



# **20<sup>th</sup> International Conference on Computer Theory and Applications**

**ICCTA 2010**

23-25 October 2010  
Alexandria, Egypt

**Conference Program**

*Day 1*

*Saturday, October 23<sup>rd</sup>, 2010*

**DAY 1 - Saturday, October 23<sup>rd</sup>, 2010**

**09:30 Registration**

**10:30 Opening Session**

**"ICCTA in 20 Years"**

**H.E. Prof. Dr. Youssry El Gamal**

Chairman-Board of Trustees  
Egypt-Japan University for Science and Technology  
Former Minister of Education  
President, Computer Scientific Society

**"In Search for the Second Decade Character: ?-Gov"**

**H.E. Prof. Dr. Ahmed Darwish**

Minister of State for Administrative Development  
Egypt

**12:00 Coffee Break**

**12:30 Invited Presentation**

**"The Business of Scientific Research"**

**Prof. Dr. Ahmed Tantawy**

Executive Director – Egypt Nanotechnology Center - Egypt

**13:30 Invited Presentation**

**"Science Supercourse: A New Tool for Education"**

**Prof. Dr. Noha Adly**

Professor, Computer Systems and  
Engineering Department, Faculty of  
Engineering, Alexandria University, Egypt  
Deputy Head – ICT Sector – Bibliotheca Alexandrina - Egypt

**14:30 Sponsor Presentation**

Information Technology Industry Development Agency (ITIDA)  
Egypt

**15:30 Lunch**

*Day 2*

*Sunday, October 24<sup>th</sup>, 2010*

**DAY 2 - Sunday, October 24<sup>th</sup>, 2010**

**9:00 - 11:00 Two Parallel Sessions**

<b>Session I Software Engineering</b>	<b>Session II Image Processing and Pattern Recognition -1</b>
<b>Chairs:</b> <i>Dr. Medhat Fakhry and Dr. Essam Kosba</i>	<b>Chairs:</b> <i>Prof. Khaled Mahar and Prof. Ossama Ismail</i>
Design Pattern Mining in Object Oriented Software <b>Mohamed A. Soliman, Islam A. M. ElMaddah, and Ayman M. Wahba (Egypt)</b>	A Symmetry-Based Efficient Computation of 2D Image Moments <b>Khalid M. Hosny (Egypt)</b>
SM-VIS: Visualizing Overlay Student Models in Intelligent Learning Systems <b>Essam Kosba, Yasser Hanafy, Mohamed Gaafar (Egypt)</b>	Segment k-means Clustering Algorithm <b>Omnia Ossama, Hoda M. O. Mokhtar, Mohamed E. El-Sharkawi (Egypt)</b>
Prediction of Faults at Different Severity levels using Decision Tree Analysis <b>Ruchika Malhotra, Arvinder Kaur, Yogesh Singh (India)</b>	Fully Automatic Technique for Hepatic Tumor Segmentation in Medical Images <b>Nader H. Abdel-massieh, Mohiy M. Hadhoud, and Khalid M. Amin (Egypt)</b>
Agent-Based Adaptive Testing System <b>Nada Farag, Khaled Mahar, Essam Kosba(Egypt)</b>	Modeling and Analysis of The Human Brain Using The Diffusion Tensor MRI <b>Ihab Abdalla El-Aff, Ahmed Barbary, Fatma Zada (Egypt)</b>

<b>Session I Software Engineering</b>	<b>Session II Image Processing and Pattern Recognition -1</b>
	Development of Secure Encoder-Decoder for JPEG Images <b>Ghada Hamissa, Hatem Abd Elkader, Amany Sarhan and Mahmoud Fahmy (Egypt)</b>

**11:00 Coffee Break**

**11:30 Invited Presentation**

**"Cloud Computing Benefits and Challenges"**

**Prof. Dr. Hany Ammar**

Lane Dept. of Computer Science and Electrical Engineering,  
West Virginia University, USA

**12:30 Invited Presentation**

**"Information Assurance, Security, and Forensics"**

**Prof. Dr. Adel Elmaghraby**

Professor and Department Chair  
Computer Engineering and Computer Science Department  
Director – Innovative and Emerging Technologies Lab  
University of Louisville, USA

**14:00 Lunch**

**DAY 2- Sunday, October 24<sup>th</sup>, 2010 (Continued)**

**15:00 - 17:00 Two Parallel Sessions**

<b>Session III Image Processing and Pattern Recognition -2</b>	<b>Session IV Networks, Security, and High Performance Computing</b>
<b>Chairs:</b> Prof. Amin Shoukry and Prof. Taher ElSonni	<b>Chairs:</b> Prof. Yasser Hanafy and Dr. Mohamed Abou Elnasr
An Efficient Conventional Methodology for IRIS Recognition <b>Ramadan M. Mohammed, Benbella S. Tawfic, Noha Y. Hassan (Egypt)</b>	A Model for Enhancing Security in Web Service Business Process Workflow (WS-BPEL) <b>Fady Angelo, Medhat Fakhry (Egypt)</b>
Fast Generation of Demolition Special Effects on 3D Buildings <b>Samia A. Ali, Khaled F. Hussain, and Ahmed M. Sayed (Egypt)</b>	Design and Implementation of a Cross Site Scripting Detection Tool (XSS-DT) <b>Maha Farag and Ayman Abdel- Hamid (Egypt)</b>
A Fast and Fully Automatic Wavelet-Based Hybrid Registration Technique for Brain MR Images <b>Nagham E. Mekky, Fatma E.-Z. Abou-Chadi, Sherif Kishk (Egypt)</b>	Analysis of Attack Graphs <b>Nabil Hassan (Liberia)</b>

<b>Session III Image Processing and Pattern Recognition -2</b>	<b>Session IV Networks, Security, and High Performance Computing</b>
Performance Evaluation of Iris Recognition System Using CHT and Morphological Operations <b>A.T. Kahlil and F.E.M. Abou- Chadi (Egypt)</b>	Parallel LU Factorization on GPU <b>Mohamed M. Gharib, Yasser Y. Hanafy, Amr M. Bayoumi (Egypt)</b>
MPEG-7 Feature Visualization for CBIR Systems <b>Laila Shoukry, Sebastian Klenk, Gunther Heidemann (Germany)</b>	CBDTM: A Context-based Dynamic Trust Model for Pervasive Computing Environments <b>Marwa Farouk, Ayman Abdel- Hamid, and Ossama Badawy (Egypt)</b>
Protein Structure Prediction using ab initio Approach <b>Walaa F. Ahmed, Khaled M. Mahar (Egypt)</b>	Complex Multiplication Reduction in Pipeline FFT Architecture <b>Mounir Arioua, Said Belkouch, Mohamed Agdad, M.M'rabet Hassani (Morocco)</b>

*Day 3*

*Monday, October 25<sup>th</sup>, 2010*

**DAY 3-Monday October 25<sup>th</sup>, 2010**

**9:00 - 11:00 Two Parallel Sessions**

<b>Session V Computer Control and Industrial Applications – 1</b>	<b>Session VI Information Systems &amp; Databases - 1</b>
<b>Chairs:</b> Prof. Hussein El-Dessouky and Prof. Mahmoud Abou Zeid	<b>Chairs:</b> Prof. Ossama Badawy and Dr. Mahmoud Farouk
Modeling and Simulation of a Conventional Hydraulic Power Steering System <b>H. A. El-Gamal E. S. Saber A. A. Taha (Egypt)</b>	Effect of Student Emotion-Associations on Architectural Color Design of Educational Spaces in 3D Virtual Learning Environments <b>Noha Saleeb, Georgios Dafoulas (UK)</b>
A Simplified Computer Approach to Evaluate Random Heavy Vehicle Loading on Highway Embankment <b>Mohamed Amin Foda (Egypt)</b>	Using Association Rule Mining to Detect Adverse Drug Events <b>Ashraf Shawky, Essam Kosba and Khaled Mahar (Egypt)</b>
DSP-Based DC Drive with Fuzzy Nonlinear Compensator <b>W.A.M. Ghoneim, M. Abou Zeid, and S. M. El-Sisi (Egypt)</b>	Comparing Egypt e-Government with Kuwait e-Government: Where They Stand? <b>Hoda A. Abdel Hafez, and Abeer A. Amer (Egypt)</b>
Quantum Well Number Effect on AlGaAs/GaAs Quantum Well Infrared Photodetector <b>Ahmed Khairy Aboul-Seoud, Moustafa Hadhouda, Alaa S. Hafez (Egypt)</b>	E-business as a Sustaining Innovation in Banking Industry A Case Study on Egyptian Virtual Bank <b>Christina Albert Rayad (Egypt)</b>

<b>Session V Computer Control and Industrial Applications – 1</b>	<b>Session VI Information Systems &amp; Databases - 1</b>
Kinematic Design of Wheeled Mobile Robot with Mecanum Wheels <b>M. Salama M. Abdel-Geliel E. Saber (Egypt)</b>	Mobile Banking Perception and Usage: The Case of Egypt <b>Rehaballah El Badrawy (Egypt), Rasha Abd El Aziz (UK)</b>

**11:00 Coffee Break**

**11:30 – 13:30 Two Parallel Sessions**

<b>Session VII Computer Control and Industrial Applications – 2</b>	<b>Session VIII Information Systems &amp; Databases – 2</b>
<b>Chairs:</b> Prof. Abdel-Baith Mohamed and Prof. Ahmed Elsafty	<b>Chairs:</b> Prof. Shawkat Guirguis and Dr. Mohamed Kholief
Modeling and Simulation of an On-Operation Pipeline Inspector <b>Reda Mohamed El-Mansy, Ihab Abdalla El-Aff, Alaa El-Din Khalil, Medhat El-Singaby (Egypt)</b>	Modeling and Matching Roaming User Preferences to Provider Policy <b>Khaled AL-Baadani, and Mahmoud Youssef (Egypt)</b>
Design and Implementation of Digital Azimuth Encoder for Radar Antennas Using Microcontroller <b>Mohammed Zakaria, Mohammed Najuib, Khaled Gamal, and Alaa S. Hafez (Egypt)</b>	Applying Ubiquitous Computing In Banking Industry <b>Hisham Sameeh, Medhat Fakhry (Egypt)</b>



<b>Session VII Computer Control and Industrial Applications – 2</b>	<b>Session VIII Information Systems &amp; Databases – 2</b>
CAD System for Bio-material Characterization <b>Ahmed Farag Aly , Ahmed Agameia, Amal Samir Eldesouky, and Mohamed A. Sharaf (Egypt)</b>	M-Learning Framework for University Students <b>Karim M. EL-Gamil, Ossama M. Badawy (Egypt)</b>
Design Of An Adaptive And Self- Tuning Power System Stabilizer For a Synchronous Generator <b>Alaa El-din Ahmed Khalil (Egypt)</b>	New SOA Model for Unlocking Transaction Resources <b>Ezzat A.Korany, Fatma Sayed Gad EL Rab (Egypt)</b>

**14:00 Lunch**

---

**End of ICCTA 2010 Activities**

## **ICCTA 2010 Committees**

### **Conference Chair**

**H. E. Prof. Dr. Youssry S. El-Gamal**

Chairman – Board of Trustees, Egypt-Japan University of Science and Technology

Former Minister of Education

President, Computer Scientific Society

### **Honorary Chair**

**Prof. Dr. Mohamed Farghaly**

President, Arab Academy for Science, Technology, and Maritime Transport (AASTMT), Egypt

### **Conference Coordinators and Program co-Chairs**

**Dr. Ayman Adel Abdel-Hamid**, AASTMT, Alexandria, Egypt.

**Prof. Dr. Ahmed Farouk Elsafty**, AASTMT, Alexandria, Egypt.

### **Organizing Committee**

**Prof. Dr. Ossama Ismail**, AASTMT, Alexandria, Egypt

**Dr. Essam Kosba**, AASTMT, Alexandria, Egypt

**Eng. Hassan Bakr**, AASTMT, Alexandria, Egypt

**Dr. Mahmoud Farouk**, AASTMT, Alexandria, Egypt

**Prof. Dr. Abdel-Baith Mohamed**, AASTMT, Alexandria, Egypt

**Dr. Mohamed El-Habrouk**, Alexandria University, Alexandria, Egypt

**Eng. Hossam Shakour**, Orascom Technology Solutions, Alexandria, Egypt

### **Finance Chair**

**Eng. Mahmoud Morsy**

Honorary Secretary, Computer Scientific Society