PROGRAM

17th International Computer Engineering Conference

ICENCO 2021

Faculty of Engineering, Cairo University

Giza, EGYPT, December 29-30, 2020

ICenco2021.eng.cu.edu.eg

Wednesday 29 December 2021 **10.00 AM – 11.00 AM**

Invited Paper

The Future of High-Performance Computing

Prof. Mohamed Zahran

Computer Science Department - New York University (NYU).

http://www.mzahran.com

Abstract

How did High-Performance Computing (HPC) evolve from the early days of mainframes to current days of Top 500 supercomputers? What technology advances affected this evolution? What will the future of HPC look like? The race to reach exascale computing is very heated among the US, China, Japan, and the European Union. What are the obstacles to reaching exascale computing?

In my talk, I will answer these questions. We will touch upon technology advances, the history of computing, and the economy of technology and see how they affect each other in this new era of AI, big data, and sustainable development. Throughout my talk, I will introduce some research problems that are still open for contribution.

Short Bio

Mohamed Zahran is currently a professor with the Computer Science Department at New York University (NYU). His research interest spans several aspects of computer architecture, such as architecture of heterogeneous systems, hardware/software interaction, and high-performance computing. He received his Ph.D. in electrical and computer engineering from the University of Maryland at College Park in 2003. Zahran has published more than 45 papers in premiere journals and conferences. He served as reviewer panelist with many organizations such as the national science foundation and department of energy, as well as reviewer for many journals and conferences. Zahran is a senior member of IEEE, a senior member of ACM, and a member of Sigma Xi Scientific Honor Society. Besides research and teaching, he is also interested in the history and philosophy of science.
http://www.mzahran.com

- **All Times are Cairo Time which is UTC +2**
- **Session Link will be sent by mail to corresponding author.**

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Session -1: Health Oriented Computer Application

No	From	TO	ID	Paper Title
1	11.30 AM	11.45 AM	13	Forecasting healthcare cost in Australia using health insurance claims data
2	11.50 AM	12.05 AM	33	Next Generation Sequence Prediction Intelligent System for SARS-COV-2 Using Deep Learning Neural Network
3	12.10 PM	12.25 PM	38	Evaluating and Improving Accessibility of Web Applications: Zulip Chat Case Study
4	12.30 PM	12.45 PM	40	Enhanced Dynamic Sign Language Recognition using SlowFast Networks
5	12.50 PM	01.05 PM	04	Iridology-Based Human Health Examination

Session -2: Machine Learning

No	From	TO	ID	Paper Title
1	03.00 PM	03.15 PM	08	Optimization of multiplier-less algorithm in the neural network trigger for a detection of cosmic rays
2	03.20 PM	03.25 PM	17	A Comparative Study of Machine Learning Techniques for Automatic Rice Crop Irrigation
3	03.30 PM	03.45 PM	27	Innovative Deep Learning-based Video Editing Tool
4	03.50 PM	04.05 PM	26	Road traffic accidents detection based on Crash estimation
5	04.10 PM	04.35 PM	35	Autonomous GUI Testing using Deep Reinforcement Learning
6	04.40 PM	04.55 PM	01	Opposition-based learning tunicate swarm algorithm for biomedical classification

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Thursday 30 December 2021

Session -3: Control and Communications

No	From	TO	ID	Paper Title
1	11.30 AM	11.45 AM	09	Active Fault Tolerant Control of Discrete Event System Subjected to Sensors Fault
2	11.50 AM	12.05 AM	29	Fuel Cell Propulsion Control System Based On PID Approaches
3	12.10 PM	12.25 PM	36	Quantum Chain of Things (QCoT): A New Paradigm for Integrating Quantum Computing, Blockchain, and Internet of Things
4	12.30 PM	12.45 PM	37	Intelligent Fractional Control Design of MPPT for a Standalone PV System Based on Optimization Technique
5	12.50 PM	01.05 PM	39	Adaptive Neural Network Predictive Control Design for Hybrid Electric Vehicle with Hardware in the Loop (HIL) Verification
6	01.10 PM	01.25 PM	28	Machine Learning based ECU Detection for Automotive Security

Session – 4: Machine Intelligence and Image Processing

No	From	TO	ID	Paper Title
1	03.00 PM	03.15 PM	06	Analysis of US Covid-19 Twitter Data Social Interest and Topic Changes
2	03.20 PM	03.25 PM	10	Bayesian Knowledge Tracing for Assessment Results Analysis
3	03.30 PM	03.45 PM	15	Heuristic Approach for Optimizing ResourceAllocation in D2D Underlaying Cellular Networks
4	03.50 PM	04.05 PM	23	Sentiment Analysis for Arabic Language Using Word Embedding
5	04.10 PM	04.35 PM	25	A Quantitative Analysis in CTP images for Ischemic Stroke Lesion Segmentation
6	04.40 PM	04.55 PM	34	A New Benchmark Dataset for Egyptian License Plate Detection and Recognition

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