

**ICENCO 2017**

**Program**

**2017 13<sup>th</sup> International Computer  
Engineering Conference**

**Computer Engineering Department  
Faculty of Engineering**

**Cairo University  
Cairo, EGYPT**

***"Boundless Smart Societies"***

**December 27-28, 2017**



# The Conference Venue

## First Day:

The conference will be held at the Four Seasons Hotel – Giza. It's located in 35 Giza Street (Ex. Mourad st.). If you're taking a taxi, mention "Four Seasons El Giza, Sharie Mourad" (Four Seasons, Giza, Mourad st.)

## Second Day:

The conference will be held at Faculty of Engineering, Cairo University, and Computer Engineering Department. You may phone +202-35678981.

Both Venues are shown in the map below





# Conference in a Glance

**Wednesday, December 27<sup>th</sup>,**

**At Four Seasons Hotel-First Residence, Giza**

<b>08:30-09:00 am</b>	<b>Registration</b>
<b>09:00-09:10 am</b>	<b>Soft Opening</b> Prof. Samir Shaheen, ICENCO Chair and Past-Dean Faculty of Engineering, Cairo University
<b>09:15-11:00 am</b>	<b>Session 1</b> Communications and Computer Networks
<b>11:00: 11:15 am</b>	<b>Coffee Break</b>
<b>11:15 am-01:00 pm</b>	<b>Session 2</b> Image Processing and Computer Vision
<b>01:00-02:00 pm</b>	<b>Lunch Break</b>
<b>02:00-03:45 pm</b>	<b>Session 3</b> Machine Intelligence
<b>3:45:4:00 pm</b>	<b>Coffee Break</b>
<b>04:00-05:45 pm</b>	<b>Session 4</b> Control Applications and Embedded Systems
<b>06:00-09:00 pm</b>	<b>Official Opening, Conf. Banquet and Honoring of class 2007</b>



**Thursday, December 28<sup>th</sup>,**

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

<b>09:00-09:30 am</b>	<b>Registration</b>
<b>09:30-11:15 am</b>	<b>Session 5</b> Image Processing & Computer Vision and Big Data
<b>11:15-11:30 am</b>	<b>Coffee break</b>
<b>11:30 am-1:15 pm</b>	<b>Session 6</b> Machine Intelligence
<b>1:15-02:15 pm</b>	<b>Lunch</b>
<b>02:15-04:00 pm</b>	<b>Session 7</b> Communications and Computer Networks
<b>4:00-4:15 pm</b>	<b>Coffee break</b>
<b>04:15-06:00 pm</b>	<b>Session 8 &amp; Closing</b> Miscellaneous



## Conference Program

<b>Date</b>	<b>Wednesday 27, December 2017</b>
<b>Location</b>	<b>Four Seasons Hotel -First Residence, Giza</b>

<b>Registration</b> (08:30 am – 09:00 am)		
<b>Soft Opening</b> (09:00 am – 09:10 am) <i>Prof. Samir Shaheen Past-Dean Faculty of Engineering, Cairo University          Conference Chair</i>		
<b>Session 1: Communications and Computer Networks</b> (09:15 am – 11:00 am)		
<b>Moderators: Prof. Samir Shaheen Past-Dean Faculty of Engineering, Cairo U.          &amp; Prof. Omar Karam Dean of Informatics &amp; Computer Science, BUC</b>		
No	Ref. No.	Paper Title/authors
1	EG-62	<b>Modified Capacity Enhanced PF (MCE-PF) Downlink Scheduling Algorithm for Heterogeneous LTE-Advanced Networks</b> <i>Amany Sobhy Eladham, Nada ElShennawy and Amany Sarhan</i>
2	Ku-65	<b>Performance Enhancement of Free Space Optical (FSO) Systems Using Polarized DWDM-OFDM technique under Atmospheric Disturbances</b> <i>Abd El-Naser A. Mohamed, Ahmed Nabih Zaki Rashed, Mohamed S. F. Tabbour and Amira M. Ismail</i>
3	EG-24	<b>Evaluating QoS using Scheduling Algorithms in MPLS/VPN/WiMAX Networks</b> <i>Hassan H. Elkarash, Nada M. Elshennawy and Elsayed A. Sallam</i>
4	So-112	<b>Cost-Efficient Architecture of IPsec Classification Engine with TCAM</b> <i>Hayotjon Aliev, Won Sik Chae and HyungWon Kim</i>
5	So-98	<b>Interoperability of Device Identification in Heterogeneous IoT Platforms</b> <i>Jahoon Koo and Young-Gab Kim</i>
6	Ku-47	<b>Performance Analysis For Diverse Simulation Scenarios for DSDV, DSR and AODV MANET Routing Protocols</b> <i>Qutaiba Razouqi, Ahmed Boushehri and Mohamed Gaballah</i>
7	Jo-115	<b>Fuzzy Logic-Based Clustering Approach with Mobile Sink for WSNs</b> <i>Omar Banimelhem and Alaa Abu-Hantash</i>
8	So-96	<b>Development of IoT Security Component for Interoperability</b> <i>Se-Ra Oh and Young-Gab Kim</i>
9	So-49	<b>Low overhead routing for IEEE 802.11-based Internet-of-Things networks</b> <i>Hyoung-Gyu Choi, Seung-Jae Han, and Sunju Park</i>
10	UK-77	<b>An Energy Efficient and Adaptive Clustering for Wireless Sensor Network (CH-leach) using Leach Protocol</b> <i>Walid Abushiba, Princy Johnson and Saad Alharthi</i>
<b>Coffee Break</b> (11:00: 11:15 am)		



**Session 2: Image Processing and Computer Vision**

(11:15 am– 01:00 pm)

**Moderators: Prof. Ahmed Darwish Former Minister of Administrative Develop.  
 & Dr. Mayada Hadhoud Assistant Professor Computer  
 Engineering Department, Cairo University**

No	Ref. No.	Paper Title/authors
1	EG-70	<i>Speeding up Dominant Object Video Segmentation</i> Ali Alabed, Omar A. Nasr and Elsayed Hemayed
2	EG-43	<i>Improving the speed of chaotic-maps-based image encryption using parallelization</i> Amany Elrefaey, Amany Sarhan and Nada M. El-Shennawy
3	EG-09	<i>Automatic Multi-Style License Plate Detection Using a Biologically Inspired Classifier</i> Amr A. El-Latief, Elsayed E. Hemayed, Dina Helal and Mohamed Rehan
4	Cz-79	<i>An investigation of key features of atherosclerotic plaques on B-images in comparison with histological patterns to ischemic stroke prediction</i> Jiri Blahuta, Jakub Skacel and Petr Cermak
5	EG-21	<i>A Comparative Study of Classification Methods And The Combination of Their Models for Automatic Multimodal Brain Tumor Segmentation</i> Moumen T. El-Melegy, Khaled M. Abo El-Magd, Samia A. Ali, Khaled F. Hussain and Yousef B. Mahdy
6	Le-40	<i>Lebanese Automated Number Plate Reading Based on Neural Network Recognition</i> Moustafa M. Kurdi, Imad A. Elzein, Jalal Issa and Ibrahim Sayed Ahmad
7	Li-37	<i>Detection of Saliency Map as Image Feature Outliers Using Random Projections Based Method</i> Robertas Damaševičius, Rytis Maskeliūnas, Marcin Woźniak, David Polap, Tatjana Sidekėskienė and Marcin Gabryel
<b>Lunch Break</b> (1:00 pm – 2:00 pm)		



<b>Session 3: Machine Intelligence</b> (2:00 pm – 3:45 pm)		
<b>Moderators: Prof. Reda Abdel Wahab Vice –Dean Faculty of Computer and Information Technology</b> <b>Prof. Nevin Darwish x-Chair Computer Engineering Department</b> <b>Computer Engineering Department , Cairo University</b>		
No	Ref. No.	Paper Title/authors
1	SA-90	<i>Twitter Features Distributions across Similar Labels</i> Amal Abdullah AlMansour
2	EG-23	<i>Prediction of DNA Methylation for Every CpG Loci in chromosome 18 in Embryonic stem cells using Support Vector machine</i> Asmaa Abo Bakr Kamel, Mai S. Mabrouk and Mohamed Waleed Fakhri
3	EG-06	<i>Observations on Exploration and Exploitation Effects on Solving Rubik's Cube Using Evolutionary Strategies</i> Ayman M. Abo El-Maaty and Magda B. Fayek
4	Ye-88	<i>A Fuzzy Classifier based Detection for Epileptic Seizure Signals</i> B. AL-Bokhity, Dalia Nashat and T. M. Nazmy
5	EG-14	<i>A Stacked Generalization Method for Disease Progression Prediction</i> Gamal Elkomy, Elsayed Sallam and Sherin Elgokhy
6	EG-57	<i>Learning the Sit-to-Stand Human Behavior: An Inverse Optimal Control Approach</i> Haitham El-Hussieny, Ahmed Asker and Omar Salah
7	Le-38	<i>Proposed System of ANN for Positioning and Navigation of UAV-UGV</i> Moustafa M. Kurdi, Alex K. Dadykin, Imad Elzein and Ibrahim Sayed Ahmad
8	Li-127	<i>Gender-Related Differences in Brand-Related Social Media Content: An Empirical Investigation</i> Ligita Zailskaitė-Jakštė and Robertas Damaševičius
9	UN-31	<i>A Novel Language-Adaptable Accent Reduction Software Template</i> Aaron Ward and Selim S. Awad
<b>Coffee break</b> (3:45 – 4:00 pm)		



**Session 4: Control Applications and Embedded Systems**

(04:00 pm – 5:45 pm)

**Moderators: Prof. Ahmed Hassan, Computer Eng. Ain Shams University  
 & Dr. Amr Wassal Associate Professor**

No	Ref.No.	Paper Title/authors
1	IQ-135	<i>Modeling and Control of Stand-Alone PV System Based on Fractional-Order PID Controller Tuned by Particle Swarm Optimization Techniques</i> Ahmed .M. Betti, M. A. Mustafa Hassan and M. A. Ebrahim
2	EG-13	<i>Modeling and Simulation of The Common Rail Fuel System of The Diesel Engine</i> Mohamed H. Siliman, Ahmed S.Ali, Saleh abo-Elfadl
3	EG-50	<i>GWOMF: Grey Wolf Optimization for Motif Finding</i> Fatma Hashem, Mai S. Mabrouk and Walid Al-Atabany
4	EG-18	<i>Detection of Breast cancer using different power spectrum methods</i> Safaa M. Naeem, Mai S. Mabrouk and Mohamed A. Eldosoky
5	So-94	<i>IKE Hardware Engine Based on CAM for Concurrent Processing of Massive User Sessions</i> Shimaa Abdel Naby, Saad Arslan and HyungWon Kim
6	EG-129	<i>Hardware in the Loop of Position Tracking Control of HyDraulic Servo Mechanism</i> Mohamed El-Sayed M. Essa, Magdy A. S. Aboeleta, M. A. Moustafa Hassan and S. M. Abdrabbo
7	EG-54	<i>Experimental Nonlinear Identification of a Lab-Scale Helicopter System using MLP Neural Network</i> Mohammed Moness and Tarek Daa-Eldeen
8	EG-10	<i>Fluid Catalytic Cracking Unit Control Using Model Predictive Control And Adaptive Neuro Fuzzy Inference System: A Comparative Study</i> Mohamed Zahran, M. E. Ammar, M. M. Ismail and M. A. Moustafa Hassan
9	EG-58	<i>Towards High Accuracy Measurements for Gas Flow Rate Using Ultrasonic Devices in Oil Fields</i> Waleed Sayed Khadrawy, M. M. Elsherbini, Reham S. Saad and Hala Abdel Kader

**Official Opening (Banquet and Honoring of Class of 2007)**

(06:00 pm – 9:00 pm)





## Conference Program (cont.)

<b>Date</b>	<b>Thursday 28, December 2017</b>
<b>Location</b>	<b>Computer Engineering Dept. Cairo University, Giza</b>

### Registration

(09:00 – 09:30 am)

### *Session 5: Image Processing/Computer Vision & Big Data*

(9:30 – 11:15 am)

**Moderators:** *Dr. Bassem Ibrahim Electronic Research Institute  
 & Dr. Mayada Hadhoud Assistant Professor  
 Computer Engineering Department, Cairo University*

No	Ref. No.	Paper Title/authors
1	EG-87	<i>A Novel Implementation for FastSLAM 2.0 Algorithm Based on Cloud Robotics</i> Shimaa S. Ali, Abdallah Hammad and Adly S. Tag Eldien
2	EG-102	<i>A Reactive Fault Tolerance Approach For Cloud Computing</i> Eman AbdElfattah, Mohamed Elkawkagy and Ashraf El-Sisi
3	EG-74	<i>An Economic Model for Cloud Service Composition Based on User's Preferences</i> Hala Hassan, Ali El-Desoky and Abd El-Hameed Ibrahim
4	EG-126	<i>Concurrency Control Algorithm for Shared Disk Cloud DBMS</i> Islam Eisa and Rashid Salem
5	EG-134	<i>Automatic Diagnosis of Autoimmune Diseases by Classifying HEp-2 Cells</i> Maryam A. G. Kasem, Marwa M. A. Hadhoud, Mohammed A. A. ELdesoky
6	EG-76	<i>Improving Instance Selection Methods for Big Data Classification</i> Mohamed Malhat, Mohamed El Menshawy, Hamdy Mousa, and Ashraf El Sisi
7	EG-111	<i>Non-Uniform Quantized Huffman Compression Technique for EEG Data</i> Ramez Moh. Elaskary, Mohamed Saeed and Tawfik Ismail
8	EG-92	<i>Record Linkage Approaches in Big Data: A State Of Art Study</i> Randa M. Abd El-Ghafar, Mervat H.Gheith, Ali H. El-Bastawissy and Eman S. Nasr
9	EG-26	<i>Providing QoS in Contention Management for Software Transactional Memory</i> Sherif F. Fahmy, Zakaria Senousy and Ahmed F. Amin
10	EG-131	<i>Novel selection policies for Container-based Cloud Deployment Models</i> Walid A. Hanafy, Amr E. Mohamed and Sameh A. Salem
		<b>Coffee Break</b> (11:15 – 11:30)



***Session 6: Machine Intelligence***

*11:30 – 1:15)*

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

<b>No</b>	<b>Ref. No.</b>	<b>Paper Title/authors</b>
<b>1</b>	EG-81	<b><i>A Data Mining Experimentation Framework to Improve Six Sigma Projects</i></b> <i>Ahmed F. Fahmy, Ahmed H. Yousef and Hoda K. Mohamed</i>
<b>2</b>	EG-82	<b><i>On the Use of Predictive Analytics Techniques for Network Elements Failure Prediction in Telecom Operators</i></b> <i>Ahmed F. Fahmy, Ahmed H. Yousef and Hoda K. Mohamed</i>
<b>3</b>	EG-17	<b><i>Enhancing Stock Prediction Clustering Using K-Means with Genetic Algorithm</i></b> <i>Eslam Nader Desokey, Amr Badr and Abdel Fatah Hegazy</i>
<b>4</b>	EG-46	<b><i>Customer Churn Prediction Model using Data Mining techniques</i></b> <i>Ibrahim M. M. Mitkees, Sherif M Badr and Ahmed Ibrahim Bahgat ElSeddawy</i>
<b>5</b>	EG-133	<b><i>Location Category Classification using Tree Based Models with Novelty Discrimination</i></b> <i>Khaled Yasser and Elsayed Hemayed</i>
<b>6</b>	EG-132	<b><i>A Novel Model based on Non Invasive Methods for Prediction of Liver Fibrosis</i></b> <i>Mahmoud Nasr, Khalid El-Bahnasy, M. Hamdy and Sanaa M. Kamal</i>
<b>7</b>	EG-35	<b><i>An Algorithmic Approach for Overcoming Brain Tumor Using Swarm Robots</i></b> <i>Mohamed Abd Elhamid Abbas</i>
<b>8</b>	EG-124	<b><i>Classification of right and left hand movement using nonlinear analysis</i></b> <i>Muhammed Alsuify, Walid Al-Atabany and Mohamed.A.A.Eldosoky</i>
<b>9</b>	EG-97	<b><i>Improve the Compression of Bacterial DNA Sequence</i></b> <i>Nour S. Bakr and Amr A. Sharawi</i>
<b>10</b>	EG-20	<b><i>A New Hybrid Approach for Document Clustering</i></b> <i>Osama Ismael</i>
<b><i>Lunch Break</i></b> <i>(01:15 – 02:15)</i>		



## ***Session 7: Communications and Computer Networks***

(02:15pm – 4:00 pm)

**Moderators: Prof. Samir Shaheen Past-Dean Faculty of Engineering, Cairo Uni.  
Prof. Ehab Ali x- Chair Computer Department, Helwan Uni.**

No	Ref No	Paper Title/authors
1	EG-25	<b><i>Optimization of FBG Performance Parameters under Gamma Radiation and Temperature Effects</i></b> <i>Abd El-Naser A.Mohamed, Ahmed Nabih Zaki Rashed, Ahmed I.Elsaket, M. M. Zaky and Mohamed A. Gaheen</i>
2	EG-114	<b><i>Multicast Security Model for Internet of Things Based on Context Awareness</i></b> <i>Hussein Harb, Ashraf William, Omayma A. El-Mohsen and Hala A. Mansour</i>
3	EG-66	<b><i>Cooperative Spectrum Sensing and Clustering Schemes in CRN:A Survey</i></b> <i>Ibrahim Salah, Waleed Saad, Mona Shokair and Mohamed Elkordy2</i>
4	EG-55	<b><i>Energy Aware Ad-hoc On Demand Multipath Distance Vector (EA-AOMDV)</i></b> <i>Mahmoud M. Shawara., Amany M. Sarhan and Nawal A. Elfishawy</i>
5	EG-99	<b><i>A study in WPA2 enterprise recent Attacks</i></b> <i>Mohamed A. Abo-Soliman and Marianne A. Azer</i>
6	EG-34	<b><i>Robust Pre-Authentication Protocol for Wireless Network</i></b> <i>Mohammed Aly Abdrabou</i>
7	EG-52	<b><i>A Novel Approach for Resource Utilization and Management in SDN</i></b> <i>Mohamed I. Hamed, Basem M. ElHalawany, Mostafa M. Fouda and Adly S. Tag Eldien</i>
8	EG-75	<b><i>An Adaptive Algorithm for Channel Assignment and Load Balancing in Elastic IEEE 802.11 WLANs</i></b> <i>Noureen Heiba, Masoud Alghoniemy, Mohamed Elwekeil, Amr Mokhtar and Mohamed R. M. Rizk</i>
9	EG-123	<b><i>SLUM: Smart Location Update Mechanism for Random Mobility Model</i></b> <i>Lamiaa Menshawy, Heba Nashaat and Rawya Y. Rizk</i>
10	EG-67	<b><i>A Novel Multiuser MIMO Scheduling Technique for Limited Feedback Systems</i></b> <i>Yasser Naguib Ahmed</i>
11	EG-71	<b><i>A Novel Determinant Based Transmit Antenna Selection Technique in Single User MIMO Systems</i></b> <i>Yasser Naguib Ahmed</i>
12	EG-73	<b><i>A Spectrum Decision Framework Based on Self Organized Map for Cognitive Radio Ad Hoc Networks</i></b> <i>Zahraa Abdelhamid, Salah El Agouz, Abdel halim Zekry and Fathi E. Abd El-Samie</i>
<b><i>Coffee Break</i></b> (4:00 – 4:15 pm)		



## Session 8: Miscellaneous

(4:15 pm – 6:00 pm)

**Moderators:** *Prof. Ihab Talkhan* Chair Computer Engineering Department  
 & *Dr. Khaled Ibrahim* Tech. Computer Systems Developer  
 Computer Engineering Department, Cairo University.

No	Ref.No.	Paper Title/authors
1	EG-95	<i>High-Level Synthesis Hardware Implementation and Verification of HEVC DCT on SoC-FPGA</i> Belal Mohamed, Amr Elsayed, Omar Amin, Eslam Khafagy, Maher Abdelrasoul, Ahmed Shalaby and Mohammed S. Sayed
2	EG-33	<i>FPGA Implementation of a PRNG Based on Cross-Coupled Skew Tent Maps</i> Rania A. Elmanfaloty, Ehab Abou-Bakr, Ahmed. M. El-Shaer and El-Sayed A. El-Badawy
3	EG-86	<i>Using Ontology-Based Concept Maps for Requirements Engineering: A Case Study</i> Mahmoud AbdEllatif, Marwa Salah Farhan and Karama Ali Mohamed
4	EG-106	<i>Happy Feet Maya plugin to generate customized gait cycles for 3D characters</i> Mary Guindy and Rimon Elias
5	EG-117	<i>Internet of Things Security Framework</i> Amira Hagag Imam and Marianne. A. Azer
6	EG-119	<i>Correlation Between Protocol Selection and Packet Drop Attack Severity in Ad Hoc Networks</i> Mahmoud Reda and Marianne. A. Azer
7	EG-68	<i>Efficient Microcontroller System to Test an SRAM Chip Using Signature Analysis</i> Mahmoud S. Ragab , Mohamed H. El-Mahlawy, and Emad A. El-Samahy
8	EG-107	<i>Design and Simulation of Authenticated Encryption AENOTP Stream Cipher Algorithm</i> Mohamed Nabil Hussein, Mohamed Helmy Megahed and Mohamed Hassan Abdel Azeem
9	EG-22	<i>Analysis of Faults Repairing System Using Rough Sets: A Case Study in Large-Scale Telecommunication Company (Telecom Egypt)</i> Osama Emam, Marwa Salah and Amr Abohany

## Closing Session