33rd International Conference on Computer Theory and Applications

ICCTA 2023

16-18 December 2023
Alexandria, Egypt

Under the Auspices of

Prof. Dr. *Mohamed Ayman Ashour*
Minister of Higher Education and Scientific Research
Egypt

Conference Program

DAY 1 - Saturday, December 16th, 2023
Venue: *AASTMT Presidency Building, AbuQir and Online*

10:00 Registration

11:00 Opening Session and Keynote Speech

Welcoming Speeches

Prof. Dr. Ayman Abdel-Hamid
Dean – College of Computing and Information Technology (Alexandria)
Arab Academy for Science, Technology, and Maritime Transport
Conference Coordinator

Prof. Dr. Hesham Elbadawy
Vice Chairman, IEEE Egypt Section
Head of Network Planning Dept., National Telecommunications Institute,
Egypt

H.E. Prof. Dr. *Yousry El Gamal*
Former Minister of Education, Egypt
President, Computer Scientific Society

H.E. Prof. Dr. Ismail Abdel Ghafar Ismail Farag
President – Arab Academy for Science, Technology, and Maritime Transport

H.E. Prof. Dr. *Mohamed Ayman Ashour*
Minister of Higher Education and Scientific Research, Egypt

Keynote Speech

"Impact of Generative AI on Education and Scientific Research"

H.E. Prof. Dr. Yousry El Gamal

12:30 Coffee Break

13:30 Keynote Speech

"Human Dynamics, Approaches in Sensing, Modeling, and Smart City Integration"

Prof. Dr. *Hirozumi Yamaguchi*
Professor, Osaka University, Japan
Leader - Mobile Computing Laboratory

DAY 1 - Saturday, December 16th, 2023 (Cont'd)

14:00 Keynote Speech

"Smart City Vision, What to Expect"

Dr. Hany Elgebaly
Founder and Chief Executive Officer of AvidBeam Technologies Inc.

14:30 Keynote Speech

"The AI Revolution and the Role of Academia"

Prof. Dr. Ahmed Tantawy
Senior Technology and Strategy Advisor, USA

15:00 Lunch

End of Day 1 Activities - ICCTA 2023

Venue: Farsi Hall – College of Engineering and Technology- AbuQir and *Online*

9:00 - 11:00 Session I

Session I Intelligent Computing I and Information Systems
Chairs:
Impacts of Smartphones' Distraction on Driving Behavior: Naturalistic Data Collection Using A Smartphone Application **Mohamed Attwa, Mohamed El Esawey, and Ahmed Osama (Ain Shams University, Egypt)**
CIRAJ: An Extended IoT Reference Architecture for Gamified Smart Classrooms **Islam Elgedawy and Laila Shoukry (Alamein International University, Egypt)**
A New Hybrid Approach to Dynamic Pricing Categorization Using Deep Learning and Neutrosophic **Mariam Yacout and Saleh Mesbah Elkaffas (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
A Novel Transformer-Based Approach for Detecting Anomalies in Event Logs of Process-Aware Information Systems **Eman Abd El-Aziz and Radwa Fathalla (Arab Academy for Science, Technology and Maritime Transport, Egypt), Yasser Ismail (Southern University and A&M College, USA), and Mohamed Shaheen (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Unveiling the Unseen: Leveraging Zero-Day Attack Detection Using Unsupervised and Semi-Supervised Learning **Osama A. El Awadia (NTRA, Egypt) and Sameh A. Salem (Helwan University, Egypt)**
Fintech Discourse on Twitter: Mapping the Evolution and Interconnections of Academic Publications **Dian Kurnianingrum (Bina Nusantara University, Indonesia), Isma Addi Bin Jumri (Universiti Teknikal Malaysia Melaka (UTeM), Malaysia), Mulyani Karmagatri, Rosyidah Rahmah (Bina Nusantara University, Indonesia), Nugraha Nugraha (Universitas Pendidikan Indonesia, Indonesia), and Enny Noegraheni Hindarwati (Bina Nusantara University, Indonesia).**
Review of Challenges and Need of Artificial Intelligence for the Modern Businesses in light of Strategic Vision documents of the GCC countries **Hesham Magd (Modern College of Business and Science, Oman) and Shad Ahmad Khan (University of Buraimi, Oman)**

11:00 Coffee Break

11:30 - 13:30 Session II

Session II Intelligent Computing II
Chairs:
A Novel Computational Method for Predicting DNA Methylation Sites within WGBS of Chromosome Y with WGS Data and Illumina Array Data **Asmaa Abo Bakr Kamel, Nahla A.Belal, and Yasser El-Sonbaty (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Classifying Email Spam Using K-Nearest Neighbors, Logistic Regression, and AdaBoost **Alaa Sheta (Southern Connecticut State University, USA) and Walaa H. El-Ashmawi (Suez Canal University and Misr International University, Egypt)**
Comparative Analysis of Computer Vision Techniques for Traffic Signs Recognition in Autonomous Vehicles **Yaman Sahu, Mahmoud Wael, Bibek Gupta, Tasneem Tarek Abdelkareem (Nile University, Egypt), and Mohamed A. Wahby Shalaby (Cairo University and Nile University, Egypt)**
Deep Learning SAR-Ship Detection Model in Complex Background for Maritime Surveillance **Mourad A. Kenk, Safaa A. Abdelrahman, A. Mahdy, and Emad A. Ahmed (South Valley University, Egypt)**
Kinship Recognition through Stacked Self-Calibrated Attention Network **Ahmed A. Dabas, Nagia M. Ghanem, and Mohamed A. Ismail (Alexandria University, Egypt)**
Noise Optimized Order-Statistic Energy Pre-fitted Active Contour for Accurate Image Segmentation **C. M. A. Rahman, Satirtha Paul Shyam, P. K. Partho, and Wasi Mashrur (Military Institute of Science and Technology, Bangladesh)**
Social Listening Using Machine Learning and NLP to Make Sense of Frontline Employees Experiences and Learning **Shiri Vivek and Muhammad S Ahmed (Eastern Michigan University, USA)**
Enhancing Quadrotor Performance Based on Intelligent Control Integration **Abdelrahman M. Watany, A. M. Abdel Ghany, M. E. Bahgat (Helwan University, Egypt), and Manar Lashin (Benha University, Egypt)**

13:30 Lunch

14:30 - 16:30 Session III

Session III **Cybersecurity, Networks, and Distributed Systems**
Chairs: Prof. Dr. Ayman Abdel-Hamid
Hackers on the Go: Investigating Cyber Threats to Crowdsourced Mobility-on-Demand Platforms **Hamada Rizk and Hirozumi Yamaguchi (Osaka University, Japan)**
Comparative Study of Spectrum Sensing for Cognitive Radio System Using Energy Detection over Different Channels **Nouran Mostafa Mohamed, Mohamed Saad Zaghloul, and Roshdy Abdelrassoul (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Smart Autonomous IoT Agricultural Monitoring System for Banana Agriculture in Egypt **Albashir Mohamed (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Towards Egyptian National HPC Grid (EN-HPCG): From Cluster to Grid Approach **Hanan A. Hassan, Mona S. kashkoush, Aya I. Maiyza, and Ghada M. Fathy (City of Scientific Research and Technological Applications, Egypt)**
Comparative Analysis of Gigabit Passive and Active Optical Networks for Undetectable Signal Interception **Khaled F. Abdallah (Military Technical College, Egypt), Moustafa H. Aly (Arab Academy for Science, Technology and Marine Transport, Egypt), Mohamed Hussein (Military Technical College, Egypt), Mohamed A. Azim, Mohamed A. Taleb (Mansoura University, Egypt), and Mohammad A. Maher (Egyptian Russian University, Egypt)**
Scheduling Linear Workflows with Various Levels of Privacy Requirements in a Fog–Cloud Environment **Helen D. Karatza (Aristotle University of Thessaloniki, Greece)**
AuthMe – A Passwordless Decentralized Authentication Management System **Abdelrahman Mustafa El-Feky, Ammar Essam Basha, Karim Mohamed Gomaa, Youssef Ashraf El-Etreby, Yasmine N. M. Saleh, and Ayman Adel Abdel-Hamid (Arab Academy for Science, Technology and Maritime Transport, Egypt)**

| **Session III** |
Cybersecurity, Networks, and Distributed Systems
Embracing Open Innovation: A Cost-Efficient Cloud Computing Disaster Recovery Model **Ahmed Abdelaziz, Saleh Mesbah, and Mohamed Kholief (Arab Academy for Science, Technology and Maritime Transport, Egypt)**

End of Day 2 Activities - ICCTA 2023

DAY 3-Monday December 18th, 2023
Venue: Farsi Hall – College of Engineering and Technology- AbuQir and *Online*

9:00 - 11:00 Session IV

Session IV Intelligent Computing III and Multimedia Processing
Chairs:
MonoLite3D: Lightweight 3D Object Properties Estimation **Ahmed El-Dawy, Amr El-Zawawi , and Mohamed El-Habrouk (Alexandria University, Egypt)**
A Novelty Two-Layered Ensemble Framework with Hybrid Filter-Based Feature Selection for Prediction of Coronary Artery Disease **Ahmed Mohamed Elsheikh and Nader Mahmoud (Menoufia University, Egypt)**
PSO-Based Optimization of Interval Type-2 Fuzzy Logic for Question Difficulty Prediction **Mai Shaaban, Yasser F. Hassan, and Magda M. Madbouly (Alexandria University, Egypt)**
Speech Emotion Recognition using Machine Learning **Batoul Rida Haidar (Coventry University – Egypt Branch) and Christopher Habib Rahme (University of Saint Joseph, Lebanon)**
Enhancing Neural Machine Translation for Languages with Limited Resources Utilizing Non-Parallel Text **Mohamed Atta Faheem, Khaled Tawfik Wassif, Hanaa Bayomi Mobarz, and Sherif Mahdy Abdou (Cairo University, Egypt)**
A comparative Analysis of Ensemble Methods and their Efficiency in the Classification of 'HIT AND RUN' Cases in an Imbalanced Dataset (Traffic Crashes) with and without using Synthetic Minority Oversampling Technique **Manjula Shenoy K. and R. Srinivas Prabhu (Manipal Academy of Higher Education, India)**
Adaptive Pyramid with Tree-map Visualization **Hazem Hossam (German University in Cairo, Egypt), Enas Elgmmal (Media Television, Egypt), and Reham H. Elnabawy (New Giza University, Egypt)**

11:00 Coffee Break

11:30 - 13:30 Session V

Session V Intelligent Computing IV
Chairs:
Stairs Gait Cycle Trajectory Prediction and Phase Segmentation Using Deep Learning **Mohamed Karakish and Ahmed ELsawaf (Arab Academy for Science, Technology and Maritime Transport, Egypt), Mohamed I. Abu El-Sebah (Electronics Research Institute, Egypt), and Moustafa A. Fouz (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Workspace Mobile Application Finder Based on Machine Learning Approach **Wessam M. Salama (Pharos University, Egypt) and Moustafa H. Aly (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Skin Diseases Detection Based on Deep Learning Models **Moustafa H. Aly (Arab Academy for Science, Technology and Maritime Transport, Egypt), Loaa Ahmed Mohamed, Wessam M. Salama, Ahmed Abd El-Hakim Abd El-Motilab, Mahmoud Moustafa Fathalla, Maria Mina William, Arsany Nashaat Fawzy, and Mohamed Mohamed Ibrahim (Pharos University, Egypt)**
Integration of Advanced Automated Systems Utilizing Internet of Things and Artificial Intelligence **Omar Yasser, Amr Othman, and Hamdy A. Ashour (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Optimized End-to-End Coiflets Discrete Wavelet Transform for Dermoscopic Images Compression **Radwa A. Elsawy (Alexandria Higher Institute of Engineering & Technology, Egypt), Ghada F. R. Hassan, Maram A. Wahba, Diaa-Eldin A. Mansour (Egypt-Japan University of Science and Technology, Egypt), and Amira S. Ashour (Tanta University, Egypt),**
Diabetic Retinopathy Detection using Convolutional Neural Networks **Dina W. Ahmed, Fatma A. Hashim, and Nancy M. Salem (Helwan University, Egypt)**
Blockchain and Restricted Boltzmann Machine for Credit Card Fraud Detection **Mahmoud Ghanem (Alexandria University, Egypt), Saleh Mesbah Elkaffas (Arab Academy for Science, Technology and Maritime Transport, Egypt), and Magda M. Madbouly (Alexandria University, Egypt)**

13:30 Coffee Break

14:00 - 16:00 Session VI

Session VI Intelligent Computing V
Chairs:
MyHealthDigest: A Smart-driven Medical Platform **Dalia Mohamed Sobhy (Arab Academy of Science, Technology and Maritime Transport, Egypt), Noureldin Saad Eldehi (Vodafone, Egypt), Youssef Tarek (Software Engineer), and Mahmoud Eid (Software Engineer)**
Analyzing User Interest Detection in Web sites: A Bimodal Approach **Habiba Elkashef, Alaa Taie, Abdalla Hamdy (October University for Modern Sciences and Arts, Egypt), and Ayman Atia (Helwan University and October University for Modern Sciences and Arts, Egypt)**
Agglomerative Hierarchical Clustering based Method for Image Clustering using Restricted Boltzmann Machine **Abraham Woubie (Silo AI, Finland), Enoch Solomon (Virginia State University, USA), and Eyael Solomon Emiru (University of Trento, Italy)**
Enhanced Brain Tumor Detection and Segmentation Using Identity Generative Adversarial Network and Attention Residual U-Net **Mahmoud Elagamy, Hossam Selim, and Saleh Mesbah Elkaffas(Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Hybrid Framework for Early Detection of Multiple Sclerosis through MRI Segmentation: A Multi-Layer Preprocessing and Modified Residual Attention U-Net Approach **Mohamed Elagamy, Hossam Selim, and Saleh Mesbah Elkaffas (Arab Academy for Science, Technology and Maritime Transport, Egypt)**
Enhancing Remote Sensing Image Classification through Modified VGG 16: Augmentation and Missing Pixel Imputation Approaches **Mohammed Attya, OM Abo-Seida (Kafr El-Shiekh University, Egypt), Hatem M. Abdulkader, and Amgad M. Mohammed (Menoufia University, Egypt)**
Detecting Sarcasm in Arabic Text Using Model Soup of Deep Learning Models **Aya Lotfy, Marwan Torki, and Nagwa El-Makky (Alexandria University, Egypt)**

End of ICCTA 2023 Activities

ICCTA 2023 Committees

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Former Minister of Education
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