



IEEE 5th Global Power, Energy and Communication Conference

Cappadocia/TURKEY

June 14-16, 2023

DRAFT PROGRAM OF IEEE GPECOM2023

Program is scheduled according to Turkey (CET+1) Time Zone

CET+1 Time Zone	WEDNESDAY 14 June		
08:30-09:00	Registration		
09:00-09:30	Opening Ceremony		
09:30-10:30	Keynote Lecture 1: Advancements in Electric Vehicle Technology – Electric Machines and Power Electronics Professor Bulent Sarioglu, University of Wisconsin-Madison, USA Chair:		
10:30-11:00	Coffee Break		
11:00-12:00	Keynote Lecture 2: Online Monitoring of the Smart Grid: Distributed System of Sensors and Devices Andrea Bonetti, Megger Sweden AB – Sweden David Eckert, Megger Grid Performance Solutions Division, Megger Germany Chair:		
12:00-13:30	Lunch Break		
	Hall-1	Hall-2	Hall-3
13:30-15:15	W1 #1 (TT1)	W1 #2 (TT2)	W1 #3 (TT3)
15:15-15:45	Coffee Break		
	Hall-1	Hall-2	Hall-3
15:45-17:30	W2 #1 (TT2)	W2 #2 (TT3)	W2 #3 (TT4)
19:00-21:00	Welcome Reception		

CET+1 Time Zone	THURSDAY 15 June		
08:30-09:00	Registration		
09:00-10:00	Keynote Lecture 3: The Strategies of Application of Communications Along Phase Conductors of High Voltage Power Transmission Lines for Future Power Grids Dr. Anton Merkulov, Smart Grid Division, Siemens, Kazakhstan Chair:		
10:00-11:00	Keynote Lecture 4: What will it take for wireless communications to conquer the sky? Professor Giovanni Geraci, Universitat Pompeu Fabra, Barcelona, Spain Chair:		
11:00-11:30	Coffee Break		
	Hall-1	Hall-2	Hall-3
11:30-13:00	T1 #1 (TT1)	T1 #2 (TT2)	T1 #3 (TT3)
13:00-14:00	Lunch Break		
	Hall-1	Hall-2	Hall-3
14:00-15:45	T2 #1 (TT2)	T2 #2 (TT4)	T2 #3 (TT3)
15:45-16:15	Coffee Break		
	Hall-1	Hall-2	Hall-3
16:15-18:00	T3 #1 (TT5)	T3 #2 (TT3)	

19:00-23:00	Gala Dinner
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CET+1 Time Zone	FRIDAY 16 June		
08:30-09:00	Registration		
09:00-10:00	Keynote Lecture 5: PEV Parking Lots for the Sustainable Energy Supply of Smart Cities Professor Aydogan Ozdemir, Istanbul Technical University, Turkey Chair:		
10:00-11:00	Keynote Lecture 6: Resilience and Mixed Criticality: Concepts, Applications, and Research Challenges in the Era of Digital Twins and Metaverses Professor Aydin Sezgin, Ruhr-University Bochum, Germany Chair:		
11:00-11:30	Coffee Break		
	Hall-1	Hall-2	Hall-3
11:30-13:00	F1 #1 (TT1)	F1 #2 (TT2)	F1 #3 (TT4)
13:00-14:00	Lunch Break		
	Hall-1	Hall-2	Hall-3
14:00-15:45	F2 #1 (TT3)	F2 #2 (TT4)	
15:45-16:15	Coffee Break		
	Hall-1	Hall-2	Hall-3
16:15-18:00	F3 #1 (TT5)	F3 #2 (TT3)	

18:00-18:30	Closing Ceremony
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IEEE GPECOM 2023 Programme

CEST +1 Time Zone	Wednesday, June 14th
08:30-09:00	Registration
09:00-09:30	Opening Ceremony
09:30-10:30	Keynote Lecture 1: Advancements in Electric Vehicle Technology – Electric Machines and Power Electronics Professor Bulent Sarioglu, University of Wisconsin-Madison, USA Chair:
10:30-11:00	Coffee Break
11:00-12:00	Keynote Lecture 2: Online Monitoring of the Smart Grid: Distributed System of Sensors and Devices Andrea Bonetti, Megger Sweden AB – Sweden David Eckert, Megger Grid Performance Solutions Division, Megger Germany Chair:
12:00-13:30	Lunch Break

Session W1#1	TT1-Power Electronics, Devices and Controllers-1 13:30-15:15	Hall	Hall-1
Chairs			
13:30-13:35	Chairs' Introduction and Welcome Messages		
13:35-13:55	Cascaded IMC & PI Digital Controller Comparison for Boost Converter with Non-Ideal Switch Modelled State-Space Averaging Method, <i>Burhan HÜKÜMEN (Karabük University)*; Mustafa GÖKDAĞ (Karabük University); Ozan Gulbudak (Karabük University)</i>		
13:55-14:15	Efficient Sliding Mode Controllers for Off-grid Photovoltaic Systems, <i>Chaibi Yassine (Smartilab laboratory, EMSI)*; Salhi Mohamed (ENSAM, Moulay Ismail University, Meknes, Morocco)</i>		
14:15-14:35	Hardware in the Loop (HIL) based Real Time Control of Single-Phase Grid-Connected Inverters, <i>Tolganay Orynassarova (Sakarya University of Applied Sciences)*; Ali Kuyumcu (Sakarya University of Applied Sciences); Murat Karabacak (Sakarya University of Applied Sciences)</i>		
14:35-14:55	Two Stage Dimmable PFC LED Driver Digital Controller Design and Analysis for Isolated SEPIC Converter, <i>Burhan HÜKÜMEN (Karabük University)*; Mustafa GÖKDAĞ (Karabük University); Ozan Gulbudak (Karabük University)</i>		
14:55-15:15	In-Vehicle Qi-Compliant Inductive Wireless Charging Solutions: A Review, <i>Ezgi GÜVERCİN (VESTEL ELECTRONICS)*; Gokturk Poyrazoglu (Ozyegin University)</i>		
15:15-15:45	Coffee Break		

Session W1#2	TT2- Electrical Machines and Drives-1 13:30-15:15	Hall	Hall-2
Chairs			
13:30-13:35	Chairs' Introduction and Welcome Messages		
13:35-13:55	Application of Feature Selection in Distribution Transformer Design and Manufacturing Using Feed Forward Artificial Neural Network and Equilibrium Optimizer Algorithm, <i>Mohammad Hassan Hashemi (Ege University)*; Ulaş Kılıç (Ege University); Selim Dikmen (Eltaş Transformatör A.Ş)</i>		
13:55-14:15	Energy Management Strategy of Dual-source Electric Vehicles Based on Fuzzy Logic Control Considering Driving Cycles, <i>Khoudir KAKOUCHE (Université de Bejaia); Adel oubelaid (LTII); Smail Mezani (Université de Lorraine); Toufik Rekioua (Université de Bejaia); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)</i>		
14:15-14:35	Diagnostic and Prognostic Health Management of Electric Vehicle Powertrains : An Empirical Methodology for Induction Motor Analysis, <i>Hicham EL HADRAOUI (UM6P)*; Oussama Laayati (Hassan First University of Settat); Adila El Maghraoui (University Mohammed VI Polytechnic); Erroumayssae Sabani (Chouaib Doukkali University); Mourad Zegrari (Benguerir Hassan II University of Casablanca); Ahmed Chebak (Green Tech Institute Mohammed VI Polytechnic University Benguerir)</i>		
14:35-14:55	Optimal Location of EV Parking Lot in Distribution System Using MAOWHO Technique, <i>Prasad Rao (Koneru Lakshmaiah Education Foundation); Dr PANDIAN A (KL, India); Dr. Ch Rami Reddy (Electrical and Electronics Engineering, Joginpally B R Engineering College, India); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)</i>		
14:55-15:15	An integrated Approach for Modelling Electric Powertrain, <i>Shashwat Chandra (Motilal Nehru National Institute of Technology, Allahabad); Arun Chandrasekharan Nair (Mercedes-Benz Research and Development India)*; Ashwini Kumar Yadav (MNNIT Allahabad); Sachin Singhal (Mercedes-Benz Research and Development India)</i>		
15:15-15:45	Coffee Break		

Session W1#3	TT3- Conventional and Renewable Energy-1 13:30-15:15	Hall	Hall-3
Chairs			
13:30-13:35	Chairs' Introduction and Welcome Messages		
13:35-13:55	Genetic Algorithm-based MPPT for Wind Power Conversion System: Study and Comparison with Conventional Method in Tropical Climate, <i>Fares Debbabi (Universite des Antilles)*; Fateh MEHAZZEM (Université des Antilles); Ted Soubdhan (Antilles University)</i>		
13:55-14:15	A Comparison Between MPC, Perturb & Observe (P&O) and Incremental Conductance Method (INC), <i>El kafazi Ismail (Ibn Tofail University)*; Chaymae Boubii (ENSAK)</i>		
14:15-14:35	Design of an Optimal PI Controller for Time-Delayed Two-Area LFC-VID System, <i>Suud Ademnur Hasen (Gazi University); Ömer Aydın (Gazi University); Saffet Ayasun (Gazi University)*</i>		
14:35-14:55	A Compact Model of Off-Grid Micro-Hydro Generation, Low Impact and Accessible in Remote Areas, <i>Francisco G Arias (Universidad Politécnica Salesiana); Flavio Quizhpi (Universidad Politécnica Salesiana)*</i>		
14:55-15:15	Application of Distributed Consensus in Fixed Time Sliding Mode to the Wind Turbine System, <i>Sanae El bouassi (Sidi Mohamed Ben Abdellah university)*; Zakaria Chalh (Sidi Mohamed Ben Abdellah university); El Mehdi Mellouli (Sidi Mohamed Ben Abdellah University)</i>		
15:15-15:45	Coffee Break		

Session W2#1	TT2- Electrical Machines and Drives-2 15:45-17:30	Hall	Hall-1
Chairs			
15:45-15:50	Chairs' Introduction and Welcome Messages		
15:50-16:10	Reduced Switch Converter Topology for Double Traction Motors Electric Vehicles, <i>Ahmed AZIB (université de Bejaia); Adel Oubelaid (LIII); Djamel Ziane (Faculté de Technologie, Université de Bejaia); Dr. Nachaat Mohamed (Rabdan Academy); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)</i>		
16:10-16:30	A Comparative Analysis of the Prophet and LSTM Models for Predicting Wind Speed, <i>Başak Öztürk (Nevsehir Haci Bektas Veli University)*; Gülbahar Bilgiç (Nevsehir Haci Bektas Veli University)</i>		
16:30-16:50	Forecasting Energy Consumption of Electric Vehicles, <i>Hasan Huseyin Coban (Ardahan University); Mohit Bajaj (Graphic Era, India); Vojtech Blazek (VSB-TU Ostrava); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)</i>		
16:50-17:10	Sooty Tern Optimization Technique based 2DOFPID Controller for Stability of Multisource Power System with Plug-in Electric Vehicles Integration, <i>CH Naga sai kalyan (Vasireddy Venkatadri Institute of Technology); Bhurugu Sravanthi (Vignana Bharathi Institute of Technology); Dr. B Srikanth Goud (Anurag University); Mohit Bajaj (Graphic Era India); Vojtech Blazek (VSB-TU Ostrava); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)</i>		
17:10-17:30	Improvement Performances of Sensorless Control for PMSM Based on DTC Strategy Using SMO Observer and RL-TD3 Agent, <i>Marcel Nicola (National Institute for Research, Development and Testing in Electrical Engineering – ICMET Craiova); Claudiu I NICOLA (National Institute for Research, Development and Testing in Electrical Engineering – ICMET Craiova)*</i>		

Session W2#2	TT3- Conventional and Renewable Energy-2 15:45-17:30	Hall	Hall-2
Chairs			
15:45-15:50	Chairs' Introduction and Welcome Messages		
15:50-16:10	Combined Voltage and Frequency Control of Multi Area Power System using Sooty Tern Algorithm Optimized Cascade Controller, <i>CH Naga sai kalyan (Vasireddy Venkatadri Institute of Technology); Kambhampati Venkata Govardhan Rao (St. Martin's Engineering College); Dr. B Srikanth Goud (Anurag University); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)</i>		
16:10-16:30	TS-Fuzzy Controllers based Novel Control of Hybrid Wind-PV-Battery System for Improving Power Quality, <i>Eswara Saraswathi Devadula (Dadi Institute of Engineering and Technology)*</i>		
16:30-16:50	Hardware in the Loop Real-Time Implementation of Small Wind Turbine Emulator Using Dspace 1104 Board, <i>Fares Debbabi (Universite des Antilles)*; Fateh MEHAZZEM (Université des Antilles); Ted Soubdhan (Antilles University)</i>		
16:50-17:10	Didactic Integration for the Monitoring of Electric Power Systems Using Power Monitoring Expert with MODBUS TCP/IP and IEC 61850 Communication, <i>Flavio Quizhpi (Universidad Politécnica Salesiana)*; Jefferson Adrian Gutama Chuñir (Universidad Politécnica Salesiana); Danny Fabián Cisneros Solorzano (Universidad Politécnica Salesiana)</i>		
17:10-17:30	Parameter and Siting Optimization of Concentrated Solar Power - Parabolic Trough Distributed Generation Using Elitist Non-dominated Sorting Genetic Algorithm, <i>Austin Lloyd C Catap (University of the Philippines Los Baños); RODOLFO JR. A. AGUIRRE (University of the Philippines Los Baños)*; John Paul P Manzano (University of the Philippines Los Baños)</i>		

Session W2#3	TT4- Smart Grid Researches-1 15:45-17:30	Hall	Hall-3
Chairs			
15:45-15:50	Chairs' Introduction and Welcome Messages		
15:50-16:10	Tabu Search Optimization for Energy Management in Microgrids: A Solution to Grid-Connected and Standalone Operation Modes, <i>Oussama Laayati (Hassan First University of Settat)*; Hicham EL HADRAOUI (UM6P); Mostafa Bouzi (FST SETTAT); Adila El Maghraoui (University Mohammed VI Polytechnic); Younes Ledmaoui (EHTP); Ahmed Chebak (UM6P)</i>		
16:10-16:30	Reliability Indicators of Electrical Distribution Networks in Absence of Gas and Hot Water Supply, <i>Saidjon S Tavarov (South Ural State University); Smolin Anton (South Ural State University); Adel oubelaid (LTI); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan Universiyt, Egypt)</i>		
16:30-16:50	Uncertainty Dealing Energy Management of a PV and Battery Supplied Grid Connected Charging Service Station for a Fleet of Mobile Charging Oriented Evs, <i>Gülşen Erdiñç (Istanbul Gelişim University)*</i>		
16:50-17:10	Performance Evaluation of Low Sampling Rates for Event Detection and Appliance Recognition in NILM, <i>Sumeyya Javaid (Lahore University of Management Sciences)*; Muhammad Ammar Abdullah (Lahore University of Management Sciences); Ahmad Nadeem (Lahore University of Management Sciences); Naveed Arshad (Lahore University of Management Sciences)</i>		
17:10-17:30	A Quantitative Framework to Evaluate the Resilience Enhancement in Power Distribution Feeders, <i>Mohammad Shahidehpour (Illinois Institute of Technology)*; Meher Preetam Korukonda (Illinois Institute of Technology); Shikhar Pandey (ComEd); Honghao Zheng (ComEd); Ahmed Alabdulwahab (King Abdulaziz University); Abdullah M. Abusorrah (King Abdulaziz University)</i>		
19:00-21:00	Welcome Reception at Goreme		

IEEE GPECOM 2023 Programme

CEST+1 Time Zone	Thursday June 15th
08:30-09:00	Registration
09:00-10:00	Keynote Lecture 3: The Strategies of Application of Communications Along Phase Conductors of High Voltage Power Transmission Lines for Future Power Grids Dr. Anton Merkulov, Smart Grid Division, Siemens, Kazakhstan Chair:
10:00-11:00	Keynote Lecture 4: What will it take for wireless communications to conquer the sky?, Professor Giovanni Geraci, Universitat Pompeu Fabra, Barcelona, Spain Chair:
11:00-11:30	Coffee Break

Session T1#1	TT1-Power Electronics, Devices and Controllers-2 11:30-13:00	Hall	Hall-1
Chairs			
11:30-11:35	Chairs' Introduction and Welcome Messages		
11:35-11:55	Primary Side Control of a Self-Oscillating Wireless EV Charger with Inherent ZCS Operation, <i>Konstantina Dimitriadou (Democritus University of Thrace); Nick Rigogiannis (Democritus University of Thrace); Anastasios Kyritsis (Ionian University); Nick Papanikolaou (Democritus University of Thrace)*</i>		
11:55-12:15	Enhancement of Steady-State Performance of PFC Boost Rectifier using Modulated Model Predictive Control, <i>Enis Kranda (Uskudar University)*; Mustafa Gökdağ (Karabük University); Ozan Gulbudak (Karabuk University); Dr. Natarajan Prabakaran (SASTRA Deemed University)</i>		
12:15-12:35	Machine Learning and EMI For MOSFET Aging Diagnosis, <i>Cheikhna Ma Ahmed Taleb (LATIS)*; Jaleddine Ben Hadj Slama, (Université de Sousse, Ecole Nationale d'Ingénieurs de Sousse, Tunisie); Othman Nasri (Université de Sousse, Ecole Nationale d'Ingénieurs de Sousse, Tunisie); Mamoudou Ndongo (University of Nouakchott Al Aasriya Research Laboratory URA3E Nouakchott, Mauritania)</i>		
12:35-12:55	Full Bridge DC-DC Converter Based Battery Charger with PFC CUK Converter Having Hysteresis Control, <i>Selami Karakaş (Kastamonu University); Erdal Şehirli (Kastamonu University)</i>		
13:00-14:00	Lunch Break		

Session T1#2	TT2- Electrical Machines and Drives-3 11:30-13:00	Hall	Hall-2
Chairs			
11:30-11:35	Chairs' Introduction and Welcome Messages		
11:35-11:55	FPGA Implementation of Model Predictive Control for Driving Multi-Induction Motors, <i>Ozan Gulbudak (Karabuk University)*; Mustafa GÖKDAĞ (Karabuk University)</i>		
11:55-12:15	Automatic Docking Method for Charging Connector of Electric Vehicle Based on Hybrid Force-position Compliance Control, <i>Lianming Hun (State Grid Electric Power Research Institute Co.,Ltd)*; Heng Song (State Grid Jiangsu Electric Power Co.,Ltd); Xize Jiao (State Grid Jiangsu Electric Power Co.,Ltd); Shanjun Xu (State Grid Electric Power Research Institute Co.,Ltd); Junlong Guo (State Grid Electric Power Research Institute Co.,Ltd); Zhifeng Liu (School of Mechanical and Aerospace Engineering Jilin University)</i>		
12:15-12:35	Change in the Temperature Indicators of the Individual Thermal Point by Adjusting the Rotational Speed of the Asynchronous Engine, <i>Alexey Sinyukov (Lipetsk State Technical University); Tatyana Sinyukova (Lipetsk State Technical University); Elena Grachieva (Kazan State Energy University); Stanimir Valtchev (FCT/UNL)*; Viktor Mescheryakov (Lipetsk State Technical University)</i>		
12:35-12:55	Comparison of Model Predictive Torque Control Based NPC and ANPC Inverters for IM Drive, <i>Ersan Kabalci (Nevsehir University)*; Yasin KABALCI (Nigde Ömer Halisdemir University); Aydin Boyar (Nevsehir University)</i>		
13:00-14:00	Lunch Break		

Session T1#3	TT3- Conventional and Renewable Energy-3 11:30-13:00	Hall	Hall-3
Chairs			
11:30-11:35	Chairs' Introduction and Welcome Messages		
11:35-11:55	Improvements on The P&O Method for PV Panels, Cezara-Liliana T Rat (as. dr. eng)*; Catalin-loan Ichim-Burlacu (University Polytechnica Timisoara); Manuela Panoiu (University Polytechnica Timisoara)		
11:55-12:15	PV Panel Monitoring using Arduino and LabVIEW, Cezara-Liliana T Rat (Politehnica University Timisoara)*; Catalin-loan Ichim-Burlacu (University Polytechnica of Timisoara); Caius Virgilius Panoiu (Politehnica University Timisoara); Corina Cuntan (University Polytechnica of Timisoara)		
12:15-12:35	Field Experience in Traveling-Wave Fault Locator Based Auto-Reclose Cancelling on a Hybrid Transmission Line, Erwin Dian Saputro (PLN Indonesia); Eko Prasetyo (PLN Indonesia)*; Martin Choirul Fatah (PLN Institute of Technology)		
12:35-12:55	Nonlinear Convergence Factor Based Grey Wolf Optimization Algorithm and Load Frequency Control, Gökçe Sena Hoccoğlu (Karadeniz Technical University); Nalican Çavli (Erzincan Binali Yıldırım University); Elçin Kılıç (Erzincan Binali Yıldırım University); Yahya Danayiyen (Karadeniz Technical University)*		
13:00-14:00	Lunch Break		

Session T2#1	TT2- Electrical Machines and Drives-4 14:00-15:45	Hall	Hall-1
Chairs			
14:00-14:05	Chairs' Introduction and Welcome Messages		
14:05-14:25	Efficient Driveline Architecture and Torque Distribution Strategy for Dual Traction Machines Electric Vehicles, Adel Oubelaïd (LTH)*; Khoudir KAKOUCHE (Université de Bejaia); Nasreddine Belbachir (University of Mostaganem); Toufik Rekioua (Université de Bejaia); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen); Salah Kamal (Aswan University, Egypt)		
14:25-14:45	Structural Integrity Analysis of a Two-Pole Synchronous Reluctance Machine with Non-circular Shaft, Didem Tekgün (Abdullah Gül University); Burak Tekgun (Abdullah Gul University)*; Irfan Alan (Abdullah Gul University)		
14:45-15:05	A Hybrid AOSAOA Technique for EV Parking Lot Optimization with Improved Power Quality, Prasad Rao (Koneru Lakshmaiah Education Foundation); Dr. PANDIAN A (KL India); Dr. Ch Rami Reddy (Joginpally B R Engineering College, India); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)		
15:05-15:25	Mechanical Design of a Haptic Hand Exoskeleton for Tele-Exploration of Explosive Devices, Dante Jorge Dorantes-Gonzalez (MEF University)*		
15:25-15:45	Optimal Frequency for Optimal Performance and Efficiency of a Single-Phase Wireless Power Transmission System, Richard J Wiencek (Tennessee State University); Sagnika Ghosh (Tennessee State University)*		
15:45-16:15	Coffee Break		

Session T2#2	TT4- Smart Grid Researches-2 14:00-15:45	Hall	Hall-2
Chairs			
14:00-14:05	Chairs' Introduction and Welcome Messages		
14:05-14:25	Optimal Placement of a Combined Wind-Solar Farm Supplying a Railway Network in Morocco, Amine Drissi (Mohammadia School of Engineers(EMI), Mohammed V University in Rabat)*; Mohammed OUASSAID (Mohammadia School of Engineers(EMI), Mohammed V University in Rabat)		
14:25-14:45	Low-carbon Operation of Smart House Based on Dynamic CO2 Emissions Intensity Considering Power Generation Status of Electric Power System, Shinya Yamamoto (University of the Ryukyus)*; Masahiro Furukakoi (University of the Ryukyus); Narayanan Krishna (SASTRA Deemed University); Ashraf M. Hemeida (Aswan University); Hiroshi Takahashi (Fuji Electric Co., Ltd.); Tomonobu Senjyu (University of the Ryukyus)		
14:45-15:05	Multi-objective optimization with multiple load control strategy, Yuya Tanigawa (University of the Ryukyus, Japan)*; Masahiro Furukakoi (University of the Ryukyus); Paras Mandal (University of Texas at el Paso); Alexey Mikhaylov (Financial University, Russia); Hiroshi Takahashi (Fuji Electric Co., Ltd, Japan); Tomonobu Senjyu (University of the Ryukyus)		
15:05-15:25	Using Modal Participation to Improve Numerical Stability in Power System Simulations, Noman Saied (University of Tennessee at Chattanooga)*; Abdelrahman Karrar (University of Tennessee at Chattanooga)		
15:25-15:45	Modeling of Power Losses in Contact Systems of Low Voltage Switching Devices, Almaz Petrov (Kazan State Energy University); Elena Grachieva (Kazan State Energy University); Stanimir Valtchev (FCT/UNL)*; Tatyana Sinyukova (Lipetsk State Technical University)		
15:45-16:15	Coffee Break		

Session T2#3	TT3- Conventional and Renewable Energy-4 14:00-15:45	Hall	Hall-3
Chairs			
14:00-14:05	Chairs' Introduction and Welcome Messages		
14:05-14:25	MPC-PSO of a DFIG and comparison with PI controller, <i>El kafazi Ismail (Ibn Tofail University)*; Chaymae Boubii (ENSAK)</i>		
14:25-14:45	Generator Grouping and Voltage Corrections for REI Reduction in Power Networks, <i>Abdelrahman Karrar (University of Tennessee at Chattanooga)*; Mariana Kamel (EnerNex)</i>		
14:45-15:05	Effect of Large-scale PV Integration onto Existing Electrical Grid on Harmonic Generation and Mitigation Techniques, <i>Adila El Maghraoui (University Mohammed VI Polytechnic)*; younes ledmaoui (EHTP); Oussama Laayati (Hassan First University of Settat); Hicham EL HADRAOUI (UM6P); Ahmed Chebak (University Mohammed VI Polytechnic)</i>		
15:05-15:25	Optimal Strategy of Retail Companies in the Day- Ahead Markets in the Presence of Non-Dispatchable Renewable Sources and Electric Vehicle Aggregators, <i>Hossein Shahinzadeh (Amirkabir University of Technology (Tehran Polytechnic)); Jalal Moradi (Amirkabir University of Technology); Wahiba Yaici (CanmetENERGY Research Centre, Canada); Mariacristina Roscia (University of Bergamo, Italy); Farshad Ebrahimi (University of Houston); Hamed Nafisi (Amirkabir University of Technology (Tehran Polytechnic))</i>		
15:25-15:45	Feasibility Analysis of Integrating Single-Phase Electrical Vehicle Charging Stations to Distribution Grid, <i>İlim ERDEN (Niğde Ömer Halisdemir Üniversitesi); Ersan Kabalci (Nevşehir Hacı Bektaş Veli University)*; Yasin KABALCI (Niğde Ömer Halisdemir University)</i>		
15:45-16:15	Coffee Break		

Session T3#1	TT5- Communication Technologies and Researches-1 16:15-18:00	Hall	Hall-1
Chairs			
16:15-16:20	Chairs' Introduction and Welcome Messages		
16:20-16:40	X-Band Pyramidal Horn Antenna Directivity Optimization with Symbiotic Organism Search Algorithm, <i>Reyhan Sağ Örnek (Karadeniz Technical University); Ahmet Yahya Boğa (Karadeniz Technical University); Osman Kerem Ateş (Karadeniz Technical University); Yahya Danayiyen (Karadeniz Technical University)*</i>		
16:40-17:00	Cooperative Hybrid-NOMA / Dynamic SWIPT-Pairing Mechanism for 6G THz Communications, <i>Haider W. Olewi (Brunel University London)*; Hamed Al-Raweshidy (Brunel University London)</i>		
17:00-17:20	High Resolution DoA Estimation Using LWA for MIMO OFDM Millimeter-Wave Systems, <i>Rabiu Sale Zakariyya (Southern University of Science and Technology (SUSTech), Shenzhen)*; Muhammad Umar Farooq Qaisar (Southern University of Science and Technology (SUSTECH)); Umar M. Jibrin (Department of Engineering and Space System)</i>		
17:20-17:40	Speech Command Based Intelligent Control of Multiple Home Devices for Physically Handicapped, <i>Ali Unluturk (Erzurum Technical University)*</i>		
17:40-18:00	An IoT-Based Healthcare Monitoring System with Ayurvedic Recommendations and Home Remedies, <i>Mohammad Amaan Khan (SRMCEM, LUCKNOW); Himanshi Kapoor (SRMCEM, LUCKNOW)*; Devashish Dubey (SRMCEM, LUCKNOW); Ranjan Tripathi (SRMCEM, LUCKNOW)</i>		

Session T3#2	TT3- Conventional and Renewable Energy-5 16:15-18:00	Hall	Hall-2
Chairs			
16:15-16:20	Chairs' Introduction and Welcome Messages		
16:20-16:40	Investigation of Distance Protection Applied to the Bahrain Interconnection on the Gulf Cooperation Council (GCC) Power Grid, <i>Hasan Isa (The University of Manchester)*</i>		
16:40-17:00	Distributed Hierarchical Control for Voltage Stability and Proportional Current Sharing in Island- Mode DC Microgrids, <i>Ayberk Calpbinici (Nevşehir Hacı Bektaş Veli University)*; Erdal Irmak (Gazi University); Ersan Kabalci (Nevşehir University)</i>		
17:00-17:20	Design and Simulation of the 5G Communication Infrastructure Between Solar Micro-Inverters and SCADA System, <i>Sagnika Ghosh (Tennessee State University)*; Richard J Wiencek (Tennessee State University); Maria Laurent-rice (Stillman College); Eden Black (Stillman College); Taheerah Mujahid (Stillman College); Sameer Devisetty (Texas A&M University Kingsville); Monika priya.surabattula (Texas A&M University Kingsville); Ayush Goyal (Texas A&M University Kingsville); Cesar Luna (California State University Bakersfield); Kanwalinderjit Kaur (California State University Bakersfield)</i>		
17:20-17:40	Dynamic Modeling and Simulation of Two-stage Grid Utility Scale PV System, <i>Osamuyi S Obadolagbonyi (Georgia Tech)*</i>		
17:40-18:00	Comparative Analysis of Three-Phase Configurations for Efficient Wireless Electric Vehicle Charging, <i>Richard J Wiencek (Tennessee State University); Sagnika Ghosh (Tennessee State University)*</i>		
19:00-23:00	Gala Dinner		

IEEE GPECOM 2023 Programme

CEST+1 Time Zone	Friday June 16th
08:30-09:00	Registration
09:00-10:00	Keynote Lecture 5: PEV Parking Lots for the Sustainable Energy Supply of Smart Cities Professor Aydogan Ozdemir, Istanbul Technical University, Turkey Chair:
10:00-11:00	Keynote Lecture 6: Resilience and Mixed Criticality: Concepts, Applications, and Research Challenges in the Era of Digital Twins and Metaverses Professor Aydin Sezgin, Ruhr-University Bochum, Germany Chair:
11:00-11:30	Coffee Break

Session F1#1	TT1- Power Electronics, Devices and Controllers-3 11:30-13:00	Hall	Hall-1
Chairs			
11:30-11:35	Chairs' Introduction and Welcome Messages		
11:35-11:55	Wide Voltage Conversion Ratio DC-DC Converter for Charging Ultracapacitor Bank, RAHUL . (NIT Calicut)*; Shreelakshmi MP (NIT Calicut)		
11:55-12:15	Fuzzy Based Intelligent Voltage Balancing Scheme for Matrix Connected Ultracapacitor Bank, ANUROOP P (NIT CALICUT)*; Reema Narayanan (National Institute of Technology Calicut); Shreelakshmi MP (NIT Calicut)		
12:15-12:35	Zero-Crossing Detection Using Operational Amplifier and Voltage Sensor: A Comparative Study for Power Electronic Converters, Osamah Al-Dori (Gaziantep University)*; Ahmet Mete Vural (Gaziantep University)		
12:35-12:55	Weighting Factor-Free Model Predictive Control for Three-Level Buck Converters, Hamza MAKHAMREH (Ozyegin University)*; Amer Dyab (Ozyegin University)		
13:00-14:00	Lunch Break		

Session F1#2	TT2- Electrical Machines and Drives-5 11:30-13:00	Hall	Hall-2
Chairs			
11:30-11:35	Chairs' Introduction and Welcome Messages		
11:35-11:55	Influence of the number of Sections on the Leakage Reactance of the Multi-Winding Transformer, Kamran Dawood (Astor Transformer)*; Semih Tursun (Astor Transformer)		
11:55-12:15	FPGA-Based Hysteresis Current Control for Induction Motor fed by a Voltage-Source Inverter, Ozan Gulbudak (Karabuk University)*; Mustafa GÖKDAĞ (Karabuk University)		
12:15-12:35	AI and ML-based Information Security in Electric Vehicles: A Review, Dr. Nachaat Mohamed (Rabdan Academy); Saif khomeis Almazrouei (Abu Dhabi, UAE); Adel oubelaid (LTI); Mohit Bajaj (Graphic Era, India); Francisco Jurado (University of Jaen)*; Salah Kamal (Aswan University, Egypt)		
12:35-12:55	Design and Analysis of Maximum Power Factor Control for a Three Phase Synchronous Reluctance Motor, Shahin A (National Institute of Technology Calicut)*; Shreelakshmi MP (NIT Calicut)		
13:00-14:00	Lunch Break		

Session F1#3	TT4- Smart Grid Researches-3 11:30-13:00	Hall	Hall-3
Chairs			
11:30-11:35	Chairs' Introduction and Welcome Messages		
11:35-11:55	Study of Probability Characteristics of the Reliability of Electrical Equipment in Internal Power Supply Systems, Elena Grachieva (Kazan State Energy University); Renata Petrova (Kazan State Energy University); Stanimir Valtchev (FCT/UNL)*; Tatyana Sinyukova (Lipetsk State Technical University)		
11:55-12:15	Analysis and Assessment of Grid Connected Photovoltaic Plant Performance in a Desert Climate of Southern Algeria, KHELIFI Seyfallah (URERMS)*		
12:15-12:35	Adaptive Protection in Smart Distribution Networks: Coordination Demonstration of Multi-Agent Systems, Motuma M ABAFOGI (Istanbul Sabahattin Zaim University)*; Abdulfetah Shobole (Istanbul Sabahattin Zaim Üniversitesi)		
12:35-12:55	Synergistic Effects of Magnetite Nanoparticles in the Hole Transport Layer of Organic PV Cells, Erdal Irmak (Gazi University)*; Ebru Kondolat Solak (Gazi University); Seçil Kaya (Gazi University); Sema Yiyit Doğan (Gazi University); Gülşen Taşkın Çakıcı (Gazi University)		
12:35-12:55	Modeling and Simulation of a Hydrogen -based Proton Exchange Membrane Fuel Cell for Power Generation, Salma El Aïmani (Ibn Zohr University)		
13:00-14:00	Lunch Break		

Session F2#1	TT3- Conventional and Renewable Energy-6 14:00-15:45	Hall	Hall-1
Chairs			
14:00-14:05	Chairs' Introduction and Welcome Messages		
14:05-14:25	Robust Stability Region for Time-Delayed Single-Area LFC-EV System, Ömer Aydın (Gazi University); Suud Ademnur Hasen (Gazi University); Saffet Ayasun (Gazi University)*		
14:25-14:45	Algorithmic Approaches for DER Sizing and Spatial Placement in Radial Networks, Gokturk Poyrazoglu (Ozyegin University)*; Beyzanur Aydin (Ozyegin University)		
14:45-15:05	Virtual Power Plant Challenges, Opportunities and Targets Analysis in the Current Electricity Markets, Zahid Ullah (Glasgow Caledonian University)*; Arshad Arshad (Glasgow Caledonian University)		
15:05-15:25	Earthquake Effects on Electricity Network: A Case Study in Turkish Grid, Caner ÖZEN (YEDAS)*; Kerim KAYA (YEDAS)		
15:25-15:45	Insights into the L-index Voltage Stability Assessment; A Qualitative Approach, Abdelrahman Karrar (University of Tennessee at Chattanooga)*; Mariana Kamel (University of Tennessee at Chattanooga); Mohamed Salah (University of Tennessee at Chattanooga)		
15:45-16:15	Coffee Break		

Session F2#2	TT4- Smart Grid Researches-4 14:00-15:45	Hall	Hall-2
Chairs			
14:00-14:05	Chairs' Introduction and Welcome Messages		
14:05-14:25	Gain Assessment of Powering Train Loads With Rooftop Solar Panels : Case study of Morocco, Mohamed Amine Ouaid (Mohammadia School of Engineers(EMI), Mohammed V University in Rabat)*; Mohammed OUASSAID (Mohammadia School of Engineers(EMI), Mohammed V University in Rabat); Mohamed TeBAA (Mohammadia School of Engineers(EMI), Mohammed V University in Rabat)		
14:25-14:45	Evaluating LMP Forecasting with LSTM Networks: A Deep Learning Approach to Analyzing Electricity Prices During Unpredictable Events, Başak Ersöz Yıldırım (Yıldız Technical University); Şevval Yıldız (Yıldız Technical University); Aliğül Selim Türkoğlu (Yıldız Teknik Üniversitesi); Ozan Erdiç (Yıldız Technical University)*; Ali Rifat Boynueğri (Yıldız Technical University)		
14:45-15:05	Revisiting Network Reconfiguration in the Era of Unpredictable EV Charger Integration, Eren Tekeler (Ozyegin University); Gokturk Poyrazoglu (Ozyegin University)*		
15:05-15:25	The Intelligent Mechanism for Data Collection and Data Mining in the Vehicular Ad-Hoc Networks (VANETs) Based on Big-Data-Driven, Mahshad Mahmoudian (Islamic Azad University,); Mohammadali Zanjani (Islamic Azad University); Hossein Shahinzadeh (Amirkabir University of Technology (Tehran Polytechnic))*; Yasin KABALCI (Nigde Ömer Halisdemir University); Ersan Kabalci (Nevsehir University); Farshad Ebrahimi (University of Houston)		
15:25-15:45	The Appraisal of an Innovative Residential Energy Hub Framework for a Home Energy Management Paradigm Using Two-Point Estimation Technique, Hossein Shahinzadeh (Amirkabir University of Technology (Tehran Polytechnic)); Jalal Moradi (Amirkabir University of Technology); Wahiba Yaici (CanmetENERGY Research Centre / Natural Resources Canada); Mariacristina Roscia ("University of Bergamo, Italy"); Farshad Ebrahimi (University of Houston); Hamed Nafisi (Amirkabir University of Technology (Tehran Polytechnic))		
15:45-16:15	Coffee Break		

Session F3#1	TT5- Communication Technologies and Researches-2 16:15-18:00	Hall	Hall-1
Chairs			
16:15-16:20	Chairs' Introduction and Welcome Messages		
16:20-16:40	Secure Deep Autoencoder-based 6G Channel Estimation to Detect/Mitigate Adversarial Attacks, Haider W. Olewi (Brunel University London)*; Doaa Mhawi (Middle Technical University); Hamed Al-Raweshidy (Brunel University London)		
16:40-17:00	An Overview of Big Data Concepts, Methods, and Analytics: Challenges, Issues, and Opportunities, Mahshad Mahmoudian (Najafabad Branch, Islamic Azad University); S. Mohammadali Zanjani (Najafabad Branch, Islamic Azad University); Hossein Shahinzadeh (Amirkabir University of Technology (Tehran Polytechnic))*; Yasin KABALCI (Nigde Ömer Halisdemir University); Ersan Kabalci (Nevsehir University); Farshad Ebrahimi (University of Houston)		
17:00-17:20	Digital Twin in Mining Industry: A Study on Automation Commissioning Efficiency and Safety Implementation of a Stacker Machine in an Open-Pit Mine, Nabil ELBAZI (Green Tech Institute - UM6P)*; Hicham EL HADRAOUI (UM6P); Oussama Laayati (Hassan First University of Settat); Adila El Maghraoui (University Mohammed VI Polytechnic); Ahmed Chebak (UM6P); Mustapha Mabrouki (University Sultan Moulay Slimane)		
17:20-17:40	Digital Twin-Enabled Monitoring of Mining Haul Trucks with Expert System Integration: A Case Study in an Experimental Open-Pit Mine, Nabil ELBAZI (Green Tech Institute - UM6P)*; Abderrahman Tigami (Digital Business Solution - UM6P); Oussama Laayati (Hassan First University of Settat); Adila El Maghraoui (University Mohammed VI Polytechnic); Ahmed Chebak (Green Tech Institute - UM6P); Mustapha Mabrouki (University Sultan Moulay Slimane of Benimellal)		
17:40-18:00	Deep Learning Aided Channel Estimation in Intelligent Reflecting Surfaces, Ural MUTLU (Niğde Ömer Halisdemir Üniversitesi)*; Yasin KABALCI (Nigde Ömer Halisdemir University)		

Session F3#2	TT3- Conventional and Renewable Energy-7 16:15-18:00	Hall	Hall-2
Chairs			
16:15-16:20	Chairs' Introduction and Welcome Messages		
16:20-16:40	Improved Control of DC-DC Converter for Fuel Cell and Battery Hybrid System Based on Ant Colony Optimization and RL-TD3 Agent, Claudiu I NICOLA (Research Department, National Institute for Research, ICMET Craiova)*; Marcel Nicola (Research Department, National Institute for Research, ICMET Craiova)		
16:40-17:00	Geothermal Energy: Addressing the Barriers to Widespread Generation and Use, Herschel B Herring (Florida Polytechnic University)*; Muhammad Rashid (Florida Polytechnic University)		
17:00-17:20	Design and Build A 3D Printed Single-Axis Solar Tracking Photovoltaic System, Lihong (Heidi) Jiao (Grand Valley State University)*; Kushal Shrestha (Grand Valley State University)		
17:20-17:40	A Novel Dynamic Voltage Influencing Metric for Cost-effective Voltage Control in Unbalanced Distribution Systems, Mohammad Abujubbeh (Kansas State University)*; Balasubramaniam Natarajan (Kansas State University)		
17:40-18:00	Optimizing Solar Power Generation: Real-time IoT Monitoring and ANN-Based Production Forecasting, Younes Ledmaoui (EHTP)*		
18:00-18:30	Closing Ceremony		