2021 17th International Computer Engineering Conference (ICENCO 2021)

Cairo, Egypt
29 – 30 December 2021



IEEE Catalog Number: CFP2132N-POD ISBN: 978-1-7281-6449-6

Copyright © 2021 by the Institute of Electrical and Electronics 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 is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP2132N-POD

 ISBN (Print-On-Demand):
 978-1-7281-6449-6

 ISBN (Online):
 978-1-7281-6448-9

ISSN: 2475-2312

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



17th International Computer Engineering Conference ICENCO 2021

Virtual Conference (ONLINE Attendance)

Faculty of Engineering, Cairo University Giza, EGYPT, December 29-30, 2021

ICenco2021.eng.cu.edu.eg

Table of Contents

Session – 1 Health Oriented Computer Application

	Paper Title	Page Number
1	The Future of High-Performance Computing Mohamed Zahran	129
2	Forecasting healthcare cost in Australia using health insurance claims data Koliya Webadu Wedanage, Rohan Wickramasuriya, Khin Than Win, Pascal Perez	35
3	Next Generation Sequence Prediction Intelligent System for SARS-COV-2 Using Deep Learning Neural Network Takwa Mohamed. Sabah Sayed, Akram Salah, Essam H.Houssein	88
4	Evaluating and Improving Accessibility of Web Applications: Zulip Chat Case Study Romi Barde, Amal Abdel Raouf	112
5	Enhanced Dynamic Sign Language Recognition using SlowFast Networks Ahmed Hassan, Ahmed Elgabry, Elsayed Hemayed	124
6	Iridology-Based Human Health Examination Hadeel O.El-Sisi, Fatma El-Zahraa A.El-Gamal, Noha A. Hikal	7
S	ession -2: Machine Learning. Moderator:	
	Paper Title	Page Number
	Optimization of multiplier-less algorithm in the neural network trigger for a	
1	detection of cosmic rays	18
	Zbigniew Szadkowski	
	A Comparative Study of Machine Learning Techniques for Automatic Rice Crop	
2	Irrigation	46
	Salma Zakzouk, Mohamed Ehab, Silvana Atef, Retaj Yousri, Rania M Tawfik, and M. Saeed Darweesh	
3	Innovative Deep Learning-based Video Editing Tool Mohamad Parakat Noba Magdy Ava Elaisi I. Payyda Voyssaf Mystafa A. Elattar M.	69
	Mohannad Barakat, Noha Magdy, Aya Elsisi1, Rawda Youssef, Mustafa A. Elattar, M. Saeed Darweesh	
	Road Traffic Accidents Detection Based On Crash Estimation	(2
4	77 1 1 2 1 1 1 1 7 1	63

Khaled Sabry, Mohamed Emad

	Autonomous GUI Testing using Deep Reinforcement Learning	
5	Salma Saber, Fatma Elbadry, Hagar Negm, Rana Abu El-Ershad, Omar Magdy,	P 1C
	Mohamed Bahnassawi, Reem El Adawi, AbdElMoniem Bayoumi	
_	Opposition-based learning tunicate swarm algorithm for biomedical classification	
6	Essam H. Houssein, Eman Saber, Abdelmgeid A. Ali, Yaser M. Wazery	1
	Session -3: Control and Communications	
	Paper Title	Page Number
1	Active Fault Tolerant Control of Discrete Event System Subjected to Sensors Fault Mostafa H. El-Mahdy, Shady A. Maged, Mohammed I. Awad	24
2	Fuel Cell Propulsion Control System Based On PID Approaches karim N mobariz, Eslam Nabil Mobarez, Mahmoud Mohamed Ashry	82
3	Quantum Chain of Things (QCoT): A New Paradigm for Integrating Quantum Computing, Blockchain, and Internet of Things	101
	Mina Younan, Mohamed Elhoseny, Abdelmgeid A. Ali, Essam H. Houssein	
4	Intelligent Fractional Control Design of MPPT for a Standalone PV System Based on Optimization Technique	107
4	Mohamed El-Sayed M. Essa, Omnia S. S. Hussian, M. A. Moustafa Hassan	107
	Adaptive Neural Network Predictive Control Design for Hybrid Electric Vehicle	
5	with Hardware in the Loop (HIL) Verification	118
	Mohamed El-Sayed M. Essa, Joseph Victor W. Lotfy, M. Essam K. Abd-Elwahed	
6	Machine Learning based ECU Detection for Automotive Security Azeem Hafeez, Janani Mohan, Mansi Girdhar, Selim S. Awad	73
S	ession-4: Machine Intelligence and Image Processing	
	Paper Title	Page Number
1	Analysis of US Covid-19 Twitter Data Social Interest and Topic Changes Amr A. El-Latief,	14
2	Bayesian Knowledge Tracing for Assessment Results Analysis	30
	Mark Naeem, Andrew Tidswell, Youmna Magdy	
3	A Heuristic Approach for Optimizing Resource Allocation in D2D Underlaying Cellular Networks	40
J	Sama Wahb, Yahia Mostafa, Omar Wasif, Mahmoud Fawzy, Engy Aly Maher	70
4	Sentiment Analysis for Arabic Language Using Word Embedding Osama Elsamadony, Arabi Keshk, Amira Abdelatey	51
5	Robust Line Based Image Fingerprinting Algorithm Khaled M. Ibraheem	135

A Quantitative Analysis in CTP images for Ischemic Stroke Lesion Segmentation
Amira Esawy, Sahar Fawzi, Mustafa Elattar