ICENCO 2018

Program

2018 14[th]International Computer Engineering Conference

**Computer Engineering Department
Faculty of Engineering**

**Cairo University
Cairo, EGYPT**

"Secure Smart Societies"

December 29-30, 2018

The Conference Venue

First Day:
The conference will be held at the Four Seasons Hotel (First Residence Giza). It is located at 35 Charli Digoul Street (Previously Mourad Street). If you're taking a taxi, mention "Four Seasons El Giza, across Giza Zoo.

Second Day:
The conference will be held at the Computer Engineering Department Faculty of Engineering, Cairo University, You may phone +2-01222166568 or 02 35678981

Both Venues are shown in the map below

Conference in a Glance

Saturday, December 29th 2018

At Four Seasons Hotel-(First Residence), Giza, Egypt.

08:30-09:00 am	**Registration**
09:00-09:10 am	**Soft Opening** Prof. Samir Shaheen, ICENCO Chair and Past-Dean Faculty of Engineering, Cairo University
09:15-10:45 am	**Session 1** **Image Processing and Communications**
11:00: 11:15 am	**Coffee Break**
11:15 am-01:30 pm	**Session 2** **Machine Intelligence**
01:30-02:00 pm	**Lunch Break**
02:00-03:45 pm	**Session 3** **Computer and Vehicular Networks**
3:45:4:00 pm	**Coffee Break**
04:00-05:45 pm	**Session 4** **Big Data and Applications**
06:30–09:30 pm	**Official Opening, Conf. Banquet and Honoring of Class 2008** **Talk entitled:** **A Journey to The Centre** **Prof. Aly Gabr** **Professor of Architecture** **Past - Vice Dean of Faculty of Engineering, Cairo University**

Sunday, December 30th 2018

Sessions: **At Faculty of Engineering, Cairo University, Giza**
(Building 3000, Fifth Floor, Conference Room)

09:00-09:10 am	Registration Seventh Floor
09:15-11:15 am	**Session 5** **Software Engineering and Applications**
11:15-11:30 am	Coffee break
11:30 am-1:30 pm	**Session 6** **Machine Learning and Applications**
1:20-02:30 pm	Lunch
02:30-04:30 pm	**Session 7** **Cryptography and Computer Security**

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Conference Program

Date	Saturday 29, December 2018
Location	Four Seasons Hotel -First Residence, Giza

Registration (08:30 am – 09:00 am)	
Soft Opening (09:00 am – 09:10 am) *Prof. Samir Shaheen Past-Dean Faculty of Engineering, Cairo University Conference Chair*	

Session 1: *Image Processing and Communications*
(09:15 am – 11:00 am)

Moderators: Prof. Magda Fayek .
& Prof. Omar Karam Dean of Informatics& Computer Science, BUC

N0	Code	Paper Title/authors
1	11	*Fusion-based Resolution Enhancement of Satellite Images: Comparative Study and Performance Evaluation* Tamer M. Talal, Mohamed R. metwalli, Gamal Attiya, Fathi E. Abd El-Samie, M.I. Dessouky
2	19	*CPRI Data Compression Using Non-Uniform Quantized Huffman Technique in C-RAN* M. Saeed Darweesh1, Ramez M. Elaskary1, and Tawfik Ismail
3	45	*Improving LSB Audio Steganography Using Simulated Annealing for Satellite Telemetry* Ashraf A. Hosny, Wael A. Murtada, and Mohamed I. Youssef
4	56	*A Comparative Study Among Various Algorithms for Lossless Airborne LiDAR Data Compression* Ahmed Kotb, Safaa Hassan, Hesham Hassan
Coffee Break (11:00: 11:15 am)		

Session 2: Machine Intelligence
(11:15 am– 01:15 pm)

Moderators: Prof. Nevin Darwish
& Dr. Abdel Monem Baiomy Assistant Professor
Computer Engineering Department, Cairo University

N0	code	Paper Title/authors
1	10	*The Concept of an Artificial Neural Network for the Classification of Atheromous Plaques from Digitized Segmented Histological Image* Jiri Blahuta, Petr Cermak, and Jakub Skacel
3		
4	36	*Adaptive Speech Synthesis and training using low-cost AI Computing* Frank Raffaeli, and Selim Awad
5	49	*Computer-aided Systematic Business Process Management: Case Study of PG ProgramAmjad* Abdullah Almubarak, and Salma Mahjoob Omar
6	51	*An Innovative Word Encoding Method For Text Classification Using Convolutional Neural Network* Amr Adel Helmy, Yasser M.K. Omar, Rania and Hodhod
7	67	*A Gaming Environment to Train Teachers Diagnose Children Learning Disabilities* Oussama Tahan, and Farah Baraké
		## *Lunch Break* *(1:15 pm – 2:00 pm)*

Session 3: *Computer and vehicular Networks*
(2:00 pm – 3:45 pm)

Moderators: **Prof. Samir Shaheen / Prof. Hoda Baraka**
Computer Engineering Department , Cairo University

N0	Code	Paper Title/authors
1	4	*Undetectable Tapping Methods for Gigabit Passive Optical Network (GPON)* M. Diaa, A. A. Mohamed, Ayman. M. Mokhtar, M. Shalaby, and Kamel. M. M. Hassan
2	21	**Adaptive Context Aware Cross-layer Vertical Handover in Heterogeneous Networks** Fatma A. Al Ema Al Emam, Mohamed E. Nasr, and Sherif E. Kishk
3	24	*An Improved Energy-Efficient Directed Diffusion Routing Protocol for Wireless Sensor Network* Shimaa Gamal El-Esawy, Nada M. Elshennawy, and Nawal Ahmed Elfishawy
4	46	*An End-user Microservice-Based Lightweight Architecture for IoT* Ying Wang, Bo Cheng, and Meng Niu
5	57	*Performance Comparison of Multicast Protocols in Mobile Social Networks* Hadeer Hassan Ibrahim, Tamer Abdelkader, and Rania El Gohary
6	89	*Finger Printing of Engine Control Units by Using Frequency Response for Secure In-Vehicle Communication* Azeem Hafeez, Muhammad Tayyab, Carmen Zolo, and Selim Awad
		Coffee break *(3:45 – 4:00 pm)*

Session 4: *Big Data and Applications*
(04:00 pm – 5:45 pm)

Moderators: **Prof. Amr Wassal / Dr. Ahmed Kaseb**
Computer Engineering Department , Cairo University

N0	Code	Paper Title/authors
1	12	**A New Game Theory Approach for Noise Reduction in Cognitive Radio Network** Saad M. Darwish, Husam Saheb, and Ashraf Eltholth
2	40	*A New Automated Big Data Partitioning Approach to Improve Condensation Methods Performance* Mohamed Malhat**,** Mohamed El-Menshawy**,** Hamdy Mousa, and Ashraf El-Sisi
3	50	*Automatic Diagnosis of Asphyxia Infant Cry Signals Using Wavelet Based Mel Frequency Cepstrum Features* Omnia Magdy Badreldine1, Nourhan A. Elbeheiry , and Eman Mohamed Marzook
4	73	*An Enhanced Registration and Display Algorithm for Medical Augmented Reality* Saad M. Darwish, Aya A. Mohallel, and Doaa Emara
		Official Opening, Conf. Banquet and Honoring of Class 2008

Talk entitled:

A Journey to The Centre
Prof. Aly H. Gabr
Professor of Architecture
Past-Vice Dean of Faculty of Engineering. Cairo University

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Conference Program (cont.)

Date	Sunday 30, December 2018
Location	Computer Engineering Dept. Cairo University, Giza

Registration *(09:00 – 09:30 am)*

Session 5: Software Engineering and Applications
(9:30 – 11:15 am)

Moderators: **Dr. Ahmed Hamdy   Dr. Khaled Soradi**
Computer Engineering Department, Cairo University

N0	Code	Paper Title/authors
1	17	*Overlapping Factor Effect on the Prototype Filter Response Proposed For FBMC Transmultiplexer System* Hagar.A.Ali, Rokaia M.Zaki, Mohsen and M.Tantawy
2	31	*Pattern Search for Closed-loop Parameter Estimation of Two Wheel Inverted Pendulum System* Hanan Nabil, Doaa M. Abd-ElAziz
3	39	*A New Approach for Treating a Time Delay System: A State Space Approach* Mohamed T. Faheem Saidahmed, Mona Eissa Ibrahem Sayedahmed
4	47	*Generalization of Third-Order Low Pass Filters to the Fractional-Order Domain with Experimental Results* Ahmed Ashraf Afify, Mohamed Amer Hussuinya, Amr M. Abdelatya, Ahmed G. Radwana
5	99	*Reducing RFID Data Uncertainty using Mean Field Variational Inference* Ahmed yousif, ahmed Kafafy, and Hatem M. Abdlkader
6	121	*Implementation for EEA3 algorithm Based on 3GPP Standard* Mohammed Aly Abdrabou, Ahmed Prince, Sameh Hosny
7	127	*A Reliability-based Stopping Criterion for Turbo Product Codes* Hazem Tawfik, Ashraf Mahran, and Gamal Mabrouk
8	146	*Comparative robustness study of multivariable controller of fixed wing Ultrastick25-e UAV* Eslam Nabil Mobarez, Amr Sarhan, and Mahmoud Mohamed Ashry
		Coffee Break *(11:15 – 11:30)*

Session 6: Machine Learning and Applications
(11:30 – 1:15)

Moderators: Prof. Nevin Darwish x-Chair Computer Engineering Department
& Prof. Amir. F. Atiya x–Director Scientific Computation Centre
Computer Engineering Department , Cairo University

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N0	Code	Paper Title/authors
1	32	*Design and Implementation of a prototype robotic system for medical ultrasound diagnosis* Mohammed A.Hussein, R.Mostafa, Ahmed S.Ali, F.A.ELmisery
2	72	*Improving Standard Progressive Multiple Sequence Alignment by Using Multithreading Techniques* Eman M. Mohamed, Hamdy M. Mousa, and Arabi E. keshk
3	75	*A Text Mining Approach for Automatic Selection of Academic Course Topics based on Course Specifications* Mohammed Badawy, Mahmood A. Mahmood, A. A. Abd El-Aziz, and Hesham A. Hefny
4	87	*Control of Hardware Implementation of Hydraulic Servo Application Based on Adaptive Neuro Fuzzy Inference System* Mohamed El-Sayed M. Essa, Magdy A. S. Aboelela, M. A. Moustafa Hassan, and S. M. Abdrabbo
5	105	*Sentiment Analysis of Social Media Networks Using Machine Learning* Mohammed H. Abd El-Jawad, Rania Hodhod, and Yasser M. K. Omar
6	108	*Twitter Sentiment Analysis using Deep Neural Network* Yaser Maher Wazery, Hager Saleh Mohammed, and Essam Halim Houssein
7	110	*Ontology Learning Based on Word Embeddings for Text Big Data Extraction* Nesma Mahmoud, Heba Elbeh, and Hatem M. Abdlkader
8	119	*Parametric Fault Detection of Analogue Circuits Based on Optimized Support Vector Machine Classifier* Mohamed S. Saleh, Mohamed H. El-Mahlawy, and Hossam E. Abou-Bakr Hassan
9	142	*A Multi Linear Regression Approach for Handling Missing Values with Unknown Dependent Variable (MLRMUD)* Ahmed Karama, Mona Farouk, and Amir Atiya
10	148	*Modeling and Simulation Synthesis for an Air-to-Air Guided Missile* Ahmed Samier Saied, A. N. Ouda, and Wagdy R. Anis
11	152	*Accuracy Enhancement Scaling Factor of Viola-Jones Using Genetic Algorithms* Ahmed I. Taloba, Adel A. Sewisy, and Yasser A. Dawood
		### *Lunch Break* *(01:15 – 02:00)*

<table>
<tr><td colspan="3"><h2>Session 7: Cryptography and Computer Security</h2><p>(02:00 pm – 4:00 pm)</p></td></tr>
<tr><td colspan="3">Moderators: Prof. Samir Shaheen   Prof. Hoda Baraka
Computer Engineering Department, Cairo University.</td></tr>
<tr><td colspan="3"></td></tr>
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N0	Code	Paper Title/authors
1	41	*A Secure Privacy-Preserving Mutual Authentication Scheme for Publish-Subscribe Fog Computing* Fatty M. Salem
2	59	*Energy Efficient Smart Wireless Sensor Network for Border Monitoring* Islam W. Mahdy, Mohamed M. Elkhatib, and Mohamed A. Refky
3	64	*SCIQ-CD: A Secure Scheme to Provide Confidentiality and Integrity of Query results for Cloud Databases* Mai Rady, Tamer Abdelkader, and Rasha Ismail
4	66	*Applying Blockchain to automate installments payment between Supply Chain Parties* Dona Kaid, and Maged M. Eljazzar
5	86	*C2S, a New Cryptographic Command Set for Smart Card Operating System* Hazem M. Eldeeb, Hisham M. Dahshan, Alaa El-Din R. Shehata
6	88	*Malware Incident Handling and Analysis Workflow* Doaa Wael, and Marianne A. Azer
7	90	*Web Application API Blind Denial of Service Atta*cks Marianne Azer
8	124	Anonymous Routing Protocols in MANETs, a Security Comparative Analysis Ayman M. El-Zoghby, Ahmed Mosharafa, and Marianne A. Azer
9	151	*Group Mobility-Based Optimization of Cache Content in Wireless Device-to-Device Networks* K. M. Naguib, A. S. Ali, and K. R. Mahmoud
		Closing Session