

## 2023 IEEE PES GT&D CONFERENCE & EXPOSITION ISTANBUL TECHNICAL PROGRAM

Day 0: Monday, May 22, 2023		Location
08:30-17:00	<b>Registration</b>	Entrance
08:00-18:00	<b>Exhibition Moves in</b>	B5
10:00-17:00	<b>IEEE PES Chapters' Meeting</b>	Beylerbeyi Room 1
10:00-17:00	<b>IEEE PES Students Chapters' Meeting</b>	Beylerbeyi Room 2
<b>TUTORIALS</b>		
10:00-12:30	<p style="text-align: center;"><b>Tutorial A</b></p> <p style="text-align: center;">EEE 1547- IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces</p> <p style="text-align: center;"><b>Babak Enayati</b> New Leaf Energy</p> <p style="text-align: center;">Room: Yıldız 1</p>	<p style="text-align: center;"><b>Tutorial B</b></p> <p style="text-align: center;">Optimal Voltage Ride-Through of IBR-Dominated Power Systems</p> <p style="text-align: center;"><b>Bikash PAL &amp; Yifei Guo</b> Imperial College London</p> <p style="text-align: center;">Room: Yıldız 2</p>
14:00-16:30	<p style="text-align: center;"><b>Tutorial C</b></p> <p style="text-align: center;">Transforming Distributed Energy Resources into Valuable Grid Assets Methods, Technologies, and Applications</p> <p style="text-align: center;"><b>Reza Razzaghi &amp; Mohsen Khorasany</b> Monash University &amp; TYMLEZ</p> <p style="text-align: center;">Room: Yıldız 1</p>	<p style="text-align: center;"><b>Tutorial D</b></p> <p style="text-align: center;">Condition Monitoring &amp; Diagnostics of Power Assets</p> <p style="text-align: center;"><b>Murtaza Hashmi</b> Saudi Aramco</p> <p style="text-align: center;">Room: Yıldız 2</p>

<b>Day 1: Tuesday, May 23, 2023</b>				<b>Location</b>
08:30-18:00	<b>Registration</b>			Entrance
10:00-18:00	<b>Exposition Visits</b>			B5
09:00-10:00	<b>Welcoming Remarks</b>			Harbiye Auditorium
	Omer Usta, General Moderator			
	Murat PINAR, EnerjiSA			
	Jessica BIAN, IEEE PES President			
	Saifur RAHMAN, IEEE President			
	Fatih Dönmez, Minister of Energy and Natural Resources			
10:00-10:30	<b>Coffee Break</b>			
10:30- 12:00	<p style="text-align: center;"><b>Supersession A</b>  “The Use of Technology for the Mitigation and Adaptation of Climate Change”  Moderator: <b>Saifur RAHMAN</b>,  IEEE President &amp; Virginia Tech</p>			Harbiye Auditorium
12:00-12:30	<b>Exposition/Exhibition Opening</b>			B5
12:30-13:30	<b>Lunch Break / Conference Luncheon</b>			
13:30-15:00	<b>Panel 1</b>	<b>Paper Session 1</b>	<b>Paper Session 2</b>	<b>Paper Session 3</b>
	“The Future of Energy Exchange” Moderator: <b>Avni Çebi</b> <b>EXIST (EPIAŞ)</b> Room: Emirgan 1	The Global Energy Transition and De- carbonization Room: Yıldız 1	Distributed Storage & Generation Systems Room: Yıldız 2	HVDC & Flexible AC Transmission System Room: Beylerbeyi
15:00-15:30	<b>Coffee Break</b>			
15:30-17:00	<b>Panel 2</b>	<b>Paper Session 4</b>	<b>Paper Session 5</b>	<b>Paper Session 6</b>
	“Advanced Clustering Techniques for Power System Data Analysis” Moderator: <b>Hiroyuki Mori</b> Meiji University Room: Emirgan 1	Power Quality Issues Associated with Microgrid Room: Yıldız 1	Power Generation & Renewables Room: Yıldız 2	Advanced Monitoring, Diagnostic, and Control Techniques Room: Beylerbeyi
17:00-19:00	<b>WELCOME RECEPTION</b>			

<b>Day 2: Wednesday, May 24, 2023</b>				<b>Location</b>
08:30-17:00	<b>Registration</b>			Entrance
09:00-18:00	<b>Exposition Visit</b>			B5
09:00-09:40	<p style="text-align: center;"><b>Keynote A</b>            "The Impact of the Energy Transformation On Wholesale Electricity Market Design and Regulation – The Australian Experience"  <b>Steve EDWELL</b>, Australian Regulation Authority</p>			
09:45-11:15	<p style="text-align: center;"><b>Supersession B</b>            "Global Perspectives on the Utility of the Future"            Moderator: <b>Wayne Bishop</b>, IEEE PES Vice President Meetings</p>			Üsküdar Room
11:15-11:45	<b>Coffee Break</b>			
11:45-13:15	<p style="text-align: center;"><b>Supersession C</b>            "Resilience and Reliability in Multi-Energy System Planning"            Moderator: <b>Fran LI</b>, The University of Tennessee</p>			Üsküdar Room
13:00-14:00	<b>Lunch Break / Conference Luncheon</b>			
14:00-15:30	<p style="text-align: center;"><b>Panel 3</b>            "Machine Learning for Power Systems"            Moderator: <b>Fran LI</b>, University of Tennessee            Room: Emirgan 1</p>	<p style="text-align: center;"><b>Paper Session 7</b>            Renewable Integration &amp; Operation 1            Room: Yıldız 1</p>	<p style="text-align: center;"><b>Paper Session 8</b>            Power System Protection            Room: Yıldız 2</p>	<p style="text-align: center;"><b>Paper Session 9</b>            Electrical Vehicles and Charging            Room: Beylerbeyi</p>
15:30-16:00	<b>Coffee Break</b>			
16:00-17:30	<p style="text-align: center;"><b>Panel 4</b>            "The Future of Transmission and Distribution Equipment Using SF6 Gas"            Organized by the <b>Association of Electromechanical Industry</b>            Room: Emirgan 1</p>	<p style="text-align: center;"><b>Paper Session 10</b>            Cyber and Physical Security            Room: Yıldız 1</p>	<p style="text-align: center;"><b>Paper Session 11</b>            Advancements in Power Transmission &amp; Distribution            Room: Yıldız 2</p>	<p style="text-align: center;"><b>Paper Session 12</b>            Big Data Utilization &amp; Analytics            Room: Beylerbeyi</p>
18:00-22:00	<b>Event Dinner</b>			Will be Located

<b>Day 3: Thursday, May 25, 2023</b>			<b>Location</b>
08:30-17:00	<b>Registration</b>		Entrance
09:00-18:00	<b>Exposition Visits</b>		B5
09:00-09:40	<p align="center"><b>Keynote B</b>  “Grid Integration of Large-Amounts of Wind and Solar”  <b>Ben KROPOSKI</b>, NREL National Renewable Energy Laboratory</p>		Üsküdar Room
09:45-11:15	<p align="center"><b>Keynotes Panel</b>  “Enhancing the Power Grid Resilience”  Moderator: Vahid Vahidinasab, Nottingham Trent University</p>		Üsküdar Room
11:15-11:45	<b>Coffee Break</b>		
11:45-13:15	<p align="center"><b>Supersession D</b>  “Women in Power”  Moderator: <b>Lale Erdem Atilgan</b>, Istanbul Technical University</p>		Üsküdar Room
13:00-14:00	<b>Lunch Break / Conference Luncheon</b>		
14:00-15:30	<p align="center"><b>Panel 5</b>  “Addressing the Challenges of Implementing OT Cybersecurity Solutions in Substations”  Moderator: <b>Jassim Al Hamad</b>, SEL  Room: Emirgan 1</p>	<p align="center"><b>Paper Session 13</b>  Renewable Integration &amp; Operation 2  Room: Yıldız 1</p>	<p align="center"><b>Paper Session 14</b>  T&amp;D Monitoring, Control, and Automation  Room: Yıldız 2</p>
15:30-16:00	<b>Coffee Break</b>		
16:00-17:30	<p align="center"><b>Panel 6</b>  “The Grid-Consumer Nexus in Decarbonizing Energy Systems”  Moderator: <b>Ioana Pisica</b>  Brunel University London  Room: Emirgan 1</p>	<p align="center"><b>Paper Session 15</b>  Microgrids Integration &amp; Operation  Room: Yıldız 1</p>	<p align="center"><b>Paper Session 16</b>  Forecasting for Grid Operation  Room: Yıldız 2</p>
17:30-18:00	<b>Closing Remarks</b>		Üsküdar Room

## **Paper Session 1: The Global Energy Transition and De-carbonization**

Date: **May 23, Tuesday, 13:30-15:00**

Chair :

2023IEEEPESGT&D007

### **Energy Consumption Tokens for Blockchain-Based End-to-end Trading of Green Energy Certificates**

Maximilian Eickhoff, Armin Exner and Axel Busboom

2023IEEEPESGT&D058

### **Investigating the Impacts of Resiliency of the Automation System on Distribution Network Resilience**

Mohammad Sadeghian-Jahromi, Mahmud Fotuhi-Firuzabad, Sajjad Fattahian Dehkordi, Matti Lehtonen and Saeed Heidari

2023IEEEPESGT&D071

### **Short-Term Heat Demand Prediction Using Deep Learning for Decentralized Power-to-Heat Solutions**

Pavani Ponnaganti, Jayakrishnan R Pillai and Birgitte Bak-Jensen

2023IEEEPESGT&D102

### **Electricity Grid Enhancement in Puerto Rico by Establishing Renewable-Based Microgrids in Vieques and Culebra Islands**

Mohammad Shahidehpour, Larissa Affolabi, Alex Nassif, Daniel Kushner, Muhidin Lelic and Shay Bahramirad

2023IEEEPESGT&D125

### **Two-Stage Bi-Level Stochastic Model for Optimal Operation of a Green Hydrogen-Based VPP**

Saman Baharvandi

2023IEEEPESGT&D127

### **Implementing Grid Supportive Behavior in Induction Motor-Driven Loads using Field Oriented Control**

Zarka Mirza and Himanshu Jain

## **Paper Session 2: Distributed Storage & Generation Systems**

Date: **May 23, Tuesday, 13:30-15:00**

Chair :

2023IEEEPESGT&D027

### **Model Identification of Distributed Energy Resources using Sparse Regression and Koopman Theory**

Javad Khazaei and Faegheh Moazeni

2023IEEEPESGT&D029

### **A Coordinated Control Scheme to Integrate Flywheels Energy Storage Systems in AGC**

Hany Farag, Ahmed Ibrahim and Ehab El-Saadany

2023IEEEPESGT&D031

### **Allocation of battery energy storage systems (BESS) to mitigate FIDVR in the Con Edison Transmission Systems**

Chang Chen, Yilu Liu, Resk E Uosef, Matthew Koenig and Constantine Spanos

2023IEEEPESGT&D109

### **Battery Sizing and Location for Provision of Network Support Services**

Njegos Jankovic, Marcelo Nogales-Balderrama, Javier Roldan-Perez and Milan Prodanovic

2023IEEEPESGT&D120

### **Battery Saving Mode for a Grid Forming Battery Storage System Operating in an Islanded Microgrid**

Ammar Atif Abdalla Ibrahim, Mohamed El Moursi, Tarek El Fouly and Khalifa Hassan Al Hosani

2023IEEEPESGT&D131

### **Evaluation of the Effects of Noise And Sample Rate on the Detection of HIF With Machine Learning Methods on the Distribution System**

Eren Baharozu, Suat Ilhan and Gurkan Soykan

## **Paper Session 3: HVDC & Flexible AC Transmission System**

Date: **May 23, Tuesday, 13:30-15:00**

Chair :

2023IEEE PESGT&D014

**Grid-Forming Control for VSC-HVDC Links Connected to Weak Grids – a Comparison Study to Vector Current Control**

Lidong Zhang, Xiaobo Yang, and Chengyan Yue

2023IEEE PESGT&D015

**A Study of a Damping Control-Based Predictive Strategy on an Inter-area Power System**

Amro Sarayrah, Mohammed Haj Ahmed, and Eyad Feilat

2023IEEE PESGT&D016

**Oscillation Damping Using Reinforcement Learning Controlled HVDC Transmission**

Rui Fan, Renke Huang, Qiuhua Huang, Jie Tan and Yu Liu

2023IEEE PESGT&D035

**Parametric Analysis of Lightning Overvoltages in High-Voltage Gas-Insulated Substation**

Selma Grebović, Senad Smaka, Vahid Helać and Nermin Oprašić

2023IEEE PESGT&D089

**An AGC Algorithm for Multi-Area Power Systems in Network Splitting Conditions**

Armağan Temiz and A. Nezih Guven

2023IEEE PESGT&D110

**AMPL based Optimization Tool for Reliability Assessment of Multi-terminal HVDC Networks Using the Monte Carlo Method**

Manuel Valois-Rodriguez and Lothar Löwer

## **Paper Session 4: Power Quality Issues Associated with Microgrid**

Date : **May 23, Tuesday, 15:30-17:00**

Chair :

2023IEEEPEESGT&D048

### **Active Damping in LCL-filter Based Three Phase Converter Using Lead-lag Network and Kalman Filter**

Imane Biyya, Ahmed Abbou and Mohamed Maaroufi

2023IEEEPEESGT&D057

### **A PMU Placement Framework in an Active Distribution Network Based on Voltage Profile Estimation Accuracy**

Amin Salehi, Mahmud Fotuhi-Firuzabad, Sajjad Fattahian Dehkordi and Matti Lehtonen

2023IEEEPEESGT&D062

### **Investigation of Renewable Energy Sources Fast Fault Current Injection Tuning on Voltage Dips**

Roosbeh Torkzadeh

2023IEEEPEESGT&D090

### **AC Fault Current Limiting Using LC DC Circuit Breaker**

Dragan Jovicic

2023IEEEPEESGT&D094

### **Computationally Robust Line Outage Detection and Identification in Three-Phase Networks**

Tuna Yildiz and Ali Abur

2023IEEEPEESGT&D133

### **According to Different Core Cross-sections Ratio Excitation Current and Harmonic Analysis of a Three-Phase Five-Limb Transformer Under GIC**

Emre Kervan and Mahmut Aksoy



## **Paper Session 5: Power Generation & Renewables**

Date : **May 23, Tuesday, 15:30-17:00**

Chair :

2023IEEEPESGT&D021

### **Appropriate Evaluation of Primary Frequency Response and Its Applications**

Chengwen Zhang, Mark Baldwin, Hongyu Li, Zhihao Jiang, Weikang Wang, Chujie Zeng, Chang Chen, He Yin and Yilu Liu

2023IEEEPESGT&D022

### **Analyzing the Computational Burden of Global-Linking Balance Equations in the Medium-Term Unit Commitment Problem**

Luis Montero, Antonio Bello and Javier Reneses

2023IEEEPESGT&D041

### **Distributed Generation Control Using a Communication Multiprotocol Prototype Gateway and Ripple Signaling**

Nikolaos Pasialis, Nikolaos Lettas, Evangelos Boutsiadis, Dimitrios Tsiamitros and Dimitrios Stimoniaris

2023IEEEPESGT&D069

### **Enhancing Machine Learning Based Solar Generation Forecasting with Time Data Utilization**

Lejla Pašić, Azra Pašić, Alija Pašić, István Vokony and József Bíró

2023IEEEPESGT&D083

### **Machine Learning Applied to the Operation of Fully Renewable Energy Systems**

Ruben Chaer, Ignacio Ramírez and Gonzalo Casaravilla

2023IEEEPESGT&D116

### **Maximum Power Point Tracking (MPPT) Enhancement of Variable-Speed Wind Energy Conversion Using Sliding Mode Controller (SMC)**

Abdalrazak Seaf Aldean, Mujahed Aldhaifallah, A.A. Saif and S. Elferik

## **Paper Session 6: Advanced Monitoring, Diagnostic, and Control Techniques**

Date : **May 23, Tuesday, 15:30-17:00**

Chair :

2023IEEEPEESGT&D044

### **Distribution System Topology Identification using Graph Neural Networks**

Rahul Madbhavi, Balasubramaniam Natarajan and Babji Srinivasan

2023IEEEPEESGT&D056

### **Assessment of Non-Intrusive Load Monitoring as a Blind Source Separation Problem**

Madhawa Herath, Migara Liyanage and Chitral Angamma

2023IEEEPEESGT&D063

### **A Comprehensive State Estimation Methodology for Multimachine Power Systems with Transmission Losses**

Natanael Vieyra, Paul Maya-Ortiz and César Ángeles-Camacho

2023IEEEPEESGT&D082

### **Sustainable and Inclusive Demand-Side Resilience: A Semi-Dynamic Model for Outage Costs**

Ali Safamanesh, Mohammad Sadegh Ghazizadeh, Mahdi Habibi and Vahid Vahidinasab

2023IEEEPEESGT&D113

### **Optimal Dead Band Control of Load Tap Changers in Distribution Networks**

Alper Savasci, Adedoyin Inaolaji and Sumit Paudyal

2023IEEEPEESGT&D128

### **Synchronized Multi-Partition Resilience System Based on IoT Platform for Interconnected Neural Power Grid-SynerGRID**

Srdjan Skok, Hrvoje Balen and Zeljko Siranovic

## **Paper Session 7: Renewable Integration & Operation 1**

Date : **May 24, Wednesday, 14:00-15:30**

Chair :

2023IEEEESGT&D030

### **Estimating the Feasible Operating Region of Active Distribution Networks using the Genetic Algorithm**

Georgios Papazoglou, Aikaterini Forouli, Emmanouil Bakirtzis, Pandelis Biskas and Anastasios Bakirtzis

2023IEEEESGT&D072

### **Operation of Energy Storage System in Renewable-Integrated Electrical Energy Grids: Consideration of Line and Generation Contingencies Besides Exploring Demand-Side Management**

Hossein Ebrahimi, Amin Yazdanejadi and Sajjad Golshannavaz

2023IEEEESGT&D085

### **Insights for the Next Solar Eclipse in Turkish Grid with Increased Solar Capacity**

Hasan Yilmaz, Sinem Kol and Gokturk Poyrazoglu

2023IEEEESGT&D092

### **Dual-objective Optimization Scheduling Model and Analysis for Regional Integrated Electricity-hydrogen System**

Qinghan Wang, Yanbo Wang and Zhe Chen

2023IEEEESGT&D104

### **The Value of Ambiguity Quantification in Distributionally Robust Economic Dispatch Models for the Wind-Penetrated Power System**

Yujia Li, Chenxi Hu and Yunhe Hou

## **Paper Session 8: Power System Protection**

Date : **May 24, Wednesday, 14:00-15:30**

Chair :

2023IEEE PESGT&D020

### **Improve the Reliability of the Traveling Wave Fault Location**

Rustem Khuziashev and Ildar Minaev

2023IEEE PESGT&D025

### **Analysis of Fault Detection Algorithms Used in Line Differential Protection (87L)**

Marziyeh Hemmati, Giambattista Gruosso and Massimo Ambroggi

2023IEEE PESGT&D037

### **Improvement in Transformer Differential Protection using Singular Value Decomposition**

Het Bhalja, Bhaveshkumar Bhalja and Pramod Agarwal

2023IEEE PESGT&D040

### **Removal of DC Offset Components by Using Two Auxiliary Signals**

Nader Jalali Marand, Hassan Sam Daliri and Hossein Askarian Abyaneh

2023IEEE PESGT&D073

### **An ENS-Oriented Voltage Protection Scheme for Inverter-based Generators in Active Distribution Networks**

Hossein Ebrahimi, Amin Yazdaninejadi, Sajjad Golshannavaz and Saeed Teimourzadeh

2023IEEE PESGT&D074

### **Research on Relay protection equipment Maintenance Decision-making Method Based on Risk Assessment**

Limin Wang, Peng Guo, Yiqun Kang and Zhoutian Yan

## **Paper Session 9: Electrical Vehicles and Charging**

Date : **May 24, Wednesday, 14:00-15:30**

Chair :

2023IEEEPEESGT&D026

### **Micro Substation with Power Voltage Transformers for EV Charging**

Tiago Santos Guimaraes and Jorge Martins

2023IEEEPEESGT&D042

### **Impacts of State-of-Charge Estimation Error on Frequency Regulation from Electric Vehicles**

Chaowanan Jamroen, Dulpichet Rerkpreedapong and Sanchai Dechanupaprittha

2023IEEEPEESGT&D060

### **Regional Impact of Freight Electrification on The Electricity Grid**

Natalia Zuniga-Garcia, Vincent Freyermuth, Monique Stinson and Olcay Sahin

2023IEEEPEESGT&D097

### **Energy Management System of an Electric Vehicle Charging Station using Q-Learning and Artificial Intelligence**

Tapiwa N Matare and Komla Folly

2023IEEEPEESGT&D119

### **Study of Electric Vehicles for Grid Services – A Gender-based Approach**

Fathy Aboshady and Ioana Pisica

## **Paper Session 10: Cyber and Physical Security**

Date : **May 24, Wednesday, 16:00-17:30**

Chair :

2023IEEEPESGT&D009

### **A Framework for Service Restoration of Cyber-Physical Power Systems**

Chaudhry Talha Hassan and Tariq Mahmood Jadoon

2023IEEEPESGT&D046

### **Identifying Concept Drift with Supervised Algorithms in Smart Grids**

Ayşe Sayın, Mostafa Mohammadpourfard and Mehmet Tahir Sandikkaya

2023IEEEPESGT&D114

### **Machine Learning Approaches in Anomaly Type Detection and Localization in Distribution System**

Mehdi Ganjkhani and Masood Parvania

2023IEEEPESGT&D115

### **Minimizing the Risk of Attacks in Electric Power Systems via Effective Grid Reinforcement of Counter Threat Technologies**

Lujia Zhan, Saharnaz Mehrani and Payman Dehghanian

2023IEEEPESGT&D136

### **A Novel Approach Detection for False Data Injection, and Man in the Middle Attacks in IoT and IIoT**

Serkan Gönen, Mehmet Ali Barışkan, Derya Yılmaz Kaplan and Ercan Nurcan Yilmaz

## **Paper Session 11: Advancements in Power Transmission & Distribution**

Date: **May 24, Wednesday, 16:00-17:30**

Chair :

2023IEEEPESGT&D010

### **OSER – A Planning Tool for Power Systems Operation Simulation and for Impacts Evaluation of the Distributed Energy Resources on the Transmission System**

Hussein Suprême, Martin de Montigny, Nicolas Compas, Guy Vanier, Mouhamadou Makhtar Dione and Niko Qako

2023IEEEPESGT&D019

### **Voltage Regulation in Transmission Systems: the Experience of TERN**

Francesco Del Pizzo, Cristiano Quaciari, Giorgio Maria Giannuzzi, Chiara Vergine, Cosimo Pisani, Alessandro Coretti, Tiziano D'Aversa, Angelo Raffaele Cassano, Vincenzo Galdi, Vito Calderaro, Lucio Ippolito and Giuseppe Graber

2023IEEEPESGT&D051

### **Parameter-Free Virtual Synchronization Technique for Terminals of Power Transmission lines**

Dian Lu, Yu Liu, Yuhao Xie, Rui Fan and Renke Huang

2023IEEEPESGT&D054

### **Challenges of DLR systems at the Implementation and Operation Level**

Levente Rácz, Dávid Szabó, Gábor Göcsei and Bálint Németh

2023IEEEPESGT&D055

### **Identification of Visible Isolation for Substations Maintenance using Graph Theory**

Samuel Marin, Juan Sebastian Salazar and Alejandro Garces

2023IEEEPESGT&D067

### **Distribution Grid Power Flexibility Aggregation at Multiple Interconnections Between The High and Extra High Voltage Grid Levels**

Neelotpal Majumdar, Marcel Sarstedt and Lutz Hofmann

## **Paper Session 12: Big Data Utilization & Analytics**

Date : **May 24, Wednesday, 16:00-17:30**

Chair :

2023IEEEPEESGT&D065

### **Evolutionary-Based Neural Architecture Search for An Efficient CAES and PV Farm Joint Operation Strategy Using Deep Reinforcement Learning**

Amirhossein Dolatabadi, Hussein Abdeltawab and Yasser Abdel-Rady I. Mohamed

2023IEEEPEESGT&D066

### **An Improved Actor-Critic Reinforcement Learning with Neural Architecture Search for the Optimal Control Strategy of a Multi-Carrier Energy System**

Amirhossein Dolatabadi, Hussein Abdeltawab and Yasser Abdel-Rady I. Mohamed

2023IEEEPEESGT&D068

### **Separated Artificial Neural Network Based Distribution System State Estimation**

Lejla Pašić, Azra Pašić, Alija Pašić, István Vokony and József Bíró

2023IEEEPEESGT&D077

### **Short-term Electricity Price Forecasting using EEMD and GRU-NN**

Khalid Rashid Chughatta and Shaikh Saaqib Haroon

2023IEEEPEESGT&D084

### **Consumers' Willingness to Invest in Smart Home Technologies Using Machine Learning: A Survey-based Analysis in Qatar**

Taha J. Alhindi, Farhad Angizeh, Ammar Abulibdeh and Mohsen A. Jafari

2023IEEEPEESGT&D132

### **Assessment of Different Health Index Aggregation Techniques for Electric Utilities**

Swasti Khuntia and Bjorn Heling



## **Paper Session 13: Renewable Integration & Operation 2**

Date : **May 25, Thursday, 14:00-15:30**

Chair :

2023IEEEPESGT&D028

### **Capacitor Optimization for EV and Renewable DG Integration**

Mahmoud Ghofrani and Mehrdad Majidi

2023IEEEPESGT&D047

### **Probabilistic Co-optimization of Hybrid Battery/Super-Capacitor Systems Integrated into Microgrids**

Soheil Mohseni and Alan Brent

2023IEEEPESGT&D049

### **DC Microgrid Applications and Their Control Techniques**

Lejla Ahmethodžić, Senad Huseinbegović, Senad Smaka and Amer Smajkić

2023IEEEPESGT&D064

### **Building-Integrated Microgrid with Zero Energy Export - Practical Approach to Sizing**

Lejla Ahmethodžić, Senad Huseinbegović, Amer Smajkić and Senad Smaka

2023IEEEPESGT&D081

### **PV/Fuel Cell/ Superconducting magnetic Energy Storage Coupled with VSG to Improve Frequency and Voltage Regulation of Power Grid**

Alhassan Alsharif and Muhammad Khalid

2023IEEEPESGT&D088

### **Regret Cost Analysis of the Generation Expansion Plans of Uruguay 2024-2033**

Gonzalo Casaravilla and Ximena Caporale

## **Paper Session 14: T&D Monitoring, Control, and Automation**

Date : **May 25, Thursday, 14:00-15:30**

Chair :

2023IEEE PESGT&D034

### **The Influence of Fragility Curves in Resilience Assessments Considering Windstorms: A Sensitivity Analysis**

Zhiyu Liao, Alexandre Serrano-Fontova, Haiyu Li and Magnus Rory Jamieson

2023IEEE PESGT&D039

### **A Novel Dynamic Voltage Influencing Metric for Cost-effective Voltage Control in Unbalanced Distribution Systems**

Mohammad Abujubbeh and Balasubramaniam Natarajan

2023IEEE PESGT&D059

### **Process Interface Units (PIU) and its Advantages for Full Digital Substations**

Adriano Pires, Hector Leon, Leandro Pintos, Patrick Montaner and Chee Pinp Teoh

2023IEEE PESGT&D098

### **A new Method for Determining the Capacitances of a CVT C-Divider with Frequency Measurements**

Thomas Bischof, David Gopp and Dmitry Atlas

2023IEEE PESGT&D101

### **Assessment of Directional Elements for Power Networks Connected to Inverted Based Renewable Resources: Problems and Mitigation Approach**

Aarthi V, Od Naidu and Alam Mahamad Nabab

2023IEEE PESGT&D124

### **Economical Setting-Free Double-Ended Fault Locator for Transmission Lines: Experiences from Recent Pilot Installations**

Od Naidu, Sinisa Zubic, Avssr Sai, Praveen An, Patrick Cost and Hakan Eriksson

## **Paper Session 15: Microgrids Integration & Operation**

Date : **May 25, Thursday, 16:00-17:30**

Chair :

2023IEEEESGT&D043

### **Optimal Energy Scheduling in Seaport Integrated Energy Systems**

Chengzhi Xie, Jinshun Su and Payman Dehghanian

2023IEEEESGT&D087

### **Correlation Between Global and Local RoCoFs and Their Relevance for Robustness Requirements of Generation Units**

Christoph Strunck, Christian Wagner, Marco Greve, René Suchantke, Johannes Weidner, Roland Becker, Tobias Hennig, Marvin Kaiser, Janek Maamann, Georg Deiml, Hans Abele and Joachim Lehner

2023IEEEESGT&D105

### **Probabilistic Integration of Demand Flexibilities in a Renewable Energy-Assisted Community Network**

Farhad Angizeh and Mohsen A. Jafari

2023IEEEESGT&D122

### **A Review of Data-Driven Smart Energy Management Systems for Distribution Networks**

Ehtisham Asghar, Martin Hill and Conor Lynch

2023IEEEESGT&D129

### **Grid Connected and Islanded Operation of Microgrids including SMES, SC, and Li/Ion Based PV Systems**

Erdal Sehirli and Omer Usta

## **Paper Session 16: Forecasting for Grid Operation**

Date: **May 25, Thursday, 16:00-17:30**

Chair :

2023IEEEESGT&D023

### **A Cost-Aware Predictive Analytics of Electricity Consumption Variables**

Hammed Akinade, Abiodun Oladejo, Yusuf Aderemi, Emmanuel Ezeako, Stephen Ojo, Opeyemi Akanbi and Taiwo Olaleye

2023IEEEESGT&D038

### **Comparing Short-Term Net Load Forecasting Methods for Solar Homes**

Scott Watts and Iain MacGill

2023IEEEESGT&D075

### **Smart Meter Customer Data Synchronization Technique by Kmean Clustering**

Leonie Bule and Nirmal-Kumar C Nair

2023IEEEESGT&D076

### **Short-Term Load Forecasting Based on Bayesian Ridge Regression Coupled with an Optimal Feature Selection Technique**

Abdullah Ashraf and Shaikh Saaqib Haroon

2023IEEEESGT&D078

### **Impact of the Size of Data on the Reliability of Short-Term Load Forecasting Using LSTM and GRU**

Abdullah Ashraf and Shaikh Saaqib Haroon

2023IEEEESGT&D121

### **Reconfiguration: Load Models Sensitivity Analysis**

Rawdha Alkuwaiti, Hany Farag, Wael El-Sayed, Ahmed Al-Durra and Ehab El-Sadaany