

# **2015 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT)**

3-5 November, 2015

Mövenpick Resort & Spa Dead Sea  
The Dead Sea, Jordan

<http://ewh.ieee.org/conf/aeect/>

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## Message from the General Chair

On behalf of the Conference Organizing Committee, it gives me a great pleasure to welcome you to the 2015 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2015). I am honored and privileged to be the General Chair of the Organizing Committee of this Conference that is jointly organized by Princess Sumaya University for Technology (PSUT) and IEEE – Jordan Section.

This conference is the third in a bi-annual series of conferences. The Conference provides an international forum to discuss practical approaches and state-of-the-art findings in using the applied electrical engineering and computing technologies to solve technology-oriented problems, increases awareness of innovative applied ICT applications and research results, and identifies opportunities for research collaboration in communications, control, IT, energy, and signal processing among other areas. Additionally, this conference hosts the First International Workshop on Online Social Networks Technologies (OSNT 2015) as an integral part of its activities. The objective of this workshop is to provide general guidelines on the current and future trends in online social network technologies, which is very timely and important in view of the explosion in social media data sizes.

AEECT 2015 has received papers in its seven tracks that cover the various aspects of electrical engineering and computing technologies. Each of these papers was sent to three expert reviewers or more. Out of the 177 received papers, from authors of 35 countries in 6 continents, only 73 papers are accepted and registered for inclusion in the conference proceedings and are presented in the 15 technical sessions of this conference. The papers that are successfully orally presented will also be published in IEEE Xplore Digital Library.

We are proud to have five distinguished keynote speakers in the conference program, who will deliver interesting speeches in: Haptics: A Multimedia Perspective, Drone Challenges and Opportunities, Wind Energy Generation, Digital Disruption, and Upcoming Technology for an Interconnected Society.

On behalf of Princess Sumaya University for Technology and IEEE – Jordan Section, I would like to extend my thanks to the main supporters of this conference: The Scientific Research Support Fund (SRSF) and Umniah Mobile Company (AEECT 2015 Telecom Partner), as well as to other supporters and patrons; namely: King Abdullah II Fund for Development (KAFFD), Philadelphia University, University of Petra, Jordan Tourism Board, Royal Jordanian Geographical Center, and Jordan Engineers Association. Thanks are also extended to the IEEE Conference Services support team for publishing the conference proceedings.

Last, but not least, I would like to express my deepest appreciation to all members of the Organizing Committee for their valuable efforts in making AEECT 2015 a successful event, as well as to our team of volunteers, the members of the Scientific Committee, and our distinguished expert reviewers.

We are looking forward to an exciting, vibrant assembly in our venue and we are pleased to welcome the AEECT 2015 participants in Jordan at the Dead Sea; the lowest point on Earth.

Prof. Ahmad Hiasat  
AEECT 2015, General Chair  
Princess Sumaya University of  
Technology

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# AEECT 2015 PROGRAM OUTLINE

Auditorium
  Grand Ballroom 1
  Grand Ballroom 2
  Grand Ballroom 3

Time	Grand Ballroom 1	Grand Ballroom 2	Grand Ballroom 3
<b>Day 1: Tuesday - November 3, 2015</b>			
08:30-18:00	<b>Registration</b>		
09:30-10:00	<b>Opening Ceremony in the Auditorium</b>		
10:00-10:30	<b>Coffee Break</b>		
10:30-11:30	Keynote Speech 1: Prof. Xavier Fernando, Ryerson University Upcoming Technologies for an Interconnected Society		
11:30-13:30	<b>Wireless &amp; Optical Communications</b>	<b>Smart Applications</b>	<b>Modeling &amp; Control</b>
13:30-14:30	<b>Lunch in Al Saraya Restaurant</b>		
14:30-15:30	Keynote Speech 2: Prof. Abdulmoteleb El Saddik, the University of Ottawa Haptics: A Multimedia Perspective		
15:30-16:00	<b>Coffee Break</b>		
16:00-18:00	<b>Antenna Design</b>	<b>Networking &amp; Architecture</b>	<b>OSNT</b>
<b>Day 2: Wednesday – November 4, 2015</b>			
09:30-17:30	<b>Registration</b>		
09:30-10:30	Keynote Speech 3: Eng. Ra'ed Hajarat, Oracle ECEMEA Digital Disruption		
10:30-11:00	<b>Coffee Break</b>		
11:00-13:00	<b>Electronics &amp; Nanotechnology</b>	<b>Cloud &amp; Web</b>	<b>Renewable &amp; High Voltage</b>
13:00-14:00	<b>Lunch in Al Saraya Restaurant</b>		
14:00-15:00	Keynote Speech 4: Prof. Jawad Faiz, University of Tehran Wind Energy Generation		
15:00-15:30	<b>Coffee Break</b>		
15:30-17:30	<b>Image &amp; Signal Processing</b>	<b>Algorithms &amp; AI</b>	<b>Unmanned Vehicles &amp; Robotics</b>
18:30-20:30	<b>Gala Dinner in Sunset Arena</b>		
<b>Day 3: Thursday – November 5, 2015</b>			
09:30-12:30	<b>Registration</b>		
09:30-10:30	Keynote Speech 5: Prof. M-A Al Jarrah, American University of Sharjah Drones Challenges and Opportunities		
10:30-11:00	<b>Coffee Break</b>		
11:00-12:30	<b>Machines &amp; Drives</b>	<b>Education &amp; Learning Methods</b>	<b>Instrumentation</b>
12:30-13:30	<b>Lunch in Al Saraya Restaurant</b>		
13:30-19:00	<b>Tour Trip to Amman City</b>		

# Day 1: Tuesday

November 3, 2015

8:30 – 18:00

\* Indicates a Presenting Author

Time	Item	Place
08:30-18:00	Registration	Registration Area
09:30-10:00	Opening Ceremony	Auditorium
10:00-10:30	Coffee Break	Break Area
10:30-11:30	<b>Keynote Speech 1</b> <b>Prof. Xavier Fernando</b> Ryerson University, Toronto, Canada Director of Ryerson Communications Lab. <i>Upcoming Technologies for an Interconnected Society</i> Session Chair: Tarek Tutunji, Philadelphia University, Jordan	Auditorium
11:30-13:30	<b>Wireless &amp; Optical Communications</b> Session Chair: Ahmad Atieh, The University of Jordan, Jordan Session Co-Chair: Ala Khalifeh, German-Jordanian University, Jordan	Grand Ballroom 1
	<b>Paper 1</b> <i>A Low Complexity Direction Finding System Based on a Six-Port Integrated MIMO Antenna System</i> Rifaqat Hussain, Ali H Muqaibel, Wajih Abu-Al-Saud, and Mohammad S. Sharawi*(KFUPM, Saudi Arabia)	
	<b>Paper 2</b> <i>DOA Estimation in MIMO Systems with Compressive Sensing for Future Handsets</i> Saleh Alawsh, Ali H Muqaibel, and Mohammad S. Sharawi* (KFUPM, Saudi Arabia)	
	<b>Paper 3</b> <i>An Indoors AoA Study for Mobile Phones Utilizing Frequency Reconfigurable MIMO Antennas</i> Umar Johar, Rifaqat Hussain*, Wajih Abu-Al-Saud, and Ali H Muqaibel (KFUPM, Saudi Arabia)	
	<b>Paper 4</b> <i>Analysis of Enhanced Distributed Channel Access Protocol Under Non-saturation</i> Ahmed Abu-Khadrah* (Universiti Teknikal Malaysia Melaka (UTeM), Malaysia), Zahriladha Zakaria (UTeM, Malaysia), Mohd Azlishah Othman (UTeM & Microwave Research Group, Malaysia), Mohd Shahril Izuan Mohd Zin (UTeM, Malaysia)	
	<b>Paper 5</b> <i>Smart Wall Based on Active Frequency Selective Wallpaper</i> Marwah Mohammed Sideeq*, and Nidal Eyad Qasem	

(Al-Ahliyya Amman University, Jordan)

**Paper 6** *Investigating Dispersion and Nonlinearity Interaction in Optical Fibers for Hybrid Optical Telecommunication Systems*

Ahmad Atieh\* (University of Jordan, Jordan), Mais Wa'ad, and Ibrahim M Mansour (Al-Ahliyya Amman University, Jordan)

**11:30-13:30 Smart Applications**

Session Chair: Ghassan Issa, University of Petra, Jordan  
Session Co-Chair: Ali Maqousi, University of Petra, Jordan

*Grand  
Ballroom 2*

**Paper 1** *Smart Home Algorithms to Control and Reduce Electricity bill at Residential Buildings*

Ali Maqousi, Tatiana Balikhina, and Abdulkarim AlBanna\* (University of Petra, Jordan)

**Paper 2** *An Interactive Framework to Deliver Mobile Government Services*

Muder Almiani\*, Ayman Al Dmour (Al-Hussein Bin Talal University, Jordan), Abdul Razaque (Cleveland State University, USA)

**Paper 3** *Estimation of Driver Alertness Using Low-Cost Wearable Devices*

Hilal Al-Libawy, Ali Al-Ataby, Waleed Al-Nuaimy, and Majid A. Al-Tae (University of Liverpool, United Kingdom), Hamzah S. AlZu'bi\* (German Jordanian University, Jordan)

**Paper 4** *Mobile Health Platform for Diabetes Management Based on the Internet-of-Things*

Majid A. Al-Tae\*, Waleed Al-Nuaimy, Ali Al-Ataby, and Zahra Muhsin (University of Liverpool, United Kingdom), Suhail N. Abood (Kingston University London, United Kingdom)

**Paper 5** *Energy Aware Smart Home Automation with Arduino and LabVIEW*

Haroon Ur-Rashid Khan\*, Bilal Shaheen, Hamza Khan, and Kamil Abbas (Pakistan Institute of Engineering and Applied Sciences, Pakistan)

**11:30-13:30 Modeling and Control**

Session Chair: Mohammad Ababneh, The Hashemite University, Jordan  
Session Co-Chair: Tarek Tutunji, Philadelphia University, Jordan

*Grand  
Ballroom 3*

**Paper 1** *The Application of System Identification Via Canonical Variate Algorithm to North Benghazi Gas Turbine Power Generation System*

Omar Mohamed\* (Princess Sumaya University of

Technology, Jordan), Jihong Wang (The University of Warwick, United Kingdom), Ashraf Khalil (University of Benghazi, Libya)

**Paper 2** *Component-Based Engineering of Distributed Control and Automation Software*

George Hassapis\* (Aristotle University of Thessaloniki, Greece)

**Paper 3** *Distributed Processing System for Gas Odourisation*

Sérgio M. M. Faria (Instituto de Telecomunicacoes & Instituto Politecnico de Leiria, Portugal), Mário Reis (REN-Gasodutos, Portugal), Fernando Henriques (ESTG, Instituto Politécnico de Leiria, Portugal), Filipe Perdigoto and António Pires (Digiwest - Embedded and Wireless Solutions Lda, Portugal), Telmo R. Fernandes\* (IPLeiria / Institute of Telecommunications & ESTG/IT-DL, Portugal)

**Paper 4** *Networked Control of Parallel DC/DC Buck Converters*

Ashraf Khalil (University of Benghazi, Libya), Omar Mohamed\* (Princess Sumaya University of Technology, Jordan), Jihong Wang (The University of Warwick, United Kingdom)

**Paper 5** *A New Four-Dimensional Chaotic Attractor*

Mohammad Ababneh\* (The Hashemite University, Jordan)

**13:30-14:30** **Lunch**

*Al Saraya  
Restaurant*

**14:30-15:30** **Keynote Speech 2**

**Prof. Abdulmotaleb El Saddik**

Research Chair in the School of Electrical Engineering and Computer Science

The University of Ottawa, Canada

*Haptics: A Multimedia Perspective*

Session Chair: Ibrahim Al Oqily, The Hashemite University, Jordan

*Auditorium*

**15:30-16:00** **Coffee Break**

*Break Area*

**16:00-18:00** **Antennas Design**

Session Chair: Mohamed K Abdelazeez, The University of Jordan, Jordan

Session Co-Chair: Ghazi Al Sukkar, The University of Jordan, Jordan

*Grand  
Ballroom 1*

**Paper 1** *A Miniaturized Dual-Band Meander Line Antenna for RF Energy Harvesting Applications*

Ahmad Salih, and Mohammad S. Sharawi\* (KFUPM, Saudi Arabia)



- Paper 2** *A Compact Printed UWB Pacman-Shaped MIMO Antenna with Two Frequency Rejection Bands*  
Shaimaa Nasser\*, and Nihad I Dib (Jordan University of Science and Technology, Jordan)
- Paper 3** *Bandwidth Enhancement of Single Notch Planar UWB Antenna with Single Step Feed Line*  
Ali Sameeh Abbas\*, and Mohamed K Abdelazeez (The University of Jordan, Jordan)
- Paper 4** *Design of Wide-Band Bandpass Filter with Tunable Notch Response of Wireless Communication System*  
Zahriladha Zakaria\* (Universiti Teknikal Malaysia Melaka, Malaysia), Mohamad Ariffin Mutalib (Universiti Teknikal Malaysia Melaka & Hang Tuah Jaya, Malaysia)
- Paper 5** *Harmonic Suppression of Symmetrical Split Ring Resonator Using Double Spurlines*  
Rammah A. Alahnomi, Zahriladha Zakaria\*, Eliyana Ruslan, Amyrul Azuan Mohd Bahar, and Ahmed Abu-Khadrah (Universiti Teknikal Malaysia Melaka (UTeM), Malaysia)

**16:00-18:00 Networking & Architecture**

Session Chair: Gheith Abandah, The University of Jordan, Jordan

*Grand Ballroom 2*

- Paper 1** *Geographic Greedy Triplewise Gossip Algorithm for Wireless Sensor Networks*  
Maha I Raheem\* (Baghdad University, Iraq), Nuha A. S. Alwan (University of Baghdad, Iraq)
- Paper 2** *CSPDA: Contention and Stability Aware Partially Disjoint AOMDV Routing Protocol*  
Wesam Almobaideen, and Dimah Al-khateeb\* (The University of Jordan, Jordan)
- Paper 3** *Location-Aware Cooperative Spectrum Sensing Within Cognitive Radio Networks*  
Raouf Abozariba\*, Mohammad N Patwary, and Abdel-Hamid Soliman (Staffordshire University, Stafford, United Kingdom), Mohamed Abdel-Maguid (University Campus Suffolks, United Kingdom)
- Paper 4** *Analysis of Meta-Heuristics Performance in Energy Aware Scheduling of Real-Time Embedded Systems*  
Ashraf Suyyagh\*, and Jason Tong and Zeljko Zilic (McGill University, Canada)
- Paper 5** *Variable Step-Size Transform Domain ILMS and DLMS Algorithms with System Identification Over Adaptive Networks*  
Ali Almomhammedi\*, and Mohamed Deriche (King Fahd University of Petroleum and Minerals, Saudi Arabia)

**Paper 6** *Communication Characteristics of Parallel Shared-Memory Multicore Applications*

Mohammed Sultan Mohammed\*, and Gheith A. Abandah (The University of Jordan, Jordan)

**16:00-18:00 OSNT**

Session Chair: Mohammad Zeki Khedher, The University of Jordan, Jordan

Session Co-Chair: Yaser Jararweh, Jordan University of Science and Technology, Jordan

*Grand  
Ballroom 3*

**Paper 1** *Analyzing the Social Soundtrack From Second Screens Before, During, and After Real-life Events*

Partha Mukherjee (Pennsylvania State University, USA), Bernard J Jansen\* (Qatar Computing Research Institute, Qatar)

**Paper 2** *Applying Sentiment and Emotion Analysis on Brand Tweets for Digital Marketing*

Dua'a Al-Hajjar\*, and Afraz Syed (Prince Sultan University, Saudi Arabia)

**Paper 3** *Twitter Sentiment Analysis: A Case Study in the Automotive Industry*

Sarah Shukri\*, Rawan Yaghi, Ibrahim Aljarah, and Hamad Alsawalqah (The University of Jordan, Jordan)

**Paper 4** *Enhancing the Determination of Aspect Categories and Their Polarities in Arabic Reviews Using Lexicon-Based Approaches*

Islam Obaidat\*, Rami Mohawesh, Mahmoud Al-Ayyoub, Mohammad AL-Smadi, and Yaser Jararweh (Jordan University of Science and Technology, Jordan)

**Paper 5** *Effect of Topic on the Arabic Language Used on Social Networks and Mobile Phone Communications*

Mohammad Zeki Khedher\*, and Gheith A. Abandah (The University of Jordan, Jordan), Waleed A. Al-Anati (Qatar University Doha, Qatar), Sami Ababneh, Ahmad Zghoul (The University of Jordan, Jordan), Mamoun Hattab (Arabic Textware, Jordan)

# Day 2: Wednesday

November 4, 2015

9:30 – 17:30

Time	Item	Place
09:30-17:30	<b>Registration</b>	<i>Registration Area</i>
09:30-10:30	<b>Keynote Speech 3</b> <b>Eng. Ra'ed Hajarat</b> Jordan Managing Director & Technology Director – Oracle ECEMEA <i>Digital Disruption</i> Session Chair: Gheith Abandah, The University of Jordan, Jordan	<i>Auditorium</i>
10:30-11:00	<b>Coffee Break</b>	<i>Break Area</i>
11:00-13:00	<b>Electronics &amp; Nanotechnology</b> Session Chair: Abdellatif Bouchalkha, The Petroleum Institute & Art and Science College, UAE Session Co-Chair: Esam Alqaralleh, Princess Sumaya University for Technology, Jordan  <b>Paper 1</b> <i>Impact of Annealing Temperature on Piezoelectric and Morphological Properties of Aluminum Nitride Thin Films</i> Abdallah Ababneh* (Yarmouk University, Jordan) <b>Paper 2</b> <i>A New LDPC Decoder Hardware Implementation with Improved Error Rates</i> Philipp Schläfer*(University of Kaiserslautern & Creonic GmbH, Germany), Stefan Scholl, Eduardo Leonardi, and Norbert Wehn (University of Kaiserslautern, Germany) <b>Paper 3</b> <i>Efficient Light Extraction From GaN LEDs Using Gold-coated ZnO Nanoparticles</i> Ali Alhadidi*, Hassan Al-Taweel, Abdul-Rahman Al-Dakhil, and Ateeq Al-Zahrani (King Fahd University of Petroleum and Minerals, Saudi Arabia), Emad Alkhazraji (King Fahd University of Petroleum and Minerals & NOOR, Saudi Arabia), Mohammad Aziz Alsunaidi (King Fahd University of Pet & Min, Saudi Arabia) <b>Paper 4</b> <i>Low-power, Wide Supply Voltage Bandgap Reference Circuit in 28nm CMOS</i> Filippo Maria Neri* (U-blox, Switzerland), Thomas Brauner (U-BLOX AG, Switzerland), Eric De Mey (U-	<i>Grand Ballroom 1</i>

blox, Switzerland), Christian Schippel  
(Globalfoundries, Germany)

**Paper 5** *A Multi-Bin Constant Throughput CABAC Decoder for HEVC*

Tian-Sheuan Chang\* (Chiao-Tung University,  
Taiwan), Hsuan-Ku Chen, and Chih-Chung Fang  
(National Chiao Tung University, Taiwan)

**Paper 6** *Carbon Nanotube Strain Gauge Design and Calibration*

Abdellatif Bouchalkha\* (The Petroleum Institute & Art and  
Science College, UAE), Khalid Alhammedi, Hesham Helal (The  
Petroleum Institute, UAE)

## **11:00-13:00 Cloud & Web**

Session Chair: Feras Hanandeh, The Hashemite University,  
Jordan

Session Co-Chair: Ibrahim Al Oqily, The Hashemite University,  
Jordan

*Grand  
Ballroom 2*

**Paper 1** *A Network and Power Aware Framework for Data Centers Using Virtual Machines Re-Allocation*

Suheib Alhiyari\*, and Ali El-Mousa (The University of  
Jordan, Jordan)

**Paper 2** *A Policy-Based Location-Aware Framework for Personalized Services in Cloud Computing Systems*

Ismaeel Al Ridhawi (American University of the  
Middle East & University of Ottawa, Kuwait), Moayad  
Aloqaily\* (University of Ottawa, Canada)

**Paper 3** *Vehicular Clouds: State of the Art, Challenges and Future Directions*

Moayad Aloqaily\* (University of Ottawa, Canada),  
Burak Kantarci (Clarkson University, USA), Hussein T  
Mouftah (University of Ottawa, Canada)

**Paper 4** *GitBull: Source Code Hosting Web Application*

Abdallah Qusef, Israa Albadarneh\*, and Aalaa  
Albadarneh (Princess Sumaya University for  
Technology, Jordan)

**Paper 5** *Echo State Network with SVM-readout for Customer Churn Prediction*

Ali Rodan\* (The University of Jordan, Jordan)

## **11:00-13:00 Renewable & High Voltage**

Session Chair: Mazen Abdel-Salam, Assiut University, Egypt

Session Co-Chair: Eyad A. Feilat, The University of Jordan,  
Jordan

*Grand  
Ballroom 3*

**Paper 1** *Energy Management and Control of a Stand-Alone Photovoltaic/Ultra Capacitor/Battery Microgrid*

Ehsan Jamshidpour (Université de Lorraine & GREEN

Laboratory, France), Philippe Poure, Shahrokh Saadate\* (Université de Lorraine, France)

**Paper 2** *Reliability and Economic Assessment of Renewable Micro-Grid with V2G Electric Vehicles Coordination*

Saifullah Shafiq\*, and Ali T. Al-Awami (King Fahd University of Petroleum & Minerals, Saudi Arabia)

**Paper 3** *Reduction of Electrical Tree Propagation in Composite Insulation Using Double Barriering Technique*

Mohammad H. AlZoubi\* (Irbid-Jordan & Yarmouk University, Jordan), Gasem Alruweili (Saudi Electric Company, Saudi Arabia)

**Paper 4** *Particles' Re-entrainment in Electrostatic Precipitators*

Mazen Abdel-Salam\*, Mohamed El-Mohandes, Hassan Wedaa, and Seham Kamal El-deen (Assiut University, Egypt), Nouredine Zouzou (Poitiers University, France)

**13:00-14:00 Lunch**

*Al Saraya Restaurant*

**14:00-15:00 Keynote Speech 4**

**Prof. Jawad Faiz**

Professor at School of Electrical and Computer Engineering, College of Engineering, University of Tehran, Iran  
*Wind Energy Generation*

Session Chair: Eyad A. Feilat, The University of Jordan, Jordan

*Auditorium*

**15:00-15:30 Coffee Break**

*Break Area*

**15:30-17:30 Image & Signal Processing**

Session Chair: Iyad Jafar, The University of Jordan, Jordan  
Session Co-Chair: Esam Al Qaralleh, Princess Sumaya University for Technology, Jordan

*Grand Ballroom 1*

**Paper 1** *Automatic Electricity Meter Reading Based on Image Processing*

Lamiaa A. Elrefaei\* (King Abdulaziz University & Benha University, Saudi Arabia), Asrar Bajaber, Sumayyah Natheir, Nada AbuSanab, and Marwa Bazi (King Abdulaziz University, Saudi Arabia)

**Paper 2** *Iris Recognition System for Secure Authentication*

Aalaa Albadarneh\*, Israa Albadarneh (Princess Sumaya University for Technology, Jordan), Ja'far Alqatawna (The University of Jordan & King Abdullah II School for Information Technology, Jordan)

**Paper 3** *High-Capacity Image Steganography Based on Haar DWT for Hiding Miscellaneous Data*

Hamad A. Al-Korbi\* (University of Liverpool, Qatar), Ali Al-Ataby, Majid A. Al-Tae, and Waleed Al-Nuaimy

(University of Liverpool, United Kingdom)

**Paper 4** *Classification of Lung Sounds Based on Linear Prediction Cepstral Coefficients and Support Vector Machine*

Mohamed Moustafa Azmy\* (Medical Research Institute, Alexandria University, Egypt)

**Paper 5** *Automated Electrical Stimulation and Physical Activity Monitoring of Zebrafish Larvae*

Qussay Al-Jubouri, Waleed Al-Nuaimy, Majid A. Al-Taei\*, Javier Lopez Luna, and Lynne Sneddon (University of Liverpool, United Kingdom)

**Paper 6** *Reversible Data Hiding Based on Histogram Shifting of Prediction Errors Using Two Predicators*

Enas Jaara, and Iyad F. Jafar\* (The University of Jordan, Jordan)

**15:30-17:30**

### **Algorithms & AI**

*Grand Ballroom 2*

Session Chair: Mohd Sanusi Azmi, Universiti Teknikal Malaysia Melaka, Malaysia

Session Co-Chair: Ali Maqousi, University of Petra, Jordan

**Paper 1** *A Robust Framework for Enhanced Multi-Intensity Analysis in Multi-Scenery Classification*

Ramachandran Bremananth, and Hisham KH Abujalban\* (Sur University College, Oman)

**Paper 2** *Risk Management in Agile Software Development*

Aalaa Albadarneh, Israa Albadarneh\*, Abdallah Qusef (Princess Sumaya University for Technology, Jordan)

**Paper 3** *On Preventing ARP Poisoning Attack Utilizing Software Defined Network (SDN) Paradigm*

Mohammad Masoud\*, and Yousef Jaradat (Al-Zaytoonah University of Jordan, Jordan), Ismael Ahmad Jannoud (AlZaytoonah University of Jordan & Damascus University, Jordan)

**Paper 4** *Real-time 3D Fish Tracking and Behaviour Analysis*

Hamzah S. AlZu'bi\* (German Jordanian University, Jordan), Waleed Al-Nuaimy, Jonathan Buckley, Lynne Sneddon, and Iain Young (University of Liverpool, United Kingdom)

**Paper 5** *Optimizing Feedforward Neural Networks Using Krill Herd Algorithm for E-mail Spam Detection*

Hossam Faris, Ibrahim Aljarah\*, and Ja'far Alqatawna (The University of Jordan, Jordan)

**Paper 6** *Data Normalization for Triangle Features by Adapting Triangle Nature for Better Classification*

Mohd Sanusi Azmi\*, Nur Atikah Arbain, and Azah Kamillah Muda (Universiti Teknikal Malaysia Melaka, Malaysia), Zuraida Abal Abas (Senior Lecturer, Malaysia), Zulkiflee Muslim (Universiti Teknikal Malaysia Melaka, Malaysia)

**15:30-17:30 Unmanned Vehicles & Robotics**

Session Chair: Tarek Tutunji, Philadelphia University, Jordan

*Grand  
Ballroom 3*

**Paper 1** *Robotino Obstacles Avoidance Capability Using Infrared Sensors*

Tariq Ali\*, and Mohammed Mehdi Ali (Philadelphia University, Jordan)

**Paper 2** *PSO-AG: A Multi-Robot Path Planning and Obstacle Avoidance Algorithm*

Ghaith Bilbeisi\*, and Nailah Al-Madi (Princess Sumaya University for Technology, Jordan), Fahed H Awad (Jordan University of Science and Technology, Jordan)

**Paper 3** *Identification of Quadcopter Hovering Using Experimental Data*

Iyad Salameh\*, Emad M. Ammar, and Tarek A. Tutunji (Philadelphia University, Jordan)

**Paper 4** *Automatic Vehicle Perpendicular Parking Design Using Saturated Control*

Plamen Petrov (Technical University - Sofia, Bulgaria), Fawzi Nashashibi\* (INRIA, France)

**18:30-20:30 Gala Dinner**

*Sunset  
Arena*

# Day 3: Thursday

November 5, 2015

9:30 – 12:30

Time	Item	Place
09:30-12:30	<b>Registration</b>	<i>Registration Area</i>
09:30-10:30	<b>Keynote Speech 5</b> <b>Prof. M-A Al Jarrah</b> Professor of Mechanical Engineering, American University of Sharjah, UAE <i>Drones Challenges and Opportunities</i> Session Chair: Ali Shatnawi, Jordan University of Science and Technology, Jordan	<i>Auditorium</i>
10:30-11:00	<b>Coffee Break</b>	<i>Break Area</i>
11:00-12:30	<b>Machines &amp; Drives</b> Session Chair: Jawad Faiz, University of Tehran, Iran Session Co-Chair: Eyad A. Feilat, The University of Jordan, Jordan  <b>Paper 1</b> <i>Analysis of the Mutual Influence of Supply Mains and Electrical Consumer in Tasks of Induction Motors Diagnostics</i> Atef Al-Mashakbeh* (Tafila Technical University, Jordan), Mykhaylo Zagirnyak, and Dmytro Mamchur, Andrii Kalinov (Kremenchuk Mykhailo Ostrohradskyi National University, Ukraine) <b>Paper 2</b> <i>Multiphase Unbalanced Power Flow and Fault Analysis of Distribution Networks with High Penetration of Inverter-Interfaced DERs</i> Hossein Hooshyar*, Luigi Vanfretti (KTH Royal Institute of Technology, Sweden) <b>Paper 3</b> <i>Impact of Rotor Winding and Stator Stepped End Core on Magnetic Force Distribution on Stator</i> Alireza Ghaempanah (NRI, Iran), Jawad Faiz* (University of Tehran, Iran)	<i>Grand Ballroom 1</i>
11:00-12:30	<b>Education &amp; Learning Methods</b> Session Chair: Lutfi Al Sharif, The University of Jordan, Jordan  <b>Paper 1</b> <i>A Proposed Dynamic Technique for Detecting Learning Style Using Literature Based Approach</i> Thair Hamtini, Hadeel Ateia*(The University of	<i>Grand Ballroom 2</i>



Jordan, Jordan)

**Paper 2** *Preprocessing and Analyzing Educational Data Set Using X-API for Improving Student's Performance*

Elaf Abu Amrieh\*, Thair Hamtini, and Ibrahim Aljarah  
(The University of Jordan, Jordan)

**Paper 3** *Remote Low-Power Digital Design System*

Shatha AbuShanab\* (Bonn-Rhein-Sieg University of Applied Sciences, Germany), Marco Winzker (Bonn-Rhine-Sieg University, Germany), Rainer Brück (University of Siegen, Germany)

**Paper 4** *Mechatronic System Design Project: A 3D Printer Case Study*

Range Kayfi\*, Dana Ragab, and Tarek A. Tutunji  
(Philadelphia University, Jordan)

**11:00-12:30 Instrumentation**

Session Chair: Yazan Alqudah, Princess Sumaya University for Technology, Jordan

*Grand Ballroom 3*

**Paper 1** *Scale Detection Using Light Sensing Technique*

Khalid Alhammadi\* (The Petroleum Institute, UAE), Abdellatif Bouchalkha (The Petroleum Institute & Art and Science College, UAE), Solaiman Sowwan (The Petroleum Institute, UAE)

**Paper 2** *The Detection of Water Leakage in Buried Pipes Using Infrared Technology; A Comparative Study Using High and Low Resolution Infrared Cameras*

Bubaker H. Shakmak\*(Researcher, United Kingdom), Amin Al-Habaibeh (United kingdom & Nottingham Trent University, United Kingdom)

**Paper 3** *An Innovative Design and Evaluation of a Stratified Hot Water Storage System- The Water Snake*

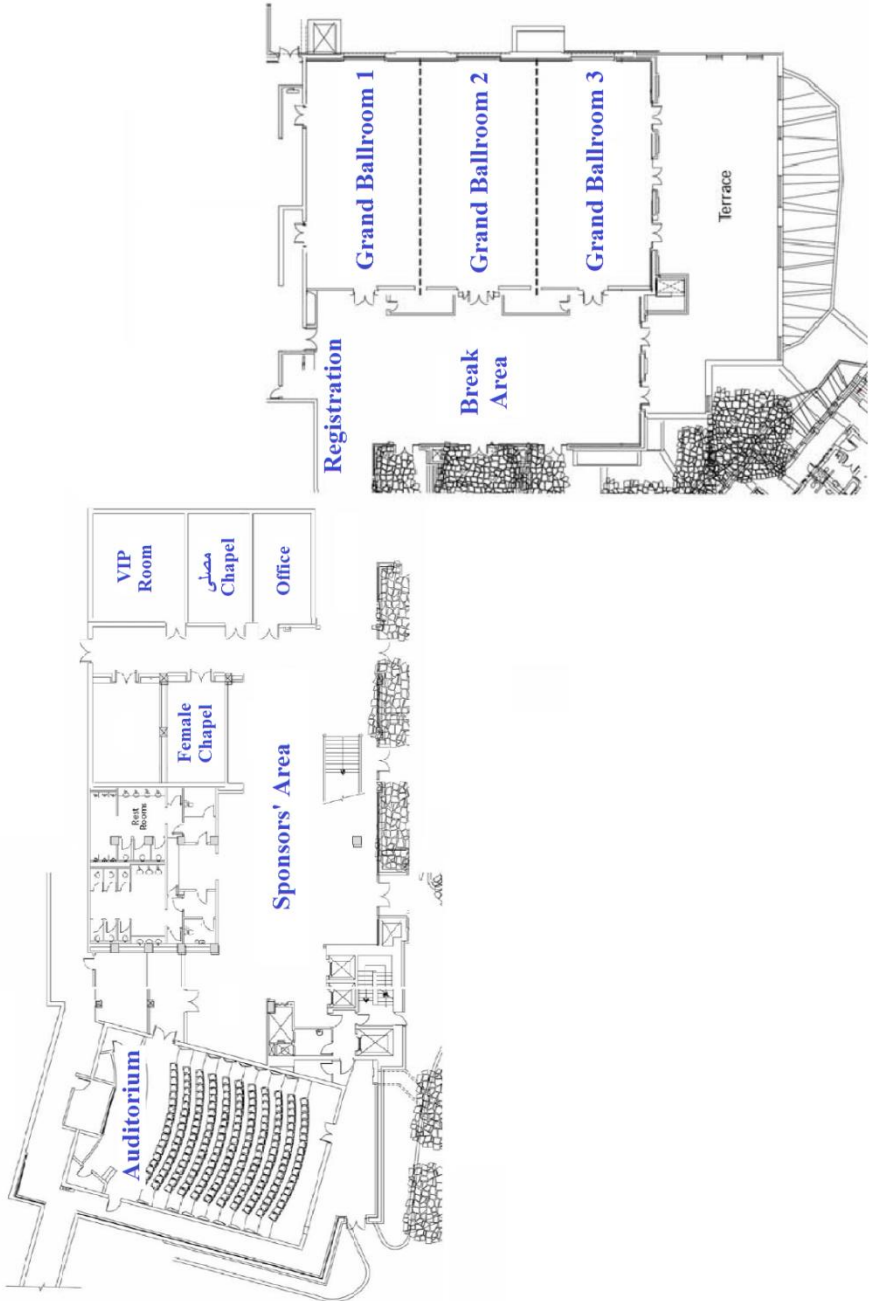
Simon Fanshawe (Gannet Limited, United Kingdom), Amin Al-Habaibeh (United kingdom & Nottingham Trent University, United Kingdom), Bubaker H. Shakmak\*(Researcher, United Kingdom)

**12:30-13:30 Lunch**

*Al Saraya Restaurant*

**13:30-19:00 Trip to Amman City**

# Venue Map



# Mövenpick Resort Map

## Mövenpick Resort & Spa Dead Sea Resort Map



- Parking
- Fast lane to the beach
- Emergency Assembly Points
- Photo Spots
  - Al Hana Terrace
  - Al Arglieh Roof
  - Splash Bar
  - Spa infinity pool
  - Infinity pool at Beach Lounge
  - Beach
- Restaurants and Bars
  - Al Saraya Restaurant
  - Al Khayyam Bar & Al Hana Lounge and Terrace
  - Al Mashrabiya Restaurant
  - Valley Café and Bar
  - Luigi's
  - Chopsticks
  - The Grill
  - The Splash Pool Bar and Restaurant
  - Beach Lounge
  - The Juice Bar
- Shop
  - Souk Zara

Mövenpick Resort & Spa Dead Sea  
Sweimeh, Dead Sea Road  
P.O. Box 816538, 11180 Amman, Jordan  
Phone +962 5 3561111  
Fax +962 5 3561122  
resort.deadsea@movenpick.com

Dead Sea

## Bus Timetable for Registered AECT 2015 Participants

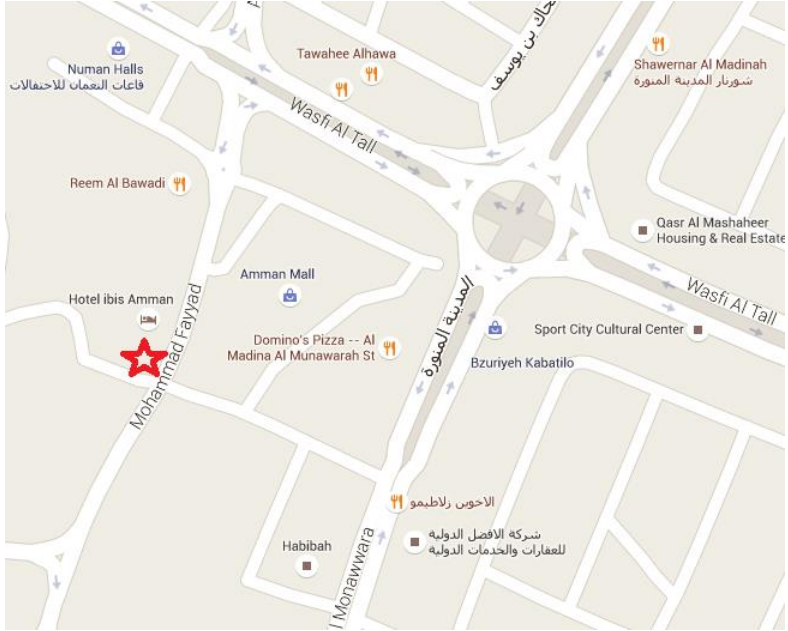
Venue is the Dead Sea Mövenpick Resort & Spa

Day 1: Tue 3/11/2015	Day 2: Wed 4/11/2015	Day 3: Thu 5/11/2015
<p><b>Amman to Venue</b>            07:30 Ibis Hotel (Bus 1)            07:35 (Bus 2)            07:40 (Bus 3)            07:45 Seventh Circle (Bus 1)            07:50 (Bus 2)            07:55 (Bus 3)            08:45 Venue (Bus 1)            08:50 (Bus 2)            08:55 (Bus 3)</p> <p><b>Venue to Amman</b>  <i>Bus schedule after Opening</i>            10:45 Venue (Bus 1)            11:45 Seventh Circle (Bus 1)            12:00 Ibis Hotel (Bus 1)</p> <p><b>Student Lunch Bus</b>            13:35 Venue (Bus 3)            13:40 Samara Mall (Bus 3)            14:20 Samara Mall (Bus 3)            14:25 Venue (Bus 3)</p> <p><b>Venue to Amman</b>  <i>Bus schedule after last session</i>            18:00 Venue (Bus 1)            18:05 (Bus 2)            18:10 (Bus 3)            19:00 Seventh Circle (Bus 1)            19:05 (Bus 2)            19:10 (Bus 3)            19:15 Ibis Hotel (Bus 1)            19:20 (Bus 2)            19:25 (Bus 3)</p>	<p><b>Amman to Venue</b>            08:00 Ibis Hotel (Bus 1)            08:05 (Bus 2)            08:10 (Bus 3)            08:15 Seventh Circle (Bus 1)            08:20 (Bus 2)            08:25 (Bus 3)            09:15 Venue (Bus 1)            09:20 (Bus 2)            09:25 (Bus 3)</p> <p><b>Student Lunch Bus</b>            13:05 Venue (Bus 3)            13:10 Samara Mall (Bus 3)            13:50 Samara Mall (Bus 3)            13:55 Venue (Bus 3)</p> <p><b>Venue to Amman</b>  <i>Bus schedule before the Gala Dinner</i>            18:00 Venue (Bus 3)            19:00 Seventh Circle (Bus 3)            19:15 Ibis Hotel (Bus 3)</p> <p><i>Bus schedule after the Gala Dinner</i>            20:30 Venue (Bus 1)            20:45 (Bus 2)            21:30 Seventh Circle (Bus 1)            21:45 (Bus 2)            21:45 Ibis Hotel (Bus 1)            22:00 (Bus 2)</p>	<p><b>Amman to Venue</b>            08:00 Ibis Hotel (Bus 1)            08:05 (Bus 2)            08:10 (Bus 3)            08:15 Seventh Circle (Bus 1)            08:20 (Bus 2)            08:25 (Bus 3)            09:15 Venue (Bus 1)            09:20 (Bus 2)            09:25 (Bus 3)</p> <p><b>Venue to Amman</b>            13:30 Venue (Bus 3)            14:00 Seventh Circle (Bus 3)            14:15 Ibis Hotel (Bus 3)</p> <p><b>Amman Tour</b>            13:30 Venue (Buses 1 and 2)            19:00 Tour ends (Buses 1 and 2)</p> <p><i>Bus 1 returns to the Venue</i>            20:15 Venue (Bus 1)</p> <p><i>Bus 2 has the following stops:</i>            19:30 Seventh Circle (Bus 2)            19:45 Ibis Hotel (Bus 2)</p>

- These are the expected departure and arrival times. Some delays may occur due to unfavorable traffic conditions.
- The locations of the bus stops in Amman are indicated in the following maps.

## Ibis Hotel Stop

On Mohammad Fayyad street near Amman Mall



## Seventh Circle Stop

On Zahran street, in front of CTown Supermarket



# خط المهندسين الخاص

## صمم ليغطي جميع احتياجاتك

### لتبقى على اتصال بأفضل تعرفه



بدون اشتراك شهري

#### خط المهندسين الخاص

غير محدود	مكالمات على شبكة أمنية
1.8 قرش للدقيقة	مكالمات على الشبكات الخلوية الأخرى
0.8 قرش للدقيقة	مكالمات على الشبكة الأرضية
غير محدود	رسائل محلية ودولية
1GB بلصاف دينار	إنترنت
5 دنانير أو 10 دنانير	قيمة الرصيد المضاف

لمزيد من المعلومات الرجاء الاتصال على 0785004531  
أو زيارة معرض أمنية المتواجد في نقابة المهندسين

أمنية

إلهي



نقابة المهندسين الأردنيين  
Jordan Engineers Association

- الأسعار أعلاه لا تشمل الضرائب والرسوم
- يمكن استخدام الرصيد المضاف في جميع أنواع الاستهلاك
- الرصيد المضاف صالح لمدة سنة
- هذا العرض للإشتراكات الجديدة فقط