2020 I&CPS Virtual Conference
Technical Program
Updated: June 29, 2020

Codes and Standards Committee Session #1

Organizer: Dennis Nielsen
Chair: Tom Johnson (tjohnson@ppcwa.com)

Paper	Author	Title
2020-CSC-0287	Anthony Hoevenaars	Data Center Cooling Harmonics – How to Ensure the Good without the Bad
2020-CSC-0371	John Webb	IEC versus IEEE-ANSI MV Switchgear - Matching the Standard to the Application
2020-CSC-0364	Erling Hesla	Power Management For Data Centers – Challenges And Opportunities
2020-CSC-0368	Shenxi Zhang	Optimal Sizing of Energy Station in the Multi-energy System Integrated with Data Center

Codes and Standards Committee Session #2

Organizer: Dennis Nielsen
Chair: Steven Townsend (steven.townsend@gm.com)

Paper	Author	Title
2020-CSC-0365	Erling Hesla	Utility Services for Data Centers
2020-CSC-0366	Erling Hesla	Reliable Power for Data Centers
2020-CSC-0395	Kangping Li	A Cooperation Model of Data Center Cluster and Electricity Retailer for Demand Response

Energy Systems Committee Session #1

Organizer: Mahesh Illindala
Chair: Mahesh Illindala (illindala.1@osu.edu)

Paper	Author	Title
2020-ESC-0222	Chia-Hung Lin	Enhancement of Power System Operation by Renewable Ancillary Service
2020-ESC-0226	Bonan An	A Multi-attribute and Multi-dimensional based Comprehensive Evaluation Method for New Multi-Pulse Integrated Metro Traction Power Supply System
2020-ESC-0285	Kuo Lung Lian	Investigation of Maximum Power Point Tracking of Different Kinds of Solar Panels Under Partial shading conditions
2020-ESC-0228	Liangzi Li	A Novel DC Outlet with Adaptive output control for LVDC Household Power System
2020-ESC-0234	Payman Dehghanian	Estimating Participation Abilities of Industrial Customers in Demand Response Programs: A Two-Level Decision-Making Tree Analysis

Energy Systems Committee Session #2

Organizer: Mahesh Illindala
Chair: Mahesh Illindala (illindala.1@osu.edu)

Paper	Author	Title
2020-ESC-0218	Yu Wang	A Unified Distributed Control in Networked Microgrids for Multiple Modes of Operation
2020-ESC-0221	Sidun Fang	Adaptive Voyage-Generation Scheduling in Shipboard Microgrid under Time-varied Weather Conditions
2020-ESC-0225	Xiaodong Liang	Improving Reactive Power Sharing in Microgrids by Adaptive Virtual Impedance Approach
2020-ESC-0233	Sree Subiksha M. Reshikeshan	A framework to plan the large-scale grid-integration of distributed PV using solar irradiance and distribution feeder data
2020-ESC-0220	Tazim Ridwan Billah Kushal	A Decision Support Framework for Resilience-Oriented Cost-Effective Distributed Generation Expansion in Power Systems

Energy Systems Committee Session #3

Organizer: Mahesh Illindala
Chair: Yuan-Kang Wu (allenwu@ccu.edu.tw)

Paper	Author	Title
2020-ESC-0231	Yuan-Kang Wu	Probabilistic Forecast of Wind Power Generation with Smart Data pre-processing Technique
2020-ESC-0229	Zhiyuan Si	Hybrid Solar Forecasting Method Using Satellite Visible Images and Modified Convolutional Neural Networks
2020-ESC-0232	Fei Wang	Surface Irradiance Distribution Mapping Model for Photovoltaic Power Station Based on Ground-based Sky Images
2020-ESC-0235	Ming Yang	A Regional Wind Power Probabilistic Forecast Method Based on Deep Quantile Regression
2020-ESC-0230	David Celeita	An advanced laboratory for research and training of smart grid control and protection schemes

Power System Protection Committee Session #1

Organizer: Saleh Saleh
Chair: Rob Hoerauf (robhoerauf@earthlink.net)

Paper	Author	Title
2020-PSPC-0276	Y.L. Liang	Typical Fault Causes Recognition of Single-Phase-to-Ground Faults for Overhead Lines in Non-Solidly Earthed Distribution Networks
2020-PSPC-0282	Kaynat Zia	Determine the Electrode Configuration and Sensitivity of the Enclosure Dimensions when Performing Arc Flash Analysis
2020-PSPC-0283	Vincentius R. Mahindara	Modern Concerns and Challenges of Over-Current Protection Coordination in Distribution Systems
2020-PSPC-0280	Bijaya Paudyal	Measurement of dc Arc-flash Incident Energy in Large-Scale Photovoltaic Plants: A Basis for Standardization
2020-PSPC-0277	Xuan Wu	Expanded DC Arc Flash Model for 125V Substation Battery Backup Systems

Power System Protection Committee Session #2

Organizer: Saleh Saleh
Chair: Gary Fox (gary.fox@us.abb.com)

Paper	Author	Title
2020-PSPC-0273	Ming-Ta Yang	High Impedance Fault Detection in Overhead Distribution Feeders Using a DSP-Based Feeder Terminal Unit
2020-PSPC-0274	Amir Norouzi	Fault Currents, Circuit Breakers, and a New Method for X/R Calculation in Parallel Circuits Part I: Concepts and Approaches
2020-PSPC-0275	Amir Norouzi	Fault Currents, Circuit Breakers, and a New Method for X/R Calculation in Parallel Circuits Part II: Analysis and Application
2020-PSPC-0272	Hsueh-Hsien Chang	Fault Location Identification in Power Transmission Networks using Novel Non-Intrusive Fault Monitoring Systems
2020-PSPC-0278	Chia-Hung Lin	Faulted Line-Section Identification Method for Distribution Systems Based on Fault Indicators

Power System Protection Committee Session #3

Organizer: Saleh Saleh
Chair: Saleh Saleh (a.saleh@unb.ca)

Paper	Author	Title
2020-PSPC-0271	Juan Ramón Camarillo	Hardware-in-the-loop Testing of Virtual Distance Protection Relay
2020-PSPC-0126	Saleh Saleh	Ground Potentials in Transformerless Grid-Connected Multi-Level Power Electronic Converters
2020-PSPC-0279	Xiaodong Liang	Graph-Based Semi-Supervised Learning for Induction Motors Single- and Multi-Fault Diagnosis Using Stator Current Signal
2020-PSPC-0284	Yaswanth Nag	Use of High-Frequency Signatures for Fault Detection in MV Distribution Systems with High Penetrations of DERs

Power Systems Engineering Committee Session #1

Organizer: Fabio Freschi
Chair: Claudio Mardegan (Claudio.Mardegan@engepower.com)

Paper	Author	Title
2020-PSEC-0243	Jan Westman	Controller Hardware in the Loop Testing of an IEC 61850 GOOSE Based Control for Seamless Transition of a Microgrid Between Island and Grid Connected Modes
2020-PSEC-0247	Anibal T. de Almeida	University Campus Microgrid for Supporting Sustainable Energy Systems Operation
2020-PSEC-0251	Ming-Tse Kuo	Application of the Artificial Bee Colony Algorithm to Unit Commitments for Energy Storage Systems of a Microgrid with Master-Slave Control
2020-PSEC-0253	Luigi Martirano	A proposal of a smart microgrid for buildings of the public administration
2020-PSEC-0267	Sundari Ramabhotla	A Review on Reliability of Microgrid
2020-PSEC-0257	Giuseppe Parise	Adequacy of Hospital Power Systems as Strategic Operational Structures

Power Systems Engineering Committee Session #2

Organizer: Fabio Freschi
Chair: Kent Sayler (kent.sayler@ieee.org)

Paper	Author	Title
2020-PSEC-0250	Gaetano Zizzo	A Model for the Study of Sheath Currents in Medium Voltage Cables for Industrial Application
2020-PSEC-0263	Rodolfo Araneo	A Combined Deep Learning Approach for Time Series Prediction in Energy Environments
2020-PSEC-0268	Dev Paul	A Case History of Shore Power Transformer Taps Arcing During No-load Condition
2020-PSEC-0241	Olusola Bamisile	Analysis of Solar PV and Wind Power Penetration into Nigeria Electricity System
2020-PSEC-0240	Zhao Tianyang	Joint Power Management and Voyage Scheduling for All-Electric Ships Using Dynamic Real-Time Electricity Price of Onshore Power

Power Systems Engineering Committee Session #3

Organizer: Fabio Freschi
Chair: Xiaodong Liang (xiaodong.liang@usask.ca)

Paper	Author	Title
2020-PSEC-0237	Te-Tien Ku	Implementation of Battery Energy Storage System for an Island Microgrid with High PV Penetration
2020-PSEC-0238	Saleh Saleh	Battery Energy Storage Systems for Primary Frequency Regulation in Island Power Systems
2020-PSEC-0239	Saleh Saleh	Split-DC Bus for PMG-based WECSs with Battery Storage Units
2020-PSEC-0245	Chengfu Wang	A Two-stage Charging Facilities Planning Method for Electric Vehicle Sharing Systems
2020-PSEC-0255	Divya T. Vedullapalli	Effect of Forecaster Performance on Peak Shaving in a University Building by Battery Scheduling
2020-PSEC-0266	Roghieh Abdollahi	The Effect of the Battery Efficiency on the Customer's Optimum Demand Load Profile

Power Systems Engineering Committee Session #4

Organizer: Fabio Freschi
Chair: Sergio Panetta (spanetta@ieee.org)

Paper	Author	Title
2020-PSEC-0258	Giuseppe Parise	Basics on Switching Criteria For Safety and Integrity Procedures
2020-PSEC-0261	Payman Dehghanian	Multivariate Uncertainty Characterization for Resilience Planning in Electric Power Systems
2020-PSEC-0242	Yu Jie	New Energy Aggregators Optimal Dispatching Strategies Based on Price Incentive Agreement
2020-PSEC-0244	Lai, Kexing	Spatial-Temporal Demand Management and Benefit Allocation for Geo-Distributed Charging Stations and EV Aggregators
2020-PSEC-0249	Yang, Ming	A Short-Term Forecasting Method for Photovoltaic Power Based on Ensemble Adaptive Boosting Random Forests

Power Systems Engineering Committee Session #5

Organizer: Fabio Freschi
Chair: Payman Dehghanian (payman@email.gwu.edu)

Paper	Author	Title
2020-PSEC-0262	Muhammad Rashid	Local power control by LV distributed PV for feeder power factor correction and overvoltage mitigation
2020-PSEC-0264	Chongrag Boonseng	Field Experience Guidelines for Maintaining Passive Power Filters to Improve for Power Factor and Power Quality Using Deep Learning Algorithm
2020-PSEC-0252	Zhang, Zhenyuan	A Robust-Improved Method for Dynamic Equivalent Modeling of Active Distribution Network
2020-PSEC-0259	Wang, Fei	Optimal Bidding Strategy of DER Aggregator Considering Bilateral Uncertainty via Information Gap Decision Theory
2020-PSEC-0260	Wang, Fei	Auto-encoder Neural Network-Based Monthly Electricity Consumption Forecasting Method Using Hourly Data