

2015 11th International Computer Engineering Conference (ICENCO 2015)

**Cairo, Egypt
29-30 December 2015**



**IEEE Catalog Number: CFP1532N-POD
ISBN: 978-1-5090-0276-4**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1532N-POD
ISBN (Print-On-Demand):	978-1-5090-0276-4
ISBN (Online):	978-1-5090-0275-7

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

ICENCO 2015
2015 11th International Computer Engineering Conference
(ICENCO)

Today Information Society what's next?

Faculty of Engineering, Cairo University
Giza, EGYPT

December 29-30, 2015

Table of Contents

	Paper title	Page number
Session 1: Communications and Computer Networks I		
1	<u>Fair Robust SM-MIMO-LTE Detector</u> , Mohamed H. Essai	1
2	<u>Adaptive Hysteresis Handover Algorithm In Heterogeneous Mobile Networks</u> , Mohab Magdy, Hussein A. Elsayed, Salwa El Ramly	7
3	<u>Federated Cloud Computing Security using Forward-Secure Broadcast Encryption HIBE</u> , Fayza Rekaby, A. A. Abd El-Aziz, Mahmood A. Mahmood, Hesham A. Hefny	13
4	<u>An Efficient Distributed Approach for Key Management in Micro-grids</u> , Mohamed I. Baza, Mostafa M. fouda, Adly S. Tag El Din, Hala A.K Mansor	19
5	<u>Cross-layer Routing Optimization for Centralized Multi-hop Cognitive Radio Networks</u> , Ahmed Salah, Heba Abd El-Atty, and Rawia Y. Rizk	25
6	<u>The Effect of Bandwidth Allocation on Power Efficiency in Cloud Data Centers</u> , Auday Al-Dulaimy, Wassim Itani, Rached Zantout, Ahmed Zekri	32
7	<u>Optimization of Channel Selection in Cognitive Heterogeneous Wireless Networks</u> , Madyan Alsenwi, Hany Elsayed, Mona Elghoneimy	38
8	<u>Analysis and Implementation of Optimized Energy-based CH Selection for WSN Using Sun SPOT</u> , A. A. Sheta, S. A. S. Abdelwahab, S. Elaraby, M. I. Mahmoud	44
Session 2: Computer Hardware and Embedded Systems		
9	<u>A Novel Scheme for the Identification of Nonlinear Flow Control Process Based on Fuzzy Tuning Parameters</u> , R. Shalaby, T. Khalifa, M. Ibrahim	52
10	<u>An Embedded System For Agricultural Monitoring of Remote Areas</u> , Adnan Shaout, Karen Juzswik, Kiet Nguyen, Heather Peurasaari, S. Awad	58

	Paper title	Page number
11	<u>Android-Based Real-Time Signal Processing to Treat Speech-Language Pathologies.</u> S. Awad, Jennifer Barnes, Aaron Ward, Richard Merson	68
12	<u>8-bit 22nW SAR ADC Using Output Offset Cancellation Technique.</u> Karim M. Abozeid, Mohamed M. Aboudina, A. H. Khalil	76
13	<u>Maximum Power Control of Wind Energy System using fuzzy controller.</u> Walaa Mohammed, Elkhatib Kamal, Abdul Azim Sobaih	80
14	<u>Heuristic Approaches for Under Water Sensing and Processing Deployment.</u> Hesham Alhumyani, Reda Ammar, Raafat ElFouly, Ayman El Harby	86
15	<u>Implementation of Distance Metric Between Two Samples of Keystroke Dynamics.</u> Basma M. Hassan, Khaled Fouad and Mahmoud F.	92
16	<u>An Improved Dynamic Round Robin Scheduling Algorithm Based on A Variant Quantum Time.</u> Ahmed Alsheikhy, Reda Ammar and Raafat Elfouly	98

Session 3: Image Processing, Computer Vision and Machine Intelligence

17	<u>A Comparative Study of Different Approaches of a Primitive Printed Arabic Optical Character Recognition.</u> Mohamed Dahi, Noura A. Semary, Mohiy M. Hadhoud	105
18	<u>Production Operation Management using Manufacturing Execution Systems (MES).</u> M. I. Mahmoud, Hossam Hassan Ammar, Mohamed. M. Hamdy, Mostafa Hassan Eissa	111
19	<u>A Model for Generating Arabic Text from Semantic Representations.</u> Sally S. Ismail , Mostafa Aref, Ibrahim F. Moawad	117
20	<u>Investigating Mobile Applications' Requirements Evolution through Sentiment Analysis of Users' Reviews.</u> Nancy M. Rizk, Amr Ebada, Eman S. Nasr	123
21	<u>Semantic Web Service Discovery A Systematic Survey.</u> Doaa H. Elsayed, Akram Salah	131
22	<u>Ontology-Based Model for Arabic Lexicons: An Application of the Place Nouns in the Holy Quran.</u> Waseem Alromima, Ibrahim F. Moawad, Rania ELgohary, Mostafa Aref	137
23	<u>A Hybrid Segmentation Approach based on Neutrosophic sets and modified watershed: A case of abdominal CT liver parenchyma.</u> Gehad Ismail Sayed, Mona Abdelbaset Ali, Tarek Gaber, Aboul Ella Hassanien, Vaclav Snasel	144

Paper title

Page
number

Session 4: Machine Intelligence

24	Solving Nonlinear Constrained Optimization Problems Using Hybrid Evolutionary Algorithms. Rasha M. Abo-bakr, Tamara Afif Mujeed	150
25	A Smart Traffic Sign Recognition System. Adnan Shaout, Nevrus Kaja, Selim Awad	157
26	Nuclear Reactors Safety Core Parameters Prediction using Artificial Neural Networks. Amany S. Saber, Moustafa S. El-Koliel, Mohamed A. El-Rashidy, Taha E. Taha	163
27	Automated Zebrafish-based Toxicity Test using Bat optimization and AdaBoost Classifier. Alaa Tharwat, Hossam M. Zawbaa, Tarek Gaber, Aboul Ella Hassanien, Vaclav Snasel	169
28	Accelerometer-Based Human Activity Classification Using Water Wave Optimization Approach. Moataz Kilany; Aboul Ella Hassanien; Amr Badr	175
29	Gene Expression Profiles based Human Cancer Diseases Classification. Hanaa Salem, Gamal Attiya, and Nawal El-Fishawy	181

Session 5: Communications and Computer Networks II

30	A Secure Cloud Storage System Combining Time-based One Time Password and Automatic Blocker Protocol. Sheren A. El-Booz, Gamal Attiya, and Nawal El-Fishawy	188
31	Optimal Multi-Relay Placement for LTE-A. Sara M. Abo Hashish, and Rawya Y. Rizk, Fayez W. Zaki	195
32	QoS Management in WiMAX Femtocells. Ehab Karim, Heba Nashaat, and Rawya Y. Rizk	201
33	Design of a Generalized Bidirectional Tent Map Suitable for Encryption Applications. Wafaa S. Sayed, Ahmed G. Radwan and Hossam A. H. Fahmy	207
34	An efficient implementation method of H.264 CAVLC video coding using FPGA. Waleed Ahmed El-Ghobashy, Mohammed Ebian ,Osama Mowafi, Abdelhalim Abdelnabi Zekry	212

Session 6: Algorithm Analysis and Applications

35	A nature-inspired metaheuristic lion optimization algorithm for community detection Ramadan Babers, Aboul Ella Hassanien and Neveen I. Ghali;	217
36	Texture-based Rotation-Invariant Histograms of Oriented Gradients. Cun Hang, Fei Hu, Aboul Ella Hassanien and Kai Xiao	223
37	Flash Fast-Locking Digital PLL Using LT SPICE. Mahmoud Fawzy Wagdy, Syed Zeeshan Ahmed Kabeer	229

	Paper title	Page number
Poster Session		
38	<u>Speech encryption using Two Dimensional chaotic map.</u> AlZhraa Mostfa, Naglaa. F. Soliman, Mohamoud Abdallah, Fathi E. Abd El-samie	235
39	<u>Fault Tolerance in Cloud Computing – Survey.</u> Salma M. A. Ataallah, Salwa M. Nassar, Elsayed E. Hemayed	241
40	<u>Tomato leaves diseases detection approach based on support vector machines.</u> Usama Mokhtar, Mona A. S. Ali, Aboul Ella Hassenian, Hesham Hefny	246
Special Session I: Swarms and applications		
41	<u>Artificial Bee Colony Optimizer for Historical Arabic Manuscript Images Binarization.</u> Mohamed Abd Elfattah, Aboul Ella Hassenian, Abdalla Mostafa, Ahmed Fouad Ali, Khalid M. Amin, Sherihan Mohamed	251
42	<u>Grey Wolves Optimizer-based Localization Approach in WSNs.</u> Mohamed Mostafa Fouad, Ahmed Ibrahim Hafez, Aboul Ella Hassenian and Vaclav Snasel	256
43	<u>Interphase cells removal from metaphase chromosome images based on meta-heuristic grey wolf optimizer.</u> Gehad Ismail Sayed and Aboul Ella Hassenian	261
44	<u>Moth-Flame Optimization for Training Multi-layer Perceptrons.</u> Waleed Yamany, Mohammed Fawzy, , Alaa Tharwat and Aboul Ella Hassenian	267
45	<u>Hybrid Monkey Algorithm with Krill Herd Algorithm Optimization for Feature Selection.</u> Ahmed Ibrahim Hafez, Aboul Ella Hassenian, Hossam M. Zawbaa, E. Emary	273
Special Session II: Intelligent systems and applications		
46	<u>Hybrid flower pollination algorithm with rough sets for feature selection.</u> Hossam M. Zawbaa, Aboul Ella Hassenian, E. Emary, Waleed Yamany and B. PARV	278
47	<u>Optimal Community Detection Approach based on Ant Lion Optimization.</u> Ramadan Babers, Neveen I. Ghali, Aboul Ella Hassenian and Naglaa M. Madbouly	284
48	<u>Blood vessel segmentation approach for extracting the vasculature on retinal fundus images using particle swarm optimization.</u> Gehad Hassan, Aboul Ella Hassenian, Nashwa El-Bendary and Ali Fahmy	290
49	<u>A Discrete Krill Herd Optimization Algorithm For Community Detection.</u> Khaled Ahmed, Ahmed Ibrahim Hafez and Aboul Ella hassanien	297

Paper title

**Page
number**

50	<u>A Multi-granularity Rough Set Algorithm for Attribute Reduction through Particles Particle Swarm Optimization.</u>	303
	Guangyao Dai, Zongmei Wang, Chao Yang, Hongbo Liu, Aboul Ella Hassanien, Wanqing Yang	