



# The International Telecommunication Conference ( ITC-EGYPT' 2023 ) 18-20 July // ADC, Alexandria, Egypt.



Wednesday, July 19

Wednesday, July 19 9:00 - 10:30

ASP 1: Antenna Systems, Propagation, Microwaves, RF Design and High Power EM

Room 1

***A Compact Petal Shaped Two-Port MIMO Antenna with Quad-Band for Millimeter Wave 5G Applications***

Parveez Shariff (Manipal Academy of Higher Education, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); Pallavi R Mane (Manipal Institute of Technology & Manipal University, India); Pradeep Kumar (University of Kwazulu-Natal, South Africa); Praveen Kumar (Manipal Institute of Technology & Manipal Academy of Higher Education Manipal India, India)

***Characteristic Mode Analysis Based Flower Shape High Gain THz Antenna for Imaging and Defense Applications***

Praveen Kumar (Manipal Institute of Technology & Manipal Academy of Higher Education Manipal India, India); Atharv Parag Dongare (Manipal Institute of Technology Manipal, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); Sameena Pathan (Manipal Institute of Technology Manipal, India); Parveez Shariff (Manipal Academy of Higher Education, India); Om Prakash Kumar (Manipal Institute of Technology, Manipal Academy of Higher Education, India)

***A Sequence of Circular Slotted Nonagon Shape Extended Ultrawideband Antenna for Smart Electronic Systems Using Characteristic Mode Analysis***

Subhash B k (REVA University, India); Praveen Kumar (Manipal Institute of Technology & Manipal Academy of Higher Education Manipal India, India); Sameena Pathan (Manipal Institute of Technology Manipal, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); Rajashekhar Biradar (Reva University, India)

***Gain Enhancement of a Miniaturized Broadband Patch Antenna Using a Metamaterial Superstrate for Surveillance Applications in Aircraft***

M Pallavi (Manipal Institute of Technology, India); Pramod Kumar (Manipal Institute of Technology & Manipal University, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); B Satish Shenoy (MAHE, India)

***Characteristics Mode Analysis Based Dual-Port Sub-6 GHz Flexible Antenna for Surveillance Applications***

Deepthi Mariam John (Manipal Institute of Technology, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); Shweta Vincent (Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, Karnataka, India); Sameena Pathan (Manipal Institute of Technology Manipal, India); Praveen Kumar (Manipal Institute of Technology & Manipal Academy of Higher Education Manipal India, India); Parveez Shariff (Manipal Academy of Higher Education, India)

***A Conformal Wideband Antenna for Wearable Applications at Sub-6 GHz: Characteristic Mode Analysis***

Deepthi Mariam John (Manipal Institute of Technology, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); Shweta Vincent (Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, Karnataka, India); Sameena Pathan (Manipal Institute of Technology Manipal, India); Praveen Kumar (Manipal Institute of Technology & Manipal Academy of Higher Education Manipal India, India)

### ***A Thermostable Frequency Selective Surface with Both a Low-Pass and a Wide Shielding Band***

Lei Tang, Jiahui Huang and Yi Wang (Nanjing University of Aeronautics and Astronautics, China); Yanan Liu (Jinling Institute of Technology, China); Qunsheng Cao (Nanjing University of Aeronautics and Astronautics, China)

## **ASP 2: Antenna Systems, Propagation, Microwaves, RF Design and High Power EM**

### **Room 2**

#### ***Enhancing the Performance of Thin Film Photovoltaic Solar Cells Using Truncated Conical Nanoparticles***

Mohamed Magdy Gad (Nile University Nanoelectronics Integrated Systems Center, Egypt); Mai Sallam (Nile University, Egypt); Ezzeldin Soliman (The American University in Cairo, Egypt); Yasser M. El Batawy (Nile University, Egypt)

#### ***Effect of Magnetite Powder Implementation on Electromagnetic Shielding Characteristics of Electromagnetic Shelters***

Mohamed Wagih Atwa (Military Technical College, Egypt); Ismail Mohamed Kamal, Ahmed Esmat Soltan and Mohamed Ali El-Sayed Mahmoud Ali (Military Technical College, Egypt)

#### ***Investigation of Triple Frequency Bands Using Nano-Graphene Patch Enclosed with Copper Frame Antenna Based on (SPPs) for J-Band Applications***

Ahmed Fathy Miligy (ADC, Egypt); Assem H. Elfeky (Alexandria, Egypt); Ahmed Khairy and Shady Hossny Elgohary (Air Defense College, Egypt)

#### ***Analysis and Implementation of Single Feed Dual-Band Compact Slotted Antenna at 28/38 GHz for 5G Applications***

Ahmed Fathy Miligy (ADC, Egypt); Assem H. Elfeky (Alexandria, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Osama Dardeer (Electronics Research Institute, Egypt)

#### ***Super-Wide Band Antenna on Three-Layer Substrate for Microwave and Millimeter-Wave Applications***

Asmaa E. Farahat, Eman Gamal Ouf and Khalid F. A. Hussein (Electronics Research Institute, Egypt); Shaimaa Ali Mohassieb (Akhbar Elyom Academy, Egypt)

#### ***Low-Profile Monopole Antenna Design with Dual Notch Bands and Ultra-Wide Impedance Bandwidth***

Mahmoud Fathi Ghareeb (The Egyptian Technical Research and Development Centre, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Raed A Abd-Alhameed (University of Bradford, United Kingdom (Great Britain)); Mohammad Alibakhshikenari (Universidad Carlos III de Madrid, Spain)

#### ***Metasurface-Inspired UWB Antenna Design for Wireless Power Transfer Systems***

Shady Hossny Elgohary (Air Defense College, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Haleh Jahanbakhsh Basherlou (Edinburgh Napier University, United Kingdom (Great Britain))

## **CMA 1: Communication Software, Machine Learning and AI for Communications**

### **Room 3**

#### ***Using Deep Learning to Translate Algerian Sign Language to Spoken and Written Words***

Abderrazak Benarous (Amar Telidji University, Algeria); Leila Benarous (University of Amar Telidji, Laghouat, Algeria); Salim Bitam (University of Biskra & LESIA Laboratory, Algeria); Abdelhamid Mellouk (UPEC, University Paris-Est Creteil Val de Marne, France)

#### ***Leveraging Deep Learning and IoT Big Data Analytics for the Determination of Development Priorities Utilizing GeoAI in the National Project for the Development of the Egyptian Rural Villages***

Eman Taha Nassar (Ministry Of Housing & Housing, Egypt); Hassan Elgazouly and Ali Elnaggar (Professor of Geomatics, Egypt); Samy Ayyad (Associate Professor of Geomatics, Egypt)

#### ***An Optimized Radar Sensors Schedule Using Genetic Algorithms***

Mohamed Shalaby (Air Defense Research and Development Center & Arab Academy for Science Technology, Egypt); Alaa Hafez (Alexandria University, Egypt); Mohamed Hussein Emam Mabrouk (University of Ottawa, Canada)

#### ***AI-EgyVent: Artificial Neural Network Assisted Control Based Low-Cost Ventilator Implementation in Response to COVID-19 Pandemic***

Abdelrhman Mohamed Abotaleb (Cairo University, Egypt & McMaster University, Canada); Ahmed Abdellatif Elsaber and Mohammed Taha Saber (Cairo University & Military Technical College, Egypt); Mohamed Riad El Ghoneimy (Cairo University,

Canada)

***Breast Cancer Classification Using Various CNN Models***

Mariam Askar, Amgad Salama, Hassan El Kamchouchi and Adel Alfahar (Alexandria University, Egypt)

***Room-Level Activity Classification from Contextual Electricity Usage Data in a Residential Home***

Muhammad Farooq and Mahmoud Ahmed Shawky (University of Glasgow, United Kingdom (Great Britain)); Aisha Fatima (PGR, United Kingdom (Great Britain)); Ahsen Tahir, Muhammad Zakir Khan, Hasan Abbas, Muhammad Ali Imran, Qammer H Abbasi and Ahmad Taha (University of Glasgow, United Kingdom (Great Britain))

## CT 1: Communication Technologies

### Room 4

***Recent Advances Towards Securing Smart Grids with Blockchain***

Ali Yassine (The American University in Cairo, Egypt); Mohamed Baza (College of Charleston, USA); Sherif Abdelfattah (Bradley University, USA); Mahmoud M Badr (SUNY Poly, USA); Amar A Rasheed (Sam Houston State University, USA); Ramy Amer (Trinity College Dublin, Ireland)

***Performance Analysis of SAC-OCMDA Using EDW Codes in FSO Transmission Under Rainy Weather***

Somia A. Abd El-Mottaleb (Alexandria Higher Institute of Engineering and Technology, Egypt); Mehtab Singh (Chandigarh University, India)

***Particle Swarm Optimization of Machine Learning in Cognitive Radio e-Health Networks at Low SNR***

Israa Mohamed Abdul Aziz (Cairo University & Al Azhar University, Egypt); Ahmed Khattab (Cairo University, Egypt)

***Analytical Performance of Additional Active States on Power Saving and Average Delay During Hybrid-Directional DRX Technique***

Mostafa Mohamed Sallam, Fayez W. Zaki and Hala Bahy El-Deen Nafea (Mansoura University, Egypt)

***A Survey of the Most Common Task Scheduling Algorithms***

Menna Medhat Abdelrehim (FCI, Egypt); Eman Hossny (Faculty of Computers and Artificial Intelligence, Cairo University, Egypt); Fatma Omara, H. (Faculty of Computers and Information, Cairo University & 5 Ahmed Zewal Streei, Dokki, Giza, Egypt)

***Wireless Technology Identification Employing Dynamic Mode Decomposition Spectrum***

Ahmed Elsebaay (The University of Oklahoma, USA); Hazem Refai (Oklahoma University, USA)

## GCP 1: Green Communication and Power Management and Control

### Room 5

***Human Footsteps-Based Energy Harvesting Using Piezoelectric Elements***

Kyrillos Khalf Selim, Hossam Yehia and Samia Abdalfatah (Helwan University, Egypt)

***Evaluating Potential Security Risks of Advanced Metering Infrastructure Using EBIOS Risk Assessment Method***

Mostafa Shokry (Ministry of Electricity and Renewable Energy, Egypt); Ali Ismail Awad (United Arab Emirates University, United Arab Emirates & University of Plymouth, United Kingdom (Great Britain)); Mahmoud Khaled Abd-Ellah (Egyptian Russian University, Egypt); Ashraf A. M. Khalaf (Minia University, Faculty of Engineering, Egypt)

***Green Computing and Security Practices for Optimizing Crawler Efficiency***

Mai Ramadan Ibraheem (University of Kafrelsheikh, Egypt)

***Investigation of Green Hydrogen Production and Storage from PV Arrays Connected to an AC Microgrid System***

Mona Bayoumi (Benha & Faculty Engineering, Egypt); El Sayed El Tantawy (Banha-University, Egypt); Mohamed Gomaa AbdAllah Attia (Helwan University, Egypt); Ahmed M. Atallah (Ain Shams University, Egypt); Dina Mourad Hafez (Helwan University, Egypt)

***Performance Analysis and Validation of Different Meshing Element Size Used for Computational Fluid Dynamics Simulation***

Mohamed Mahran Ahmed (University of Cairo, Egypt); Shady Zahran (Technical Researches and Development, Canada); Ahmed AL-sayed Albna and Salah Tawfeq Shahen (University of Cairo, Egypt)

***Implementing Foot Tiles in Crowded Areas with the Use of Piezoelectric Material***

Sameh Osama (Lecturer, BUE, Egypt); Ahmed Ahmed (The British university in Egypt, Egypt); Ahmed Hassan and Ahmed Khalid (The British University in Egypt, Egypt); Shagird O Jetun (University of Lincoln, Egypt)

## RSP 1: Radar and Space Systems, Positioning, Navigation, and Sensing

Room 6

### ***A Novel Analysis Method for the Contents of Pharmaceutical Ingredients Using near Infrared Spectroscopy***

Huiwen Zhang (Nanjing University of Aeronautics and Astronautics, China); Caiyun Wang (Nanjing University of Aeronautics & Astronautics, China)

### ***Infrared Multi-Sensor Fusion Target Recognition Based on ISVM-DS***

Caiyun Wang (Nanjing University of Aeronautics & Astronautics, China); Yida Wu (Nanjing University of Aeronautics and Astronautics, China); Jianing Wang and Xiaofei Li (Beijing Institute of Electronic System Engineering, China)

### ***A New Image Classification Using RI-LBP with Fast-ICA***

Yida Wu (Nanjing University of Aeronautics and Astronautics, China); Caiyun Wang (Nanjing University of Aeronautics & Astronautics, China); Jianing Wang and Longfan Deng (Beijing Institute of Electronic System Engineering, China)

### ***Three-Dimensional Mapping and Change Detection Analysis Using Aerial Images for Unmanned Aerial Vehicles***

Essam Hassan Hamza (Egyptian Air Force, Egypt); Hany Abdel maksoud Abdel maksoud, ENG (National Water Research Center (NWRC) & Surveying Research Institute, Egypt)

### ***An Enhanced System on Chip-Based Sobel Edge Detector***

Ahmed S. Khalil (University of Ain Shams, Egypt); Mohamed Shalaby (Air Defense Research and Development Center & Arab Academy for Science Technology, Egypt); Emad Hegazi (Faculty of Engineering Ain-Shams University, Egypt)

### ***Faster-RCNN Based Star Image Extraction Algorithm Suitable for Star Sensors Disturbed by Gaussian Noise***

Feng Wu, Xifang Zhu, Qingquan Xu and Ruxi Xiang (Changzhou Institute of Technology, China); Cheng Wang (Suzhou University of Science and Technology, China); Jiapeng Lu (Changzhou Institute of Technology, China)

### ***FPGA Implementation for Multiple CFAR Algorithms***

Mostafa Youssif Rihan (Helwan University & Air Defence Collage, Egypt); Roaa Ibrahim Mubarak and Zaki B. Nassir (Helwan University, Egypt)

Wednesday, July 19 14:30 - 16:00

## ASP 3: Antenna Systems, Propagation, Microwaves, RF Design and High Power EM

Room 1

### ***Compact Triple-Band Millimeter Wave Flexible Antenna for Wearable Applications***

Parveez Shariff (Manipal Academy of Higher Education, India); Tanweer Ali (Manipal Institute of Technology, Manipal Academy of Higher Education, India); Pallavi R Mane (Manipal Institute of Technology & Manipal University, India); Pradeep Kumar (University of Kwazulu-Natal, South Africa); Praveen Kumar (Manipal Institute of Technology & Manipal Academy of Higher Education Manipal India, India); Sameena Pathan (Manipal Institute of Technology Manipal, India)

### ***A Petal-Shaped Base Station Antenna Array with Down-Tilted Beam for 5G Wireless Communications***

Rana Tarek Allam (Pharos University in Alexandria, Egypt); Aya Magdy Rashwan, Miss (Pharous Universty, Egypt); Ghada Mohammed Allam, Miss and Nourhan Ahmed Hassan (Pharos University, Egypt); Ahmed Alieldin (The Egyptian Technical Research and Development Centre, Egypt)

### ***Triple Band Reflective Metasurface Based Linear to Circular Polarization Converter***

Shaza Elnady (Electronic Research Institute, Egypt); Eman M. Eldesouki (Electronics Research Institute, Egypt); Shima A. M. Soliman (Electronics Research Institute (ERI), Canada & Queens University, Egypt); Ahmed M. Attiya (Electronics Research Institute, Egypt)

### ***Compact Dual Linear Polarized Antenna Feed for LEO Satellites Based on Quad Ridge Waveguide***

Mahmoud Gadelrab Ahmed Gadelrab, Shoukry Shams and Abdel R. Sebak (Concordia University, Canada)

### ***Design of a Wide-Band, Miniaturized Absorber for S- and C-Band Applications***

Zain UL Abidin, Qunsheng Cao and Gulab Shah (Nanjing University of Aeronautics and Astronautics, China)

### ***A Comparative FEM Approach of Nanoparticles-Mediated Thermal Therapy of Breast Cancer***

Ehab I. Mohamed, Samar M. Abdel-kader and Mohamed I. Badawi (Alexandria, Egypt)

CMA 2: Communication Software, Machine Learning and AI for Communications

## Room 2

### ***Systematic Review for CAD Coronary Artery Diseases Prediction***

Ghada Abdalla Radwan Abdalla Radwan (Fayoum University & October 6 University, Egypt); Mohamed Helmy Khafagy (Fayoum University, Egypt); Mostafa Thabet (Fayoum, Egypt); Marwa Hussien Mohamed (October 6 University, Egypt)

### ***An Enhanced Pseudorandom Number Generator Based Differential Lorenz System by Using Runge-Kutta Method***

Ahmed M. Mohy El Den (Arab Academy for Science and Technology, Egypt); Karim H Moussa (Xi'an Jiaotong-Liverpool University & School of Internet of Things, China); Roshdy A AbdelRassoul (Arab Academy for Science and Technology & College of Engineering & Technology, Egypt)

### ***Neural Network-Based Classification of Hand Gestures Using Electromyography Sensor Data***

Amir R. Ali (The German University in Cairo (GUC) & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); Mohamed Ramadan and Abdelrahman T. Darwish (The German University in Cairo, Egypt)

### ***Detecting Hardware Trojans Using Structural Features for Hardware Security and Reliability***

Mostafa Mohammad Helmy Sayed, Mohamed Abdalla and Ahmed Khattab (Cairo University, Egypt)

### ***Analysis and Design of Different Methods Used in Machine Learning for Epileptic Seizure Detection and Effective Usage of XGBoost Classifier Model***

Prasad Sarappadi Narasimha (Manipal Institute of Technology Bengaluru, India); Kavya B S (REVA University, India)

### ***Correcting Kernel-Based Network for Single-Image Haze***

Ruxi Xiang, Xifang Zhu, Feng Wu, Qingquan Xu and Longan Zhang (Changzhou Institute of Technology, China)

## CT 2: Communication Technologies

## Room 3

### ***Meandered V-Shape MIMO Antenna for Short-Range mmWave Vehicular Applications***

Mehr E Munir (Assistant Professor & Senior Researcher, Saudi Arabia); Saad Hassan Kiani and Mohamed Marey (Prince Sultan University, Saudi Arabia); Huseyin Serif Savci (Istanbul Medipol University, Turkey); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain))

### ***Secure Communication with Novel User-Clustering and Multi-User Cooperation in PD-NOMA System***

Asif Mahmood (NUST, Pakistan); Mohamed Marey (Prince Sultan University, Saudi Arabia)

### ***Performance Analysis of VLC-Based Infrastructure-To-Vehicle Communication***

Noura H. El Shabasy (British University in Egypt, Egypt); Samy S. Soliman (Cairo University and Zewail City - U of Science and Technology, Egypt); Mohammad M Abdellatif (The British University in Egypt, Egypt)

### ***Performance Analysis of Cache- and SWIPT-Aided NOMA-Based CDRT Networks***

Alok Kumar Shukla (Indian Institute of Technology Indore, India); Jules M. Moualeu (University of the Witwatersrand, South Africa); Maurizio Magarini (Politecnico di Milano, Italy); Prabhat Kumar Upadhyay (Indian Institute of Technology Indore, India)

### ***Assessing the Efficiency of Multi-Carrier Waveforms in Next-Generation 6G Wireless Communication Systems***

Walid Raslan (Delta University for Science and Technology, Egypt); Heba M. Abdel-Atty (Port said University, Egypt); B M El-den (Delta University for Science and Technology, Egypt)

### ***Channel Coding Challenges for Short and Moderate Block Lengths-Based Applications***

Amr Tarek, Amr Abdelaziz and Hisham Al-Dahshan (Military Technical College, Egypt)

## GCP 2: Green Communication and Power Management and Control

## Room 4

### ***Origin of Capacitance in Perovskite Solar Cells: Insight Vision on the Energy Band Diagram***

Sameh Osama (Lecturer, BUE, Egypt); Monica Ramon and Ziad Khalifa (The British University in Egypt, Egypt)

### ***Towards the First Sustainable Building in the British University in Egypt Campus: Applied Study on the Wind Tunnel Building***

Sameh Osama (Lecturer, BUE, Egypt); Mohamed Elkasrawy (The British University in Egypt, Egypt); Hani A. Ghali (British University in Egypt (BUE), Egypt)

### ***CONV1D-GRU: A Hybrid Model for Short-Term Electrical Load Forecasting***

Karim Sayed Farid, Hassan (Egyptian Electricity Holding Company, Egypt); Sameh Salem, Amr E. Mohamed and Ahmed Ayman Ali (Helwan University, Egypt)

***An Analysis of the Influence That Rooftop Photovoltaic Systems Have on the Characteristics of Distribution Networks Using Digsilent Power Factory***

Peter Bekhet (Qdesign Company for Consultant, Egypt); Amr Magdy (Faculty of Engineering Ain Shams University, Egypt); Walid El-Khattam (Faculty of Engineering, Ain Shams University, Egypt)

***Evaluation of Rooftop Photovoltaic Penetration Impact on Distribution Networks Voltage Profile and the Impact of Controlling the PV Inverter Using DIGSILENT Software***

Peter Bekhet (Qdesign Company for Consultant, Egypt); Amr Magdy (Faculty of Engineering Ain Shams University, Egypt); Walid El-Khattam (Faculty of Engineering, Ain Shams University, Egypt)

***Survey on Modular Multilevel Converter: Definition, Principal of Operation, Classification, Challenges and Applications***

Karim Abdel Mageed (ADC, Egypt); Ahmed Adel Hieba (ADC Research Center, Egypt); Ghada Mohammed Amer, Prof (Misr University for Science and Technology, Egypt & Vice Preseident – Arab Science and Technology Foundation, Egypt)

## IMS 1: IoT, M2M, Sensor Networks, and Ad-hoc Networking

### Room 5

***Cloud Region Recognition from Single Images Based on YOLO***

Xifang Zhu, Feng Wu, Qingquan Xu and Ruxi Xiang (Changzhou Institute of Technology, China); Zhaohuan Zhu (Suzhou University of Science and Technology, China); Weixin Chen (Changzhou Institute of Technology, China)

***Enhancing Security of Vehicle-To-Everything Communication (V2X) in AUTOSAR Architecture***

Mohamed Abdelazeem (Ain Shams University, Egypt); Mona Helmy (Siemens, Egypt)

***Hybrid- Blowfish Security Strengths Using Side Channel Countermeasures***

Ali E. Takieldeem (Delta University for Science and Technology, Egypt); Waleed Seror, sr (University of Zagazig, Egypt); Mohamed Fouad (Zagzig University, Egypt)

***An In-Depth Review of AI-Based Techniques for Early Diagnosis of Breast Cancer: Evaluation of CAD System Design and Classification Methodologies***

Eman A Ashraf (Lecturer Engineering, Egypt); Ahmed A. Abdullah (D U, Egypt); Warda Shaaban (Lecturer at Nile Institute, Egypt)

***Digital Twins Approaches and Methods Review***

Mohamed Helal (4 Abdelhaliem Newera & HITS, Egypt); Manal E Helal (Hertfordshire University & University of New South Wales, United Kingdom (Great Britain)); Ali E. Takieldeem (Delta University for Science and Technology, Egypt); Samia Mohammed Abd-Alhalem (DU, Egypt); Hamed shawky Zied and Ahmed Khairy (Air Defense College, Egypt)

***Wearable Health Monitoring and Tracking Through Whispering Gallery Mode Optical Sensors in IoT-Enabled Smartwatches***

Amir R. Ali (The German University in Cairo (GUC) & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); Abdelkarim Saleh (German University in Cairo, Egypt); Eman A. Abdallah (GUC, Egypt); Alaa Ali, Farida Moubarak, Hana Elzaky and Ibrahim EL-Sahhar (German University in Cairo, Egypt)

## RSP 2: Radar and Space Systems, Positioning, Navigation, and Sensing

### Room 6

***Applying Adaptive Technique to Improve Tracking Filter Performance***

Youssef Ibrahim Fayad (ADC, Egypt); Ahmed Khairy and Shady Hossny Elgohary (Air Defense College, Egypt); Shady A Deraz (Air Defense College & Electrical Eengineering, Egypt)

***Ridge Gap Waveguide Monopulse Comparator for Millimeter Wave Direction Finding Systems***

Mohammad Ali (Concordia University, Canada); Mohamed Ali (Concordia University, Egypt); Abdel-Razik Sebak (Concordia University, Canada)

***Strip Line Unequal High Power Divider with 1:12 Division Ratio***

Alla Eid (Faculty of Engineering, Egypt); Ahmed Alieldin (The Egyptian Technical Research and Development Centre, Egypt); Amgad Salama (Alexandria University, Egypt); Ahmed S.I. Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt)

***Investigation of Nonlinear Optical Absorption in a Triphenylamine Derivative and Its Potential Application in Ultrafast and Broadband Laser Protection***

Xingzhi Wu, Rui Ruan, XingXing Li, Yujie Zhao and Quanying Wu (Suzhou University of Science and Technology, China)

***An Image Restoration Method for the Sparse Aperture Optical System Based on Deep Learning***

Quanying Wu, Senmiao Wang, Junliu Fan, Baohua Chen and Xingzhi Wu (Suzhou University of Science and Technology, China)

***Enhanced Radar Performance Using Optimized Hybrid Signal Based on Nonlinear and Linear Frequency Modulation***

Mostafa Elhoshy (Air Defense College, Egypt); Ahmed Youssef (Military Technical College, Egypt)

***Design and Implementation of SDR Platform for Radar Applications***

Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Kamal Hussein (Ain Shams University, Egypt); Abdelhaliem Zekry (Ain Shams University & Fac. of Engineering, Egypt); Mohamed Abouelatta (Ain Shams University, Egypt); Ahmed Khairy (Air Defense College, Egypt); Mohamed Hussein Emam Mabrouk (University of Ottawa, Canada)

Wednesday, July 19 16:15 - 17:45

**ASP 4: Antenna Systems, Propagation, Microwaves, RF Design and High Power EM**

Room 1

***Dual Band S-Shape mmWave Antenna Array for Future RF Devices***

Saad Hassan Kiani (Prince Sultan University, Saudi Arabia); Mehr E Munir (Assistant Professor & Senior Researcher, Saudi Arabia); Mohamed Marey (Prince Sultan University, Saudi Arabia); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain))

***Printed RGW Cascaded 3-dB Coupler with Enhanced Performance for Millimeter Wave Applications***

Mohammad Ali (Concordia University, Canada); Mohamed Ali (Concordia University, Egypt); Abdel-Razik Sebak (Concordia University, Canada)

***Analysis and Design of Improved Guided Wave Structure Using Matching Network/Magnetized Material and Circular Spiral-Spiral Wraparound Metamaterial Array for X-Band Radar Applications***

Ahmed Fathy Miligy (ADC, Egypt)

***New Approach to Analyze Solid Fuel Exhaust for Rocket Engine Based on Laser Spectroscopy***

Abdalrhman Adel (ASWU, Egypt); Osama A. Omer (Aswan University, Egypt); Mohamed Anwar (ASWU, Egypt); Mohamed Alamir (AIET, Egypt); Mostafa Elhoshy (UVIC, Egypt); Amir Almslmany (Air Defence College, Egypt)

***MIMO Slot Antenna with Polarization Diversity and Dual Notched Bands for UWB Applications***

Ahmed Gamal Abdellatif Ibrahim, Ag (Air Defense College & Alexandria University, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Abdelmegid Allam (German University in Cairo, Egypt); Diaa Fawzy (Izmir University of Economics, Turkey); Alla Eid (Faculty of Engineering, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt)

***A 2-Bit Quad Band Frequency Selective Surface Furnishing Multifunction Behaviour at Two Bands***

Gulab Shah and Qunsheng Cao (Nanjing University of Aeronautics and Astronautics, China); Amir Almslmany (Air Defence College, Egypt); Zain UL Abidin (Nanjing University of Aeronautics and Astronautics, China)

***Novel Design of Voltage Controlled Oscillator (VCO) Using MEMS Switch***

Ahmed Khairy and Shady Hossny Elgohary (Air Defense College, Egypt); Mohamed A. Soliman (Air Defense College, Egypt & Alexandria University, Egypt); Youssef Ibrahim Fayad (ADC, Egypt)

**CMA 3: Communication Software, Machine Learning and AI for Communications**

Room 2

***Dehazing Image Quality Assessment Method Based on Color Information***

Qingquan Xu, Ruxi Xiang, Xifang Zhu, Feng Wu and Longan Zhang (Changzhou Institute of Technology, China)

***Optimized Performance of Attacks Detection in WSN Based on Machine Learning Algorithms***

Amr Farid and Abeer Khalil (Mansoura University, Egypt); Mahmoud Ahmed Shawky (University of Glasgow, United Kingdom (Great Britain)); Ahmed Samrah (Mansoura University, Egypt); Hegazi Ibrahim (Mansoura University, Egypt & Nile Higher Institute of Engineering and Technology, Egypt)

#### ***Efficient Enhanced Deep Learning Algorithm for Egyptian Sign Language Recognition***

Mostafa Ahmed Abdelrazik (Benha University, Egypt); Abdelhaliem Zekry (Ain Shams University & Fac. of Engineering, Egypt); Wael Mohamed (Benha University & Benha Faculty of Engineering, Egypt)

#### ***Tech-Care: A High-Tech Eye-Controlled Wheelchair for Paralyzed Patients***

Hanaa Salem Marie, Mohammed Alaa Al-Sabahi, Ahmed Awad El-Sayed, Ahmed Mohamed Zaki, Omar Mahmoud Salah, Mahmoud Elsayed Al-Sadani, Abdallah Mohammed Abdo and Muhammad Eyad Moawad (Delta University for Science and Technology, Egypt)

#### ***Voice Pathology Classifier Using SVM Classifier***

Asmaa Nabil Mohamed (Digital HUB, Egypt); Amgad Salama (Alexandria University, Egypt); Samy Darwish (PUA, Egypt)

#### ***A 32-Bit Quantum Encryption Algorithm Using Dynamic Pauli Gates***

Mohamed A Elbaset, Mr (Air Defense Colleague Alexandria University & Alexandria, Egypt); Mohamed A. Soliman (Air Defense College, Egypt & Alexandria University, Egypt); Shady A Deraz (Air Defense College & Electrical Engineering, Egypt); Karim H Moussa (Xi'an Jiaotong-Liverpool University & School of Internet of Things, China)

## CT 3: Communication Technologies

### Room 3

#### ***Performance Analysis of UAV-Based MMW/FSO Relay-Assisted System***

Moataz Mohamed Roshdy (Military Technical College, Egypt); Ehab Helmy Elshazly (Egyptian Atomic Energy Authority Egypt, Egypt & Shenzhen University China, China); Ehab Mahmoud Mohamed (Aswan University, Egypt); Ahmed Hossni Elghandour (Military Technical College, Egypt); Kamel Hassan (Future University, Egypt); Haitham Khallaf (McMaster University, Canada)

#### ***Performance Analysis of MIMO FBMC Based OTFS System***

Hossam Reda Mohamed and Mahmoud Abdelaziz (MTC, Egypt); Amr Nagy (Military Technical College Egypt, Egypt)

#### ***Machine Learning Assisted Indoor Visible Light Communication System***

Kopano Victor Menu (University of Johannesburg, South Africa); Alain Richard Ndjiongue (Memorial University of Newfoundland, Canada); Collins Leke (University of Johannesburg, South Africa)

#### ***Long Range Chipless RFID System Based on FMCW RADAR and Dielectric Resonators***

Maher Khalil (Universität Duisburg-Essen, Germany & Benha Faculty of Engineering, Benha University, Egypt); Thomas Kaiser (Universität Duisburg-Essen, Germany); Klaus Solbach (UDE, Germany); Ahmed Elawamry (Benha University, Egypt)

#### ***Voltage Controlled-Bandwidth Electrooptic Push-Pull Match Zehnder Modulator with Coplanar Electrodes***

B M El-den (Delta University for Science and Technology, Egypt)

#### ***Robust X-Haul Failure Mitigation for 5G/6G Networks: Adding More Self-Healing Antennas to Small Cells***

Mohamed Y. Selim and Ahmed E. Kamal (Iowa State University, USA)

## ASP 5: Antenna Systems, Propagation, Microwaves, RF Design and High Power EM

### Room 4

#### ***Circularly Polarized Ka-Band Dielectric Reflectarray Antenna***

Mahmoud S. Abdelhady (Queen's University, Canada); Shimaa A. M. Soliman (Electronics Research Institute (ERI), Canada & Queens University, Egypt); Al P. Freundorfer (Queen's University, Canada); Yahia Antar (Royal Military College of Canada, Canada)

#### ***A Circularly-Polarized Patch Antenna Design for 3.6 GHz Applications in 5G Systems***

Ahmed Ibrahim Salem III (Damanhur University, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Mohammad Alibakhshikenari (Universidad Carlos III de Madrid, Spain); Raed A Abd-Alhameed (University of Bradford, United Kingdom (Great Britain)); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt)

#### ***Comparison and Analysis of RSSI Values at WLAN Bands in Obstructed Wireless Communication Path***

Muhammad Asim (University of Engineering and Technology Peshawar, Pakistan); Muhammad Altaf Hussain Khan (University of Engineering Technology Peshawar Pakistan, Pakistan); Muhammad Aatif (University of Engineering and Technology Peshawar, Pakistan); Muhammad Naseer (CECOS University of Information Technology and Emerging Science Peshawar, Pakistan)



***For Future Wireless Communications: Development of A Circularly Polarized Antenna with Low Profile***

Mohammed Ezzat Yassin (Akhbar Elyom Academy, Egypt); Gomaa M. Elashry (Electronics Research Institute (ERI), Egypt); Khalid F. A. Hussein (Electronics Research Institute, Egypt); Qammer Abbasi (University of Glasgow, United Kingdom (Great Britain)); Shaimaa Ali Mohassieb (Akhbar Elyom Academy, Egypt)

***S-Band Single-Layer Balun for Wideband Applications***

Mohammad Darwish, Mohammed Mahdi and Hossam Tork (Military Technical College, Egypt); Ayman Eltager (Military Technical Collage, Egypt)

***Design and Implementation of High-Power Laser Beam Profiler Optics Based on Practical Experiments***

Abdalahman Adel (ASWU, Egypt); Osama A. Omer (Aswan University, Egypt); Ahmed El Sawi (Egypt, Egypt); Mahmoud Mohamed Talaat (Military Technical College, Egypt); Mostafa Elhoshy (Air Defense College, Egypt); Amir Almslmany (Air Defence College, Egypt)

## IMS 2: IoT, M2M, Sensor Networks, and Ad-hoc Networking

Room 5

***Whitelisting Requirements for Effective Cyber Defense Solutions***

May Medhat (AAST & EG-CERT, Egypt); Samir G. Sayed (Helwan University, United Kingdom (Great Britain) & University College London (UCL), Egypt); Samia Mohammed Abd-Alhalem (DU, Egypt); Ali E. Takieldeem (Delta University for Science and Technology, Egypt)

***Plant Disease Detection Using Artificial Intelligence Techniques for Agricultural Productivity Enhancement in Egypt***

Aya Osman (The British University in Egypt, Egypt); Sally Elghamrawy (MISR Higher Institute for Engineering and Technology & American University in Cairo AUC, Egypt)

***An AI-Based Prediction Model for Climate Change Effects on Crop Production Using IoT***

Sally Elghamrawy (MISR Higher Institute for Engineering and Technology & American University in Cairo AUC, Egypt)

***A Deep Learning Technique for Early Diagnosis of Skin Cancer Disease Using Biomedical Data***

Mohamed Shehab (The British University in Egypt, Egypt); Sally Elghamrawy (MISR Higher Institute for Engineering and Technology & American University in Cairo AUC, Egypt)

***An Optimized Digital Signature Algorithm for Efficient and Secure Authentication in VANETs***

Chenyi Yun, Mahmoud Ahmed Shawky and Shuja Ansari (University of Glasgow, United Kingdom (Great Britain))

***Machine Learning-Based Prediction of Backhaul Capacity Requirements for Cellular Networks***

Mohamed Waheed (Cairo University, Egypt); Ayman Gaber (Nile University, Egypt); Yasmine Fahmy and Ahmed Khattab (Cairo University, Egypt)

## RSP 3: Radar and Space Systems, Positioning, Navigation, and Sensing

Room 6

***Performance Improvement of a Space Robotic Manipulator Using Fuzzy-Based PID Controller***

Mohammed H. Al-Mola (Department of Petroleum and Refining Engineering, College of Petroleum and Mining Engineering, University of Mosul); Sherif I. Abdelmaksoud (Aerospace Engineering Department, King Fahd University of Petroleum and Minerals, Saudi Arabia)

***Performance Analysis of Quaternion Vs Euler-Based Approaches in Reduced INS/GNSS Fusion Techniques***

Maher Tarek (Technical Researches and Development Center & Suez Canal University, Egypt); Shady Zahran (Technical Researches and Development, Canada); Ahmed Radi (Technical Researches Center, Egypt); Sherief Fathi Nafea (Suez Canal University, Egypt); Eyad S. Oda (Associate Professor, Egypt); Alaa Hafez (Alexandria University, Egypt)

***A New Mean-Field Game Approach for Closed-Loop Strategic Swarm Maneuvering***

Mohammad Altaher Mohammad and Samir Elmougy (Mansoura University, Egypt)

***Designing High-Performance Mismatched Filters for Radar Applications***

Mostafa Elhoshy (Air Defense College, Egypt); Ahmed Youssef (Military Technical College, Egypt)

***Parameters Extraction and Suppression of Interrupted Sampling Periodic Repeater Jammer in LFM Pulse Compression Radar***

Ahmed Fawzy Hatahet, Hossameldin Aboubakr Badr Hassan, Fathy Mohamed Abdel Kader and Ahmed Mansour Abdelfattah (Military Technical College, Egypt)

***Performance Analysis of LFM Radar in Presence of Different Interrupted Sampling Jamming Techniques***

Ahmed Fawzy Hatahet, Hossameldin Aboubakr Badr Hassan, Fathy Mohamed Abdel Kader and Ahmed Mansour Abdelfattah (Military Technical College, Egypt)

***An Implementation of a Digital MTI System Which Suppresses Stationary Targets and the Moving Targets with Slow Speed***

Mohamed A. Soliman (Air Defense College, Egypt & Alexandria University, Egypt); Shady A Deraz (Air Defense College & Electrical Engineering, Egypt); Said H Abd Elkhaliq (Air Defense College, Egypt); Ahmed H. EL-Sakka (Air Defense college & Alexandria university, Egypt); Mohamed A Elbaset, Mr (Air Defense College Alexandria University & Alexandria, Egypt); Ahmed Khairy (Air Defense College, Egypt)

Thursday, July 20

Thursday, July 20 9:00 - 10:30

ASP 6: Antenna Systems, Propagation, Microwaves, RF Design and High Power EM

Room 1

***Traveling Wave Elliptical Slotted SIW Antenna***

Alla Eid (Faculty of Engineering, Egypt); Amgad Salama (Alexandria University, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Ahmed Fathy Miligy (ADC, Egypt); Assem H. Elfeky (Alexandria, Egypt)

***Metamaterial-Based MM-Wave Phased Array for Broadband Cellular Networks***

Mohamed A. Soliman (Air Defense College, Egypt & Alexandria University, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain)); Daa Fawzy (Izmir University of Economics, Turkey); Abdelmegid Allam (German University in Cairo, Egypt); Alla Eid (Faculty of Engineering, Egypt)

***A Multi-Band Textile-Based MTM Absorber for Energy Harvesting Applications***

Abdelmegid Allam and Mahmoud Helala (German University in Cairo, Egypt); Daa Fawzy (Izmir University of Economics, Turkey); Mohamed Atef Abbas (College of Engineering & Technology, Arab Academy for Science and Technology, Cairo, Egypt); Mohamed Fathy Abo sree (Arab Academy For Science and Technology Engineering Faculty & AASTMT Company, Egypt); Ahmed S.I Amar (Honorary Research Fellow of Radio Frequency Engineering, University of Bradford, United Kingdom, Egypt); Naser Ojaroudi Parchin (Edinburgh Napier University, United Kingdom, United Kingdom (Great Britain))

***A Broadband Stripline Gysel High Power Combiner for L-Band Radar Applications***

Ahmed Fathallah Elagamy (Ain Shams University, Egypt); Ahmed Alieldin (The Egyptian Technical Research and Development Centre, Egypt); Abdelrahman Hassan El-Akhdar (Ain Shams University, Egypt); Mohammad Darwish (Military Technical College, Egypt)

***Ridge Gap Waveguide Electrical Characteristics Under High Power Operation and Harsh Environmental Conditions***

Abdullah Muhammad Mahfouz (University of Assiut, Egypt); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany and Ghyslain Gagnon (ETS, Canada)

***Performance Assessment of an Orthomode Transducer Under High Power Handling and Harsh Temperature Exposure***

Abdullah Muhammad Mahfouz (University of Assiut, Egypt); Shoukry Shams (Concordia University, Canada); Mahmoud Elsaadany and Ghyslain Gagnon (ETS, Canada)

CMA 4: Communication Software, Machine Learning and AI for Communications

Room 2

***Spoken Digit Recognition Using Machine and Deep Learning-Based Approaches***

Ahmed Adel (Air Defense College, Egypt); Khalid Mostafa Ezzat Ibrahim (Alexandria University, Egypt)

***A High Performance Shooting Simulator Independent of a Laser Beam***

Hossam Reda Mohammed (Air Defense College, Egypt); Kamal Hussein and Mahmoud Ahmed Khalil (Ain Shams University, Egypt); Abdelrahman Mohamed Watany (Helwan University, Egypt); Youssef Ibrahim Fayad (ADC, Egypt)

***Image Encryption Through Cellular Automata, S-Box and Tent Chaotic Map***

Salma Khaled, Mohamed Kamel Gabr, Yousef Korayem and Wassim Alexan (German University in Cairo, Egypt)

**Double Layer Message Security for 3D Object Using Mathematical Sequences and Secret Keys**

Aya Yakout Alkhamese (Port Said University, Egypt); Hewayda ElGawalby (Teacher, Egypt); Ahmad H. Eid (Faculty of Engineering, Port-Said University, Egypt); Ibrahim Hanafy (Egypt, Egypt); Wael Abdelkader (Damietta University, Egypt)

**Three Layered Image Encryption: An Application of Hyperchaos and Cellular Automata**

Ayten Mazen, Mohamed Kamel Gabr, Yousef Korayem and Wassim Alexan (German University in Cairo, Egypt)

**Defect Diagnosis of Hot Rolling Steel Surfaces Based on Deep Learning**

Ehab Adel Kholief (Faculty of Engineering – Alexandria University & EBSC, Egypt); Mohammad Younes (Production Engineering, Egypt); Samy Hassan Darwish (Lord, Egypt); Nashat Fors (Alexandria University, Egypt)

## CT 4: Communication Technologies

### Room 3

**A Comparative Study of User Pairing Techniques of MIMO-NOMA System in Different Channel Models**

Shady A Deraz (Air Defense College & Electrical Engineering, Egypt); Karim H Moussa (Xi'an Jiaotong-Liverpool University & School of Internet of Things, China); Mohamed A. Soliman (Air Defense College, Egypt & Alexandria University, Egypt); Mohamed A Elbaset, Mr (Air Defense College Alexandria University & Alexandria, Egypt)

**An Iterative Hard Thresholding with Norm Exponent**

Bamrung Tausiesakul (Srinakharinwirot University, Thailand); Krissada Asavaskulkiet (Mahidol University, Thailand)

**Effect of the Wavelength Reuse Pattern and Cell Size on the Performance of Indoor Cellular Visible Light Communication**

Youssef A Diab (Air Defence College & Alexandria University, Egypt); Asmaa E. Farahat and Khalid F. A. Hussein (Electronics Research Institute, Egypt); Azhar Hamdi (Zagazig University, Faculty Of Engineering, Egypt); Rania Ahmed Elsayed (Zagazig University, Egypt)

**Review: Pencil-On-Paper Electronics Devices Applications / Challenges**

Hamed shawky Zied (Air Defense College, Egypt); Khalil ElKhamisy (The Higher Institute of Engineering El-Shorouk Academy & El Shorouk Academy, Egypt); Sayed El-Rabie (Dep. of Electronic and Communication Eng., Egypt)

**Fast Simple Image Encryption Technique Based on Chaos Based System**

Wageda I El sobky (Benha University, Egypt); Ahmed Khairy (Air Defense College, Egypt); Salwa Serag Eldin (Tanta University, Egypt)

**Famous Digital Signatures Used in Smart Contracts**

Hala Saeed Omar, H omar (Benha Faculty of Engineering, Egypt); Wageda I El sobky (Benha University, Egypt); Ahmed Khairy (Air Defense College, Egypt); Tamer Omar Diab (Assistant Professor, Egypt)

## IMS 3: IoT, M2M, Sensor Networks, and Ad-hoc Networking

### Room 4

**Detecting Dependent Malicious Nodes in Multi-State Target Detection Wireless Sensor Networks**

Samiha Mousa (Al-Hussein Bin Talal University, Jordan); Saud Althunibat (Texas A and M University at Qatar, Qatar); Abdullah Alhasanat (Alhussien Bin Talal University, Jordan); Moath Alsafasfeh (Al-Hussein Bin Talal University & College of Engineering, Jordan)

**A Modified Transformer Neural Network (MTNN) for Robust Intrusion Detection in IoT Networks**

Wahaj Ahmed and Fabio Kientz (Toronto Metropolitan University, Canada); Rasha Kashef (Ryerson University, Canada)

**Design and Evaluation of a Wearable Glove for Sign Language Translation Using Cross-Correlation and Flex Sensors**

Amir R. Ali (The German University in Cairo (GUC) & PI of the Applied-Science & Robotics Laboratory for Applied-Mechatronics ARATronics Laboratory, Egypt); Jessica Magdy Gergis Haleem, Aya ElNahas, Marina Samir, Samantha Kamel and Mariam Fathy (The German University in Cairo, Egypt)

**Analysis Sensing Voltage of Lead Zirconate Titanate (PZT) Piezoelectric MEMS Gyroscope and Comparing with Aluminum Nitride (AlN), Zinc Oxide (ZnO) and Barium Titanate (BaTiO3)**

Sherif A. Ghamry (Arab Academy for Science and Technology, Egypt); Ahmed Khairy (Air Defense College, Egypt); Roshdy A AbdelRassoul (Arab Academy for Science and Technology & College of Engineering & Technology, Egypt); Iman Gamal Eldin Morsi (Arab Academy for Science and Technology, Egypt)

***Towards Content-Based Image Retrieval for Encrypted Images over Cloud Computing: Review of Recent Trends***

Rowayda Adel Elsaid (BFCAI & Benha University, Egypt); Metwally Rashad and Noha E. El-Attar (Benha University, Egypt); Ahmed Elsayy (Benha University & Delta Technological University, Egypt)

***ADAS System Integrated with New Architecture for V2X in Adaptive AUTOSAR***

Mona Helmy (Siemens, Egypt); Mohamed Mahmoud Ibrahim, Ismail Amr, Ghada Alaa, Rawan Waleed, Salma Sherif, Sandy Ibrahim, Ahmed Haggag, Moamen Waleed and Ahmed Ehab (Ain Shams University, Egypt)

## GCP 3: Green Communication and Power Management and Control

Room 5

***An Effective Strategy Coupled with Perturb and Observe Algorithm to Track the PV Systems' Global Maximum Power Under Partial Shading Conditions***

Ehab Mohamed Ali, Wael Mokhtar M and Hatem Mohammed Naguib Fiyad (Air Defense College, Egypt)

***Cyber Physical Security of Energy Hubs Using Feasibility Area Estimation***

Ahmed Abd Elaziz Elsayed (York University & Assiut University, Canada); Hany Farag and Amir Asif (York University, Canada)

***Path Following Controller and Obstacles Avoidance Using Nonlinear Model Predictive Control***

Mohamed Mamdoh, Mohamed Ibrahim, Amr Ahmed Sarhan and Mahmoud Ashry (Military Technical College, Egypt)

***An Enhanced Voltage Profile for Solar PV Following Converters in Microgrid Using Data-Driven FCS-MPC***

Ahmed S. Omran (Sidpec & Arab Academy for Science, Technology & Maritime Transport, Egypt); Mostafa S. Hamad (Arab Academy for Science, Technology and Maritime Transport, Egypt); Mostafa Abedlgeiel (Arab Academy for Science and Information Technology, Egypt); Ayman Abdel-Khalik (Alexandria University, Egypt)

***Productivity Improvement in Metal Formation Production Stages Based on Overall Equipment Effectiveness***

Walaa Tayel (Tabbin Institute for Metallurgical Studies Industrial Engineering & Management, Egypt); Alaa Eldin Zohir Aly, Prof (Tabbin Institute for Metallurgical Studies, Egypt); Hany Fathy Abdelmaksoud, Sr. (Construction, Egypt); Samy Darwish (PUA, Egypt); Mohamed Morsy (ADC, Egypt)

***Cold Standby System Availability***

Ghada Mohamed Kholief (National Media Authority & AAST, Egypt); Ehab Adel Kholief (Faculty of Engineering - Alexandria University & EBSC, Egypt); Mohamed Grida (Zagazig University, Egypt); Abdel Nasser Zaied (Misr International University, Egypt)

## RSP 4: Radar and Space Systems, Positioning, Navigation, and Sensing

Room 6

***Comparative Synthesis of Linear and Nonlinear Attitude Controllers for LEO Satellite at Stabilization Mode***

Khaled Mohsen, Mohamed Ibrahim, Ahmed M. Kamel and Mahmoud Ashry (Military Technical College, Egypt)

***FMCW SAR Imaging Based on Software Defined Radio Architecture***

Mohamed Mamdouh Ashry, Mr (Electronic Warfare, Egypt); Ahmed S. Mashaly (Military Technical College, Egypt)

***Design and Assessment of Satellite Orbit Simulator and Predictor***

Ahmed Abdelhady Ahmed, Hossam Hendy, Amr Abd el azeem Ali and Ahmed M. Kamel (Military Technical College, Egypt)

***Design and Simulation of Fuzzy-Adaptive-PID Controller for Positioning of Stewart Platform Using Electric Linear Actuators***

Mohamed R. Mohamed, Amr A. Roshdy, Amr Abd el azeem Ali and Mohamed A. Fayed (Military Technical College, Egypt)

***A Dynamic Thrust Control for Pursuer Time-To-Go Reduction***

Ahmed Khairy (Air Defense College, Egypt); Alaa Hafez (Alexandria University, Egypt); Maher Tarek (Technical Researches and Development Center & Suez Canal University, Egypt)

***Evaluating the Effect of Stage Removal on the Performance of Phase Gradient Autofocus (PGA) Algorithm***

Ahmed Salah Elbohy (MTC, Egypt); Ahmed S. Mashaly and Ahmed Azouz (Military Technical College, Egypt); Ashraf Helmy (National Authority for Remote Sensing, Egypt)

***Comparative Analysis of Feature Fusion Techniques for Enhancing RGB-IR Image Matching***

Ahmed Elsayed Mohamed Fouad (MTC, Egypt); Yehia Zakria Elhalwagy, Hossam Hendy and Ibrahim Arafa (Military Technical College, Egypt)