2022 International Conference on **Electrical and Computing Technologies and Applications** (ICECTA 2022)

Ras Al Khaimah, United Arab Emirates 23-25 November 2022



IEEE Catalog Number: CFP22M75-POD ISBN:

978-1-6654-5601-2

Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP22M75-POD

 ISBN (Print-On-Demand):
 978-1-6654-5601-2

 ISBN (Online):
 978-1-6654-5600-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400

Fax: (845) 758-2633

E-mail: curran@proceedings.com Web: www.proceedings.com



2022 International Conference on Electrical and Computing Technologies and Applications (ICECTA)

Renewable Energy

	On Hybrid Health Monitoring of Photovoltaics Amir Baniamerian (Concordia University, Canada), Ali Bostani (American University of Kuwait & Microwavesoft, Canada), Ashraf A Zaher (German International University, Egypt)	1
	Experimental Analysis of a Solar-Powered Atmospheric Water Generator by Refrigerant Method Dani Abdo (Abu Dhabi Polytechnic, Institute of Applied Technology, United Arab Emirates), Fawwaz Alkhatib (Abu Dhabi Polytechnic, United Arab Emirates), Hatsari Mitsudharmadi (Abu Dhabi Polytechnic, United Arab Emirates), Sarah Alblooshi (Abu Dhabi Polytechnic Institute of Applied Technology, United Arab Emirates), Mohamed Abdalla Alnaqbi (Abu Dhabi Polytechnic Institute of Applied Technology, United Arab Emirates), Polytechnic Institute of Applied Technology, United Arab Emirates)	5
	Reliability Investigation of Long Photovoltaic String Generators Under Electrical Fault Scenarios Belgasem Aljafari (Najran University, Saudi Arabia)	9
	Assessment of a Hybrid Renewable Energy System: The Case of Kuwait Michel Nahas (Australian University - Kuwait, Kuwait), Mohamad Farhat (Australian University - Kuwait, Kuwait), Sami Asaad (Australian University - Kuwait, Kuwait), Marc Anthony Mannah (ECAM LaSalle, France)	15
Signal F	Processing - I	
	Design of a Logarithmic Signal Energy Based Voice Activity Detection Algorithm Selma Ozaydin (Cankaya University, Turkey)	19
	A Graphical Speech Analysis Teaching Tool Selma Ozaydin (Cankaya University, Turkey)	23
	Speech Denoising With Maximal Overlap Discrete Wavelet Transform	27
	Study and Analysis on CNTFET Design and Process Parameters for Performance Optimization Muhammad Faris Abdul Hadi (Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia), Hanim Hussin (Universiti Teknologi MARA, Malaysia), Maizan Muhamad (Universiti Teknologi MARA, Malaysia), Yasmin Abdul Wahab (University of Malaya, Malaysia)	31
Student	t Paper Contest -1	
	Martian Ionosphere Electron Density Prediction Using Bagged Trees Abdollah Masoud Darya (University of Sharjah, United Arab Emirates), Noora Alameri (University of Sharjah, United Arab Emirates), Muhammad Shaikh (Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Ilias Fernini (University of Sharjah & Sharjah Center for Astronomy and Space Sciences, United Arab Emirates)	35
	Disturbance-Observer Based Control for PWM Rectifiers Under Unbalanced Grid Conditions Mohammed Al Razehi (United Arab Emirates University, United Arab Emirates), Rachid Errouissi (UAEU, United Arab Emirates), Hussain Shareef (United Arab Emirates University, United Arab Emirates), Mahdi Debouza (United Arab Emirates University, United Arab Emirates)	39
	Feedback Linearizing Speed Control Strategy for Electric Vehicle Traction Motor Drives Prasanthi Achikkulath (UAE University, United Arab Emirates), Hussain Shareef (United Arab Emirates University, United Arab Emirates), Rachid Errouissi (UAEU, United Arab Emirates), Asna Madathodika (UAE University, United Arab Emirates)	
	Vital Signs Detection Using FMCW Radar Aaron Z Tekleab (Khalifa University, United Arab Emirates), Mihai Sanduleanu (Khalifa University of Science and Technology, United Arab Emirates)	

Control Systems

	Flow Control Around the NACA 4415 Airfoil by Steady and Unsteady Actuations of Dielectric Barrier Discharge (DBD) Plasma Actuator	
	Hatsari Mitsudharmadi (Abu Dhabi Polytechnic, United Arab Emirates), Yann Bouremel (University College of London, United Arab Emirates)	55
	Control System Compensator Design Using Root Locus Approach	
	Beza Negash Getu (American University of Ras Al Khaimah, United Arab Emirates)	59
	Design and Implementation of Decentralized Streetlight Dimming System for Different Motion Sensor Strengths and Unlimited Light Poles	
	Hussain Attia (American University of Ras Al Khaimah, United Arab Emirates), Maen Takruri (American University of Ras Al Khaimah, United Arab Emirates), Amjad Omar (American University of Ras Al Khaimah, United Arab Emirates)	63
	Improved Boost Converter by Utilizing Sliding Mode Control; Comparative Study Hussain Attia (American University of Ras Al Khaimah, United Arab Emirates)	68
	Remote Farming: Monitoring Hydroponic Environments Using IoTs Said Elnaffar (Canadian University Dubai, United Arab Emirates), Gandeva Bayu Satrya (Telkom University, Indonesia), Ahmad Amin (Telkom University, Indonesia), Mohammad Andiez Satria Permana (PT. Kreasi Online Indonesia, United Arab Emirates)	72
Student	t Paper Contest -2	
	Low-Cost Energy-Efficient Voice-Activated Home Automation System-Addressing the United Nations Sustainable Development Goals	
	Omran Alblooshi (AURAK, United Arab Emirates), Saeed Alqahtani (AURAK, United Arab Emirates), Hessh Alnuaimi (AURAK, United Arab Emirates), Asma Alzaabi (American University of Ras Al Khaimah, United Arab Emirates), Ali Alnoman (American University of Ras Al Khaimah, United Arab Emirates), Arfan Ghani (AURAK, United Arab Emirates)	76
	Effectuating Communication for the Deaf and Hard-Of-Hearing: An Ethnographic Review	
	Sanchita S. Kamath (Manipal Academy of Higher Education - Dubai Campus, United Arab Emirates), Andrina Martin (Manipal Academy of Higher Education - Dubai Campus, United Arab Emirates), Ramaprasad Poojary (Manipal Academy of Higher Education, Dubai Campus, United Arab Emirates)	80
	Towards Creating Exotic Remote Sensing Datasets Using Image Generating AI Mohamed Abduljawad (UAE University, United Arab Emirates), Abdullah Alsalmani (National Space Science and Technology Center (NSSTC), United Arab Emirates University (UAEU), United Arab Emirates)	84
	Abnormal Phase Scintillation Observed From GLONASS Signals Abdollah Masoud Darya (University of Sharjah, United Arab Emirates), Muhammad Shaikh (Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Ilias Fernini (University of Sharjah & Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah & Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah & Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah & Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences, United Arab Emirates), Hamid AL Naimiy (University of Sharjah Center for Astronomy and Space Sciences)	
	Sharjah, United Arab Emirates) Design of Robust Feedback Control Together With Anti-Windup Compensator in Natural Frame for Three-Phase Grid-Tied	89
	Inverters With LCL Filter Mahdi Debouza (United Arab Emirates University, United Arab Emirates), Rachid Errouissi (UAEU, United Arab Emirates), Hussain Shareef (United Arab Emirates University, United Arab Emirates), Mohammed Al Razehi (United Arab Emirates University, United Arab Emirates)	93
Student	t Paper Contest -3	
	Studying the Effect of Face Masks in Identifying Speakers Using LSTM Mohammed Bader Alsabek (SHARJAH, United Arab Emirates), Ismaill M. Shahin (University of Sharjah, United Arab Emirates)	99
	Controller Design and Analysis for Octorotor UAVs	
	Mohamad Alansari (Khalifa University, United Arab Emirates), Ahmed Abughali (Khalifa University, United Arab Emirates), Khalid Alhammadi (Khalifa University of Science and Technology, United Arab Emirates)	103
	Web Platform for General Robot Controlling System	. 50
		109
		.00
	Design and Analysis of a Linear Controller for Parrot AR Drone 2.0 Ahmed Abughali (Khalifa University, United Arab Emirates), Obadah Habash (Khalifa University, United Arab Emirates), Mohamad Alansari (Khalifa	
	University, United Arab Emirates), Khalid Alhammadi (Khalifa University of Science and Technology, United Arab Emirates)	113

Student Paper Contest -4

	Mohammed Bader Alsabek (SHARJAH, United Arab Emirates), Ismaill M. Shahin (University of Sharjah, United Arab Emirates)	118
	Different Techniques and Algorithms to Combat the Issue of Money Laundering in Bitcoin Mariam Ali Alnaqbi (Abu Dhabi Polytechnic, United Arab Emirates), Mariam Mohamed Al-Ali (Abu Dhabi Polytechnic, United Arab Emirates), Maryam Yaqoub Al Ali (Abu Dhabi Polytechnic, United Arab Emirates), Deepa Pavithran (Abu Dhabi Polytechnic, United Arab Emirates)	122
Signal F	Processing II	
	Deep Learning Based Pathological Voice Detection Algorithm Using Speech and Electroglottographic (EGG) Signals Rumana Islam (University of Windsor, Canada), Esam Abdel-Raheem (University of Windsor, Canada), Mohammed Tarique (University of Science and Technology of Fujairah & USTF, United Arab Emirates)	127
	Voiced Features and Artificial Neural Network to Diagnose Parkinson's Disease Patients Rumana Islam (University of Windsor, Canada), Esam Abdel-Raheem (University of Windsor, Canada), Mohammed Tarique (University of Science and Technology of Fujairah & USTF, United Arab Emirates)	132
	Prioritize the Right Renovation Measures in Cooling-Dominated Environments Mohamad Kharseh (American University of Ras Al Khaimah, United Arab Emirates), Kadhim Al amara (American University of Ras Al Khaimah, United Arab Emirates), Fayez Moutassem (American University of Ras Al Khaimah, United Arab Emirates), Wlla Mhairat (American University of Ras Al Khaimah, United Arab Emirates), Ahmad Sakhrieh (American University of Ras Al Khaimah, United Arab Emirates)	137
Student	Paper Contest -5	
	Machine Learning Models for Salary Prediction Dataset Using Python Reham Kablaoui (Kuwait University, Kuwait), Ayed A. Salman (Kuwait University, Kuwait)	143
	Analysis on the Performance of CNTFET Devices Based on the Impact of CNT Diameter Variation Muhammad Faris Abdul Hadi (Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia), Hanim Hussin (Universiti Teknologi MARA, Malaysia), Maizan Muhamad (Universiti Teknologi MARA, Malaysia), Nurul Ezaila Alias (Universiti Teknologi Malaysia)	148
	Optimize Oil Field Electrification to Minimize Power Consumption Prashveen Prasad (American University of Ras Al Khaimah, United Arab Emirates), Saad Balhasan (American University of Ras Al Khaimah, United Arab Emirates)	152
	Spam Detection Techniques Recapped Sidharth Kishore (American University of Ras Al Khaimah, United Arab Emirates), Mohammed Awad (American University of Ras Al Khaimah, United Arab Emirates), Ahmed Al-Zubidy (Independent Researcher, USA)	157
	A Cohesive Machine Learning-Based Model for Energy Consumption Prediction in Smart Homes Muhammad Fayaz (University of Central Asia, Kyrgyzstan), Sarvinoz Toshpulotova (University of Central Asia, Kyrgyzstan)	163
Student	: Paper Contest -6	
	Vehicle's Big Brother: IoT-Based Monitoring System for In-Car Safety Gandeva Bayu Satrya (Telkom University, Indonesia), Said Elnaffar (Canadian University Dubai, United Arab Emirates), Tamer Mohamed Abdellatif (Canadian University Dubai, United Arab Emirates), Yulio Ferdinand (Universitas Telkom, Indonesia), N. C. Putri Alamsyah (Canadian University Dubai, United Arab Emirates)	168
	Thermal Analysis and Comparison of Common-Ground Voltage Source Inverter Sarada Phani Kiranmai Kondamudi (United Arab Emirates University, United Arab Emirates), Roopa Viswadev Damodaran (United Arab Emirates University, United Arab Emirates), Mariam Mahmoud Mastafa Alshanqiti (United Arab Emirates University, United Arab Emirates), Lin Tayara (United Arab Emirates) University, United Arab Emirates), Shahad Mohamed Obaid Alsereidi (United Arab Emirates University, United Arab Emirates), Alyazia Juma Ateeq Aldhaheri (United Arab Emirates University, United Arab Emirates), Hussain Shareef (United Arab Emirates University, United Arab Emirates)	172

	On the Design of GaN Low Noise Amplifier for 5G Applications Omar Abbas (University of Sharjah, United Arab Emirates), Anwar Hasan Jarndal (United Arab Emirates & University of Sharjah, United Arab Emirates)	178
	All-Metal Ka-Band Waveguide Reflectarray Antenna for Space Applications Khamis H Ali (Khalifa University, United Arab Emirates), Ademola Akeem Mustapha (Khalifa University of Science and Technology, United Arab Emirates), Mohamed A Abou-Khousa (Khalifa University of Science and Technology, United Arab Emirates)	182
	Optimal Control of a Supercapacitor Energy Storage System for Smoothing Wave Output Power Abdin Elamin (United Arab Emirates University, United Arab Emirates), Addy Wahyudie (UAE University, United Arab Emirates)	186
	Intelligent Active Disturbance Rejection Control for Quadrotor System Abdul Rahman Abdul Majid (University of Sharjah, United Arab Emirates), Raouf Fareh (University of Sharjah Electrical Engineering, United Arab Emirates), Maamar Bettayeb (University of Sharjah, United Arab Emirates)	190
Student	t Paper Contest -7	
	A Case Study on the Information Security System of AI Wahda Bank Almountassir Bellah Balhasan (American University of Ras Al Khaimah, United Arab Emirates), Ibrahim A.M. Alkasih (Al Wahda Bank, Libya), Wagdi Saad Sallabi (Al Wahda Bank, Libya), Moftah B.M. Bokhatwa (Al Wahda Bank, Libya), Adrees Saeid Bilhasan (Al Wahda Bank, Libya), Salem Ali Alhuni (Al Wahda Bank, Libya)	196
	Analytical Study of the Application of the Amorphous Core Material 2605HB1M to Reduce in Electromagnetic Core Losses in Induction Motors Mervat Madi (Higher Colleges of Technology (HCT), Lebanon), Rayan Ajeeb (Lebanese University, Lebanon), Olavaa Aaker (Østfold University College,	
	Norway), Efstatios Ntantis (Amity University, Dubai, UAE, United Arab Emirates), Mahmood Rahi (HCT, United Arab Emirates) **Split Ring Resonator Sensor Design for Real-Time Breathing Monitoring Ziad Ahmed Mostafa Sefelnasr (UAEU, United Arab Emirates), Mousa Hussein (UAE University, United Arab Emirates), Mebruk Kedir (UAEU, United Arab Emirates), Muhammed Shafeeque Kallumottakkal (UAEU, United Arab Emirates)	201
	Remote Heart Rate Monitoring Using K-Band Doppler Radar Ebtisam Alyammahi (Khalifa University, United Arab Emirates), Mohamed A Abou-Khousa (Khalifa University of Science and Technology, United Arab Emirates), Baker Mohammad (Khalifa University, United Arab Emirates), Khaled Al-Wahedi (Khalifa University of Science and Technology, United Arab Emirates), Alya Alameeri (Khalifa University, United Arab Emirates), Mariam Alhosani (Khalifa University, United Arab Emirates), Dhoha Alzahmi (Khalifa University, United Arab Emirates), Reem Almeqbaly (Khalifa University, United Arab Emirates), Mithaa Alhanaee (Khalifa University, United Arab Emirates)	211
	Mental Stress Analysis Using the Power Spectrum of fNIRS Signals Rateb Katmah (Khalifa University, United Arab Emirates), Fares Al-Shargie (American University of Sharjah, United Arab Emirates), Usman Tariq (AUS, United Arab Emirates), Fabio Babiloni (University of Rome Sapienza, Italy), Fadwa Al Mughairbi (United Arab Emirates University, United Arab Emirates), Hasan Al-Nashash (American University of Sharjah, United Arab Emirates)	216
	Home and Irrigation Automation System Mervat Madi (Higher Colleges of Technology (HCT), Lebanon), Hadi Hasan (American University of Beirut, Lebanon), Mahmood Rahi (HCT, United Arab Emirates)	220
RF & W	/ireless Sensors	
	RF LNA With Simultaneous Noise-Cancellation and Distortion-Cancellation for Wireless RF Systems Ziad Elkhatib (Canadian University Dubai, United Arab Emirates), Sherif Moussa (Canadian University of Dubai, United Arab Emirates), Ahmed Mohammed Nabil Al-Gindy (Canadian University Dubai, United Arab Emirates), Adel Ben Mnaouer (Canadian University Dubai & Faculty of Engineering, Applied Science and Technology, United Arab Emirates), Firuz Kamalov (Canadian University Dubai, United Arab Emirates)	226
	Energy Optimization Protocol in Wireless Sensor Networks Based on LEACH and Gateway Deployment Mohammed Kaddi (LDDI Laboratory, University of Adrar, Algeria), Mohammed Omari (American University of Ras Al Khaimah, United Arab Emirates), Hamza Zaanane (LDDI Laboratory University Ahmed Draia of Adrar, Algeria), Belquessme Dihaj (LDDI Laboratory University Ahmed Draia of Adrar, United Arab Emirates), Moamen Adel Abdelfattah Alnatoor (LDDI Laboratory University Ahmed Draia of Adrar, Algeria)	230
	Using Orientation Sensors as a New Secure Lock Screen System for Smartphones	235
	Design of an Edge-Coded Signaling Transceiver With Minimal Inter-Symbol Separation Mizan Abraha Gebremicheal (Khalifa University, United Arab Emirates), Shahzad Muzaffar (Philips, The Netherlands), Ibrahim (Abe) M. Elfadel (Khalifa	

Microwave & Radar

	Online Microwave Assisted Coalescence of Binary Water Drops in Crude Oil Idowu Adeyemi (Khalifa University, United Arab Emirates), Mahmoud Meribout (Khalifa University, United Arab Emirates), Lyes Khezzar (Khalifa University, United Arab Emirates), Khalid Alhammadi (Khalifa University of Science and Technology, United Arab Emirates)	249
	Sudoku Binary Codes and Signaling Schemes for the Applications of Radar and Wireless Communications	
	Malek G.M. Hussain (Kuwait University, Kuwait), Ram M Narayanan (Pennsylvania State University, USA)	253
	Influence of Constant Wave and Pulsatile Electric Field on Water Droplets Coalescence in Crude Oil Emulsions Idowu Adeyemi (Khalifa University, United Arab Emirates), Mahmoud Meribout (Khalifa University, United Arab Emirates), Lyes Khezzar (Khalifa University, United Arab Emirates), Khalid Alhammadi (Khalifa University of Science and Technology, United Arab Emirates)	257
	Design and Analysis of Ultra-Wideband Koch Fractal Microstrip Patch Antenna Amjad Omar (American University of Ras Al Khaimah, United Arab Emirates), Amal Alnuaimi (American University of Ras Al Khaimah, United Arab Emirates), Mouza Bin Thaleth (American University of Ras Al Khaimah, United Arab Emirates), Mouza Bin Thaleth (American University of Ras Al Khaimah, United Arab Emirates), Ali Alnuaimi (American University of Ras Al Khaimah, United Arab Emirates), Mousa Hussein (UAE University, United Arab Emirates)	261
Applica	tions of Al and Informatics-I Centroid-Based Clustering Using Sentential Embedding Similarity Measure Kholed Abdeleader (American University of Pas Al Kholenah United Arch Emirates)	205
	Khaled Abdalgader (American University of Ras Al Khaimah, United Arab Emirates)	265
	Optimal Resource Allocation for Containerized Cloud Microservices Lamees M. Al Qassem (Khalifa University, United Arab Emirates), Thanos Stouraitis (Khalifa University, United Arab Emirates & University of Patras, Greece), Ernesto Damiani (Khalida University - EBTIC, United Arab Emirates), Ibrahim (Abe) M. Elfadel (Khalifa University & Center of Cyber Physical Systems, United Arab Emirates)	271
	Hardware/Software Co-Acceleration of Progressive Learning Under Feature Dimension Variation Rupesh Karn (Khalifa University, United Arab Emirates), Ibrahim (Abe) M. Elfadel (Khalifa University & Center of Cyber Physical Systems, United Arab Emirates)	275
Student	E Paper Contest -8 Classification of Network Slicing Requests Using Support Vector Machine Omar Abdul Latif (Rochester Institute of Technology, USA), Muhieddin Amer (Rochester Institute of Technology, United Arab Emirates), Andres Kwasinski (Rochester Institute of Technology, USA)	279
	Hypergraph Theory for Network Slicing Omar Abdul Latif (Rochester Institute of Technology, USA), Muhieddin Amer (Rochester Institute of Technology, United Arab Emirates), Andres Kwasinski (Rochester Institute of Technology, USA)	283
Applica	tions of AI and Informatics-II	
	Predicting Market Behavior With Artificial Neural Networks: Gold Price as an Example	
	Mohamad Kharseh (American University of Ras Al Khaimah, United Arab Emirates), Basem Yousef (American University of Ras Al Khaimah, United Arab	

Ali Alnoman (American University of Ras Al Khaimah, United Arab Emirates)

UAV-To-UAV Communication Scheme for Enabling Emergency Services During Network Failure

	Social Media Trends Analysis Using the BiLSTM With Multi-Head Attention Modafar Ati (College of Engineering & Abu Dhabi University, United Arab Emirates)	295
	Precision Agriculture for Medicinal Plants: A Conjunction of Technologies Abhirup Khanna (University of Petroleum and Energy Studies, India), Sapna Jain (University of Petroleum and Energy Studies, India), Piyush Maheshwari (British University in Dubai, United Arab Emirates)	300
loT Sed	curity Challenges-I	
	How Do Default Privacy Settings on Social Media Apps Match People's Actual Preferences? Alper Alan (American University of the Middle East, Kuwait), Zakwan Al-Arnaout (American University of the Middle East & Victoria University of Wellington, Kuwait), Ahmet E Topcu (American University of the Middle East, Kuwait), Chamseddine Zaki (American University of the Middle East, Kuwait), Ahmed Shdefat (American University of the Middle East, Kuwait), Ersin Elbasi (American University of the Middle East, Kuwait)	305
	6G Decentralization Steven Wright (Georgia State University, USA)	309
	Phishing for Legitimacy: The Use of SSL Certificates to Ensnare Internet Users Mohammed Awad (American University of Ras Al Khaimah, United Arab Emirates), Aisha El Allam (American University of Ras al Khaimah, United Arab Emirates), Khouloud Salameh (American University of Ras Al Khaimah & University of Basques, United Arab Emirates), Reem Almazrouei (American University of Ras Al Khaimah, United Arab Emirates)	313
	Design a Fully Automated Safety and Security System for Swimming Pools Shatha Marwan Naji (ALTIBBI, Jordan), Aya Almousily (Xina Al, Jordan), Adham Alsharkawi (University of Jordan, Jordan)	318
101 000	Application of CNNs in Home Security Ramaprasad Poojary (Manipal Academy of Higher Education, Dubai Campus, United Arab Emirates), Roma Raina (Manipal University Dubai, United Arab Emirates), Sachidananda Hassan Krishanmurthy (Manipal University, United Arab Emirates) Crypto-Ransomware Detection Using Selective Hashing Anas AlMajali (The Hashemite University, Jordan), Ahmad Qaffaf (The Hashemite University, Jordan), Natali Alkayid (The Hashemite University, Jordan), Yatin Wadhawan (University of Southern California, USA)	322
	Portable Coordinate Measuring Machine Basem Yousef (American University of Ras Al Khaimah, United Arab Emirates), Mohamad Kharseh (American University of Ras Al Khaimah, United Arab Emirates), Khaled M Aribe (Abu Dhabi University, United Arab Emirates)	328
Control	Systems- II	
	AN LSTM Model-Based Prediction of Chaotic System: Analyzing the Impact of Training Dataset Precision on the Performance Wafaa Al Nassan (University of Sharjah, United Arab Emirates), Talal Bonny (University of Sharjah, United Arab Emirates), Khaled Obaideen (University of Sharjah, United Arab Emirates), Abd Alrhman Hammal (University of Sharjah, United Arab Emirates) Moss-Based Biotechnological Air Purification Control System Sanzhar Kusdavletov (Astana IT University, Kazakhstan), Abdulla Sapargali (Astana IT University, Kazakhstan), Didar Yedilkhan (Astana IT University, Kazakhstan), Altynbek Yermekov (Astana IT University, Kazakhstan) A Customized Convolutional Neural Network for Dental Bitewing Images Segmentation Wafaa Al Nassan (University of Sharjah, United Arab Emirates), Talal Bonny (University of Sharjah, United Arab Emirates), Khaled Obaideen (University of	337 343
	Sharjah, United Arab Emirates), Abd Alrhman Hammal (University of Sharjah, United Arab Emirates)	347

Energy-I

	A Comparison of PV Module Brands and Types in the UAE Work Environment	
	Mohamad Kharseh (American University of Ras Al Khaimah, United Arab Emirates), Mohammed A Alturikhm (American University of Ras Al Khaimah, United	
	Arab Emirates), Easa Aldhuhoori (American University of Ras Al Khaimah, United Arab Emirates), Ahmed Wasseel Alabbas (American University of Ras Al Khaimah, United Arab Emirates), Mahmoud Bostaniaid (American University of Ras Al Khaimah, United Arab Emirates)	352
	Effects of Matching Short Current Density for Dual Junction Lead Salts TPV Devices at 1400 °C	
	Majed Khodr (American University of Ras Al Khaimah, United Arab Emirates), Patrick McCann (Oklahoma University, USA)	357
	The Positive Impact of Lockdown on University Electricity and Water Consumption Maissa Farhat (American University of Ras Al Khaimah, United Arab Emirates), Sarfaraz Ali (American University of Ras Al Khaimah, United Arab Emirates)	260
	Maissa i amat (American Ginversity of Nas Art Maiman, Gineed Arab Eminates), Garanaz An (American Ginversity of Nas Art Maiman, Gineed Arab Eminates)	360
Energy	-	
	An Ensemble Learning to Predict Glucose Level of Patient by Urine Sample	
	Modafar Ati (College of Engineering & Abu Dhabi University, United Arab Emirates), Muhammad Ikram Ali (University of Engineering and Technology, Pakistan)	366
	On the Design of Broadband Doherty Power Amplifier for 5G Applications Anwar Hasan Jarndal (United Arab Emirates & University of Sharjah, United Arab Emirates), Husna Hamza (University of Sharjah, United Arab Emirates)	370
	The Impact of Personal Lifestyle and Personal Innovativeness on Insta Shopping Purchase Intention Mousa Al-kfairy (Zayed University, United Arab Emirates), Ahmed Haitham Shuhaiber (Zayed University, United Arab Emirates), Mewael Alema Hailu (Zayed	
	University, United Arab Emirates)	374
Miscella	aneous	
IVIIOCCIIC		
	A Wideband Electromagnetic Energy Harvester Design for Internet of Things (IoT) Applications	
	Haitham Al-Ajmi (Sultan Qaboos University, Oman), Mohammed Bait-Suwailam (Sultan Qaboos University, Oman)	378
	Research on the Auditory Characteristics of Humanoid Robots to Assist the Older Population With Cognitive Impairments	
	Zhao Zou (Western Sydney University, Australia), Omar Mubin (Western Sydney University, Australia), Fady Alnajjar (UAE University, United Arab Emirates), Abdullah Al Mahmud (Swineburne University of Technology, Australia), Aila Khan (Western Sydney University, Australia), Michael Lwin (Western Sydney	
	University, Australia)	382
	Advanced Regenerative Braking System Design and Prototype for an Electric Bicycle	
	Haseeb Naveed (Western Sydney University, Australia), Mahmood Nagrial (Western Sydney University, Australia), Ali Hellany (Western Sydney University, Australia), Jamal Rizk (Western Sydney University, Australia)	387
		001
	Machine Learning Classification Algorithms for Sentiment Analysis in Arabic: Performance Evaluation and Comparison Ruba Kharsa (University of Sharjah, United Arab Emirates), Saad Harous (University of Sharjah, United Arab Emirates)	395
	Machine Learning Algorithms for Early Prediction of Diabetes: A Mini-Review	
	Rouaa Alzoubi (University of Sharjah, United Arab Emirates), Saad Harous (University of Sharjah, United Arab Emirates)	401
	Surface Area Optimization of a Domestic Solar Still Design Wajid Ali Khan (Bahrain Polytechnic, Bahrain)	406
	Subject Authentication Using Textural Features of Recurrence Plot	
	Turky Al Otaiby (King ABDULAZIZ CITY for Science and Technology, Saudi Arabia), Saleh A Alshebeili (King Saud University, Saudi Arabia), Gaseb Alotaibi	444
	(University of Tabuk, Saudi Arabia)	411
	Cursor Control Using Electroencephalogram (EEG) Technology	
	Maitha Alhammadi (University of Sharjah, United Arab Emirates), Baraah Othman (University of Sharjah, United Arab Emirates), Sara Rashid Bani Rasheed (University of Sharjah, United Arab Emirates), Talal Bonny (University of Sharjah, United Arab Emirates), Wafaa Al Nassan (University of Sharjah, United Arab	
	Emirates), Khaled Obaideen (University of Sharjah, United Arab Emirates)	415
	Experimental Investigations for Performance Improvement of Solar Cell Using Phase Change Material	
	Iftikhar Ahmad (Bahrain Polytechnic, Bahrain), Abdulla Bushlaibi (Bahrain Polytechnic, Bahrain), Ahmed Abdelrhman (Bahrain Polytechnic, Bahrain), Syed Imam (Bahrain Polytechnic, Bahrain), Mahmood Hammad (Bahrain Polytechnic, Bahrain), Riaz Muhammad (University of Bahrain, Bahrain)	420

Speed Control of Induction Motors Using V/f Control Method Anil Liyanage (Western Sydney University, Australia), Jamal Rizk (Western Sydney University, Australia), Mahmood Nagrial (Western Sydney University, Australia), Ali Hellany (Western Sydney University, Australia)	424
Improvement of the Energy Consumption of the IoT/M2M Communication System Embedded in Pirogues on the West African Coast	
Ismaila Diakhate (UCAD/Ecole Supérieure Multinationale des Télécommunications, Senegal), Boudal Niang (Multinational High School of Telecommunications (ESMT), Senegal)	430