

Conference Program

Tuesday Oct. 8 th 2019			Venue: Princess Sumaya University for Technology
18:30 – 19:00	Welcome address – <i>Conference Chair</i> , Prof. Arafat Awajan		
19:00 – 21:00	Conference Reception		
DAY 1: Wednesday Oct. 9 th 2019			Venue: The St. Regis Hotel
08:30 – 10:00	Registration		
10:00 – 11:00	Opening Ceremony		<i>Location: (Astor Ballroom–B)</i> <i>Master of Ceremony: Dr. Rawan Ghnemat</i>
11:00 – 11:30	Coffee Break		
11:30 – 12:15	Keynote Speech – View Invariant and Few Shot Human Action Recognition <i>Prof. Mubarak Shah, University of Central Florida, USA</i>		<i>Location: (Astor Ballroom–B)</i> <i>Moderator: Dr. Sufyan Almajali</i>
12:15 – 13:30	Session 1: Intelligent Systems I <i>(Astor Ballroom–B)</i>	Session 2: Computer & Network Security I <i>(Carnegie)</i>	Session 3: VCL + JOVITAL <i>(Astor Ballroom–C)</i>
13:30 – 15:00	Lunch		
15:00 – 16:30	Keynotes and Panel Discussion on – New Trends in Cybersecurity and Digital Forensics <i>Moderator: Major Aymen Al-Refai (Family Protection Department, Public Security Directorate)</i> - The Digital Future: Research and Education Challenges in Cybersecurity and Digital Forensics <i>Prof. Giorgio Giacinto, University of Cagliari, Italy</i> <i>Prof. George Dafoulas, Middlesex University, UK</i> - Autonomic Cyber Security (ACS) – The Next Generation of Self Protection Systems and Services <i>Prof. Salim Hariri, The University of Arizona, USA</i> - Leveraging Machine Learning in Cyber Defense <i>Mr. George Merhej, Splunk Systems Engineering Manager, Middle East</i> - Panel Discussion		<i>Location: (Astor Ballroom–B)</i> <i>Dr. Mohammad Ababneh</i>
16:30 – 17:00	Coffee Break		
17:00 – 18:30	Industrial Session <i>Moderator: Mr. Nidal Bitar (CEO, Intaj)</i> - Data Science for Data-Driven Innovations <i>Dr. Mutaz M. Al-Debei, Territory Manager, Autonomous Data Management and Cloud Computing Oracle Systems Ltd.</i> - Customer Power is Shaping the Future of Banking <i>Mr. Rand Hashem, Managing Director, Pio-Tech Solutions</i>		<i>Location: (Astor Ballroom–B)</i> <i>Dr. Ashraf Ahmad</i>
DAY 2: Thursday Oct. 10 th 2019			Venue: The St. Regis Hotel
08:30 – 09:00	Arrival of participants		
09:00 – 10:30	Session 4: Intelligent Systems II <i>(Carnegie)</i>	Session 5: Computer & Network Security II <i>(Vanderbilt–1)</i>	Session 6: Natural Language Processing I <i>(Vanderbilt–2)</i>
10:30 – 11:15	Keynote Speech – Hybrid Swarm Intelligence Algorithms for Optimization Problems <i>Prof. Ku Ruhana Bt Ku M., Universiti Utara Malaysia, Malaysia</i>		<i>Location: (Astor Ballroom–B)</i> <i>Moderator: Prof. Amjad Hudaib</i>
11:15 – 11:45	Coffee Break		
11:45 – 12:30	Keynote Speech – Towards Bio-Inspired Resilient Cloud Environments <i>Prof. Elhadj Benkhelifa, Staffordshire University, UK</i>		<i>Location: (Astor Ballroom–B)</i> <i>Moderator: Dr. Malik Qasaimeh</i>
12:30 – 13:30	Session 7: Internet of Things I <i>(Vanderbilt–1)</i>	Session 8: Intelligent Systems III <i>(Vanderbilt–2)</i>	Session 9: Online Session <i>(PSUT)</i>
	FORC Session: Technical Session on Data Analysis and Visualization <i>Ms. Ariadni Tsiakara, Middlesex University, UK</i>		<i>Location: (Carnegie)</i> <i>Moderator: Dr. Edward Jaser</i>
13:30 – 14:30	Lunch		
14:30 – 15:30	Keynote Speech – Realizing Edge Marketplaces <i>Prof. Omer Rana, Cardiff University, UK</i>		<i>Location: (Astor Ballroom–B)</i> <i>Moderator: Dr. Anas Abu Taleb</i>
15:30 – 16:00	Coffee Break		
16:00 – 19:30	Visit to Dead Sea		
19:30 – 22:00	Conference Gala Dinner		
DAY 3: Friday Oct. 11 th 2019			Venue: The St. Regis Hotel
09:30 – 10:00	Arrival of participants and Morning Coffee		
10:00 – 11:15	Session 10: Natural Language Processing II <i>(Carnegie)</i>	Session 11: Intelligent Systems IV <i>(Vanderbilt–1)</i>	Session 12: Data Science and Big Data I <i>(Vanderbilt–2)</i>
11:15 – 12:15	Keynote Speech – Low Resource Scenarios: Challenges and Opportunities <i>Prof. Mona T. Diab, The George Washington University, USA</i>		<i>Location: (Astor Ballroom–B)</i> <i>Moderator: Prof. Bassam Hammo</i>
12:15 – 14:00	Friday Prayers and Lunch		
14:00 – 15:00	Session 13: Intelligent Systems V <i>(Carnegie)</i>	Session 14: Virtual and Electronic Learning <i>(Vanderbilt–1)</i>	Session 15: Miscellaneous <i>(Vanderbilt–2)</i>
15:00 – 15:30	Coffee Break		
15:30 – 16:30	Keynote Speech – Coexistence Strategies in the Era of Artificial Intelligence and Heterogeneous Technologies: Opportunities and Challenges <i>Prof. Moussa Ayyash, Chicago State University, USA</i>		<i>Location: (Astor Ballroom–B)</i> <i>Moderator: Dr. Mustafa Al-Fayoumi</i>
16:30 – 17:00	Closing Ceremony <i>Prof. Arafat Awajan, Conference Chair</i>		



Session 1: Intelligent Systems I <i>Chair: Prof. Said Ghoul</i> <i>co-Chair: Dr. Ebaa Fayyumi</i> <i>Wednesday 9th October 2019</i> <i>Location: Astor Ballroom-B</i>	A Parallel Face Detection Method Using Genetic & CRO Algorithms on Multi-core Platform <i>Mohammad Khanafsa, Ola Surakhi and Sami Sarhan</i>
	Classification of Short-time Single-lead ECG Recordings Using Deep Residual CNN <i>Areej Kharshid, Haikel S. Alhichri, Ridha Ouni, and Yakoub bazi</i>
	Identification and Tagging of Malicious Vehicles through License Plate Recognition <i>Ahmad Mostafa, Walid Hussein, and Samir El-Seoud</i>
	Cascaded Layered Recurrent Neural Network for Indoor Localization in Wireless Sensor Networks <i>Hamza Turabieh and Alaa Sheta</i>
Session 2: Computer & Network Security I <i>Chair: Prof. Mouhammd Al-Kasassbeh</i> <i>co-Chair: Dr. Nazeeruddin Mohammad</i> <i>Wednesday 9th October 2019</i> <i>Location: Room Carnegie</i>	Optimized Multi-Layer Hierarchical Network Intrusion Detection System with Genetic Algorithms <i>Pranesh Santikellur, Tahreem Haque, Malek Al-Zewairi and Rajat Subhra Chakraborty</i>
	Leader Election and Blockchain Algorithm in Cloud Environment for E-Health <i>Basem Assiri</i>
	Automotive Cybersecurity: Foundations for Next-Generation Vehicles <i>Michele Scalas and Giorgio Giacinto</i>
	NTRU-Like Secure and Effective Congruential Public-Key Cryptosystem Using Big Numbers <i>Anas Ibrahim, Alexander Chefranov and Naqham Hamad</i>
Session 3: VCL + JOVITAL <i>Chair: Dr. Edward Jaser</i> <i>co-Chair: Dr. Wissam Tawileh</i> <i>Wednesday 9th October 2019</i> <i>Location: Astor Ballroom-B</i>	Enhancing International Virtual Collaborative Learning with Social Learning Analytics <i>Alexander Clauss, Florian Lenk and Eric Schoop</i>
	The JOVITAL Project: Capacity Building for Virtual Innovative Teaching and Learning in Jordan <i>Katherine Wimpenny, Arinola Adefila, Alun DeWinter, Valerij Dermol, Nada Trunk Širca, and Aleš Trunk</i>
	The JOVITAL Expert Group Meeting <i>Moderator: Prof. Katherine Wimpenny</i>
Session 4: Intelligent Systems II <i>Chair: Prof. Nadim Obeid</i> <i>co-Chair: Dr. Abul Bashar</i> <i>Thursday 10th October 2019</i> <i>Location: Room Carnegie</i>	A novel medical image fusion algorithm for detail-preserving edge and feature extraction <i>Fayadh Alenezi</i>
	Hybrid Machine Learning Classifiers to Predict Student Performance <i>Hamza Turabieh</i>
	Automated Grading for Handwritten Answer Sheets using Convolutional Neural Networks <i>Eman Shaikh, Iman Mohiuddin, Ayisha Manzoor, Ghazanfar Latif and Nazeeruddin Mohammad</i>
	Wrapper-based Feature Selection for Imbalanced Data using Binary Queuing Search Algorithm <i>Thaer Thaher, Majdi Mafarja, Baker Abdalhaq and Hamouda Chantar</i>
	Resolving Conflict of Interests in Recommending Reviewers for Academic Publications Using Link Prediction Techniques <i>Sa'ad A. Al-Zboon, Saja Khaled Tawalbeh, Heba Al-Jarrah, Muntaha Al-Asa'd, Mahmoud Hammad, and Mohammad AL-Smadi</i>



Session 5: Computer & Network Security II <i>Chair: Dr. Raad Al-Qassas</i> <i>co-Chair: Dr. Mohammad Abu Snober</i> <i>Thursday 10th October 2019</i> <i>Location: Room Vanderbilt-1</i>	Detecting Slow Port Scan Using Fuzzy Rule Interpolation <i>Mohammad Almseidin, Mouhammd Al-Kasassbeh and Szilveszter Kovacs</i>
	An Approach for Web Applications Test Data Generation Based on Analyzing Client-Side User Input Fields <i>Samer Hanna and Hayat Jaber</i>
	Achieving Data Integrity and Confidentiality Using Image Steganography and Hashing Techniques <i>Ahmad Hambouz, Yousef Shaheen, Abdelrahman Manna, Mustafa Al Fayoumi and Sara Tedmori</i>
	Detecting network anomalies using machine learning and SNMP-MIB dataset with IP group <i>Abdelrahman Manna and Mouhammd Alkasassbeh</i>
	Enhancing Data Protection Provided by VPN Connections over Open WiFi Networks <i>Ashraf Karaymeh, Mohammad Ababneh, Malik Qasaimeh and Mustafa Al-Fayoumi</i>
Session 6: Natural Language Processing I <i>Chair: Dr. Khalaf Khatatneh</i> <i>co-Chair: Dr. Nailah Al-Madi</i> <i>Thursday 10th October 2019</i> <i>Location: Room Vanderbilt-2</i>	Using Part of Speech Tagging for Improving Word2vec Model <i>Dima Suleiman and Arafat Awajan</i>
	Sentiment Analysis for Arabic Language using Attention-Based Simple Recurrent Unit <i>Saja Al-Dabet and Sara Tedmori</i>
	Arabic Document Indexing for Improved Text Retrieval <i>Yaser A. M. Al-Lahham</i>
	Evaluation of Question Classification <i>Mariam Biltawi and Sara Tedmori</i>
Session 7: Internet of Things I <i>Chair: Dr. Jaafar Alghazo</i> <i>co-Chair: Dr. Ashraf Tahat</i> <i>Thursday 10th October 2019</i> <i>Location: Room Vanderbilt-1</i>	Reducing Ambulances Arrival Time to Patients <i>Mohammed Eshtayah, Jalal Morrar, Ameer Baghdadi and Amjad Hawash</i>
	A Proactive Design to Detect Denial of Service Attacks Using SNMP-MIB ICMP Variables <i>Yousef Khaled Shaheen and Mohammad Alkasassbeh</i>
	The relation between Individual Student Behaviours in Video Presentation and their Modalities using VARK and PAEI Results <i>Ahmed Fekry, Georgios Dafoulas and Manal Ismail</i>
	Towards an Integration Concept of Smart Cities <i>Naoum Jamous and Stefan Willi Hart</i>
	An overview of Digital Forensics Education <i>Georgios A. Dafoulas and David Nelison</i>
Session 8: Intelligent Systems III <i>Chair: Dr. Sherenaz AL-Haj Baddar</i> <i>co-Chair: Dr. Abdullah Aref</i> <i>Thursday 10th October 2019</i> <i>Location: Room Vanderbilt-2</i>	Heart Disease Detection Using Machine Learning Majority Voting Ensemble Method <i>Rahma Atallah and Amjed Al-Mousa</i>
	Self-Organizing Maps for Agile Requirements Prioritization <i>Amjad Hudaib and Fatima Alhaj</i>
	Reconstructing Colored Strip-Shredded Documents based on the Hungarians Algorithm <i>Fatima Alhaj, Ahmad Sharieh and Azzam Sleit</i>
	Affordable and Portable Realtime Saudi License Plate Recognition using SoC <i>Loay Alzubaidi, Ghazanfar Latif and Jaafar Alghazo</i>



Session 9: Online Session <i>Chair: Prof. Walid Salameh</i> <i>co-Chair: Dr. Firas Alghanim</i> <i>Thursday 10th October 2019</i> <i>Location: PSUT</i>	An Energy Aware Fuzzy Trust based Clustering with group key Management in MANET Multicasting <i>Gomathi Krishnasamy</i>
	Causal Path Planning Graph Based on Semantic Pre-link Computation for Web Service Composition <i>Moses Olaiya and Tranos Zuva</i>
	Would it be Profitable Enough to Re-adapt Algorithmic Thinking for Parallelism Paradigm? <i>Aimad Eddine Debbi, Abdelhak Farhat Hamida and Haddi Bakhti</i>
	Implementation and Comparative Analysis of Semi-automated surveillance algorithms in real time using Fast-NCC <i>Omer Khan, Nayab Saeed, Raheel Muzzammel, Umair Tahir and Omar Azeem</i>
	Graph-Based Arabic Key-phrases Extraction <i>Dana Halabi and Arafat Awajan</i>
Session 10: Natural Language Processing II <i>Chair: Dr. Sara Tedmori</i> <i>co-Chair: Dr. Baker Abdalhaq</i> <i>Friday 11th October 2019</i> <i>Location: Room Carnegie</i>	Arabic Text Keywords Extraction using Word2vec <i>Dima Suleiman and Wael Etaiwi</i>
	Arabic Text Classification of News Articles Using Classical Supervised Classifiers <i>Leen Al Qadi, Hozayfa El Rifai, Safa Obaid and Ashraf Elnaqar</i>
	Applying Ontology in Computational Creativity Approach for Generating a Story <i>Lana Issa and Shaidah Jusoh</i>
	A Deep Learning Approach for Arabic Text Classification <i>Katrina Sundus, Fatima Al-Haj and Bassam Hammo</i>
	Arabic Text Semantic Graph Representation <i>Wael Etaiwi and Arafat Awajan</i>
Session 11: Intelligent Systems IV <i>Chair: Dr. Muder Almiani</i> <i>co-Chair: Dr. Saleh Abu-Soud</i> <i>Friday 11th October 2019</i> <i>Location: Room Vanderbilt-1</i>	Using K-Means Clustering and Data Visualization for Monetizing logistics Data <i>Hamzah Qabbaah, George Sammour and Koen Vanhoof</i>
	Content Based Image Retrieval Approach using Deep Learning <i>Heba Abdel-Nabi and Ghazi Al-Naymat</i>
	Data Analytics and Business Intelligence Framework for Stock Market Trading <i>Batool AlArmouty and Salam Fraihat</i>
	Task Scheduling based on Modified Grey Wolf Optimizer in Cloud Computing Environment <i>Abdullah Alzaqebah, Rizik Al-Sayyed and Raja Masadeh</i>
	Adaptive Control of Nonaffine Nonlinear Systems by Neural State Feedback <i>Mohamed Bahita and Khaled Belarbi</i>
Session 12: Data Science and Big Data I <i>Chair: Dr. Ilyes Jenhani</i> <i>co-Chair: Dr. Salam Fraihat</i> <i>Friday 11th October 2019</i> <i>Location: Room Vanderbilt-2</i>	DeepDR: An image guided diabetic retinopathy detection technique using attention-based deep learning scheme <i>Noman Islam, Umair Saeed, Rubina Naz, Jaweria Tanveer, Kamlesh Kumar, and Aftab Ahmed Shaikh</i>
	Mitigating the Effect of Data Sparsity: A Case Study on Collaborative Filtering Recommender System <i>Bushra Alhijawi, Ghazi Al-Naymat, Nadim Obeid and Arafat Awajan</i>
	Visualizing Program Quality – A Topological Taxonomy of Features <i>Islam Al Omari, Razan Al Omoush, Haneen Innab, and A. Elhassan</i>
	Improved Swarm Intelligence Optimization using Crossover and Mutation for Medical Classification <i>Mais Yasen and Nailah Al-Madi</i>



Session 13: Intelligent Systems V <i>Chair: Dr. Ashraf Ahmad</i> <i>co-Chair: Dr. khaled Mahmoud</i> <i>Friday 11th October 2019</i> <i>Location: Room Carnegie</i>	Learning with Dynamic Architectures for Artificial Neural Networks - Adaptive Batch Size Approach <i>Reham Saeed, Rawan Ghnemat, Ghassen Benbrahim, and Ammar Elhassan</i>
	Accelerating Stochastic Gradient Descent using Adaptive Mini-Batch Size <i>Muayyad Saleh Alsadi, Rawan Ghnemat, and Arafat Awajan</i>
	Framework for Blockchain Deployment: The Case of Educational Systems <i>Saif Kazakzeh, Eyad Ayoubi, Baraa K. Muslmani, Malik Qasaimeh and Mustafa Al-Fayoumi</i>
	Compression Techniques Used in IoT: A Comparative Study <i>Salam Hamdan and Sufyan Almajali</i>
	Framework Architecture for Securing IoT Using Blockchain, Smart Contract and Software Defined Network Technologies <i>Hasan Al-Sakran, Yaser Alharbi and Irina Serguevskia</i>
Session 14: Virtual and Electronic Learning II <i>Chair: Prof. Katherine Wimpenny</i> <i>co-Chair: Dr. Adiy Tweissi</i> <i>Friday 11th October 2019</i> <i>Location: Room Vanderbilt-1</i>	Security issues in Wireless Sensor Network Broadcast Authentication <i>Asad Raza, Ali Abu Romman, and Muhammad Faheem Qureshi</i>
	Deep Learning Assisted Smart Glasses as Educational Aid for Visually Challenged Students <i>Hawra AlSaid, Lina AlKhatib, Aqeela AlOraidh, Shoa AlHaidar, and Abul Bashar</i>
	The importance of institutional support in maintaining academic rigor in e-learning assessment <i>Darin El-Nakla, Beverley McNally and Samir El-Nakla</i>
	Designing and Implementing an e-Course Using Adobe Captivate and Google Classroom: A Case Study <i>Shahd Alia and Thair Hamtini</i>
Session 15: Miscellaneous <i>Chair: Dr. Mohammed Al-Zoube</i> <i>co-Chair: Dr. Khaled Jaber</i> <i>Friday 11th October 2019</i> <i>Location: Room Vanderbilt-2</i>	Novel Approach towards Arabic Question Similarity Detection <i>Mohammad Daoud</i>
	Two Information Systems in Air Transport It is a Short Journey from Success to Failure <i>Victor P. Lane, Derar Eleyan, and James Snaith</i>
	Evaluation of Students' Acceptance of the Leap Motion Hand Gesture Application in Teaching Biochemistry <i>Nazlena Mohamad Ali and Mohd Shukuri Mohamad Ali</i>
	Review: Phishing Detection Approaches <i>Almaha Abu Zuraig and Mouhammd Alkasassbeh</i>