



**16th ACS/IEEE International Conference
on Computer Systems and Applications
AICCSA 2019**



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

**16th ACS/IEEE International Conference on Computer Systems and
Applications AICCSA 2019**

3 November to 7 November 2019

Al Ain University & Crowne Plaza

Abu Dhabi, UAE



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

Welcome Message

On behalf of the organizing committee, we welcome you to the 16th International Conference on Computer Systems and Applications (AICCSA 2019), Abu Dhabi, United Arab Emirates. The conference is co-organized by Al Ain University, UAE.

AICCSA 2019 Conference, in collaboration with IEEE, continues its mission of covering all contemporary areas in computer systems and applications, and providing the latest results on theory, design, analysis, implementation, and application in these important and rapidly changing domains. Indeed, this edition addresses nine areas and the technical program presents high-quality papers in: (1) Artificial Intelligence and Machine Learning, (2) Semantics, Knowledge and Cyber Systems, (3) Security, Privacy and Trust, (4) IoT, IoV, IoEnergy, IoHealthcare, (5) High Performance Computing, (6) Databases and Information Systems, (7) Multimedia, Computer Vision and Image Processing, (8) Parallel and Distributed Systems, (9) Data Science, (10) Software Engineering, (11) VLSI Design and Systems

The 5-days program of the conference exhibits exciting Main Conference and workshop sessions. A posters presentation session and a poster judging session are also planned for Sunday afternoon. Young researchers are featured with a full day PhD forum on Monday 4 November 2019. A number of networking and social events are also organized all along the conference. A whole afternoon is dedicated to the women in computer science & STEM event, open to all scientists. Apart from daily lunches, a Gala dinner is organized on Tuesday evening and a desert safari is planned for Wednesday 6 November 2019, followed by a dinner.

The prominence of approaches in these areas is underlined by the topics of the five distinguished keynote speakers: Prof. Azzedine Boukerche from University of Ottawa (Canada), Prof. Ali Jaoua from ESPRIT Tunis (Tunisia), Dr. Abdelkader Nasreddine Belkacem from Osaka University (Japan), Prof. Abdelkader Hameurlain from Paul Sabatier University (France) and Prof. Ernesto Damiani from Khalifa University (UAE). Two tutorials will be given by Mustafa Jarrar from Birzeit University (Palestine) about Arabic Lexical Resources and Dr. Mutaz M. Al-Debei from Oracle (Jordan) about IoT, AI, & Blockchain.

We hope that you will enjoy your stay in Abu Dhabi.

Mahdi Zargayouna, on behalf of the General chairs

Moayad Aloqaily, on behalf of the TPC chairs

Qutaibah Althebyan, on behalf of the Organization chairs



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

AICCSA 2019 Tracks

- **Track 1:** Artificial Intelligence and Machine Learning (chairs: Safa Otoum, Amjad Gawanmeh and Qassim Nasir)
- **Track 2:** Semantics, Knowledge and Cyber Systems (chairs: Noura Faci, Mohammed Daoud and Maamar Zakaria)
- **Track 3:** Security, Privacy and Trust (chairs: Monther Aldwairi, Aimeur Esma, and Saed Alrabaee)
- **Track 4:** IoT, IoV, IoEnergy, IoHealthcare (chairs: Ouns Bouachir, Fadi Al Hassan and Sohail Abbas)
- **Track 5:** High Performance Computing (chairs: Thar Baker, Adel Ben Mnaouer and Sharhabeel H. Alnabelsi)
- **Track 6:** Databases and Information Systems (chairs: Fernanda Baião, Ahmed Ghandour, and Zaydoon Hatamleh)
- **Track 7:** Multimedia, Computer Vision and Image Processing (chairs: Nadjia Benblidia, and Hussam Abdel-Karim Al-Rabai'ah)
- **Track 8:** Parallel and Distributed Systems (chairs: Somayeh Kianpisheh, Huthaifa Al-Omari, and Andy Rindos)
- **Track 9:** Data Science (chairs: Fernando Chirigati, Issam Al Azzoni, and Yazeed Ghadi)
- **Track 10:** Software Engineering (chairs: Igor Steinmacher, Zina Houhamdi, and Saqib Iqbal)
- **Track 11:** VLSI Design and Systems (chairs: Ibrahim (Abe) M. Elfadel, Mawahib Sulaiman, and Mohammed Al-Hattab)

AICCSA 2019 Workshops & Symposiums

- **IEEE BCA'2019:** The 1st IEEE International Workshop on Blockchain and its Applications (chairs: Khaled Salah, Muhammad Habib ur Rehman and Davor Sventinovic)
- **IEEE HOPE'19:** The 2nd International Workshop on Health Informatics: PatientCentered Solutions and Educational Approaches in the Digital Health Era (chairs: Adel Taweel, Yousef Kader, Thomas Lux and Elyes Lamine)
- **IEEE ACCO'2019:** The Third IEEE International Workshop on Automation of Cloud Configuration and Operations (chairs: Abdella Battou, Robert Bohn and Cihan Tunc)
- **IEEE SCALP'2019:** The Third IEEE International Symposium on Social Computing and Arabic Language Processing (Ashraf Elnagar and Imad Afyouni)
- **IEEE MCA'2019:** The Third IEEE International symposium on Multimedia Computing and Applications (chair: Mohamad Alsmirat)
- **IEEE DSC'2019:** The Fifth IEEE International Workshop for Data Science and Computing (chairs: Nadjia Benblidia, Genoveva Vargas Solar and Muhammad Ali Memon)
- **IEEE CDD'2019:** The First IEEE International Workshop on Cybercrime Defense and Digital Forensics (chairs: Farkhund Iqbal and Moayad Aloqaily)

AICCSA 2019 Special event

This edition is characterized by a new event dedicated to Women in computer science & STEM session to highlight concrete opportunities female have to carry on successful careers in Computer Science and STEM in general. The aim is to bring together junior and senior women computer scientists/STEM, encourages collaboration through formal and informal discussion, and provides a perfect opportunity for young researchers to discuss their research and get valuable feedback in an open and informal environment. Besides, this event will provide networking opportunities and a support network comprising role models, mentors, and peers. The event open to all scientists – male & female - will include talks by distinguished women speakers from industry and academia who will share their experiences with the participants.

AICCSA 2019 Tutorials

- **Prof. Mustafa Jarrar, Birzeit University (Palestine):** Arabic Lexical Resources in the Linked-Data Era
- **Dr. Mutaz M. Al-Debei (Jordan):** Transformational Technology (IoT, AI, & Blockchain)– Industry Use Cases and Demos



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

DETAILED PROGRAM

08:00 - 17:00	Registration @AL AIN UNIVERSITY	
Sunday, November 03, 2019		
09:00 - 10:00	Opening & Welcome	
10:00 - 11:00	Keynote speaker: Prof. Azzedine Boukerche Connected/Autonomous Vehicles: A New Challenge for Smart Transportation and Connected Cities Chair: Prof. Qutaibah Althebyan Room : Al Jawhra Theatre	
11:00 - 11:30	Coffee Break	
11:30 - 13:00	Track 1 @IEEE AICCSA'2019 AL AIN UNIVERSITY Room 206	Chair : Prof. Chirine Ghedira <ul style="list-style-type: none"> Junfeng Wu, Li Yao, Liu Bin and Ding Zheyuan. Automated Anomaly Detection Assisted by Discrimination Model for Time Series Alaa Alsaedi, Arwa Soliman and Saad Alharbi. Mining the Global Terrorism Dataset using Machine Learning Algorithms Flávia Dias Casagrande and Evi Zouganeli. Prediction of Next Sensor Event and its Time of Occurrence using Transfer Learning across Homes Kamalkhan Artykbayev, Askhat Temir and M.Fatih Demirci. Selecting the best optimal feature correspondence with deep learning
	Tutorial AL AIN UNIVERSITY Room 212	Prof. Mustapha Jarrar : Arabic Lexical Resources in the Linked-Data Era
	Track 2 @IEEE AICCSA'2019 AL AIN UNIVERSITY Room 213	Chair : Dr. Moayad Aloqaily <ul style="list-style-type: none"> Saoussen Mathlouthi and Chiraz Ben Othmane Zribi. Detection of Arabic Non-referential Pronouns using Self-training method and similarity measures Rogério Winter, Ferruccio de Franco Rosa, Rodrigo Bonacin and Mario Jino. Architecture and Conceptual Formalization of Cyber Mission Operations Alibek Jakupov, Julien Mercadal and Besma Zeddini. MacNabbs: Knowledge Extraction from Unstructured Data using Semantic Analysis and User Activity Logging
13:00 - 14:00	Lunch	
14:00 - 15:30	Track 1 @IEEE AICCSA'2019 AL AIN UNIVERSITY Room 206	Chair : Prof. Nadia Kabachi <ul style="list-style-type: none"> Hamda Slimi, Ibrahim Bounhas and Yahya Slimani. URL-Based Tweet Credibility Evaluation Sara Elmidaoui, Laila Cheikhi and Ali Idri. The Impact of SMOTE and Grid Search on Maintainability Prediction Models Mohamed-Cherif Rahal and Dominique Gruyer. Multi-Layer Laser Scanner Strategy for Obstacle Detection and Tracking Maroua Masmoudi, Hedi Karray, Sana Ben Abdallah Ben Lamine, Hajer Baazoui and Bernard Archimede. DISERTO:



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

14:00 - 15:30		semantics-based tool for automatic and virtual data integration
	IEEE BCA @AICCSA'2019 AL AIN UNIVERSITY Room 212	Chair : Prof. Khaled Salah
		<ul style="list-style-type: none"> • Muneer Bani Yassein, Farah Shatnawi and Saif Rawashdeh. Blockchain Technology: Characteristics, Security and Privacy; Issues and Solutions • Nida Khan and Mohamed Nassar. A Look into Privacy-Preserving Blockchains • Ilhaam Omar, Raja Jayaraman, Khaled Salah and Mecit Can Emre Simsekler. Exploiting Ethereum Smart Contracts for Clinical Trial Management • Mazin Debe, Khaled Salah, Muhammad Habib Ur Rehman and Davor Svetinovic. Towards a Blockchain-based Decentralized Reputation System for Public Fog Nodes • Kromes Roland and Verdier François. IoT devices hardware modeling for executing Blockchain and Smart Contracts applications • Macià Mut-Puigserver, Magdalena Payeras-Capellà and Miquel Àngel Cabot-Nadal. Blockchain-based Contract Signing Protocol for Confidential Contracts
Posters short presentations AL AIN UNIVERSITY	Chairs : Dr. Fatma Abdelhedi & Mohamed Chérif Rahal	
		<ul style="list-style-type: none"> • Lubna Alhenaki and Manar Hosny. A Genetic-Frog Leaping Algorithm for Large Dataset Document Clustering • Ahmad Khalil, Nader Mbarek and Olivier Togni. Fuzzy Logic based security trust evaluation for IoT environments • Mona Alghamdi, Asma Cherif and Abdessamad Imine. Towards an Edge-based Architecture for Real-Time Collaborative Editors • Dou El Kefel Mansouri, Seif-Eddine Benkabou, Bachir Kaddar, Josep Lluís Larriba -Pey and Khalid Benabdeslem. Reducing Traffic Congestion by LSTM-LOF Framework • Mohammad Madine, Mohammad Battah, Aaminah Khan and Naoufel Werghi. Detecting Driver Smartphone: A Learned Features Approach Using Aggregated Scalogram Images • Salwa Alem, David Espes, Eric Martin, Laurent Nana and Florent De Lamotte. A hybrid intrusion detection system in industry 4.0 based on ISA95 standard • Ibtihal Alablani and Mohammed Alenazi. Performance Evaluation of Sensor Deployment Strategies in WSNs Towards IoT • Marwan Torki, Dina Samak, Sarah Jad, Nour El-Din Nabil and Amr Wassal. Spectrometer as a Ubiquitous Sensor for IoT Applications Targeting Food Quality • Samir Ouchani and Abdelaziz Khaled. A Meta Language for Cyber-Physical Systems and Threats: Application on autonomous vehicle • Darren Saguil, Qiao Xue and Qusay Mahmoud. M2MHub: A Blockchain-based Approach for Tracking M2M Message Provenance



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

14:00 - 15:30

- Wael Elwasif, Ane Lasa, Philip Roth, Timothy Younkin and Mark Cianciosa. Nested Workflows For Loosely Coupled HPC Simulations
- Sabah Al-Fedaghi and Yazan Mohamad. Business Process Mapping: A case Study
- José Ramón González Montero, Aura Conci, Maíra Hernandez Moram, Aline Paes, Charbel Pereira Damião and Wilian Gionanni Fiirst. Analysis of static and dynamic infrared thermograms for thyroid nodules investigation
- Manal Alohal. Information Security Risk Communication: A User-centric Approach
- Gurdal Ertek, Gul Tokdemir and Mohamad Hammoudi. Graph-Based Visualization of Stochastic Dominance in Statistical Comparisons
- Dorob Wali Ahmad and Waqar Haque. An Interactive Framework to Develop and Align Business Process Models
- Viktor Osmov, Atadjan Kurbanniyazov, Rasheed Hussain, Alma Oracevic, S.M. Ahsan Kazmi and Fatima Hussain. On the Blockchain-based General-Purpose Public Key Infrastructure
- Marcio Silva, Valéria Times, André Araújo and Paulo Silva. A Microservice-based Approach for Increasing Software Reusability in Health Applications
- Myriam Jaouadi and Lotfi Ben Romdhane. Influence Maximization problem in social networks: An overview
- Boumediene Belkhouche, Wadha Alketbi, Aysha Alneyadi, Shaikha Al Nuaimi and Eiman Al Hassani. Modeling and Virtualization of Cultural Heritage
- Negin Alisoltani Dehkordi, Mahdi Zargayouna and Ludovic Leclercq. Data-Oriented Approach for the Dial-A-Ride Problem
- Ahmad Alwadi, Abdulrahman Nahhas, Sascha Bosse, Naoum Jamous and Klaus Turowski. A Modernized Model for Performance Requirements and their Interdependencies
- Faizan Ur Rehman, Imad Afyouni, Ahmed Lbath and Saleh Basalamah. Hadath: From Social Media Mapping to Multi-Resolution Event-Enriched Maps
- Mohamed Amir Abbas, Nadja Benblidia and Nour El Islam Bachari. A multi-level fusion approach for climate variation study using multi-source data – Case study: Algeria
- Lama Alturki, Khawlah Aloraini, Amina Aldughayshim and Saleh Albahli. PREDICTORS OF READMISSIONS AND LENGTH OF STAY FOR DIABETES RELATED PATIENTS
- Ahmed Shuhaiber, Ibrahim Mashal and Osama Alsaryrah. Smart homes as an IoT application: predicting attitudes and behaviours
- Souad Sadki, Hanan El Bakkali, Driss Allaki and Anas Chenguiti Ansari. Predicting patients' health medical behavior based on their privacy preferences
- Najla Fattouch, Mouna Rekik, Abderrahim Ait Wakrime and Khouloud Boukadi. A Model-driven Engineering Approach for Business Process based SaaS services Composition
- Maryam Yousef, Shaima Alshouq, Haifa Alhosani, Farkhund Iqbal and Djedjiga Mouheb. A COMPARATIVE LEGAL



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

14:00 - 15:30		<p>ANALYSIS OF CYBERBULLYING AND CYBERSTALKING IN THE UAE, US, ENGLAND AND CANADA</p> <ul style="list-style-type: none"> • Moez Krichen and Roobaea Alroobaea. Towards Optimizing the Placement of Security Testing Components for Internet of Things Architecture • Benjamin Yankson and Adam Davis. Analysis of the Current State of Cloud Forensics • Maryam Yousef and Farkhund Iqbal. Digital Forensics on a DJI Mavic Air drone • Dua'a Abu Hamdi, Farkhund Iqbal, Saiqa Aleem, Abdulla Kazim and Áine MacDermott. Drone Forensics: A case study on DJI Phantom 4 Vision UAVs • Faizan Ur Rehman and Emad Felemban. A Preference-based Interactive Tool for Safe Rescheduling of Groups for Hajj • Eman Alsagour, Lubna Alhenki and Mohammed Al-Dhelaan. Different Word Representation For Text Classification: A Comparative Study • Alsmadi Hiba, Ahmed J. Aljaaf and Tahar Bakr. An Insight into ICP Monitoring of Patients with Hydrocephalus using Data Science Approach • Mohammed Rasol Al Saidat. A Design of an Enhanced Redundant SIP Model for Securing SIP-Based Networks • Farah Fargo, Shobha Vissapragada and Samantika Sury. CONCORD: Improving Communication using Consumer-Count Detection • Sicong Shao, Cihan Tunc, Amany Al-Shawi and Salim Hariri. One-class Classification with Deep Autoencoder Neural Networks for Author Verification in Internet Relay Chat • Osman ismail. A simple and Efficient Degree Reduction algorithm for Parametric Interval Bezier Curves Using Tridiagonal Matrices • Imane Guellil, Ahsan Adeel, Faical Azouaou, Fodil Benali, Ala Eddine Hachani, Mandar Gogate, Kia Dashtipour and Amir Hussain. Arabizi sentiment analysis: Translation Vs Transliteration for dealing with Arabizi • Muhammad Kashif, Ihsan Cicek and Malik Imran. A Hardware Efficient Elliptic Curve Accelerator for FPGA Based Cryptographic Applications • Amjad Aldweesh. Does the Gas Price of the Ethereum Instruction proportional to the CPU Time?
14:00 - 15:30	Tutorial AL AIN UNIVERSITY Room 213	Dr. Mutaz M. Al-Debei: Transformational Technology (IoT, AI, & Blockchain)— Industry Use Cases and Demos
15:30 - 16:00	Coffee Break	
16:00 - 17:30	POSTERS Display Session (Best poster Judging) AL AIN UNIVERSITY Open Area Second Floor Male Side	
18:30 - 20:00	Welcome Reception - finger buffet CROWNE PLAZA	



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

08:00 - 17:00	Registration @CROWNE PLAZA	
Monday, November 04, 2019		
10:00 - 11:00	<p>Keynote speaker: Prof. Ali Jaoua Conceptual data science: foundation and applications Chair: Prof. Mahdi Zargayouna Main Conference Room</p>	
11:00 - 11:30	Coffee Break	
11:30 - 13:00	<p>Track 1 @ IEEE AICCSA'2019</p> <p>CROWNE PLAZA</p> <p>Room 1</p>	<p>Chair : Prof. Hedi Karray</p> <ul style="list-style-type: none"> Tian Ma, Shiyong Qian, Jian Cao, Guangtao Xue, Jiadi Yu, Yanmin Zhu and Minglu Li. An Unsupervised Incremental Virtual Learning Method for Financial Fraud Detection Mohammad Shojafar, Rahim Taheri, Zahra Pooranian, Reza Javidan, Ali Miri and Yaser Jararweh. Automatic Clustering of Attacks in Intrusion Detection Systems Gcinizwe Dlamini, Rufina Galieva and Muhammad Fahim. A Lightweight Deep Autoencoder-based Approach for Unsupervised Anomaly Detection Alramzana Nujum Navaz, Mohamed Adel Serhani and Sujith Samuel Mathew. Facial Image Pre-Processing and Emotion Classification: A Deep Learning Approach
	<p>IEEE HOPE @AICCSA'2019</p> <p>CROWNE PLAZA</p> <p>Room 2</p>	<p>Chair : Prof. Adel Taweel</p> <ul style="list-style-type: none"> Felix Holl, Louisa Reschke, Stefan Müller-Miellitz, Marina Fotteler and Walter Swoboda. Secondary Use of Research Data: A Review of Availability and Utilization of Public Use Files and Initial Steps for the Development of a Process to Facilitate Medical Research Data Donation Lena Otto. Implementing and Scaling up Telemedicine Initiatives: Beyond User-Centredness Ahmad Wassim Al Gendy and Arij Lahmar. Review on Healthcare Supply Chain Liwen Zhang, Elyes Lamine, Franck Fontanili, Christophe Bortolaso, Mustapha Derras and Hervé Pingaud. A decision-making support system for operational coordination of Home Health Care services Bernhard Breil, Thomas Lux, Lisanne Kremer, Laura Rühl and Jennifer Apolinário-Hagen. Determination, Prioritization and Analysis of User Requirements to Prevention Apps Yousef Khader, Mohammad Alyahya, Anwar Batieha and Adel Taweel. JSANDS: A stillbirth and neonatal deaths surveillance system
	<p>Track 3 @ IEEE AICCSA'2019</p> <p>CROWNE PLAZA</p> <p>Room 3</p>	<p>Chair : Prof. Sami Yangui</p> <ul style="list-style-type: none"> Firas Saidi, Zouheir Trabelsi and Henda Ben Ghezala. Fuzzy Logic Based Intrusion Detection Systems as a Service for Malicious Port Scanning Traffic Detection Ryma Boussaha, Yacine Challal and Abdelmadjid Bouabdallah. Single-Path Network Coding Authentication for Software-Defined Named Data Networking Zouheir Trabelsi and Safaa Zeidan. Resilience of Network Stateful Firewalls against Emerging DoS Attacks: A Case Study of the BlackNurse Attack Olfa Abu Salem and Asma Cherif. Towards Optimistic Access Control in Cloud-based Collaborative Editors



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

	PHD FORUM CROWNE PLAZA Room 4	<p>Chair : Dr. Ali Akoglu</p> <p>Selected Student Research Talks</p> <ul style="list-style-type: none"> • Negin Alisoltani, "New Mobility Services" • Faizan Ur Rehman, "Building Socially-enabled Event-enriched Maps" • Alem Salwa, "A hybrid Intrusion Detection System in Industry 4.0 based on ISA95 Standard" • Adriel dos Santos Araújo, "Computer Techniques for Follow up Breast Cancer Neoadjuvant Treatment Using Infrared Examinations" • Maryam Yousef, "Digital Forensics: A Case Study on a DJI Mavic Air"
13:00 - 14:30	Lunch	
14:30 - 15:30	<p>Keynote speaker: Dr. Abdelkader Nasreddine Belkacem Real-time MEG-based Brain-Geminoid Interface Chair: Prof. Elhadj Benkhelifa Main Conference Room</p>	
15:30 - 16:00	Coffee Break	
16:00 - 17:30	Track 1 @ IEEE AICCSA'2019 CROWNE PLAZA Room 1	<p>Chair : Prof. Salima Hassas</p> <ul style="list-style-type: none"> • Faten Khemakhem and Hela Ltifi. Facial Expression Recognition using Convolution Neural Network Enhancing with Preprocessing Stages • Noura Algeri and Azzedine Boukerche. Design and Evaluation of An Efficient Online Machine Learning Based RSU Prediction Scheme for Intelligent Vehicular Networks • Juan Sebastian Piedrahita Giraldo, Chris O'Connor and Marian Verhelst. Efficient Keyword Spotting using Hardware-Aware Conditional Execution of Deep Neural Networks • Diana Alhafi, Anton Deik and Mustafa Jarrar, Usability Evaluation of Lexicographic e-Services
	IEEE HOPE @AICCSA'2019 CROWNE PLAZA Room 2	<p>Chair : Prof. Elyes Lamine</p> <p>Nidal Drissi, Sofia Ouhbi, Mohammed Abdou Janati Idrissi and Mounir Ghogho. Gamification-Based Apps for PTSD: an Analysis of Functionality and Characteristics Elyes Lamine, Katarzyna Borgiel, Hervé Pingaud, Marie-Noëlle Cufi, Christophe Bortolaso and Mustapha Derras. BL.Frailty: Towards an ICT-Based Platform for Frailty Assessment at Home Feras Odeh and Adel Taweel. A Deep Learning Approach to Extracting Adverse Drug Reactions</p>
	Track 3 @ IEEE AICCSA'2019 CROWNE PLAZA Room 3	<p>Chair : Dr. Sami Yangui</p> <p>Yacine Hebbal. Bypassing Full Disk Encryption with Virtual Machine Introspection Shadan Ghaffaripour and Ali Miri. Cryptographically Enforced Access Control in Blockchain-Based Platforms Ahmed Ibrahim, Mohammad El-Ramly and Amr Bard. Beware of The Vulnerability! How Vulnerable Are GitHub's Most Popular PHP Applications? Sicong Shao, Cihan Tunc, Amany Al-Shawi and Salim Hariri. Automated Twitter Author Clustering with Unsupervised Learning for Social Media Forensics</p>
	PHD FORUM CROWNE PLAZA Room 4	<p>Chair : Dr. Ali Akoglu</p> <ul style="list-style-type: none"> • Doctoral Symposium Mentor (Genoveva Vargas Solar) • Career Mentoring and Breakout Sessions (Mentors: Fatma Abdelhedi, Cihan Tunc, Genoveva Vargas Solar)



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

08:00 - 17:00	Registration @CROWNE PLAZA	
Tuesday, November 05, 2019		
09:30 - 10:30	<p>Keynote speaker: Prof. Kader Hameurlain New Generation of Cloud DBMS: Impacts and Challenges Chair: Prof. Chirine Ghédira Main Conference Room</p>	
10:30 - 11:00	Coffee Break	
11:00 - 12:30	<p>Track 9@IEEE AICCSA'2019</p> <p>CROWNE PLAZA</p> <p>Room 1</p>	<p>Chair : Dr. Fatma Abdelhedi</p> <ul style="list-style-type: none"> Mahnaz Mohammadi, Sardar Jaf, Stephen McGough A., Toby P. Breckon, Peter Matthew, Georgios Theodoropoulos and Boguslaw Obara. On the Use of Neural Text Generation for the Task of Optical Character Recognition Goutam Mylavarapu, K Ashwin Viswanathan and Johnson P Thomas. Assessing Context-Aware Data Consistency Reem Al Junaibi, Mohamad Atif Omar, Zeyar Aung, Armin Alibasic, George Westerman and Wei Lee Woon. Evaluating Skills Dimensions: Case Study on Occupational Changes in the UAE
	<p>IEEE ACCO @AICCSA'2019</p> <p>CROWNE PLAZA</p> <p>Room 2</p>	<p>Chair : Dr. Cihan Tunc</p> <ul style="list-style-type: none"> Fadi Yilmaz and Meera Sridhar. A Survey of In-lined Reference Monitors: Applications and Challenges Oussama Mounnan Anas Abou El Kalam and Lamia Elhaourani. Decentralized Access Control Infrastructure Using Blockchain for Big Data. Jesus Horacio Pacheco Ramirez, Victor Benitez, Cihan Tunc and Clarisa Grijalva Lugo. Anomaly Behavior Analysis for Fog Nodes Availability Assurance in IoT Applications Farah Fargo, Olivier Franza, Cihan Tunc and Salim Hariri. Autonomic Resource Management for Power, Performance, and Security in Cloud Environment Charif Mahmoudi and Fabrice Mourlin. A Language for Controller-less Internet of Things Orchestration based on Label Forwarding Sahli Nabil, Benmohammed Mohamed and Outbib Rachid. A Survey on Semantic Security challenges about smart grid deployment on hybrid cloud of clouds
	<p>Track 5+6+8 @IEEE AICCSA'2019</p> <p>CROWNE PLAZA</p> <p>Room 3</p>	<p>Chair : Dr. Thar Baker</p> <ul style="list-style-type: none"> Xavier Boulet, Mahdi Zargayouna, Scemama Gerard and Fabien Leurent. Service-Oriented Architecture for Multiscale Traffic Simulations Rihab Derouiche and Zaki Brahmi. Cooperative Agents based Data Placement Approach for Data Intensive Workflows Mohammed Al-Khafajiy, Thar Baker, Atif Waraich, Omar Alfandi and Aseel Hussien. Enabling High Performance Fog Computing through fog-2-fog Coordination Model Eman Omar, Paola Flocchini and Nicola Santoro. Perpetual Energy Restoration by Multiple Mobile Robots in Circular Sensor Networks Ibrahim Bounhas and Souheila Ben Guirat. KUNUZ: a Multi-purpose Reusable Test Collection for Classical Arabic Document Engineering



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

11:00 - 12:30	Track 10 @IEEE AICCSA'2019 CROWNE PLAZA Room 4	Chair : Prof. Elhadj Benkhelifa <ul style="list-style-type: none"> • Fatimah Alsayoud and Ali Miri. SSD: Cache Or Tier - An Evaluation of SSD Cost and Efficiency Using MapReduce • Hamid Mcheick, Youness Dendane, Fabio Petrillo and Souhail Ben Ali. Quality model for evaluating and choosing a stream processing framework architecture • Mohamed Samir, Mohamed Elramly and Amr Kamel. Investigating The Use Of Deep Neural Networks For Software Defect Prediction • Khalid Alsubhi, Fawaz Alsolami, Abdullah Algarni, Emad Albassam, Maher Khemakhem, Fathi Eassa, Kamal Jambi and M Uthman Ashraf. A Tool for Translating sequential source code to parallel code written in C++ and OpenACC • Marina Wanis, Adel Ben Manouer and Moayad Aloqaily. Hierarchical Timed Colored Petri Net Based modeling and evaluation of a Bank Credit Monitoring system • Majdi Rawashdeh, Awny Alnusair, Muder Almiani and Lina Sawalha. J Mentor: An Ontology-based Framework for Software Understanding and Reuse • Amro Abuabdo and Ziad Al-Sharif. Virtualization vs. Containerization: Towards A Multi-threaded Performance Evaluation Approach
12:30 - 14:00	Lunch	
14:00 - 15:30	Women In Science, Technology, Engineering, and Mathematics <ul style="list-style-type: none"> • Prof. Manar Abu Talib, University of Sharjah (UAE) (• Prof. Hoda Alkhazami Cyber Security Center NYU, Abu Dhabi (UAE) Chairs: Dr. Rima Grati & Prof. Chirine Ghédira CROWNE PLAZA Main Conference Room	
15:30 - 16:00	Coffee Break	
16:00 - 17:30	Women In Science, Technology, Engineering, and Mathematics <ul style="list-style-type: none"> • Prof. Mona Arishi, MEA client centers Leaser IBM (UAE) • Prof. Genevieve Vargas Solar, CNRS & LIG Lab (France) • Hend Abdulrazzaq Altair; Ministry of Education (UAE) <ul style="list-style-type: none"> • Panel Chairs: Dr. Rima Grati & Prof. Chirine Ghédira CROWNE PLAZA Main Conference Room	
19:30 - 23:00	GALA DINNER Crowne Plaza Hotel	



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

Wednesday, November 06, 2019

09:30 - 14:00

FREE MORNING

14:00 - 20:00

SOCIAL EVENT

DESERT SAFARI



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

Thursday, November 07, 2019

Thursday, November 07, 2019		
09:30 - 10:30	<p>Keynote speaker: Prof. Ernesto Damiani AI pipelines for Cyber Security Chair: Prof. Hedi Karray Main Conference Room</p>	
10:30 - 11:00	Coffee Break	
11:00 - 12:30	<p>Track 4@IEEE AICCSA'2019 CROWNE PLAZA Room 1</p>	<p>Chair : Dr. Sami Yangui</p> <ul style="list-style-type: none"> • Soukeina Zouaidi, Abdelfettah Belghith and Ilhem Lengliz. Vehicular Cloud Architectures: Taxonomy, Security and Challenges • Sarika Choudhary. Cluster-based Intrusion Detection Method for Internet of Things • Trabelsi Ala Din, Marouane Hend, Bouhamed Emna and Zarai Faouzi. NOMA based on Dynamic Scheduling Algorithm with Priority Assignment for V2X communications • Hossain Kordestani, Roghayeh Mojarad, Abdelghani Chibani, Aomar Osmani, Yacine Amirat, Kamel Barkaoui and Wagdy Zahran. Hapicare: A Healthcare Monitoring System with Self-adaptive Coaching Using Probabilistic Reasoning • Nada Obaid, Ibrahim Hamad, Ali Madkhane, Yousif Hamad, and Fadi El-Hassan. Design and Testing of a Practical Smart Walking Cane for the Visually Impaired
	<p>IEEE CDD+SCALP @AICCSA'2019 CROWNE PLAZA Room 2</p>	<p>Chair : Prof. Farkhund Iqbal</p> <ul style="list-style-type: none"> • Mohamed Saifeddine Hadj Sassi, Manel Zekri, Ines Beltaief and Sadok Ben Yahia. Multi-Oriented Real-time Arabic Scene Text Detection with deep Fully Convolutional Networks • Omar Einea and Ashraf Elnagar. Predicting Semantic Textual Similarity of Arabic Question Pairs using Deep Learning • Bashar Talafha, Mohammad Al-Smadi, Mahmoud Al-Ayyoub, Yaser Jararweh and Patrick Juola. Using a Hierarchical Softmax based on the Huffman Coding Tree For Authenticating Arabic Tweets • Raghad Albarghash, Mohamad Fouzi Mowakeh, Djedjiga Mouheb, Ibrahim Kamel and Zaher Al Aghbari. Detection of Arabic Cyberbullying on Social Networks Using Machine Learning • Amandio Balcão Filho, Ferruccio Franco Rosa, Rodrigo Ruiz, Rodrigo Bonacin and Mario Jino. A study on Trust Models in Cloud Computing • Bashar Talafha, Mahmoud Al-Ayyoub, Analle Abuammar and Yaser Jararweh. Outperforming State-of-the-Art Systems for Aspect-Based Sentiment Analysis



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

	<p>Track 7@IEEE AICCSA'2019 CROWNE PLAZA Room 3</p>	<p>Chair : Prof. Nadjia Benblidia</p> <ul style="list-style-type: none"> • Kamel Madi, Eric Paquet and Hamamache Kheddouci. New Graph Distance based on Stable Marriage formulation for Deformable 3D Objects Recognition • Mohamed Hamroun, Sonia Lajmi, Henri Nicolas and Ikram Amous. Arabic text-based Video indexing and retrieval system enhanced by semantic content and relevance feedback • Tasleem Kausar, Mingjiang Wang and Muhammad Idrees. Cancer detection in breast histopathology with convolution neural network based transfer learning • Mohammad Mahmudul Alam and Dr. S. M. Mahbubur Rahman. Detection and Tracking of Fingertips for Geometric Transformation of Objects in Virtual Environment
11:00 - 12:30	<p>IEEE DSC @AICCSA'2019 CROWNE PLAZA Room 4</p>	<p>Chair : Dr. Mohamed Chérif Rahal</p> <ul style="list-style-type: none"> • Maryam Elamine, Seifeddine Mechti and Lamia Hadrach Belguith. An unsupervised method for detecting style breaches in a document • Mohamed Nassar, Abdallah Itani, Mahmoud Karout, Mohamad El Baba and Omar Al Samman Kaakaji. Shoplifting Smart Stores Using Adversarial Machine Learning • Otman Manad, Tarek Menouer and Patrice Darmon. Towards a Performant Multilingual Model Based On Ensemble Learning to Enhance Sentiment Analysis • Yousef Shatnawi, Mohammad Alsmirat and Mahmoud Al-Ayyoub. Face Recognition using Eigen-faces and Extension Neural Network
12:30 - 14:00	Lunch	
14:00 - 15:30	<p>Track 4@IEEE AICCSA'2019 CROWNE PLAZA Room 1</p>	<p>Chair : Dr. Moayad Aloqaily</p> <ul style="list-style-type: none"> • Hassan Harb, Ghina Saad, Chady Abou Jaoude and Ali Jaber. Correlation-Based Sensor Activity Scheduling Mechanisms for Wireless Sensor Networks • Farhan Ahmad, Asma Adnane, Chaker Abdelaziz Kerrache, Fatih Kurugollu and Iain Phillips. On the Design, Development and Implementation of Trust Evaluation Mechanism in Vehicular Networks • Hamid Mcheick, Alia Ghaddar and Monah Bou Hatoum. CMHN: Coverage Maximization of Heterogenous Network • Youssef Inedjaren, Besma Zeddini and Mohamed Maachaoui. Securing Intelligent Communications on the Vehicular AdHoc Networks using Fuzzy Logic based Trust OLSR



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

	IEEEEMCA @AICCSA'2019 CROWNE PLAZA Room 2	Chair : Prof. Mohammad Alsmirat <ul style="list-style-type: none"> • Saad Aldoihi and Omar Hammami. Effect of Invisible Exertions on Computed Tomography Radiologists in Saudi Hospitals • Mohammed Tawheed, Wasif Kiyani, Mumtaz Ummar, Tamer Shanableh and Salam Dhou. Motion-Based Gait Recognition for Recognizing People in Traditional Gulf Clothing • Edward Richter, Ryan Raettig, Joshua Mack, Spencer Valancius, Burak Unal and Ali Akoglu. Accelerated Shadow Detection and Removal Method • Faten Kharbat, Tarik Elamsy, Ahmed Mahmoud and Rami Abdullah. Image Feature Detectors for Deepfake Video Detection • Humaira Nisar. Image Segmentation of Bright Field Activated Sludge Microscopic Images Using Gaussian Mixture Model
	Track 7@IEEE AICCSA'2019 CROWNE PLAZA Room 3	Chair : Prof. Nadjia Benblidia <ul style="list-style-type: none"> • Adriel Araújo, Thiago Alves Elias da Silva, Maira Beatriz Hernandez Moran and Aura Conci. Using series of infrared data and SVM for breast normality evaluation • Imen Ben Rejeb, Sonia Ouni and Ezzeddine Zagrouba. Intra and Inter Spatial Color Descriptor for Content Based Image Retrieval • Ahmad Obeid, Abdulrahman Takiddeen and Andrzej Sluzek. ICSAC: Towards Outliers Rejection and Multi-model Identification in Keypoint-based Matching of Partial Near-duplicates
14:00 - 15:30	IEEE DSC @AICCSA'2019 CROWNE PLAZA Room 4	Chair :Dr. Fatma Abdelhedi <ul style="list-style-type: none"> • Majed Bouchahma, Sana Ben Hammouda, Samia Kouki, Mouza Alshemali and Khalid Samara. An automatic dental decay treatment prediction using a deep convolutional neural network on X-Ray images • Muntaha Al-Asa'D, Nour Al-Khdour, Mutaz Bni Younes, Enas Khwaileh, Mahmoud Hammad and Mohammed Al-Smadi. Question to Question Similarity Analysis Using Morphological, Syntactic, Semantic, and Lexical Features • Boulkrinat Nour El Houda, Benblidia Nadjia and Meziane Abdelkrim. Queries-based Profile Evolution using Genetic Algorithm • Amina Benkessirat and Nadjia Benblidia. Fundamentals of feature selection: an overview and comparison
15:30 - 16:00	Coffee Break & Refreshment and Conference Closing	

Posters

Sunday 3-Nov-2019, 16:00-17:30
 Open Session-(Judging for Best Poster)
AL AIN University
 Open Area Second Floor Male Side
Chairs: Dr. Fatma Abdelhedi & Dr. Mohamed Chérif Rahal



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

AICCSA 2019 Keynote Speakers

Prof. Ernesto Damiani: AI pipelines for Cyber Security



Ernesto Damiani is the Senior Director of Artificial Intelligence and Intelligent Systems Institute, Khalifa University, leader of the Big Data area at Etisalat British Telecom Innovation Center, and Full Professor at Università degli Studi di Milano, where he leads the SESAR Lab. He has done extensive research on design and deployment of secure systems and protocols. Ernesto Damiani's work has more than 15,400 citations on Google Scholar and more than 6,100 citations on Scopus, with an h-index of 34. His areas of interest include Artificial Intelligence, Machine Learning, Big Data Analytics, Edge/Cloud security and performance, and cyber-physical systems. Ernesto has been a recipient of the Stephen Yau Award from the Service Society, of the Outstanding contributions Award from IFIP TC2, of the Chester-Sall Award from IEEE IES and of a doctorate honoris causa from INSA – Lyon (France) for his contribution to Big Data teaching and research.

Prof. Azzedine Boukerche: Connected/Autonomous Vehicles: A New Challenge for Smart Transportation and Connected Cities



Prof. Azzedine Boukerche is a Distinguished University Professor and holds a Senior Canada Research Chair position at the University of Ottawa, Canada. He is a Fellow of IEEE, a Fellow of the Canadian Academy of Engineering, a Fellow of the Engineering Institute of Canada, and Fellow of American Association for the Advancement of Science. He is the founding director of the PARADISE Research Laboratory, and DIVA Strategic Research Network@ School of Electrical Engineering and Computer Science (EECS), uOttawa. Prior to this, he held a faculty position at the University of North Texas, and he was a senior scientist at the Simulation Sciences Division, Metron Corp., San Diego. He spent a year at the JPL/NASA-California Institute of Technology, where he contributed to a project centered on specification and verification of the software used to control

interplanetary spacecraft operated by JPL/NASA Laboratory. His current research interests include IoT, Wireless ad hoc and sensor networks, wireless networks, wireless multimedia, performance evaluation and modeling of large-scale distributed systems, distributed computing, and distributed and parallel simulation. He has published several research papers in these areas, and he received about 16 Best research paper awards. He has been serving as an Associate Editor of several journals, ACM Computing Surveys, IEEE Transactions on Distributed Systems, IEEE Transactions on Cloud Computing, IEEE TVT, Elsevier Ad-Hoc Networks, Wiley International Journal of Wireless Communication and Mobile Computing, Wiley Security and Communication Network Journal, Elsevier Pervasive and Mobile Computing Journal, IEEE Wireless Communication Magazine, and Elsevier Journal of Parallel and Distributed Computing. He was the recipient of the Premier of Ontario Research Excellence Award, Ontario Distinguished Researcher Award, Glinski Research Excellence Award, IEEE CS Golden Core Award, IEEE Canada Gotlieb Medal Award, IEEE ComSoc Exceptional Leadership Award, IEEE TCPP Exceptional Technical and Leadership Award. He served as the General Chair for numerous IEEE/ACM sponsored International Conference, He a Steering Committee chair for the IEEE Transactions on Sustainable Computing, and several IEEE.ACM conferences. He has served on the Hiring committee for EIC for ACM TCSUR, and IEEE TSUCS



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

Prof. Abdelkader Hameurlain: New Generation of Cloud DBMSs: Impacts and Challenges



Prof. Abdelkader Hameurlain is full Professor in Computer Science at Paul Sabatier University, Toulouse, France. He is a member of the Institute of Research in Computer Science of Toulouse (IRIT). His current research interests are in query processing and optimization in parallel and large-scale distributed environments, mobile databases, and database performance. Prof. Hameurlain has been the general chair of the International Conference on Database and Expert Systems Applications (DEXA'02, DEXA'2011, DEXA'2017 and DEXA2018). He is co-editors in Chief of the International Journal "Transactions on Large-scale Data and Knowledge Centered Systems" (LNCS, Springer). He was guest editor of three special issues of "International Journal of Computer Systems Science and Engineering on "Mobile Databases", "Data Management in Grid and P2P Systems", and "Elastic Data Management in Cloud Systems".

Prof. Ali Jaoua: Conceptual data science: foundation and applications



Prof. Ali Jaoua, adviser/consultant professor in Computer Science, he obtained the degree of "Docteur es-Science" (PhD) in Computer Science, from the University Paul Sabatier of Toulouse (France), "Doctor Engineer" from Polytechnic Institute of Toulouse, and "Engineer in Computer Science" from ENSEIHT of Toulouse (France). During the last twenty years, he contributed in machine learning and conceptual data science in general (i.e. Automatic Information Extraction from internet, Feature extraction, data reduction, Text Mining, Hidden Data Analysis, Information Retrieval, Knowledge Engineering, Meta-Search Engine development, Alerting System, Natural Language Processing, pattern generation and recognition, Sentiments Analysis, and opinion mining). He coordinated the Master of Science in Computing and PhD programs in Computer Science and Computer Engineering during the last 6 years,. He supervised about 14 PhD thesis mostly on conceptual information engineering, software fault tolerance and

algorithmic in Tunisia, France and the Gulf. He published about 50 International Journal papers, presented about one hundred conferences, and contributed to several books. He organized five international conferences in computer science in Tunisia, and the Gulf. He has been Invited Professor/researcher in Joseph Fournier University, Grenoble(France), University of Sherbrook (Canada), Sophia-Antipolis (I3S) (France). He occupied the position of Associate Professor in computer science in Laval University (Quebec, Canada), 1989-1992, Professor in Computer Science of the University Al-Manar (Tunis) since 1995, up to 2008, and Professor in Qatar University up to 2019. He has been invited speaker for international conferences and universities during the last ten years, program committee member of several known international conferences. He has been agreed several research grants as lead PI, co-Lead PI or co-PI from QNRF for six NPRP research projects. He also got grants from CRSNG and FCAR in Canada, and DGRST and SERST from Tunisia, and participated to several pilot projects in France, Canada, and Tunisia. He is a Member of the Steering Committee of Relational Methods in Computer Science Group, RELMICS, and Editorial member of the associated electronic journal (JORMICS). He has been a member of the editorial board of the international Journal of Information Science, Elsevier publisher, during several years, and regularly evaluating papers for this journal with high impact factor. He is also a regular reviewer of IEEE transaction on Fuzzy Systems. Member of the Editorial Board of NMNC (New Mathematics and Natural Computation (World Scientific)). Starting from January 2009 to 2011, he has been the Editor in Chief of the International Journal of Computer Science and Engineering in Arabic, Philips Publisher for several years. He is also member of ACM society.



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

Dr. Abdelkader Nasreddine Belkacem: Real-time MEG-based Brain-Geminoid Interface



Dr. Belkacem is one of the recipients of the prestigious international award "MIT Technology Review Innovators Under 35 MENA for the year 2018" and brings over 10 years of experience in Brain-Computer-Interface. One of his work was adopted on a cover page of IEEE Trans Neural Syst Rehabil Eng, Vol 26-6, 2018.

Dr. Belkacem got his Ph.D. degree in Information Processing from Tokyo Institute of Technology, Japan, under the supervision of Prof. Yasuharu Koike in 2015. He is currently an Assistant Professor at the United Arab Emirates University, UAE. Prior to joining the UAEU, Dr. Belkacem was a specially appointed researcher at the department of Neurosurgery, Osaka University Medical School, and an assistant Professor at the Endowed Research Department of Clinical

Neuroengineering, Global Center for Medical Engineering and Informatics, Osaka University, in Japan from 2015 to 2019. He has been working with outstanding researchers and experts such as: Prof. Hiroshi Ishiguro and Prof. Masayuki Hirata. Dr. Belkacem is a reviewer in: Science Advances, IEEE Trans Biomed Eng, IEEE Access, PLOS ONE,... Etc. He has contributed to many international Technical Program Committees such as IEEE International Conference on Systems, Man, and Cybernetics SMC2018 (Miyazaki, Japan).



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019, Abu Dhabi, UAE.

AICCSA 2019 Tutorial Speakers

Dr Mutaz M. Al-Debei: Transformational Technology (IoT, AI, & Blockchain)– Industry Use Cases and Demos



Dr. Mutaz M. Al-Debei is currently working as a Territory Sales Manager for Autonomous Data Management & Cloud Technology. Also at Oracle, Al-Debei had a previous role as a Principal Cloud Platform Consultant - Big Data & Business Analytics. Before joining Oracle, Al-Debei was working as the Director of Big Data & Advanced Analytics at INTRASOFT MEA. Moreover and before joining INTRASOFT, Al-Debei was serving as an Associate Professor of Information Systems and Computing at the University of Jordan (UJ), and also as an ICT Chief Consultant at the National Center for Security and Crises Management. He also worked as an IT Manager for Arab Radio & Television (ART) in Jordan Media City and he held other positions in Al-Ahli Bank (Master Card Department) and Royal Scientific Society. Al-Debei earned his PhD from Brunel University London (BUL) in

Information Systems and Computing in May, 2010. Furthermore, Al-Debei has received many international and national significant research awards such as Abdul Hameed Shoman Award for Arab Researchers – ICTs, 2015, the prestigious Vice Chancellor's Prize for Doctoral Research from Brunel University London in 2010, the Distinguished Researcher Award from The University of Jordan - two times in 2012 and 2014, and best paper awards from UKAIS (2008), and another one from IFIP 8.2 (2010). Moreover, Al-Debei is a Certified Information Systems Auditor (CISA) and Certified Information Systems Manager (CISM) from ISACA. Dr. Belkacem is one of the recipients of the prestigious international award "MIT Technology Review Innovators Under 35 MENA for the year 2018" and brings over 10 years of experience in Brain-Computer-Interface. One of his work was adopted on a cover page of IEEE Trans Neural Syst Rehabil Eng, Vol 26-6, 2018.

Prof. Mustafa Jarrar: Arabic Lexical Resources in the Linked-Data Era



A full professor of Computer Science, at Birzeit University in Palestine. Prof. Mustafa Jarrar was a Fulbright visiting professor at the University at Buffalo in the USA (2016-2017), a Marie Curie fellow at the University of Cyprus (2007-2009), and a senior research scientist at Vrije Universiteit Brussel (1999-2007), where he completed his Masters (2000) and PhD (early 2005). He won several prestigious awards like the Shoman Arab Researchers Award in Technology, Mohammed Bin Rashid Award for Arabic Language, Google Faculty Research Award, among others. Prof. Jarrar published +70 articles in the areas of Ontology Engineering, Lexical Semantics, Natural Language Processing, Semantic Web, and Databases. He chaired 23 international workshops, a PC member of +150 journals/conferences, a coordinator/manager of 25 large EU project, a full member of the IFIP2.6 on Database Semantics, the IFIP2.12 on Web Semantics,

and the UN ESCWA Technology Centre Board of Governors, among others. Prof. Jarrar is also the founder of both Sina Institute for Knowledge Engineering and Language Technologies, and the Palestinian eGovernment Academy. He also was voluntarily serving as an advisor at the Palestinian ministry of Telecom & IT for e-government topics, where he developed and chaired the Palestinian e-Government Interoperability Framework (called Zinnar).



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

AICCSA 2019 “Women In Science, Technology, Engineering, and Mathematics” Speakers

Dr. Mona Arishi: Building your Character and Personal Signature



30+ years' experience, in the fields of; Leadership, Management, Globalization, Pre-sales, Software Engineering, Quality Management, Business Processes, Business Controls, Corporate Social Responsibility and Project Management, with a focus on Diversity and Work Life Balance as extra curriculum activities. Mona is currently leading IBM Middle East & Africa Client Centers in 7 countries. The Centers' teams are responsible for creating a memorable immersive and essential Client experience on the IBM innovative solutions, Industries and Imperatives. She is a passionate renowned facilitator of the Humane Centric approach: Design Thinking, she has facilitated 26 Workshops for

IBM Clients in addition to 6 Internal Workshops with flying colors client feedback.

She has held the honorary position of: Women Leadership Council in IBM Egypt 2005 till 2015, supporting 400+ ladies within IBM Egypt, on how to manage their gender related concerns, work life balance, motivation and career progress activities. On another dimension, Mona is the Founder and Director of Heya Hayah, a social enterprise focused on increasing the awareness of Egyptian Women and their capability to play an active role within their zones of influence to lead and manage their lives. Mona has a bachelor's Degree in architectural engineering from Cairo University, an MBA in International Management from ESLSCA (École Supérieure Libre des Sciences Commerciales Appliquées) in the Relationship between Diversity and Creativity, and a Doctor of Business Administration from Ain Shams University in the 'impact of Responsible Leadership on Employee Intention to Leave. She is a mother of two, a 24 years old young man and a 22 years young lady, both in the field of Dentistry.

Prof. Genoveva Vargas-Solar : Data for empowering women in STEAMM (Science, Technology, Engineering, Arts, Mathematics and Medicine)



Genoveva Vargas-Solar (<http://www.vargas-solar.com>) is senior scientist at the French Council of Scientific Research, the CNRS. She develops her research activities at the Laboratory of Informatics of Grenoble, and she is deputy director of the CNRS International Unit LAFMIA, a French Mexican Laboratory of Informatics and Automatic Control, in Mexico. She is regular member of the Mexican Academy of Computing Science. Genoveva Vargas-Solar is an active and illustrated feminist, militant from her early age since her undergraduate studies and she was born implicit feminist. Her education, from her undergraduate until her graduate studies has been transdisciplinary with a double expertise in Computing Science and Compared Literature. Thus, she made up her own scientific profile under the banner of the notion of “CyberLit”, that someone invented for to “define” her. Officially she obtained her first master's degree and.

then PhD in Computing Science from University Joseph Fourier and her second master's degree and PhD in Compared Literature from the University Stendhal, both in France. Previously, she obtained her Computing Systems Engineering diploma from Universidad de las Américas in Mexico with a minor in Latin-American literature. In 2018 she obtained a diploma on Human Trafficking in in the Gender Institute from the National Autonomous University of Mexico



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

Prof. Manar Abu Talib: Women in Research: Architects of Society



Dr. Manar Abu Talib is the Chair of Research Outreach Department at Office for Vice Chancellor for Research & Graduate Studies at the University of Sharjah in the UAE. Dr. Abu Talib's research interest includes software engineering with substantial experience and knowledge in conducting research in software measurement, software quality, software testing, blockchain, IoT, AI, ISO 27001 for Information Security and Open Source Software. Manar is also working on ISO standards for measuring the functional size of software, and has been involved in developing the Arabic version of ISO 19761 (COSMIC-FPP measurement method). She published more than 50 refereed conferences, journals, manuals and technical reports, involved in more than 400 professional activities and sponsored research activities and supervised 30 capstone projects. She received the Best Teacher Award two times, the Exemplary Faculty Award in 2008 and 2010, Google

CS4HS Award in 2014, QCRI ArabWIC and Anita Borg Institute Faculty scholarships in 2015, outstanding University & Community Service Award in 2016, Exemplary Leader Award in WiSTEM 2016 and Exemplary Leader Award in ArabWIC 2019. She was the Counselor of IEEE Student Branch at Zayed University, 2012-2013 and founder and former CEO of Emirates Digital Association for Women (EDAW111). She is the ArabWIC VP of Chapters in Arab Women in Computing Association (ArabWIC), Google Women Tech Maker Lead, an executive member in UAE IEEE Section & Women in Engineering (WIE), the Sharjah Google Developer Group Advisor, the UAE representative for the COSMIC-FPP Education Committee, Co-coordinator of OpenUAE Research & Development Group and the International Collaborator to Software Engineering Research Laboratory in Montreal



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

AICCSA COMMITTEES

Steering Committee

- **Salim Hariri**, University of Arizona, USA (Chair)
- **Elhadj Benkhelifa**, Staffordshire University, UK
- **Yaser Jararweh**, Jordan University of Science and Technology
- **Chirine Ghedira Guegan**, University of Lyon, France
- **Nashaat Mansour**, Lebanese American University, Lebanon
- **Abdella Battou**, NIST, USA
- **Salima Hassas**, University of Lyon, France
- **Athman Bouguettaya**, University of Sydney
- **Nadia Kabachi**, Université Claude Bernard Lyon 1, France
- **Hedi Karray**, INP-ENIT, University of Toulouse, France
- **Sebti Foufou**, NYU, UAE

General Co-Chairs

- **Mahdi Zargayouna**, IFSTTAR, France
- **Albert Zomaya**, University of Sydney, Australia
- **Qutaibah Althebyan**, Ain University, UAE

Program Committee Co-Chairs

- **Sami Yangui**, CNRS-LAAS, Toulouse, France
- **Leonardo Murta**, Universidade Federal Fluminense, Brazil
- **Moayad Aloqaily**, Al Ain University, UAE
- **Faten F. Kharbat**, Al Ain University, UAE

Workshop and Tutorial Chairs

- **Hedi Karray**, INP-ENIT, University of Toulouse, France
- **Mohamad Alsmirat**, Jordan University of Science and Technology
- **Genoveva Vargas Solar**, CNRS, France

Local Organising Committee

- **Moayad Aloqaily**, Al Ain University, UAE
- **Mawahib H. Sulieman**, Al Ain University, UAE
- **Zina Y. Houhamdi**, Al Ain University, UAE
- **Yazeed Y. Ghadi**, Al Ain University, UAE
- **Mohammad Al-Hattab**, Al Ain University, UAE
- **Mohammed Sh. Daoud**, Al Ain University, UAE



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

Publicity Chairs

- **Sandra Sendra**, Universidad de Granada, Spain
- **Mohamad Alsmirat**, Jordan University of Science and Technology
- **Andrzej Zbzezny**, Jan Dlugosz University in Czestochowa, Poland
- **Adriano Fiorese**, Universidade do Estado de Santa Catarina, Brazil
- **Fatih Ugurdag**, Ozyegin University, Istanbul, Turkey
- **Yoonhee Kim**, Sookmyung Women's University, Seoul, Korea

Poster and demo Chairs

- **Fatma Abdelhedi**, CBI2 - Trimane, France
- **Mohamed Chérif Rahal**, VEDECOM, France

Sponsorship Chair

- **Elhadj Benkhelifa**, Staffordshire University, UK
- **Chirine Ghedira Guegan**, University of Lyon, France
- **Hedi Karray**, INP-ENIT, University of Toulouse, France

PhD Symposium Chairs

- **Ali Akoglu**, The University of Arizona, USA

Web Chair

- **Nabil Makarem**, Lebanese American University, Lebanon

Registration, Finance & Publication Chair

- **Cihan Tunc**, University of Arizona, USA
- **Yaser Jararweh**, Jordan University of Science and Technology, Jordan

Women in computer science & STEM chairs

- **Rima Grati**, Zayed University, UAE
- **Chirine Ghedira Guegan**, University of Lyon, France



16th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2019



November 3rd to November 7th, 2019. Abu Dhabi, UAE.

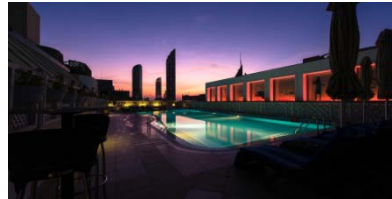
Venue

AICCSA 2019 will take place Abu Dhabi, UAE at the Crowne Plaza in Abu Dhabi's Yas Island (<https://www.yasisland.ae/en/hotels/crowne-plaza-abu-dhabi-yas-island>).

Crowne Plaza Abu Dhabi is one of Abu Dhabi's most iconic properties, having witnessed the city's impressive transformation, growth and development. Its exceptional location in the heart of the capital has allowed the hotel to be a part of Abu Dhabi's community for 20 years. Crowne Plaza Abu Dhabi offers many award-winning restaurants and bars that welcome guests from every corner of the world. With a full palette of worldly cuisines and beverages, Crowne Plaza Abu Dhabi's award winning outlets, offer a unique culinary experience for everyone

The Crowne Plaza in Abu Dhabi's Yas Island is located just minutes away from the airport, the gorgeous sandy beach, a massive water park, and a golf course, and the hotel sits in the middle of all the action.

For more information about Yas Island, please refer to <https://www.yasisland.ae>



PROGRAM AT A GLANCE

	Sunday, November 03, 2019	Monday, November 04, 2019	Tuesday, November 05, 2019	Wednesday, November 06, 2019	Thursday, November 07, 2019	
08:00 - 17:00	Registration @ AL AIN UNIVERSITY	Registration @ CROWNE PLAZA	Registration @ CROWNE PLAZA			
09:00 - 09:30	Opening & Welcome					
09:30 - 10:00						
10:00 - 10:30	Keynote Connected/Autonomous Vehicles AL AIN UNIVERSITY Al Jawhra Theatre	Keynote Conceptual data science CROWNE PLAZA Main Conference Room	Keynote Cloud DBMSs CROWNE PLAZA Main Conference Room	FREE MORNING	Keynote Cyber Security CROWNE PLAZA Main Conference Room	
10:30 - 11:00			Coffee break		Coffee break	
11:00 - 11:30	Coffee break	Coffee break	Track 9@IEEE AICCSA'2019 CROWNE PLAZA Room 1		Track 4@IEEE AICCSA'2019 CROWNE PLAZA Room 1	Track 7@IEEE AICCSA'2019 CROWNE PLAZA Room 3
11:30 - 12:00	Track 1 @IEEE AICCSA'2019 AL AIN UNIVERSITY Room 206	Track 1 @ IEEE AICCSA'2019 CROWNE PLAZA Room 1	Track 5+6+8 @IEEE AICCSA'2019 CROWNE PLAZA Room 3		Track 10 @IEEE AICCSA'2019 CROWNE PLAZA Room 4	IEEE CDD+SCALP @AICCSA'2019 CROWNE PLAZA Room 2
12:00 - 12:30	Tutorial Arabic Lexical Resources AL AIN UNIVERSITY Room 212	PHD FORUM CROWNE PLAZA Room 4	Track 3 @ IEEE AICCSA'2019 CROWNE PLAZA Room 3	IEEE HOPE @AICCSA'2019 CROWNE PLAZA Room 2	IEEE DSC @AICCSA'2019 CROWNE PLAZA Room 4	
12:30 - 13:00	Track 2 @IEEE AICCSA'2019 AL AIN UNIVERSITY Room 213					
13:00 - 13:30	Lunch	Lunch	Lunch		Lunch	
13:30 - 14:00						
14:00 - 14:30	Track 1 @IEEE AICCSA'2019 AL AIN UNIVERSITY Room 206	Keynote Brain-Geminoid Interface CROWNE PLAZA Main Conference Room	Women In Science, Technology, Engineering, and Mathematics Main Conference Room	SOCIAL EVENT Desert SAFARI	Track 4@IEEE AICCSA'2019 CROWNE PLAZA Room 1	
14:30 - 15:00	IEEE BCA@ AICCSA'2019 AL AIN UNIVERSITY Room 212				Track 7@IEEE AICCSA'2019 CROWNE PLAZA Room 3	IEEE MCA @AICCSA'2019 CROWNE PLAZA Room 2
15:00 - 15:30	Tutorial IoT, AI, & Blockchain Room 213					IEEE DSC @AICCSA'2019 CROWNE PLAZA Room 4
15:30 - 16:00	Posters short presentations AL AIN UNIVERSITY				Coffee Break & Refreshment and Conference Closing	
16:00 - 16:30	POSTERS Display Session (Best poster Judging) AL AIN UNIVERSITY Open Area Second Floor	Track 1 @ IEEE AICCSA'2019 CROWNE PLAZA Room 1	PHD FORUM CROWNE PLAZA Room 4	Track 3 @ IEEE AICCSA'2019 CROWNE PLAZA Room 3		
16:30 - 17:00						
17:00 - 17:30						
18:30 - 20:00	Welcome Reception - finger buffet CROWNE PLAZA					
19:30 - 23:00			GALA DINNER CROWNE PLAZA			

