for waste gas treatment in a TFT-LCD manufacturing plant. Results indicate that with operation parameters of EBRT (empty bed retention time) 2.0 s, pH 6.5-8.0, and daily nutrition milk 0.11 L/m <sup>3</sup> chips (10 g milk powder/m <sup>3</sup> chips), 50% THC in the influent gas could be removed. It was estimated that around 0.016 USD is required for treating 1000 m <sup>3</sup> of the vented gas from concentrators with a gas flow of 2,000 Nm <sup>3</sup> /min.
P014	The presence of heavy metals in landfill leachate pose a risk to the environment especially in unlined landfills where dissipation of leachate into ground water might occur. This study is focused on the assessment of heavy metals in leachate of Al Amerat unlined landfill in the Sultanate of Oman. Leachate samples were collected from leachate pools located behind the landfill and analyzed using the standard methods. Results showed that certain heavy metals found in leachate were exceeding the drinking water standards and waste water re-use and discharge standards of the Sultanate. Al, V, Cr, Mn, Co, Ni, Ba, Pb and Fe were all above the standards in concentrations of 2.050 mg/l, 0.9775 mg/l, 2.800 mg/l, 0.503 mg/l, 0.128 mg/l, 0.773 mg/l, 0.8575 mg/l, 0.130 mg/l, and 39.25 mg/l, respectively. The effect of these contaminants should be considered as surface and ground water contamination might occur. Rehabilitation of such unlined landfills should take place with continuous monitoring programs of ground water sources around the area to contain any contamination that might occur.
P015	Wetlands act as natural sponges that trap and slowly release waters over time and help in controlling floods. At the same time, they retain water and provide time for infiltration of water for groundwater recharge. But these intangible benefits are not properly assessed in developing countries. The significant problem is that such benefits cannot be evaluated as the same way as the market goods. In this context, nearly 11 sq. km area of the western flood plain of Dhaka is selected as the study area. To evaluate the flood control function of the site, Damage Cost Avoided Method is applied. And to evaluate the ground water recharge function at first total recharge quantity in a year is estimated than the quantity is valued. Finally, the estimated value of these indirect use benefits of the site amounts to USD 0.13 million per sq. km in a year.
P016	Measuring pollution in a city is vital for maintaining its living standard and healthy environment. Pollution in land, water, and air of a city is attributed to motorized vehicles, construction works, human and industrial waste and so on. Measuring pollution is, however, expensive in terms of human efforts, resources and costs. For cities in developing countries, such as Dhaka where the authors live, these challenges are severe because of lack of infrastructure and financial capacity. As a functional alternative, in this paper we propose citizen assisted pollution measurement techniques that leverage voluntary participation of city dwellers in collecting pollution-related data and evidence using their mobile phones and other suitable digital gadgets. To this end, we propose techniques for measuring three types of pollution: i) sound/noise pollution, ii) solid waste pollution, and iii) air/carbon emission pollution. We propose schematic system architecture for these measurements and also put discussions on relevant side issues, such as accuracy of these measurements, willingness and incentives for people participation.
P10003	The study determined the heavy metal concentrations (Cu, Zn, Cd and Pb) in dumpsite soil and accumulation in <i>Zea mays</i> (corn) growing in the area. The area of study is a closed dumpsite in Manila, Philippines covered with rich vegetation and being used as agricultural land. Soils and plants were

	<p>sampled and analysed using atomic absorption spectrophotometer (AAS). Concentrations of the metals in the dumpsite soil and plant parts were found to be in higher concentrations compared to normal farmland which served as the control. Significant differences of heavy metals accumulations were observed per plant parts. Traces of metals were found in highest concentrations in the roots of all studied plants. Pb was found to be the only metal in plant parts exceeding the permissible limit given by WHO/FAO. The findings suggest that further study and proper legislation on the use of dumpsite soils must be taken into consideration.</p>
P20003	<p>In recent years the waste water ministerial regulations have led to a constant ascend in the purification performance demanded of waste water treatment plants. Because of this, the number of waste water treatment plants has been maturing, and technical complexity has also been growing. In order to hold the connected rising costs of capital expenditure and operation within bounds, sagacious process technology solutions have to be found. Besides having a deeper understanding of the individual processes, it is indispensable to consider the entire waste water treatment plant as a whole. Most treatment plants consist of a mechanical and biological waste water purification, sludge treatment and gas utilization. In three of these four stages, namely in the preliminary and secondary clarification of the waste water and in the thickening and dewatering of the sludge, the processes for solids/liquids separation are of crucial importance.</p> <p>The efficiency of the solids/liquids separation is mainly influenced by the properties of the sludge.</p>
P30002	<p>Despite the consequent development of solar thermal systems in many countries, there are many difficulties which to a large extent hamper the implementation of these products. The summary of discussions of the R &amp; D seminar organized by ADEME in Sophia Antipolis (27 – 28 April 2004) about "the need for innovation in solar thermal", states that solar thermal systems currently available in the market are added to the building without real integration. The problems, both technical and aesthetic, are the obvious obstacles to the development of this type of systems. For these reasons, in the frame of the present work, a new flat plate solar collector with high building integration and a prototype of this collector were developed. A numerical thermal model, developed in Matlab® environment by using a finite difference model was validated. Then, a modelling of the solar system was realized and the performance of the proposed system was optimized for various solar collector configurations.</p>
P30003	<p>The corrosion inhibition of some common surfactants and biosurfactant on mild steel has been investigated in hydrochloric acid at different concentrations of the inhibitor using mass loss, potentiodynamic polarization and electrochemical impedance spectroscopy measurements. The interest in these surfactants stems from their potential as 'green compounds' because of chemical and thermal stability, nonflammability, high ionic conductivity, and a wide electrochemical potential window, which makes them as good inhibitors. A significant decrease in the corrosion rate was observed in presence of the investigated inhibitor. The polarization curves showed that, the inhibitor behaves as mixed type but the cathodic effect is more pronounced. The surface tension at 298K was measured; the critical micelle concentration (CMC) and some surface active parameters were calculated. The inhibition efficiency (<math>\eta</math> %) of this surfactant has been studied by both chemical and electrochemical techniques at 25 °C. It was shown that an excess of cationic and anionic surfactant resulted in the formation of nanostructures. The observed corrosion data indicate that, the inhibition of mild steel corrosion is due to the adsorption of these molecules on the surface. The adsorption mechanism onto steel surface in acid medium in the absence and presence of surfactant was also discussed.</p>
P30004	<p>In this study, TiO<sub>2</sub> nanoparticles were synthesized by the P-25 powder modified sol-gel method and immobilized on alumina foam as support. The structural properties of the as-prepared film were characterized by XRD, SEM, and BET analysis. The XRD results show no discernible changes in the</p>

	structure of TiO <sub>2</sub> as a result of the immobilization procedure. The formation of microcracks in the film, as observed in SEM images, may have a beneficial effect on the photocatalytic performance of the as-prepared film with respect to the exposure of TiO <sub>2</sub> nanoparticles within the inner layers to the solution. Comparing with the films synthesized by the sol-gel method and those made from the slurries of P-25 powder, the film prepared by the modified sol-gel method exhibit higher photocatalytic activity. The reasonable performance and sufficient stability of the TiO <sub>2</sub> nanoparticles on alumina foam leads to consider it as an effective and environmental friendly photocatalyst in the degradation of colored wastewater.
P30005	TiO <sub>2</sub> nanoparticles were synthesized by the P-25 powder modified sol-gel method under different TTIP (Titanium tetraisopropoxide) concentrations, P-25 loading and the gelation pHs. Based on XRD analysis SEM results and BET technique, the crystalline composition, the level of crystallinity, the particle size and the surface area of the as-prepared samples were found to be affected by these parameters. Response surface methodology based on central composite design was used to optimize these synthesis parameters in photodegradation of Acid Red 73. The degradation efficiency was significantly affected by P-25 loading, pH value of gelation and the interaction effect between TTIP concentration and P-25 loading. The optimal values of parameters were found to be a pH of 1.34, a TTIP concentration of 0.25 M and a P-25 loading of 39.76 g/L. Regression analysis with an R <sup>2</sup> value of 0.9549 showed a good agreement between the experimental results and the predicted value.

## ICFAS 2013

G0001	The sweet taste perception is mainly sensed by T1R2 and T1R3 human sweet taste receptors, which belong to the super family of G protein coupled receptors (GPCR). However, there is yet a clear study to describe the binding modes of T1R2 and T1R3. Therefore, further experimental and the computational data is needed to understand more about the GPCR, especially for the homology modeling as it is important to reduce the gap between the protein structures and sequences. In this research, 3MQ4 and 2E4U were selected as templates for the chimeric T1R2 and T1R3. MODELLER V9.10 was used to create the 3D structure of the target sequences, and finally the Ramachandran plot evaluations showed that 83% of the residues are located in the most favoured regions for the chimeric model.
G0005	About one third of the cultivated land in Egypt is suffering from high sodicity, water logging, depletion of nutrient cations and deterioration of soil structure. Therefore, growing conditions for plants become more stressful. The paper aims at evaluation of finely crushed basalt as a cheap soil conditioner to increase food crops production. Basalt from different localities of Egypt collected and characteristic using XRD and XRF. The results from XRD analysis of fresh samples of Baharia Oasis, El Arish and El Fayium basalt show plagioclase as the most abundant minerals in addition to forsterite (Mg <sub>2</sub> SiO <sub>4</sub> ) and fayalite (Mg <sub>2</sub> Fe <sub>2</sub> O <sub>3</sub> ). Clinopyroxene auguite [ (Ca,Na)Mg,Fe <sup>3+</sup> , AlFe <sup>3+</sup> ,Ti)(Si,Al) <sup>2</sup> O <sup>6</sup> ] and enstatite (MgSiO <sub>3</sub> ) are recognized. Iron oxide and oxyhydroxide represented by goethite and hematite. However, the XRD pattern of altered basalt showed the presence of a phyllosilicate such as kaolinite, smectite, illite, chlorite and celadonite. At Gebel Abu Terrify, plagioclase, olivine and pyroxene were detected as remnant of basalt, trioctahedral smectite is the main component followed by calcite and zeolite. XRF data revealed that the studied basalt provides abundant amounts of a number of macro- micronutrients that are essential for plant growth (notably calcium, magnesium, and trace elements: iron, manganese, zinc, and copper), but no nitrogen, and relatively low amounts of phosphorus and potassium. Crushing, Grinding, particle size, work index and energy consumption of four basaltic samples were carried out. The average of the sum of the 4 basic cations (Ca, Mg, K, Na in cmol/kg of crushed basalt) for each of particle size fraction of the studied basalt provided a sound basis for determining the effective cation exchange capacity (ECEC) of the fraction. The trend of

	ECEC is analogous to that shown for the individual cations. That is, the ECEC increases to a maximum as the particle size of the crushed basalt fraction decreases to > 125 $\mu$ m. The basalt dust has great effects on decreasing the salinity of soils based on the soils texture.
G0007	Tow avian species; Japanese quail and Sinai chickens were examined genetically using 3 microsatellite markers to detect genetic variation. The studied loci on average produced 5.666 alleles per locus (range: 4-8). The mean observed heterozygosity ( $H_o$ ) was 0.568 and ranged across loci from 0.125 to 0.900, whereas the mean expected heterozygosity ( $H_e$ ) was 0.697 and ranged between 0.611 and 0.843. The polymorphic information content (PIC) values varied among loci and ranged between 0.519 for locus GUJ0063 and 0.806 for locus GUJ0087 with overall mean 0.637. Differentiation among populations was high ( $F_{ST} = 0.311$ ; $R_{ST} = -0.042$ ). Sinai chickens showed no departure from Hardy-Weinberg equilibrium, while Japanese quails were not in Hardy-Weinberg equilibrium. These results reflect that, the set of studied markers can be used effectively to capture the magnitude of genetic variability in both of Sinai chicken and Japanese quail populations.
G0016	Proximate and trace metal contents of fish is of great interest to the consumer and the nutritionist. In the study, trace metal concentrations and proximate compositions of local and imported fish species were examined. The result of the analysis showed that all fish species have adequate amount of fish proteins necessary for human consumption. The high yield of fillet makes Atlantic mackerel the best source of raw materials for canning and great value when added to other products. The lipid content reveals that all fish species can be preserved using local methods. The result of the analysis shows that the levels of Cd in all the fish samples were between 0.03 mg/g in cat fish species and 0.09 mg/g in Tilapia fish species. The concentration of Zn was found high in catfish species while low concentration was recorded for Tilapia fish species. It was further revealed that the levels of Cd and Zn were below permissible levels for human consumption. Pb was not detected in the entire species understudy. These findings conclude that the fish species understudy were safe for human consumption and adequate for various methods of preservation.
G0017	The study was conducted to characterize seven wheat ( <i>Triticum aestivum</i> L. and <i>T. durum</i> L.) accessions from the arid and semi-arid areas of Oman using morpho-anatomical characteristics. Omani wheat germplasm had a great magnitude of variation in qualitative and quantitative morphological characteristics, and stem, leaf sheath and leaf blade anatomical characteristics. Modifications in the structural features related to drought tolerance were thick epidermis and cuticle, highly developed bulliform cells and dense covering of epidermal hairs for preventing water loss. Another feature is highly developed mechanical tissues with intensive sclerification, for providing a mechanical strength to soft tissues and preventing tissue collapse. All these structural modifications are of ecological importance, which can be extremely helpful in combating extreme aridity in these Omani wheat landraces.
G0020	A glasshouse experiment was carried out at Sultan Qaboos Univeristy, Oman, to evaluate the performance of cucumber grown at varying salt stress levels viz; 0, 2, 3, 4, and 5 dSm <sup>-1</sup> . The results revealed that salinity adversely affected the morphological, physiological and biochemical attributes of cucumber. The results exhibited that stem length and number of leaves per plants was substantially reduced at 5 dSm <sup>-1</sup> . Moreover, the highest weakening in shoot and root dry weights were noted at 5 dSm <sup>-1</sup> NaCl level in contrast to control treatment. The data set further narrated that the electrolyte leakage was enhanced remarkably with the increasing NaCl levels; however, substantially maximum electrolyte leakage was noted at 5 dSm <sup>-1</sup> . Moreover, the same salinity level also decreased total chlorophyll contents than any other salinity level. Water potential of cucumber plant was decreased with increasing NaCl levels and maximum lower water potential was observed at 5 dSm <sup>-1</sup> NaCl level. In conclusion, the varying levels of salt stress substantially reduced the morphological, physiological and biochemical; maximum reduction in all growth and physiological attributes were observed at salinity level 5 dSm <sup>-1</sup> and this was positively correlated with

	increased salinity regimes.
G1006	The organic amendment 'vermicompost' has ability to improve soil health and crop quality to a great extent depending on its application amount. In the present investigation, we analyzed the effect of different combination of soil and vermicompost mixture on physical, chemical and biological properties of growing media and on yield and quality of sweet corn grown in pot experiment at Indian Institute of Technology Kharagpur India, during the years 2012 and 2013. The bulk density of the media was lowered from 1.32 g/cc in full soil to 0.53 g/cc in full vermicompost. On the other hand, porosity and water holding capacity of the soil and vermicompost mixture steadily increased from 39.6 to 72.4 % and 31.3 to 175 %, respectively with increasing the proportion of vermicompost from 0 (full soil) to 100% (full vermicompost) in the mixture. Similarly, soil available N and microbial population increased with increasing application of vermicompost. In the mixture, soil proportion of 30-40% and rest vermicompost (60-70%) can meet the crop nutrient demand throughout the growth stages for increasing yield and quality of the sweet corn through improvement of soil physical, chemical and biological properties.
G2011	Food security paid great attention in all countries all over the world to supervise and manage the food. The State Council of People's Republic of China issued "The Decision of Further Strengthening Food Security" instantly after the H7N9 virus was first discovered at Shanghai, China. The food security involves in many sectors, levels and segments. China should build the system of law; unify the system of adjustment and clarify the inspection system of authority and responsibility; establish the system of emergency; promote the criterion and inspection system of food security; establish the systems of risk evaluation and information; And setup research institutes in order to improve the level of food security and public health as soon as possible. Besides, in this paper, it's most interesting that a U-curve trend has been discovered about the connection between food security and human death during the past fifteen years. There are some complicated reasons for this worrisome trend. In the end, the authors summarize the lessons we should learn from the H7N9 virus outbreak in China and point out the possibly directions in the future.
G2014	Muscovado is a nutritious sugar that is brown in color, has coarser, stickier texture, distinct taste and aroma making it unique and highly prized. Quality evaluation of muscovado stored in various packaging materials was done on different storage time. The evaluation involved microbial and physicochemical property determination of muscovado stored in six types of packaging materials; Low Density Polyethylene (LDPE) and High Density Polyethylene (HDPE) plastics, plastic and glass containers, aluminum pouch and open storage (control). Stored muscovado at ambient temperature were analyzed periodically at 21, 42, 53 and 84 days for Standard Plate Count (SPC), mold and yeast counts, moisture content (MC), water activity (aw), safety factor (SF), sucrose, reducing sugar and color. SPC, mold and yeast counts steadily increased at 21 days after processing until 42nd day and slowly declined until the 84th day. Of the physicochemical properties, only sucrose content of muscovado decreased with storage time. MC, aw and SF increased with storage time. Results showed that glass container, aluminum pouch and HDPE plastic are appropriate muscovado packaging materials. Glass container produced the most stable muscovado, but is impractical to use, thus a flexible packaging material with combined properties of aluminum pouch and HDPE plastic is recommended.
G2015	The prevalence of type-2 diabetes in the world is increasing with family history and unhealthy lifestyle as the well-known risk factors. Cross sectional study was performed by interviewing seventy nine young adults with diabetes family history (age 20-40 years, Body Mass Index (BMI) 16.8-39.5 kg/m <sup>2</sup> , forty nine of which have diabetes and thirty subjects are healthy without diabetes) regarding their dietary patterns, physical activity level, and sleeping patterns. It was observed that before being diagnosed with diabetes, respondents with diabetes followed an unhealthier eating pattern and had a lower sleeping duration. Their daily fat, carbohydrate, and added sugar intake were also higher than their healthy counterparts and were above the recommended amount by Indonesian Health Ministry. However, no difference was observed in physical

	<p>activity level as both groups could be considered as sedentary. Although this study did not directly show a causal relationship, this unhealthy lifestyle could be correlated with the incidence of diabetes in the groups through increased BMI or other mechanisms. Seeing how both groups had similar family history but were different in diabetes status and lifestyle, it could be suggested that lifestyle may play a bigger role than family history in the onset of diabetes.</p>
G2020	<p>The seed of Rambutan (<i>Nephelium lappaceum</i> Lin L.) mostly remain as a waste material annually in large amount because it is slightly bitter, cause of bitterness in seeds of rambutan are traces of alkaloid, tannin, saponin and polyphenol content . There should be a proper method for removing bitterness from the seed to produce almond like snack item. Taking this issue into consideration, this study attempts to determine the effect of fermentation on reduction the levels of antinutritional factors and bitterness in kernel. This indicates that their deleterious and antinutritional effects could partly be removed by fermentation as a pretreatment. Chemical composition of fermented seeds was considered for 0,1,2,3 to 10 days. Effect of fermentation period were analyzed for chemical composition and reduce cause of bitterness, Regression results showed that fermentation significantly (<math>p \leq 0.05</math>) increased the lactic acid, acetic acid, fermentation index, lipid content and color(<math>a^*</math>,<math>b^*</math>), however decreased moisture content, pH, crude protein, total phenol content, saponin content and tannin content.</p>
G2023	<p>The study was carried out with four purposes. The first objective included the socio-economic characteristics of dry season Okra marketers; the second described the marketing channel; the third analysed the structure and conduct of the market; and the fourth determined the marketing margin for dry season Okra marketers. Multi-stage sampling technique was adopted for the study. 111 Okra marketers were selected and structured questionnaires administered to them. Descriptive statistics, Gini coefficient model and Marketing margin analysis were used for analyzing the objectives. Most of the Okra marketers interviewed were females indicating that these were doing active dry season marketing of Okra vegetable in the study area. Eight (8) marketing channels were identified. From the Gini coefficient model, which determined the level of concentration in relation to the structure of the markets of wholesale and retail markets, there were no barriers to entry and exit in and out of the markets during the dry season period. There was a high percentage (93%) in the marketing margin of the marketers. Government's indispensable role in building and repairing worn out roads, as well as constructing new ones; which will in turn bring about reduction in the cost of transportation and minimization of vegetable losses in the marketing process should be encouraged.</p>
G2027	<p>The effects of insect infestation by <i>Rhizopertha dominica</i> on quality parameters of wheat (UP2204) were investigated. The wheat samples (uninfested and infested) were analyzed for nutritional contents viz.–Carbohydrate, Protein, Phenol and the changes in chemical structure were assessed by SEM. Chemical analysis showed that due to infestation carbohydrate and protein content decreased by 85.7% and 13.5% respectively whereas total phenol content increased relatively by 41.6% due to difference in distribution of protein and carbohydrates throughout the wheat grains and the Carbon, Phosphorous, and Potassium contents spiraled up by 4%, 2% and 1% respectively. Infestation also led to weight loss of 16.7% and changes in the chemical structure and composition of wheat grain.</p>
G2029	<p>Surfactin, a lipopeptidic biosurfactant from <i>Bacillus subtilis</i> can only be produced under appropriate fermentation conditions and one of the factor being considered is their nutrient source. Conventionally, production of surfactin had been practised by utilizing commercial laboratory media in either both small and large scale fermentation. Alternative media options are being sought from agro-based wastes in order to minimize the production cost due to its relatively abundant and inexpensive raw materials. Palm oil mill effluent (POME), an agricultural waste from palm oil industry has been reviewed as a promising candidate that could potentially to be exploited. This study investigated on the feasibility of POME as fermentation</p>

	media in surfactin production by using prominent surfactin producer of <i>B. subtilis</i> American Type Culture Collection (ATCC) 21332. Nutrient analysis showed POME consisted of significant amount of fermentable sugars, nitrogenous compounds, and essential elements that could support the bacterial growth and surfactin production. Fermentation study evaluated that POME media at various concentrations (10, 30, and 50%) were capable to produce surfactin with different yields. The highest surfactin amount was achieved by using 50 % (v/v) of POME compared to other concentrations studied.
G3002	The level of adoption of improved cashew ( <i>Anacardium occidentale L.</i> ) production technologies by farmers was assessed in the Southeastern Tanzania. The study was conducted in three selected districts namely Tandahimba (Makonde plateau), Mtwara rural (Coastal area) and Nachingwea (Nachingwea-Masasi plain). The findings have revealed that most of the respondents were experienced cashew farmers being aware of improved cashew technologies. On the other hand study has confirmed that only a proportion of respondents have adopted improved technologies at different levels. Several factors were responsible for constraining farmers from adopting the package of cashew technologies some of them include inadequate and untimely supply of inputs particularly those with subsidies and also delay of payment after farmers sold their raw nuts. Further results of logistic regression summarize the factors that influenced adoption of technologies. It was found that number of years spent in school, number of active labour in the household and access to extension services were the most important factors that influenced technologies adoption. In last section of this paper recommendations were made, some of them include; district councils should supervise and ensure adequate and timely supply of inputs and also building capacity of extension officers on recommended cashew management practices.
G3003	The utilization of <i>Lankauas</i> ( <i>Pyramidata Blume merr</i> ) in fermented Indian oil sardines ( <i>Sardinella longiceps</i> ) was conducted to determine its effect to fermentation period and the physical attributes of the fish sauce and bagoong. Three (3) different formulations were prepared and the amount of liquid hydrolysed from the formulation was observed daily. Likewise, the nutritional value or chemical constituents and halophilic yeast were determined. The raw materials are highly nutritious and have paramedic effect. Result of sensory evaluation was analysed through Friedman two-way analysis of variance by ranks (ANOVA). It was found out that the best treatment or formulation was Treatment 1 a mixture of fish with 25% salt and 5% of <i>lankauas</i> added per kilo of fish. Utilization of <i>lankauas</i> to <i>Sardinella longiceps</i> shortened the fermentation period to 60 days and improved the quality and enhanced the flavour and odour. Protein and mineral content of fish sauce (patis) and Fish paste (bagoong) was very high and exceeded the Philippine standard for quality of fermented fish. Products were safe from any pathogen bacteria. Halophilic yeast count increased with decreasing salt concentration.
G3015	The effect of socio-economic characteristics on small scale farmers in Apa Local Government Area of Benue State, Nigeria was examined. Respondents (120) were selected based on multi-stage sampling procedure, and structured questionnaire was used to generate appropriate data. Descriptive and inferential statistics were employed to analyze data. The respondents were predominantly male (79.80%) between 41 – 50 years and with more than twenty years farming experience. About 45% of them have households comprising 6-10 people and implies large family size. About 48.70% of them had only primary school education and 65.80% have dependents of between 1- 5 people. A large proportion (44.50%) of respondents does not have off-farm income, and majority (62.20%) was poor. Logistic regression results showed that age (0.336) and farm size (0.415) significantly and positively affect poverty status of respondents. Years spent in formal school (-2.138) and farming experience (-0.349) were also significant. Most (62.20%) of the farmers live on less than one US dollar per day. Human capital development and training opportunity if provided will not only enhance the acquisition of more human capital, but also more income that will combat poverty.
G3016	The effects of the wet milling (WM) and dry milling (DM) on the physical and antioxidant activity of the

	<p>nanostructured ginger rhizome powder (NG) were studied and compared with its micron (MG) and submicron particle (SM). Both dry and wet milling processes reduced the particle into nanoscale (in the range of 200 to 250 nm). DM showing a 3.6% increase in size compared to the WM nanostructured ginger rhizome. A higher degree of the agglomerated nanoparticle was found in the DM based on FESEM image. Greater value of TPC and TFC showed in DM sample (1178.33 mgGAE/g and 22.35 mgQE/g of dw respectively, followed by the WM with 9203.70 mgGAE/g; 20.16 mgQE/g of dw respectively, SM with 7595.27 mgGAE/g; 16.22 mgQE/g and the MG with 6938.33 mgGAE/g; 14.80 mgQE/g of dw correspondingly. No difference in the DPPH free radical inhibition between the DM and WM samples, but greater than the SM and MG. Moreover, the DM showed a strong (<math>p &lt; 0.05</math>) ABTS free radical scavenging activity and FRAP compared to the other samples tested. The antioxidant activity was in the following sequence: DM&gt;WM&gt;SM&gt;MG. Dry mill process had a potential to produce the nanostructured ginger rhizome with better antioxidant activities.</p>
G3019	<p>The extract from the fruit hull of mangosteen (GME) possesses a wide variety of biological activities, however, its effects on learning and memory remain to be elucidated. Thus, the aim of the present study was to investigate the effects of GME on spatial learning and memory of adult male Wistar rats. Rats received vehicle (10% tween80, 1 ml/kg), vitamin E (40 mg/ml/kg), GME (500, 1000 or 2000 mg/ml/kg) orally once daily for 30 days. Spatial memory and learning of rats were tested by Morris water maze test. The protocol consisted of 21 training trials (3 times per day for 7 days on day 24-30) and probe trial on day 30. In all groups, time to find platform on day 7 of training trial was significantly decreased from day 1. Time spent in target quadrant was significantly increased in vitamin E-treated group and 500 mg/ml/kg GME-treated group when compared to vehicle treated group. No significant difference was found in the number of entry into the target quadrant between groups. Thus, GME appears to improve learning and memory in adult rats. GME may promote neuroprotective effects, however, the underlying mechanisms are still not fully understood.</p>
G3020	<p>This study assessed effects of <i>Centella asiatica</i> extract on blood pressure and heart rate (HR) of N-nitro-L-arginine methyl ester (L-NAME) induced hypertensive rats. Male Wistar rats were anesthetized with sodium pentobarbital (50 mg/kg, i.p.) and their left carotid arteries were cannulated for invasive blood pressure measurement. Mean arterial blood pressure (MABP), systolic blood pressure (SBP), diastolic blood pressure (DBP), and HR were recorded continuously throughout the experiment using PowerLab system. Thirty minutes after administration of L-NAME (40 mg/kg, i.p.), rats were intragastrically administered with either DDD water (20 ml/kg), quercetin (5 mg/20 ml/kg), propylene glycol (20 ml/kg), or <i>Centella asiatica</i> extract (4, 8, 16, or 32 g/20 ml/kg), <math>n=8</math> each. All recordings were further continued for 90 minutes. L-NAME significantly increased MABP, SBP and DBP. <i>Centella asiatica</i> extract (16 g/20 ml/kg) and quercetin significantly lowered the elevated MABP, SBP, and DBP in L-NAME induced hypertensive rats. <i>Centella asiatica</i> extract and quercetin did not cause any change in HR of rats receiving L-NAME. The present study demonstrated blood pressure lowering effect of <i>Centella asiatica</i> extract in L-NAME induced hypertensive rats. These findings provide scientific support for tradition use of this plant to modify the actions of human cardiovascular system.</p>
G2010	<p>The incidence of aerobic sporeforming bacteria in some foods of animal origin obtained from Ismailia city markets was investigated. A total of 150 food samples, 25 each of frozen beef, frozen minced beef, frozen sausage, cow milk, soft Dommietta cheese and full cream milk powder were subjected to microbiological analyzed. Aerobic sporeforming organisms were detected with 100% in all examined frozen meat samples, while 23 (92%), 14 (56%) and 10 (40%) of cow milk, soft dommietta cheese and milk powder samples were positive for the incidence of aerobic sporeformer bacteria. The mean values of total aerobic sporeforming counts for frozen meat, minced beef and frozen sausage were <math>6 \times 10^3</math>, <math>2.2 \times 10^6</math> and <math>4 \times 10^5</math> 102 CFU/g</p>

respectively, while for cow milk, soft Dommietta cheese and milk powder samples were  $3.5 \times 10^4$ ,  $5.1 \times 10^3$  and  $2 \times 10^2$  cfu/ml or g respectively. Nine Bacillus strains represented by 203 isolates were identified from the food samples. Genus of *B. cereus*, *B. flexus* and *B. pumilus* had both proteolytic and lipolytic activities.

## ICNEE 2013

W4000	Electrospinning is a technique that is exceptionally well-suited for reliable, cost-effective production that uses electrostatic forces to form and manipulate a jet of polymer solution to form nano-sized, fibrillar polymeric materials. However, producing smooth (non-beaded) fibres with truly nano-sized diameters is not an easy task and is highly influenced by polymer selection. Substantial versatility also exists in the properties and morphologies of the nanomaterials produced with this method. Knowledge of the fundamental features and current trends within the sector of electrospinning are enabling the reliable, effective production of materials that would be most suitable for a variety of applications. This article will discuss each of these issues and will demonstrate the usefulness of the electrospinning technique with a brief overview of the key applications of interest including those which have obtained commercial success. Overall, this article will demonstrate how electrospinning is a unique and effective tool that continues to develop at a rapid pace, with substantial commercial potential yet to be unlocked.
W008	This paper explains the influence of oxygen partial pressure on crystallographic structure, surface morphology and sensing properties of sputtered MoO <sub>3</sub> thin films. The MoO <sub>3</sub> thin films were deposited by DC reactive magnetron sputtering technique on glass substrate at different oxygen partial pressures in the range of $5 \times 10^{-5}$ - $4 \times 10^{-4}$ mbar. X-ray diffraction (XRD) results showed that all prepared films were polycrystalline of $\beta$ -MoO <sub>3</sub> stable orthorhombic phase. Atomic force microscopy (AFM) images depicted a needle-like structure for deposited film at lowest oxygen partial pressure ( $5 \times 10^{-5}$ mbar) and a granular structure for formed samples at higher oxygen partial pressures ( $1 \times 10^{-4}$ and $2 \times 10^{-4}$ mbar). These results also showed that increasing of oxygen partial pressure up to $2 \times 10^{-4}$ mbar caused increasing of grains size and surface roughness, while an increase in oxygen partial pressure to the highest pressure ( $4 \times 10^{-4}$ mbar) had an inverse effect. The electrical response of samples was measured in vacuum and NO environments in the temperature range of 150-350 K. This study showed that the NO gas detection sensitivity of MoO <sub>3</sub> thin films improved with increasing of oxygen partial pressure up to $2 \times 10^{-4}$ mbar, and then decreased.
W009	Nanocrystalline bismuth phosphorus oxide (BPO) materials with a lamellar structure have been successfully synthesized for the first time via hot injection method. Parameters in synthesis condition including amount of reaction solvent (3-130 mL, 2.81 M), reaction time (5-60 minutes), and ageing time (1-168 hours) were investigated in order to yield nanocrystalline BPO materials of high crystallinity. XRD results showed the synthesized BPO materials crystallized in face centered cubic (FCC) phase with a lamellar structure. It has been demonstrated that degree of crystallinity of the materials varied with different reaction solvent amounts, reaction times and ageing times used in the synthesis procedure. Evidently, the optimum condition in yielding BPO with high crystallinity and ordered lamellar were 52 mL 2.81 M reaction solvent, 30 minutes reaction time, and 20 hours ageing time. TEM images showed the particle size of the BPO material synthesized at optimum condition ranged 10-20 nm.
W014	Nano-structured hydrotalcite based mixed oxides have been synthesized using coprecipitation method under variable pH and low supersaturation condition. XRD technique has been used to confirm the hydrotalcite structure and its derived different phase of mixed oxides. The metal dispersion of mixed

	oxides was analyzed using ICP-MS. The nanostructures of the mixed oxides have been investigated using FESEM and HRTEM. The textural properties of mixed oxides were analyzed using N <sub>2</sub> adsorption-desorption (BET) technique. The Characterizations have revealed that the developed mixed oxides were consisted with hexagonal/rhombohedral well dispersed nano-particles. Polycrystalline mixed oxides formed mesopore surface and narrower pore size distribution.
W016	Due to the growing interest in using mesoporous materials as catalytic support, this paper presents the synthesis and characterization of mesoporous silica (SBA-15) prepared under different synthesis conditions. Variables studied were acidity of the synthesis duration, synthesis sol, aging duration, and washing solvent. The influence of these parameters on the textural properties and morphology of the mesoporous silica is reported. Increasing the sol acidity changed the shape of the particles from cylindrical (fiber) to spherical.
W017	Molecular modelling methods were used to investigate the structural and interatomic potential of bulk cubic zirconia. To widen the scope of the expected outcome, <i>GULP</i> and <i>CASTEP</i> software were used based on the concept of minimizing the energy of the crystal structure with respect to atomic coordinates. The crystal structure of cubic zirconia was modelled and optimized; the lattice parameter of 5.10 Å obtained is similar to available calculated and experimental values. The developed interatomic potential is based on <i>Born</i> model for ionic solids without defects. The calculated interatomic potential of 109.67eV per atom is also within acceptable range, but variation was observed depending on the relative position of individual atoms. The modelling gave a better understanding of the bulk crystal structure of cubic zirconia due to detailed parameters that were obtained. Also, the determined parameters were used to estimate the Young's Modulus of bulk zirconia as 397GPa.
W018	Design and modeling of a CMOS MEMS device using 0.35 μm CMOS technology is used to achieve high sensitivity on mass sensing is presented in this paper. The purpose of this paper is to investigate the effect of increasing beams lengths which support the membrane of the device, on the resonance frequency to achieve high sensitivity. A study on the effect of added mass on the device on natural frequency is also conducted. Mass sensitivity of this device is found to be 153 mHz/ng. At damping ratio of 0.0002, the resonant frequency of the resonator is 19.04 kHz with quality factor 3500.
W1000	This paper presents varied CMOS ring oscillator topologies using Silterra 0.13-μm Process. Three topologies of ring oscillators have been designed which is the single-ended ring oscillator, differential ring oscillator and ring oscillator based variable resistor for 2.4 GHz wireless applications. The proposed designs consist of five stages delay cell. The simulation results show that a single-ended ring oscillator obtained the lowest power consumption of 0.41 mW, while differential oscillator achieves phase noise of -64.44 dBc/Hz at 1 MHz offset frequency. However, ring oscillator based variable resistor did not achieve any significant improvement. The proposed design is oscillates at 2.4 GHz.
W2001	Eco-friendly films have been prepared using various biopolymers and their properties have been improved in order to meet the requirements for appropriate applications. However, the frequently encountered weakness of the properties of most biopolymer film is its water solubility. In this study, the polyvinyl alcohol/rice starch/silk fibroin (PVA/RS/SF) films were modified by the addition of glycerol aiming to increase the hydrophobicity of the films. Some properties of the modified films including water contact angle, degree of swelling and water solubility were compared with the unmodified PVA/RS/SF film. Results from the contact angle measurement showed that the films with glycerol could be transformed to be hydrophobic after soaking in ethanol medium. The increase in

	soaking time tends to increase the hydrophobicity of the films. However, at about 60 min soaking, the water contact angles on the films were quite constant with the values of about $107.9 \pm 5.2^\circ$ comparing with $65.3 \pm 2.4^\circ$ of the ethanol-untreated PVA/RS/SF films. In addition, the ethanol-treated glycerol-modified films also show higher degree of swelling with constant solubility and better mechanical properties.
W2002	Hydroxyapatite (HA) has been widely utilized in the biomedical applications due to its chemical and structural features that are similar to the natural bones. The addition of organic components enhances the flexibility of the HA-based composites which result in increasing its molding ability into any desirable shapes. In this article, preparation of hydroxyapatite/silk fibroin (HA/SF) composite using sol-gel method is reported. The optimal condition for preparing the HA/SF composites was determined by judging from their crystallite size, crystallinity and particle size distribution, morphology and calcium/phosphorus (Ca/P) ratio investigated with X-ray diffraction analysis, particle size analyzer, scanning electron microscopy and energy dispersive X-ray spectroscopy, respectively. The HA/SF composite was successfully prepared in the binary solvent of ethanol and water at the optimal volume ratio of 4:1. At this solvent condition, the composites had a uniform rod-like shape, ranging from 30-70 nanometers. The Ca/P ratios of all composites are close to the theoretical value of about 1.67.
W2004	Silk fibroin (SF) and rice starch (RS) are both biopolymers being non-toxic, biocompatible and biodegradable which can be utilized as hydrogels. The aim of this study was to prepare the SF-RS hydrogels modified with trisodium trimetaphosphate (STMP) and determine its crosslinking density for providing a guideline for preparing better quality absorbable hydrogels. The SF-RS hydrogels modified with various percentages of STMP were prepared by solution casting at pH 12 then neutralized to pH 7. The functional groups and molecular linkages of the hydrogels were investigated by Fourier transform infrared spectrometry (FTIR) and proton nuclear magnetic resonance ( $^1\text{H}$ NMR) spectrometry, respectively. Finally, the crosslinking density of the hydrogels was determined by UV/Vis spectrophotometry via the measurement of the relative amount of methylene blue (RMB) bound to the hydrogels. Results from the FTIR and $^1\text{H}$ NMR spectra revealed that linkages within the hydrogels occurred mainly between the O-H groups of RS and the triphosphate groups of STMP. From the MB adsorption study, the crosslinking density of the SF-RS hydrogel with 1.0 %w/w STMP at the 60 min saturation time was approximately 63 %.
W3001	Yttrium oxide nano-powder has been successfully synthesized by a modified transient morphology. In the first step, a foamy structure was produced by combustion synthesis using yttrium nitrate and glycine. This was followed by the addition of sulfate ions and calcination at $1100^\circ\text{C}$ for 4 h. The sulfated powders were characterized by X-ray powder diffraction (XRD), transmission electron microscopy (TEM). The XRD pattern shows $\text{Y}_2\text{O}_3$ single phase after calcination. The TEM images confirm the nanometric size of the particles in the range of 40-100nm.
W3002	Nanocrystalline Ga doped nickel ferrite $[(\text{NiFe}_{2-x}\text{Ga}_x\text{O}_4 (x=0.0, 0.1, 0.3, 0.5 \text{ and } 0.7)]$ powders have been synthesized by sol-gel auto-ignition method and the effect of non-magnetic gadillium content on the nanosize particles and magnetic properties has been studied. The X-ray diffraction (XRD) revealed that the powders obtained are single phase with spinel structure. The calculated grain size from XRD data have been verified using transmission electron microscopy (TEM). TEM photograph shows that the powders consist of nano meter sized grain. The size of nanoparticles decreases as the non magnetic Ga content increases. Magnetic hysteresis loops were measured at room temperature with maximum applied magnetic field of 20 KOe. As Ga content increases, the measured magnetic hysteresis curves became border and saturation magnetization ( $M_s$ ) increased up to $x= 0.3$ and further increase of $x$ leads the magnetization to decrease. The results are explained according to the assumed cation distribution.
W3005	This paper describes how glass transition temperature ( $T_g$ ) and capacitance ( $C_p$ ) of a nano-modified

	<p>composite polymer changes as compared to that of its base polymer. Because of its versatile applications, polycarbonate materials (grade PC1100 and PC1220 respectively), which are commercially available, were chosen as the base polymer in this study and nano structured alumina material was used as filler for fabricating the desired composites by varying the filler weight in the composite materials. The Tg of the composites has been evaluated by differential scanning calorimetry (DSC) technique and Cp of the composites are derived from AC conductivity measurements of the composites. Results show that the Tg decreases as a function of filler load in the composite material whereas capacitance of the composites increase with the filler load in the composites. A filler concentration equal to or greater than 5 wt% in the said composites, the Tg of the composites reduces upto 15°C, whereas Cp shoots up in the pico-farad range with the same level of filler load, as compare to base polymers.</p>
W005	<p>Zinc oxide nanoparticles were synthesized by the thermal-treatment method. Polyvinyl pyrrolidone was used as capping agent and Zinc nitrate was used as a precursor. The samples were calcined at 500 and 550 oC for removal of the organic compounds. The structural characteristics of the calcined samples were examined by X-ray diffraction and transmission electron microscopy. The results show that the average particle size increases with increase in calcination temperature. The optical properties were characterized at room temperature using a UV-Vis spectrophotometer in the wavelength range between 200–800 nm and the band gap energy was calculated from reflectance spectra using kubalka munk function and the results indicated that the band gap energy decreased from 3.23 eV at 500 oC to 3.21 eV at 600 oC due to an increase of particle size. This simple thermal-treatment method has advantages of the pure nanoparticles formation as no additional chemicals were required, a lack of by-product effluents, and environmentally friendly process.</p>
W3008	<p>Deposition precipitation method was employed to synthesize carbon nanofiber based Cu-ZrO<sub>2</sub> catalyst (Cu-ZrO<sub>2</sub>/CNF). Carbon nanofibre of herringbone type was used as a catalyst support. Prior deposition of catalyst particles, carbon nanofibre was oxidized to (CNF-O) with nitric acid solution. Catalyst was characterized by X-ray diffraction (XRD), Fourier Transmission Infrared (FTIR), Transmission Electron Microscopy (TEM) and Temperature-Programmed Reduction (TPR). Highly loaded, well-dispersed and thermally stable catalyst particles with average size of 4 nm were obtained by deposition precipitation method. Reaction studies confirmed the activity of the catalyst towards methanol formation.</p>

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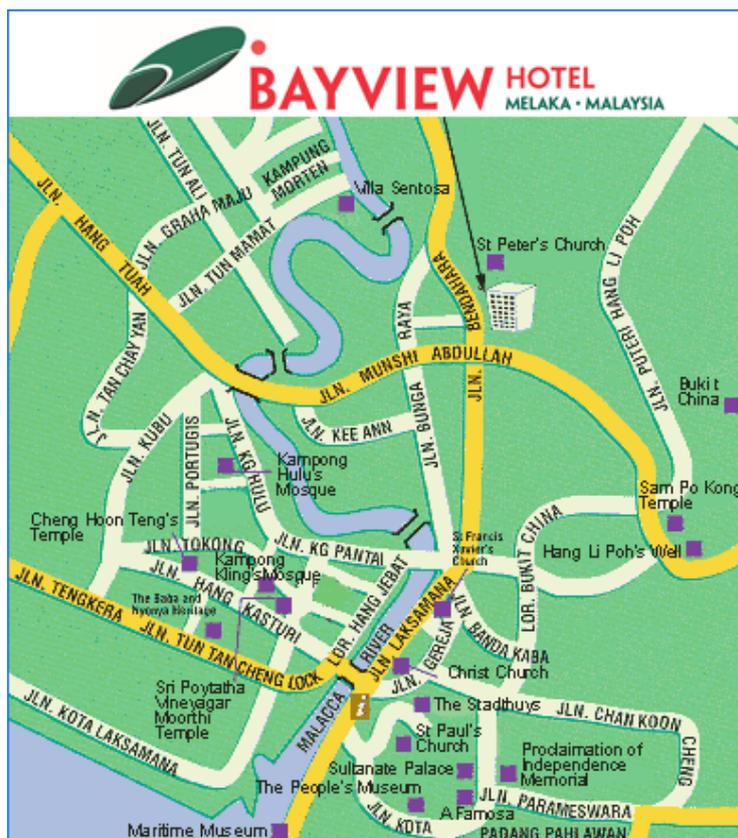
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## UPCOMING CONFERENCES

Chengdu, China, December 1-3, 2013

The submission deadline: September 15, 2013

Conference Name	Conference Website	Conference Email
2013 5th International Conference on Information Management and Engineering (ICIME 2013)	<a href="http://www.icime.org">www.icime.org</a>	<a href="mailto:icime@iacsit.com">icime@iacsit.com</a>
2013 4th International Conference on Computer and Computational Intelligence (ICCCI 2013)	<a href="http://www.iccci.org">www.iccci.org</a>	<a href="mailto:iccci@iacsit.com">iccci@iacsit.com</a>
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Melbourne, Australia, January 2-3, 2014.

The submission deadline: November 25, 2013

Conference Name	Conference Website	Conference Email
2014 6th International Conference on Computer and Automation Engineering (ICCAE 2013)	<a href="http://www.iccae.org">www.iccae.org</a>	<a href="mailto:iccae@iacsit.org">iccae@iacsit.org</a>
2014 International Conference on Communication and Electronics Information (ICCEI 2013)	<a href="http://www.iccei.org">www.iccei.org</a>	<a href="mailto:iccei@iacsit.org">iccei@iacsit.org</a>
2014 International Conference on Information and Education Technology (ICIET 2013)	<a href="http://www.iciet.org">www.iciet.org</a>	<a href="mailto:iciet@iacsit.org">iciet@iacsit.org</a>

Hong Kong, February 13-14, 2014

The submission deadline: September 10, 2013

Conference Name	Conference Website	Conference Email
2014 the 3rd International Conference on Intelligent Information Networks (ICIIN2014)	<a href="http://www.iciin.org">www.iciin.org</a>	<a href="mailto:iciin@iacsit.org">iciin@iacsit.org</a>
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January 2-3, 2014, Melbourne, Australia

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February 13-14, Hong Kong

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