

Preface: General Chair

The 7th International Conference on Information Technology



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Welcome to ICIT'15; the 7th International Conference on Information Technology. ICIT'15 has attracted high quality papers in different fields of IT. It offers a unique opportunity for Arab scientists and practitioners to meet and get in touch with outstanding international scientists to share their expertise, research results, and achievements. During the last decade, Jordan has made IT fundamental to its development. This conference is aimed to promote this technology nationally and internationally. ICIT'15 get indexed and cosponsored by IEEE, EBSCO, IET Inspec, ULRICHS, and Google scholar. Each paper has been blind reviewed by three reviewers, two reviewers from our international committee (from 45 countries) and one reviewer from the conference local committee. This year, we were delighted to have 302 papers submitted from 53 different countries, of these, 120 were accepted for presentation at the conference with an acceptance rate of 39%.

Four distinguished keynote speakers will feature lectures during the conference's three-day alongside with two workshops that will be presented this year. Prof. Anu Gokhale; Illinois State University, USA; will share his experience in the field of "Cloud Computing Security". Prof. Hassan Ugail; Director of Centre for Visual Computing, University of Bradford, UK; in his speech will present the recent developments on "Applied Visual Computing: Challenges and Opportunities". Furthermore, Prof. Abdel-Badeeh Salem, Head of Artificial Intelligence and Knowledge Engineering Department, Ain Shams University, Egypt; will introduce the latest trends in "Exploiting Artificial Intelligence Technology in e-Health". Finally; in Dr. Mohamed Kayyali (Ongoing for Harvard University) talk, he will provide an answer for the question "What is after Image Processing!".

Many individuals have contributed to the success of this event. My sincere gratitude is addressed to the authors who chose to submit their work to the ICIT'15, as well as to the reviewers and all conference committees. Your valuable time and effort are highly appreciated. I also express my deep appreciation to our workshops organizers; Sheik Ali Alao (ePromaG Consultancy London, UK) and Prof Abdel-Badeeh Salem, who elicited great workshop proposals on important and timely topics.

The ICIT'15 would not have seen the light without the encouragement and full support from our university president Prof. Rushdi A. Hasan and the board of directors.

In closing, on behalf of all committees of the ICIT'15, I wish you a fruitful conference and pleasant stay in Jordan.

Monday May 11th, 2015

**Registration: Days Inn Hotel & Suites, Amman
At 21:00**

**Day 1
Tuesday May 12th, 2015**

Time	Event	Location
09:30 – 10:00	Late Registration, Conference Location: Al-Zaytoonah University	Main Stage Building 18
10:00 – 10:30	Opening Session	
10:30 – 10:55	Coffee Break	
11:00 – 11:40	Keynote Speech: Applied Visual Computing: Challenges and Opportunities. Prof. Hassan Ugail Chair: Dr. Abdelfattah Tamimi	Main Stage Building 18
11:45 – 12:25	Keynote Speech: Security in Cloud Computing. Prof. Anu Gokhale Chair: Dr. Thomas Risse	
12:30 – 13:25	Workshop: Consumer Electronics Information Technologies in 21st Century Course or Blessing! Babatunde Ali Alao Chair: Dr. Firas Tarawneh	
Lunch 13:30 – 14:30 Main Restaurant		

Day 1
Tuesday May 12th , 2015

Session A
Software Engineering

<p>14:30-16:00</p>	<p>Cahir: Prof. Nabil Arman</p> <ol style="list-style-type: none"> Using MADA+TOKAN to Generate Use Case Models from Arabic User Requirements in a Semi-Automated Approach. Nabil Arman Smart OptiSelect Preference Based Innovative Framework for User-in-the-Loop Feature Selection in Software Product Lines. Ahmed Eid El Yamany, Mohamed Shaheen Elgamel Decision Support System for Learning Disabilities Children in Detecting Visual-Auditory-Kinesthetic Learning Style. Wan Fatin Fatihah Yahya, Noor Maizura Mohamad Noor Identification of Potential Crime Tactical Path-Finding Using Analytical Hierarchy Process (AHP) in Situational Crime Prevention. Wan Mohd Farhan Bin Wan , Noor Maizura Mohamad Nor, Masita Abdul Jalil Extended Cavity Model to Analysis Tunable Circular Disk Microstrip Antenna Using Genetic Algorithm. Sami Bedra, Tarek Fortaki, Siham Benkouda, Abderraouf Messai Improving the Reuse of Services in Geospatial Applications with XMDD Technology. Samih Al-Areqi , Anna-Lena Lamprecht , Tiziana Margaria 	<p>Conference Hall (1) Faculty of IT Building 9 3^d floor</p>
<p>Time</p>	<p>Session B Information and knowledge Engineering</p>	<p>Location</p>
<p>14:30-16:00</p>	<p>Chair: Dr. Abdelkader Adla</p> <ol style="list-style-type: none"> Hierarchical Sparsity-Regularized Framework Based Frequency Hopping Spectrum Estimation With Antenna Array System. Lifan Zhao, Lu Wang, Bi Guoan, Haijian Zhang Unsupervised Single Channel Source Separation with Nonnegative Matrix Factorization. A.M. Darsono, Shakir Saat, N.M. Z. Hashim, A.A.M ISA The Trends and Directions of Wisdom and Semantic-based Search System. Soheli Farhana, Md. Masum Billah Evaluating the Success of Information Strategic System Planning. Qais Hammouri, Laith Shraideh, Emad Abu-Shanab A Novel Web Application for Image Fusion. V. Aslantas, R. 	<p>Conference Hall (2) Faculty of IT Building 9 3^d floor</p>

	<p>Kurban, A.N. Toprak, E. Bendes</p> <p>6. Ontology-based Facilitation Support Tool for Group Decision Making. Abdelkader Adla, Bakhta Nacet</p>	
<p>Dinner and Folklore Band and Music</p> <p>20:00 – 22:00</p> <p>Al-Zaytoonah University</p>		

Day 2 Wednesday May 13th , 2015

09:00-09:40	<p>Keynote Speech: Exploiting Artificial Intelligence Technology in e-Health</p> <p>Prof. Abdel-Badeeh Salem</p> <p>Chair: Dr. Maria Mach-Król</p>	<p>Conference Hall (1)</p> <p>Faculty of IT</p> <p>Building 9</p> <p>3^d floor</p>
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Session A Artificial Intelligence

09:45-11:00	<p>Chair: Prof. Abdel-Badeeh Salem</p> <ol style="list-style-type: none"> 1. Using temporal formalisms to support organizational creativity. Maria Mach-Król 2. Multi Objects Tracking in Nighttime Traffic Scenes. Mohamed Taha, Hala H. Zayed , Taymoor Nazmy, M. E. Khalifa 3. New Selection Schemes for Particle Swarm Optimization. Mohammad Mohammad Shehab, Mohammed Azmi Al-Betar, Ahamad Tajudin Khader 4. Knowledge Acquisition for Developing Knowledge-Base of Diabetic Expert System. IBRAHIM M.AHMED, MARCO AL-FONSE, ABEER M.MAHMOUD, ABDEL-BADEEH M.SALEM 5. Solving Nurse Rostering Problem Using Artificial Bee Colony Algorithm. Asaju, La'aro Bolaji, Mohammed A. Awadallah, Mohammed Azmi Al-Betar, Ahamad Tajudin Khader 6. Bridging the Gap between Modeling of Mobile Agent-based Systems and Semantic Web using Meta-Modeling and Graph Grammars. Aissam Belghiat, Allaoua Chaoui, Ali Aldahoud 7. Artificial Bee Colony Based Focus Fusion. Veysel Aslantas, Ahmet Nusret Toprak 	<p>Conference Hall (1)</p> <p>Faculty of IT</p> <p>Building 9</p> <p>3^d floor</p>
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Session B
Modeling and Simulations

09:45-11:00	<p>Chair: Prof. Allaoua Chaoui</p> <ol style="list-style-type: none"> Multicore RISC Processor Implementation by VHDL for Educational Purposes. Safaa S. Omran, Ali J. Ibada VeSimulator A Location-Based Vehicle Simulator Model for IoT Applications. Osama Oransa, Mostafa Abdel-Azim Numerical Simulation for Fuzzy Fredholm Integral Equations Using Reproducing Kernel Algorithm. Omar Abu Arqub, Hasan Rashaideh, Shadi Aljawarneh Modeling and Simulation of Electroactive Polymer Robotic Actuator. Md. Masum Billah, Raisuddin Khan, Amir Akramin Shafie UML Activity Diagrams and Maude Integrated Modeling and Analysis Approach Using Graph Transformation. Elhillali Kerkouche, Khaled Khalfaoui, Allaoua Chaoui, Ali Aldahoud Plane Segmentation of Kinect Point Clouds using RANSAC. Rifat Kurban, Florenc Skuka, Hakki Bozpolat 	<p>Conference Hall (2) Faculty of IT Building 9 3^d floor</p>
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Coffee break
11:00 – 11:15

Session A
Artificial Intelligence

11:15-12:15	<p>Cahir: Prof. Mahmoud Iskandarani</p> <ol style="list-style-type: none"> Towards Developing an Intelligent HAJJ Guide system. Malak Osman Abbdelazeez, Adnan Shaout Hierarchical Singular Value Decomposition for Halftone Images. Roumen Kountchev , Roumiana Kountcheva Design and Implementation of Two Degree of freedom Proportional Integral Derivative Controller. Raaed Faleh Hassan Experiments with Simulated Humanoid Robots. Hans-Dieter Burkhard Design of rectangular microstrip antenna with rectangular aperture in the ground plane using artificial neural networks. Siham Benkouda, Tarek Fortaki, Sami Bedra, Abdelkrim Belhedri 	<p>Conference Hall (1) Faculty of IT Building 9 3^d floor</p>
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Session B
Modeling and Simulations
Computers and Networks Security

11:15-12:15	<p>Chair: Dr. Oleksandr Letychevskiy</p> <ol style="list-style-type: none"> Particle swarm optimization and method of moments for modeling and optimization of microstrip antennas Tarek Fortaki , Mounir Amir, Siham Benkouda, Abdelkrim Belhedri Simulation of Class D resonance inverter for Acoustics Energy Transfer applications. Huzaimah Husin, H. Hamidon, Shakir Saat, Y. Yusmarnita Symbolic Modeling Approach in Verification and Testing. Oleksandr Letychevskiy Design, Implementation and Comparison of Low-Cost Laser Scanning Systems for 3D Modeling. Tuba Kurban, Erkan Besdok Secure Data Sharing Polices and Architecture Preserving Privacy. Sanaa Sarahneh , Radwan Tahboub 	<p>Conference Hall (2) Faculty of IT Building 9 3^d floor</p>
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Break
12:15 – 12:30

Session A
Artificial Intelligence

12:30-14:00	<p>Cahir: Dr. Tihomir Orehovački</p> <ol style="list-style-type: none"> Unsupervised Classification of Mobile Device Images. Jocelin Rosales Corripio, Ana Lucila Sandoval Orozco, Luis Javier García Villalba Distributed 3D Object Recognition System Using Smartphones. Mustafa Ibrahim, Omar El-gendy, Mohamed Farouk A Survey on Digital Image Steganography. Zaid Al-Omari, Ahmad T. Al-Taani Computer Vision Applied to Road Lines Recognition Using Machine Learning. C. H. Rodríguez-Garavito, A. Ponz, F. García, A. de la Escalera, J.M. Armingol Supporting Arabic Sign Language Recognition with Facial Expressions. Ghada Dahy Fathy, E.Emary, Hesham N.ElMahdy Modeling and Design of Anisotropic Circular Microstrip Patch Antenna Using Neurospectral Computation Approach. Sami BEDRA, Tarek FORTAKI, Randa BEDRA, Abderraouf MESSAI 	<p>Conference Hall (1) Faculty of IT Building 9 3^d floor</p>
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7. **Dynamic Frames-Based Generation of Web 2.0 Applications.**
Tihomir Orehovački, Ivan Magdalenić, Danijel Radošević

Session B

**Bioinformatics and Computational Biology, Cloud Computing
Database and Data Mining, Parallel and Distributed Systems, Computers and Networks Security**

Chair: Dr. Musarat Hasan Mujawar

1. **Detecting patients with Parkinson's disease using PLP and VQ.** Achraf Benba, Abdelilah Jilbab, Ahmed Hammouch
2. **Proposed Evaluation Criteria for Selecting Appropriate Cloud Based On-Demand CRM for SMEs.** Musarat Hasan Mujawar
3. **Analysis of Oral Cancer Prediction using Features Selection with Machine Learning.** Fatihah Mohd, Noor Maizura Mohamad Noor, Zainab Abu Bakar, Zainul Ahmad Rajion
4. **Web Crawler System for Distinct Author Identification in Bibliographic Databases.** Nancy Dau, Marcial Russo, Eric Bouwsema, Tansel Özyer, Reda Alhajj
5. **An Effective Parallel FDTD Algorithm For Modeling 3D Frequency-Dependent Electromagnetic Applications.** Omar Ramadan, Muhammed Salamah, Ahmad Salh
6. **The Dualism of Context in Ubiquitous Computing.** Dennis. Lupiana, Fredrick Mtenzi, Brendan O'Shea
7. **Groebner Bases and Coding.** Thomas Risse

Conference Hall
(2)
Faculty of IT
Building 9
3^d floor

12:30-14:00

Lunch

14:00 – 15:00
Main Restaurant

Dinner and Folklore Band and Music

20:00 – 22:00
Jeresh – The Old City

Day 3

Thursday May 14th, 2015

09:00-09:40

Keynote Speech: What is after image processing!

Dr. Mohamed Kayyali

Chair: Dr. Sokyna Qatawneh

Conference Hall
(1)
Faculty of IT
Building 9
3^d floor

Session A
Internet and Web Services

<p>09:45-11:00</p>	<p>Chair: Dr. Gheith A. Abandah</p> <ol style="list-style-type: none"> 1. Privacy and Protection in Electronic Transaction: A Review of the E-Commerce Security Protocols. Taroub Ahmed Sa'ed 2. Towards Building Novel Educational System for School Students Using Smart Phones and QR Codes. Yarub A. Wahsheh, Reem A. Wahsheh, Yousef A. Eyadat 3. Cross-Language Name Matching for Data Fusion in Linked Open Data. Ziad F. Torkey, Emad Elabd, Mostafa Abdelazem 4. Exploring Domain Interrelations in Freebase Schema Using Modularity-Based Community Detection. Mahmoud Elbattah, Mohamed Roshdy, Mostafa Aref, Abdel-Badeh Salem 5. The Arabic Language Status in the Jordanian Social Networking and Mobile Phone Communications. Gheith A. Abandah, Mohammed Zeki Khedher, Waleed A. Anati, Ahmad A. Zghoul, Sami M. Ababneh 6. Internet-based Troubleshooting and Monitoring System of Industrial Robots. Md Mozasser Rahman, Sulleha Bt Parnin 	<p>Conference Hall (1) Faculty of IT Building 9 3^d floor</p>
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Session B
Computer Networks and Communications

<p>09:45-11:00</p>	<p>Chair: Dr. Mohamed Fezari</p> <ol style="list-style-type: none"> 1. Analyzing Optimal Setting Of Reference Point Group Mobility Model Using DSR Protocol In MANETS Nasser Ali Husieen, Mohammad M. Rasheed 2. Extending OpenFlow in Virtual Networks. Lorena Isabel Barona López, Ángel Leonardo Valdivieso, Luis Javier García 3. An Overview of Integration of Mobile Infrastructure with SDN/NFV Networks. Ángel Leonardo Valdivieso Caraguay, Lorena Isabel Barona López, Luis Javier García Villalba 4. Impact of Node Clustering on Power Consumption in WSN. Ala'a H. Makableh , Ghassan Samara 5. WSN for AIR Quality Monitoring in Annaba City. Mohamed Fezari, Mohamed Seghir Boumaza, Ahmed Al-Dahoud, Ali Al-Dahoud 	<p>Conference Hall (2) Faculty of IT Building 9 3^d floor</p>
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Coffee break
11:00-11:15

Session A
Computers and Networks Security

11:15-12:15	<p>Chair: Prof. Jihad Al-Ja'am</p> <ol style="list-style-type: none"> 1. On The Improvement of the Tri-Way Pixel Value Differencing Steganography Algorithm. Nada Mahmoud Aboueata, Sara Yaqoob Al-Rasbi, Wafa Ahmed Al-Jaal, Jihad Al-Ja'am 2. Finger-Knuckle-Print identification System Using Hidden Markov Model and Discret Cosine Transform. Abdallah Me-raoumia, Salim Chitroub, Ahmed Bouridane 3. A Suggested Algorithm of Recommender System to Recommend crawled-Web Open Educational Resources to Course Management System. Jamil A. Itmazi, Haytham W. Hijazi 4. The Generalised Secured Mobile Payment System Based on ECIES and ECDSA. Ehab Alkhateeb, Mohammad A. Alia, Adnan A. Hnaif 	<p>Conference Hall (1) Faculty of IT Building 9 3^d floor</p>
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Session B
Multimedia and Its Applications

11:15-12:15	<p>Chair: Prof. El-Sayed M. El-Horbaty</p> <ol style="list-style-type: none"> 1. Human Activity Recognition for Surveillance Applications. Ahmed Taha, Hala H. Zayed, M. E. Khalifa, El-Sayed M. El-Horbaty+ 2. New Technique of Forensic Analysis for Digital Cameras in Mobile Devices. Jocelin Rosales Corripio, Ana Lucila Sandoval Orozco, Luis Javier García Villalba 3. Virtual Tourism Application through 3D Walkthrough: Flor De La Mar. Mohd Rahmat Bin Mohd Noordin, Ismassabah Binti Ismail, Muhammad Nur Aiman Bin Mohd Yahya 4. Enhanced Watermarking Scheme for 3D Mesh Model. Lamiaa Basyoni, H. I. Saleh, M. B. Abdelhalim 5. User interfaces applied to teleoperate mobile robots with keyboard command, PS3 controller and mobile phone. Nancy Velasco E, Darío José Mendoza Chipantasi, Antonio Barrientos 	<p>Conference Hall (2) Faculty of IT Building 9 3^d floor</p>
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break
12:00-12:30

Session A Computers and Networks Security, E-Technology		
12:30-13:45	<p>Cahir: Dr. Rifat Kurban</p> <ol style="list-style-type: none"> Temperature Aware Design for High Performance Processors. Mustafa M. MUSTAFA, Muhammed A. IBRAHIM, Diary R. SULAIMAN Image Watermarking using DC Component of DCT. Rifat Kurban, Hakki Bozpolat, Florenc Skuka A New Authenticated Key Agreement Protocol. Kamal A. EIDahshan, Emad Masameer, AbdAllah A. Elhabshy The Effect of Using Social Media in Governments: Framework of Communication Success. Dareen A.Mishaal, Emad Abu-Shanab A Review on Internet Banking Security and Privacy Issues in Oman. Elbek MusaeV , Muhammed Yousoof 	Conference Hall (1) Faculty of IT Building 9 3 ^d floor
Session B E-Technology		
12:30-13:45	<p>Chair: Dr. Emad A. Abu-Shanab</p> <ol style="list-style-type: none"> Predictors of Mobile Learning Adoption. Mohamad Noorman Masrek Predictors of E-Participation Levels: The Case of Jordan. Heba K. Al-Quraan, Emad A. Abu-Shanab The Development of Software Agents in e-Learning 3.0. Dorota Jelonek E-Government Adoption in Jordan: The Influence of Age. Nebal Q. Al-Jamal, Emad A. Abu-Shanab Big Issues for A Small Piece: RFID Ethical Issues. Mai Al-Sebae 	Conference Hall (2) Faculty of IT Building 9 3 ^d floor
Lunch 14:00 – 15:00 Main Restaurant		
Dinner and Folklore Band and Music 20:00 – 22:00 Al-Zaytoonah University		

Al-Zaytoonah University of Jordan was established in 1993. Since then; Al-Zaytoonah has witnessed considerable progress, at both the infrastructure and academic levels. It now includes seven faculties, encompassing 28 undergraduate specializations and 5 graduate programs.

Al-Zaytoonah is now a member of the following associations:

- Federation of Arab Universities
- Union of Arab & European Universities
- International Association of University (IAU)
- Federation of the Universities of the Islamic World (FUIW)
- Association of Private Institutions for Higher Education



Al-Zaytoonah campus is distinguished by a wonderful site overlooking Queen Alia International Airport Highway, and is characterized by beautiful architectural features. It is only 15 km south of the center of Amman, the capital of Jordan, and its premises stretch over a total area of approximately 220,000 sq. m

The Faculty of Science and Information Technology was established in 1993. It offers the Bachelor of Science degree in the following specializations:

- **Mathematics and Natural Science**
- **Computer Science**
- **Computer Information Systems**
- **Software Engineering**
- **Computer Networks**
- **Multimedia Systems**



The 7th International Conference is a clear evidence of how far the Faculty of Science and Information Technology have come in organizing conferences with high quality research discussing advanced topics in the diverse areas of Information Technology and its applications.

The conference reflects the high standards and the advanced level of Al-Zaytoonah University of Jordan.