

# **2015 International Conference on Smart Sensors and Application (ICSSA 2015)**

**Kuala Lumpur, Malaysia  
26 – 28 May 2015**



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## ICSSA 2015 Program Schedule

Program in Chronological Order

Tuesday, 26 May 2015	
<b>Session 1: Chemical, Biological, Optical, and Magnetic Sensors</b> 12:00 - 13:00	<b>Avenue 9</b>
12:00-12:15 <b>Cytotoxicity Studies of Lung Cancer Cells Using Impedance Biosensor</b> <i>Ahmad Fairuzabadi Mansor, Anis Nurashikin Nordin, Irmanisha Ibrahim (International Islamic University Malaysia, MALAYSIA)</i>	Day1 S1.1
12:15-12:30 <b>Classification of Pure and Mixture Agarwood oils by Electronic Nose and Discriminant Factorial Analysis (DFA)</b> <i>Sahrim Lias, Nor Azah Mohamad Ali, Mailina Jamil, Muhd Hafizi Zainal and Siti Humeirah Ab Ghani (Forest Research Institute Malaysia (FRIM), MALAYSIA)</i>	Day1 S1.2
12:30-12:45 <b>Optimization on the Preparation of Microfluidic Channel Using Dry Film Resist</b> <i>Firdaus Kamuri, Zurina Zainal Abidin, Suryani Kamarudin, Siti Zalikha Zhukhi, Nurul Amziah Md Yunus, Mohd Nizar Hamidon, Mohd Hanif Yaacob (Universiti Putra Malaysia, MALAYSIA).</i>	Day1 S1.3
12:45-13:00 <b>Numerical Analysis on DNA-Sensor Based on Copper-Graphene Surface Plasmon Resonance</b> <i>Hamid Toloue A. T., Anthony Centeno (Universiti Teknologi Malaysia, MALAYSIA )</i>	Day1 S1.4
<b>Session 2: System Identification, Modeling and Simulation</b> 14:15 - 15:30	<b>Avenue 9</b>
14:15-14:30 <b>Gas turbine bearing and vibration classification of using multi-layer neural network</b> <i>Moneer Ali Lilo, Latiff, L.A, Aminudin Bin Haji Abu, Abidulkarim K. Ilijan (Universiti Teknologi Malaysia, MALAYSIA), Yousif I. Al Mashhadany, (University of Anbar, IRAQ)</i>	Day1 S2.1
14:30-14:45 <b>Cubature Quadrature Kalman Filter for Maneuvering Target Tracking Physical</b> <i>C. Abhinoy Kumar Singh and Shovan Bhaumik (Indian Institute of Technology Patna, Bihar, INDIA)</i>	Day1 S2.2
14:45-15:00 <b>Optimal Analysis and Control of 2D Nonlinear Gantry Crane System</b> <i>Ahmad Bala Alhassan, Kumeresan A. Danapalasingam, Bashir Bala Muhammad, Yahaya Md Sam (Universiti Teknologi Malaysia, MALAYSIA)</i>	Day1 S2.3
15:00-15:15 <b>Simplified Parameter-Transformation for Guaranteeing Variable-Filter Stability</b> <i>Tian-Bo Deng (Toho University, JAPAN)</i>	Day1 S2.4
15:15-15:30 <b>Time Delay Estimation between two Biosignals using System Identification</b> <i>Aws Zuhair Sameen,Edmond Zahedi (University Kebangsaan Malaysia, MALAYSIA)</i>	Day1 S2.5
<b>Session 3: Wireless Sensors Measurement Systems</b> 16:00 - 17:30	<b>Avenue 9</b>

16:00 - 16:15	<b>Statistical Validation of Performance of ZigBeebased Wireless Sensor Network for Track Cycling</b> <i>Rosdiadee Nordin, Mahamod Ismail (Universiti Kebangsaan Malaysia, MALAYSIA) Sadik Kamel Gharghan (College of Electrical and Electronic Techniques,Baghdad-IRAQ)</i>	Day1 S3.1
16:15-16:30	<b>Adaptive-PCA: An Event-Based Data Aggregation Using Principal Component Analysis for WSNs</b> <i>Patcharapol Poekaew, Paskorn Champrasert (Chiang Mai University, Chiang Mai, THAILAND)</i>	Day1 S3.2
16:30-16:45	<b>Enhanced Trust Aware Routing against Wormhole Attacks in Wireless Sensor Networks</b> <i>Raja Waseem Anwar, Majid Bakhtiari, Anazida Zainal,Abdul Hanan Abdullah and Kashif Naseer Qureshi (Universiti Teknologi Malaysia, MALAYSIA)</i>	Day1 S3.3
16:45-17:00	<b>Concept Development of Integrated Monitoring System Model to Support Activities Monitoring in the Border Region</b> <i>P. Daud, O.Heriana, A.N. Rahman, E.J. Pristianto, D. Mahmudin, Y. N. Wijayanto, N. Armi and D. Syamsi (Indonesian Institute of Sciences (LIPI),INDONESIA),</i>	Day1 S3.4
17:00 - 17:15	<b>Optimal Design Of Wireless Sensor Network For Providing QOS</b> <i>Sathyaprakash Palaniappan (Mahabharathi Engineering College, Chinnasalem, INDIA),P.Prakasam (United Institute of Technology , Coimbatore, INDIA),Jayakumar Vaithiyashankar,Dr. Shohel Sayeed (Multimedia University, MALAYSIA)</i>	Day1 S3.5
17:15 - 17:30	<b>Precision Irrigation using Wireless Sensor Network</b> <i>Ahmad Nizar Harun, Mohamed Rawidean Mohd Kassim, Ibrahim Mat, Siti Sarah Ramli (MIMOS, MALAYSIA)</i>	Day1 S3.6

<b>Keynote Speaker 1</b> 09:30 - 10:30	<b>Avenue 15</b>
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Keynote Speaker 1: 09:30-10:30 <b>5G A Special Generation (SG)</b> <i>Prof. Dr. Rahim Tafazolli (University of Surrey, UNITED KINGDOM)</i>	Day1 INVS.1
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<b>Keynote Speaker 2</b> 11:00 - 12:00	<b>Avenue 9</b>
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Keynote Speaker 2: 11:00-12:00 <b>Ultrasonic Tomography system for Liquid/Gas bubble Column</b> <i>Prof Ir Dr Ruzairi Abdul Rahim (Universiti Teknologi Malaysia, MALAYSIA)</i>	Day1 INVS.2
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<b>Wednesday, 27 May 2015</b>
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<b>Session 4: Smart Sensors and Transducers</b> 09:00 - 10:45	<b>Avenue 9</b>
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09:00 - 09:15 <b>Investigating the Optimum Frequency and Gain for Calibration Copper Block Using Eddy Current Technique</b> <i>Damhuji Rifai, Ahmed N. Abdalla, Ramdan Razali (Universiti Malaysia Pahang, MALAYSIA)</i>	Day2 S4.1
09:15 - 09:30 <b>SSNM-Smart Sensor Network Model for Vehicular Ad hoc Networks</b> <i>Kashif Naseer Qureshi, Abdul Hanan Abdullah, Majid Bukhari and Raja Waseem Anwar (Universiti Teknologi Malaysia, MALAYSIA)</i>	Day2 S4.2
09:30 - 09:45 <b>Environmental Liquid Waste Sensors Using Polymer Multi-Coupled Ring Resonators</b> <i>D. Mahmudin, T. T. Estu, P. Daud, N. Armi, and G. Wirantoe (Indonesian Institute of Sciences (LIPI),INDONESIA), Y. N. Wijayanto (Nat. Ins. Information and Communications Technology, JAPAN)</i>	Day2 S4.3
09:45 - 10:00 <b>Plant Growth Optimization Work Using Variable Intensity Method and Far Red Treatment for Brassica Chinensis in Indoor Farming</b> <i>Ahmad Nizar Harun, Robiah Ahmad ,Norliza Mohamed, (Universiti Teknologi Malaysia, MALAYSIA)</i>	Day2 S4.4

10:00 - 10:15 Day2 S4.5  
**Drift Compensation using Bulk Feedback in a Neural Recording System based on Open-Gate FET**  
*Ashwin K. Vijayan, Sreejish Sreenivasan, Deleep R. Nair and M. Ramasubba Reddy (IIT Madras, Chennai, INDIA)*

10:15 - 10:30 Day2 S4.6  
**Power transformer oil-level measurement using multiple fiber optic sensors**  
*Deba Kumar Mahanta (Assam Engineering College, Assam, INDIA), Shakuntala Laskar (DBCET, Assam Don Bosco University, Assam, INDIA)*

10:30 - 10:45 Day2 S4.7  
**Simulation and Analysis of Actuation Voltage of Electrostatically Actuated RF MEMS Cantilever Switch**  
*Norshahida Saba (MARA Japan Industrial Institute, MALAYSIA), Norhayati Soin (University of Malaya, MALAYSIA), Khairun Nisa Khamil (University of Technical Malaysia Melaka, MALAYSIA)*

**Session 5: Robotic and Process Automation** Avenue 9  
**12:15 - 12:45**

12:15 - 12:30 Day2 S5.1  
**Integrated Online Water Quality Monitoring**  
*Goib Wiranto, Yudi Yuliyus Maulana, I Dewa Putu Hermida, Iqbal Syamsu, Dadin Mahmudin (Indonesian Institute of Sciences (LIPI), INDONESIA)*

12:30 - 12:45 Day2 S5.2  
**A Human Orientation Tracking System using Template Matching and Active Infrared Marker**  
*Mark Tee Kit Tsun, Lau Bee Theng, Hudyjaya Siswoyo Jo (Swinburne University of Technology Kuching, MALAYSIA), Sian Lun Lau (Sunway University Selangor, MALAYSIA)*

**Session 6: Software Development, Evolutionary Computation and Optimization** Avenue 9  
**14:15 - 15:45**

14:15 - 14:30 Day2 S6.1  
**An Analysis of MVL Neural Operators Using Feed Forward Backpropagation: Realization and Application of Logic Synthesis**  
*Adib Kabir Chowdhury, Md. Saifullah Razali, Gary Loh Chee Wyai, Lenin Gopal, Bakri Madon (University College of Technology Sarawak, MALAYSIA), Lenin Gopal (Curtin University Sarawak, MALAYSIA), Ashutosh Kumar Singh (National Institute of Technology, Kurukshetra, INDIA)*

14:30 - 14:45 Day2 S6.2  
**A Fuzzy based Low-Cost Monitoring Module built with Raspberry Pi-Python-Java Architecture**  
*Fahim Salauddin, Tarif Ryad Rahman (North South University Dhaka, BANGLADESH)*

14:45 - 15:00 Day2 S6.3  
**Feature Points Selection for Markerless Hand Pose Estimation**  
*Malik Arman Morshidi (International Islamic University Malaysia MALAYSIA), Tardi Tjahjadi (University of Warwick Coventry, UNITED KINGDOM)*

15:00 - 15:15 Day2 S6.4  
**Quad Flat No-Lead (QFN) Device Faulty Detection Using Gabor Wavelets**  
*Tay Wai Lun, Norashikin Yahya (Universiti Teknologi Petronas, MALAYSIA)*

15:15 - 15:30 Day2 S6.5  
**Optimization of multilayer micro channels heat sinks cooling system using genetic algorithm**  
*Husain Zaidan, Normah Mohd Ghazali, Robiah Ahmad (Universiti Teknologi Malaysia, MALAYSIA)*

15:30 - 15:45 Day2 S6.6  
**Flowchart-based Bayesian Intelligent Tutoring System for Computer Programming**  
*Daniyal Hooshyar, Rodina Binti Ahmad, Moein Fathi (University of Malaya, MALAYSIA), Moslem Yousefi (College of Engineering, Universiti Tenaga Nasional, MALAYSIA), Maral Hooshyar (Islamic Azad University Nour Branch, IRAN)*

**Session 7: Environment and Health Monitoring** Avenue 9  
**16:15 - 17:00**

16:15 - 16:30 Day2 S7.1  
**A Temperature Monitoring System Incorporating an Array of Precision**

### Wireless Thermometers

*Amir Javadpour, Hamidreza Memarzadeh-Tehran, Fatemeh Saghafi, (University of Tehran, IRAN)*

16:30 - 16:45

Day2 S7.2

#### **Effect of LED Lights, Plant Growth Regulator and Photoperiod on Shoot Production of in vitro Propagated Rosa spp**

*Nurul Syahirah Azmi, Robiah Ahmad (Universiti Teknologi Malaysia, MALAYSIA), Rusli Ibrahim (Agriculture and Biotechnology Division Nuclear Agency Malaysia, MALAYSIA)*

16:45 - 17:00

Day2 S7.3

#### **Respiratory Rate (RR) Based Analysis of PPG Signal for Different Physiological Conditions**

*Syed Absar Kazmi, Mansoor Hussain Shah, Sheroz Khan and Othman O. Khalifa (International Islamic University Malaysia, MALAYSIA)*

### Keynote Speaker 3

Avenue 9

11:15 - 12:15

Keynote Speaker 3: 11:15-12:15

Day2 INVS.3

#### **Sensing with Field Effect Devices**

*Prof. Dr. Arezki Benfdila (University M. Mammeri, ALGERIA)*

**Thursday, 28 May 2015**

**Tutorial Session (If Any)**