Technical Committee Paper Sessions, by Committtee

Codes and Standards Committee

CSC 1	Legends B
Wednesday Nov 1	10.30 am - 12.35 pm
Session Chair	Daleep Mohla
Comparison Studies of Protective (EG) Conductor Sizing	Liu, Haijun; Farias, Anthony
Unsupervised Fault Diagnosis of Rotating Machinery: Application of Multi-scale Features and MK-MMD	Li, Xueyi; Yu, Tianyu; Yuan, Peng; Su, Kaiyu; Xie, Zhi jie; Kong, Xiangwei
New Metric Recommended for the Harmonic Standard of Power Electronic Distribution Systems	Shan, Pengbo; Sun, Yuanyuan
Detection and Classification of False Data Injection Attacks in Power Grids Using Machine Learning and Hyperparameter Optimization methods	Garza, Luis; Mandal, Paras
Critical comparative review of international standards on wireless charging for light-duty electric vehicles	CIRIMELE, VINCENZO; Freschi, Fabio

Electrostatic Processes Committee

EPC 1	Cumberland 2
Monday Oct 30	3.30 pm - 5.10 pm
Session Chair	A K M Monayem H. Mazumder
Increasing and testing the filtration efficiency of masks using a laboratory-built electrospinning device	Cselkó, Richárd; Székely, László; Pózmán, Réka Alexandra; Illés, Balázs; Géczy, Attila
Ultrasonically Enhanced Nonthermal Plasma Bubble for Wastewater Treatment	Kuroki, Tomoyuki; Kumazawa, Yuya; Yamasaki, Haruhiko; Okubo, Masaaki
Analysis of Flow Supplied by a Two-Stage EHD Gas Pump with Minimum Emitting Electrode Fitted on Two Parallel Walls	Mazumder, A K M Monayem H.
Effects of AC frequency on non-thermal plasma inactivation of aerosolized viruses	Ma, Zhenyu; Orta, Sam; Clack, Herek L.

EPC 2	Cumberland 2
Tuesday Oct 31	2.00 pm -3.40 pm
Session Chair	Maciej Noras
Characterization of corona and dielectric barrier discharge using Pockel's effect based electro-optic probe	Hegde, Sneha Satish; ZOUAGHI, Ayyoub; Gaborit, Gwenael; Vollaire, Christian; Duvillaret, Lionel
Analysis of corona and surface discharge signals from different non intrusive sensors under HVDC	Zouaghi, Ayyoub; Hegde, Sneha Satish; Vollaire, Christian; Dalstein, Matthieu
Electric Field And Acoustic Sensing Fusion In Detection Of Rock Fracturing Processes	Noras, Maciej
Industrial wastewater reuse and ammonium removal using sonoelectrochemical precipitation	Lee, Gwangtaek; Choi, Yusom; Park, Yewon; Lee, Haneol; Han, Bangwoo; Kim, Yong-Jin; Kim, Hak-Joon

EPC 3	Cumberland 2
Tuesday Oct 31	4.00 pm -5.40 pm
Session Chair	Keiichiro Yoshida
Numerical and Experimental Analysis of Plasma-Chemical Hybrid Process for Emission Control of Fossil-Fuel Fired Glass Melting Furnace	Yamasaki, Haruhiko; Kinoshita, Ryosuke; Yamamoto, Hashira; Kuroki, Tomoyuki; Okubo, Masaaki
Title: Decomposition of Carbon Particles on a Glass Surface by the Plasma Generated Using Discharge Electrodes Combined with Floating Electrodes	Yoshida, Keiichiro
On-site test on fine dust reduction in subway station using electrostatic type air purifier	Lee, Haenol; Lee, Gwangtaek; An, So-Hee; Park, Yewon; Kim, Hak-Joon
Reduction of ozone generation and durability of discharge electrode in an electrostatic precipitator with carbon brush disk electrode	Zukeran, Akinori; Mashimo, Fumiki; Katada, Ryota; Ikeda, Yuto; Yasumoto, Koji; Matsumoto, Masahiro; Matsumoto, Noboru

EPC 4	Cumberland 2
Wednesday Nov 1	10.30 am - 12.35 pm
Session Chair	David Skrovanek
Numerical analysis of a new corona ionic wind blower used for solar panel cleaning	Yanallah, Khelifa; Chelih, Amine; Bellebna, Yacine; Kadous, Nezha; Bendaoud, Zeid; ZOUAGHI, Ayyoub; Canale, Laurent, Tilmatine, Amar
Variable capacitors utilizing liquids for low-frequency wave energy harvesting	Skrovanek, David; Ludois, Daniel C.
Experimental modelling and optimization of the tribo-electrostatic separation of PET fibers from end-of-life tires	Achouri, Imed-Eddine; Zeghloul, Thami; Medles, Karim; SIMONELLI, Thomas; Le Clerc, Christophe; Dascalescu, Lucian
Influence of 3D printed surface texturing on the tribo-charging process of polymer slabs in conformal contact	Chiujdea, Cosmina; Zeghloul, Thami; CANANAU, Sorin; Bendilmi, Mohamed Sofiane; Dascalescu, Lucian

EPC 5	Cumberland 2
Wednesday Nov 1	2.00 pm -3.40 pm
Session Chair	Noureddine Zouzou
Modification of the triboelectric properties of polymers exposed to the long-term action of ambient humidity	Dani, Csaba; Zeghloul, Thami; Lungu, Mihai; Achouri, Imed-Eddine; Aouimeur, Djillali; Dascalescu, Lucian
Investigation of the charging process for non-conductive particles using a novel triboelectric charger	Rezoug, Mohammed; Touhami, S; Maammar, Mohamed; Aksa, Wessim; Zeghloul, Thami; Dascalescu, Lucian
Numerical optimization of an electro-adhesion actuator used in the application of electrostatic sorting of metal and polymer particles	Louati, Hamza; Zouzou, Noureddine

EPC 6	Cumberland 2
Wednesday Nov 1	4.00 pm -5.40 pm
Session Chair	Lucian Dascalescu
Electrostatic separation of valuable metals from finely-ground WEEE	Moulai, Hakim; Zeghloul, Thami; Menad, Noureddine; Achouri, Imed-Eddine; Medles, Karim; Dascalescu, Lucian
Optimization of the geometry of a free-fall separator equipped with two flexible electrodes	Touhami, S; Rezoug, Mohammed; Maammar, Mohamed; Aksa, Wessim; Medles, Karim; Zeghloul, Thami
Experimental study of an electrostatic spraying process	kada zair, ikram; Touhami, S; Rezoug, Mohammed; Maammar, Mohamed; Aksa, Wessim; Zeghloul, Thami
Triboelectric charging of DBD-treated granular plastic waste previously-exposed to the long-term action of high-levels of ambient humidity	Dani, Csaba; Labiod, Siham; Zeghloul, Thami; Bendilmi, Mohamed Sofiane; Ziari, Zehira; Dascalescu, Lucian

Energy Systems Committee

ESC 1	Legends E
Tuesday Oct 31	8.00 am - 10.05 am
Session Chair	Paras Mandal
Dynamic Phasor Modeling of Optimally Scheduled Prospective Islanded Microgrid	Wu, Eric; Knight, Andrew M
Disturbance Rejection Based Model Predictive Control for DC-DC Converters in Photovoltaic and Battery Energy Systems of DC-Microgrid	Merabet, Adel; Al-Durra, Ahmed; Dhar, Rupak K.
Enhancing DC Microgrid Stability under Pulsed Load Conditions through Hybrid Energy Storage Control Strategy	Aghmadi, Ahmed; Ali, Ola; Mohammed, Osama A
A Zero Harmonic Distortion Grid-Forming Converter for Islanded Microgrids	Ramos, Gabriel Vilkn;Parreiras, Thiago; Brandão, Dener Augusto de Lisboa;Silva, Sidelmo Magalhaes;Cardoso, Braz
Dynamics of Photovoltaic System with Smart Inverter Functions using Phasor Domain Model	MAMUN, M AL; Paudyal, Sumit; Kamalasadan, Sukumar

ESC 2	Legends E
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chair	Paras Mandal
Limits to the deployment of DC microgrids	Keöves, András; Iváncsy, Tamás
An Improved Nonlinear Droop Control Method Applied to DC Microgrid	Li, Fan; Zhuo, Shengrong; Huangfu, yigeng; Wang, Xiaopeng; Song, Shaolin; Gan, Ziyu
Comparative Study of Four Droop Control Strategies in DC Microgrid	Qi, Li; Gao, Min; Faddel, Samy
Distributed Coordination of Networked Microgrids for Voltage Support in Bulk Power Grids	Gray, Nathan; Sadnan, Rabayet; Bose, Anjan; Dubey, Anamika; Vu, Thanh Long;Xie, Jing; Marinovici, Laurentio D.;Schneider, Kevin P.; Klauber, Cecilia; Trinh, Wei
Physical and Virtual Energy Community: a Comparison with a Load-Demand Profiles Generator Tool (PGT)	Loggia, Riccardo; Flamini, Alessandro; Galasso, Alessandro; Massaccesi, Andrea; Moscatiello, Cristina; Micolonghi, Erica; Martirano, Luigi

ESC 3 Tuesday Oct 31 Session Chair	Legends E 2.00 pm -3.40 pm Marcos Donolo
Evaluating Power Demand Dynamics at a Rural U.S. Highway DC-Fast Charging Station	Stenstadvolden, Anders; Zhao, Long; Heidari, Mohammad; Zhou, Yuhao
Impact of Commercial EV Loads on Power Grid	Avila, Antonio; Mandal, Paras
Impacts of Residential EV Charger on the Low Voltage Distribution Network	phillips, stephanie; Haque, Md Enamul; Gargoom, Ameen
Turn to Turn Short-Circuit Fault and High-Resistance Connection Analysis for Induction Motor During Startup Transient	Mazzoletti, Manuel Armando;Bossio, Guillermo; Donolo, Pablo; Donolo, Marcos

ESC 4 Tuesday Oct 31 Session Chair	Legends E 4.00 pm -5.40 pm Marcos Donolo
Multi-Dimensional Clustering-based Innovative Machine Learning Algorithm for Short-term Load Forecasting	Mohamad Mezher, Ahmad; Hojjatinia, Zeinab; Cardenas Barrera, Julian Luciano; Meng, Julian; Castillo, Eduardo
Deep Reinforcement Learning Based Grid-forming Inverter	Balouji, Ebrahim; Backstrom, Karl; McKelvey, Tomas
Centralized Coordination of DER Smart Inverters using Deep Reinforcement Learning	Glover, Daniel; Dubey, Anamika
Voltage Control in Distribution Grids Using Topology Aware Deep Reinforcement Learning	Hossain, Rakib; Gautam, Mukesh; MansourLakouraj, Mohammad; Livani, Hanif; Benidris, Mohammed

ESC 5 Wednesday Nov 1 Session Chair	Legends E 8.00 am - 10.05 am Zhao Long
Energy demand optimization in a seawater pumping plant by energy hybridization with solar energy and batteries.	Sbarbaro, Daniel; Morán, Luis; Cekalovic, Franco
Comparing PV and Wind Turbine Electricity Generation With Electric Energy Obtained from Chicken Manure-Based Biogas Units	Mahdavi, Meisam; Jurado, Francisco; Awaafo, Augustine; Chamana, Manohar; Marfo, Emmanuel Attah;Schmitt, Konrad; Bayne, Stephen
Optimal Scheduling of a Tri-generation Plant for Blue Ammonia, Hydrogen, and Power	Hassan, Abubakr; Al-Awami, Ali T;A. Fouad, Wael; Abido, Mohammad
Offsetting Commercial Structure Electric Cooling Loads – Technical Analysis Using Grid Connected PV	Acosta, Oscar S.;Mandal, Paras; Senjyu, Tomonobu
Hydropower Development towards a Full-Renewable Energy Grid in Indonesia	Hasanah, Rini Nur; Suyono, Hadi; Kim, Jinho; Muharram, Yunita; Muljadi, Eduard

ESC 6 Wednesday Nov 1 Session Chair	Legends E 2.00 pm -3.40 pm Yuan-Kang Wu
Modeling of a Clean Hybrid Energy System Considering Practical Limitations for Techno-Economic Energy Analysis	Hurtt, James; Baker, Kyri
A GPU-Based Model for Composite Power System Reliability Evaluation and Sensitivity Analysis	Olowolaju, Joshua; Thapa, Jitendra; Hossain, Rakib; Benidris, Mohammed; Livani, Hanif
Understanding Trade-offs in Resilience Planning Decisions for Power Distribution Systems	Poudyal, Abodh; Dubey, Anamika
Capacity Configuration in Integrated Energy Production Unit Considering Ladder-type Trading Under CCER Quota	He, Muyao; Zhang, Zhenyuan; Huang, Qi; Tang, Xiaotian; Lee, Wei-Jen

ESC 7 Wednesday Nov 1 Session Chair	Legends E 10.30 am - 12.35 pm Zhao Long
Fuzzy Logic Size and Frequency Scheduling of dP-P&O Perturbation for WECS MPPT Control	Hazzab, Abdeldjebar; Hicham, Gouabi; Rezkallah, Miloud; HABBAB, Mohamed; Ibrahim, Hussein; Chandra, Ambrish
A Three-Phase WPT System with Improved Misalignment Tolerance by Using an Effective Reactive Power Compensation Technique	Lai, Ching-Ming; Liu, Hao-En; Mishima, Tomokazu
Reserch on Model Predictive Control-based Single-stage Photovoltaic System During Grid Voltage Swell	Guo, Zhonglin; Li, Ke-Jun; Liu, Zhijie; Li, Jiachen; Song, Yuanzong
Analysis and Current Stress Optimization of Novel Active Neutral Point Clamped DAB Converter with Optimal Switch Utilization	Patil, Nikhil Suresh;Belkhode, Satish; Shukla, Anshuman
Design and selection of MMC parameters for improved performance in Grid Forming Mode	Singh, Prabhat Kumar;Nallamatti, Poornachandra Rao; Shukla, Anshuman

ESC 8	Legends E
Wednesday Nov 1	4.00 pm -5.40 pm
Session Chair	Yuan-Kang Wu
Network Reconfiguration in the Presence of Distributed Generators and Voltage-Dependent Loads	Mahdavi, Meisam; Chamana, Manohar; Schmitt, Konrad; Bayne, Stephen; Jurado, Francisco; Awaafo, Augustine; Marfo, Emmanuel Attah
PCC-COI Frequency Based Auxiliary Frequency Control Strategy for Windfarm Frequency Support Improvement	liu, yaolin; sun, kaiqi; Zhu, Lingzhi; Qu, Linan; Li, Ke-Jun
Flexible Feeder Reconfiguration Based on Correlation of Load Components and Consumption Type	Mahdavi, Meisam; Chamana, Manohar; Schmitt, Konrad; Bayne, Stephen; Jurado, Francisco; Awaafo, Augustine; Marfo, Emmanuel Attah
Equivalent Model of Photovoltaic System Dynamics using Neural Network	Hossain, MD Rifat; Paudyal, Sumit; Vu, Tuyen

ESC 9	Legends E
Thursday Nov 2	8.00 am - 9.40 am
Session Chair	Lu, Shiue-Der
A Comprehensive P-Q Capability Study for Grid Interconnection of Inverter Based Resources Plant	Rahman, Shahinur; Li, Shuhui; Das, Himadry Shekhar
Specification of Low-Voltage Ride-Through Curves Using Constrained Nonlinear Programming	Lu, Shiue-Der; Chiu, Chingsheng; Wang, Meng-Hui; Liu, Hwa-Dong
Analyzing Dynamic P-Q Capability and Operational Abnormalities of PMSG Wind Turbines	Rahman, Shahinur; Li, Shuhui; Das, Himadry Shekhar
An Overvoltage Suppression Method of AC Short Circuit Faults for PV Systems	Fan, Hongjin; sun, kaiqi; Ding, Zhaohao; Zhang, Zhengfa; Qiu, Wei; Dong, Yuqing; Sun, Yuanyuan

Industrial Automation and Control Committee

IACC 1	Cumberland 5
Monday Nov 30	3.30 pm - 5.10 pm
Session Chairs	Sukumar Kamalasadan, Ahmed Saad
Stability Analysis of a Grid-connected DC Microgrid with Hybrid Renewable-Energy Systems and EV Loads	Wang, Li; Lin, Shih-Chia; Li, Ting-You; Tseng, Ching-Chuan; Li, Kang; Prokhorov, Anton V.; Mokhlis, Hazlie; Chua, Kein Huat; Tripathy, Manoj
Intelligent Bi-Directional AC-DC-AC Power Converter Control for Hybrid ACDC Power Sharing in DC Microgrids Applications	Soliman, Ahmed; Rafin, S M Sajjad Hossain; Mohammed, Osama A
Comparative Study of Four Droop Control Schemes for ACDC Active Rectifier-based DC Microgrids	Chavan, Govind Sahadeo;Abou-Jawdeh, Shaya; Qi, Li
A Model-Free Multi-Agent Reinforcement Learning Approach for Robust, Optimal, and Environment-Friendly Power Management System in a Micro-Grid	Uddin, Mohammad; Tabrizi, Yazdan
ANN-Based Secure Control of Islanded Microgrid Under False Data Injection Cyber-Attack	Kharchouf, Ibtissam; Abdelaal, Mahmoud Shaban;Mohammed, Osama A

IACC 2	Cumberland 5
Tuesday Oct 31	8.00 am - 10.05 am
Session Chairs	Suryanarayana Doolla, Sumit Paudyal
Enhancing Grid-Interactive Facilities Flexibility through a Hierarchical DERMS Control Framework: Local and Aggregator-Level Resource Optimization for Grid Services Provision	Saad, Ahmed; Huque, Aminul; Renjit, Ajit
Particle Swarm Optimization-Based PID Controller for Stabilizing Power in Dynamic Charging of Electric Vehicles	Behnamfar, Milad; Debnath, Anjan; Tariq, Mohd; Sarwat, Arif
Dynamic Stability Analysis of a Simplified Neuro-Fuzzy Direct Torque Control Scheme for a Grid-Connected DFIG-WECS with Improved Performance and Reduced Computation	Arifin, Md. Shamsul;Uddin, Mohammad
A Distributed Optimal Power Flow (D-OPF) Model for Radial Distribution Networks With Second-Order Cone Programming (SOCP)	Chowdhury, Tarik; HASAN, MD SHAMIM; Kamalasadan, Sukumar
An Alert-Ambient Enrolled Deep Learning Model for Current Reliability Prediction of Weather Impacted Photovoltaic Inverter	Roy, Sukanta; Tufail, Shahid; Riggs, Hugo; Tariq, Mohd; Sarwat, Arif

IACC 3	Cumberland 5
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chairs	Michael Smith, Kashem Muttaqi
Municipal Solid Waste Fueled Power Generation: A Case Study of Waste-to-Energy	Akter, Sharmin; Mohandas, Mohandas; Muttaqi, Kashem M;Al-Shetwi, Ali Q;Hannan, M. A.
Load Demand Forecasting Using eXtreme Gradient Boosting (XGboost)	Mohamed, Muamar; Mahmood, Farhad; Abd, Mehmmood; Rezkallah, Miloud; Hamadi, Abdelhamid; Chandra, Ambrish
Steady-State Fault Analysis of Unbalanced Power Distribution Network Utilizing a Novel Sequence Component-Based Methodology	Suresh, Arun; Murari, Krishna; Kamalasadan, Sukumar; Paudyal, Sumit
A Robust Three-Phase Shunt Active Power Filter with Frequency Adaptive PR Controller and Sensorless Voltage Control	Alathamneh, Mohammad; Ghanayem, Haneen; Nelms, Robert M
On the Fault Behavior of Inverter Controllers: Impact on Protective Relaying	Chhetija, Deepika; Khan, Imran; Rather, Zakir Hussain;Doolla, Suryanarayana

IACC 4	Cumberland 5
Wednesday Nov 1	8.00 am - 10.05 am
Session Chairs	Li Wang, Vinod Khadkikar
Hybrid FFT and HAQSE Based Method for Fast and Accurate Online Harmonic/Interharmonic Estimation in Modern Power System	Srivastava, Ankit; Rajpurohit, Bharat Singh Singh;Singh, S. N.
Magnetic Sensor Array-based Contactless Current Measurement for Multiconductor Systems Using Knowledge-assisted Evolutionary Algorithm	Ma, Chaojun; Xu, Yingying; Chen, Qing; 焦, 洋; Qu, Zeming; He, Cheng
Modified Equivalent Network Approximation Based Distributed Optimal Power Flow for Bulk Transmission Grid	HASAN, MD SHAMIM; Kamalasadan, Sukumar
Non-linear Programming Based Optimal Power Flow (N-OPF) for Bulk Transmission Grid: Modeling and Comparative Study	HASAN, MD SHAMIM; Kamalasadan, Sukumar
Digital Twin Health Monitoring of Five-Level ANPC Power Converter based on Estimation of Semiconductor On-State Resistance	Fard, Majid Tahmasbi;He, JiangBiao

IACC 5	Cumberland 5
Wednesday Nov 1	10.30 am - 12.35 pm
Session Chairs	Arif Sarwat, Fei Gao
Comparative Simulated and Measured Charging/Discharging Characteristics of a Vanadium Redox Flow Battery under Different Values of Constant Charging/Discharging Current	Wang, Li; Lai, Jui-Tse; Tseng, Ching-Chuan; Kuo, Jen-Yuan; Hsu, Ning-Yih; Prokhorov, Anton V.; Mokhlis, Hazlie; Chua, Kein Huat; Tripathy, Manoj
An NIHOC-GI-FLL Control With Seasonal ToU Tariff Based Economic Power Regulation for a Weak Grid Tied Optimally Sized SPV-BES System	Chakraborty, Subhadip; MODI, GAURAV; Singh, Bhim; Panigrahi, B K; Farooqi, Muhammad Zarkab
Novel Combined Inductive and Capacitive Wireless Power Transfer System to Reduce Power Pulsation for Dynamic Charging of Electric Vehicles	Behnamfar, Milad; Tariq, Mohd; Sarwat, Arif
A Review of Recent Developments and Challenges in the Selection of Design Parameters for Green Hydrogen Electric Vehicles	Pindoriya, Rajesh; Golechha, harshvardhan; Kumar, Ankit; Ahuja, Vineet; Sharma, Anubhav; Singh Langeh, Arshdeep; Jain, Sarthak
An Approach for Combined AC-DC On-Board Fast Charging using Three-Port Partial Power Conversion	Kushwaha, Radha; Khadkikar, Vinod; Zahawi, Bashar

IACC 6	Cumberland 5
Tuesday Oct 31	2.00 pm -3.40 pm
Session Chairs	Govind Chavan, Abdul Ofoli
Loss Minimization of Dual Active Bridge Converter through Design Optimization in CC-CV Mode for Electric Vehicle Battery Charging Applications	Surve, Uddhav; Narayana, T Hari; SRINIVAS, SRIRAMA; Ronanki, Deepak
An Enhanced Performance of Stationary Reference Frame Controlled Three-phase Vienna Rectifier under Grid Voltage Disturbances	Gude, Srinivas; Gulipalli, surya chandra; Chen, River; Li, Sam; Chu, Chia-Chi
Optimization of A Bidirectional Boost Converter for Nanogrid Applications	AL Mdanat, Rand; Saeed, Sarah; Georgious, Ramy; Garcia, Jorge; Iannuzzo, Francesco
Active Power Decoupling in Cascaded H-Bridge Converter using Secondary-Stage Isolated DC-DC Converters	Farooqi, Muhammad Zarkab; Singh, Bhim; Panigrahi, B K

IACC 7	Cumberland 5
Wednesday Nov 1	2.00 pm -3.40 pm
Session Chairs	Saleh Saleh, Ahmed S. Soliman
Rotor Magnet Fault Analysis in Permanent Magnet AC Machines under Load Conditions – All Electric Transportation Systems	Usman, Adil; Rajpurohit, Bharat Singh Singh
Implementing V/f Control for Induction Motors Fed by Wavelet Modulated Power Electronic Converters	Saleh, Saleh A. M.
A Novel Higher Stator Slots Surface-Mounted Permanent Magnet Motor for Variable Speed Drives	Hossain, Md Jabed; Felizco, Fred; Sandjong, Mireille Tankoua; McCann, Roy
Robust Ultra-Local Model Control for Single-Axis Servomechanism Actuated Through PMSM Drive Via Optimal Extended State Observer	El-Sousy, Fayez F. M.;Amin, Mahmoud; Soliman, Ahmed; Mohammed, Osama A

IACC 8	Cumberland 5
Wednesday Nov 1	4.00 pm -5.40 pm
Session Chairs	Rachid Errouissi, Mahmoud Amin
Testing a V/f Control for Permanent Magnet Synchronous Motor Drives with Wavelet Modulated Power Electronic Converters	Saleh, Saleh A. M.
Primary Admittance Based Fault Detection for Inter-Turn Short Circuit in 3-Phase Power Transformers	Liu, Zhuo; Yang, Hao; Lu, Hai Hui; Cui, Yujia; Liano, Kadir; Liu, Tim; Cheng, George; SayyarRodsari, Bijan
A comparative study of levitation prototypes for two flat steel plates of different masses	Kundu, Janardan; Yadav, Vinod Kumar
Disturbance Observer Based Control for Torque Ripple Mitigation in PMSG-based Wind Turbine During Unbalanced Grid Voltages	Viswambharan, Amulya; errouissi, rachid

Industrial Lighting and Displays Committee

ILDC 1	Cumberland 2
Monday Nov 30	1.00pm - 3.05pm
Session Chair	Marco Dalla Costa
Analysis and Design of a High Frequency Wireless Power Transfer System for LED Driver	Wang, Yijie; Chi, Yingchao; Sun, Zhan; Rong, Zhenshuai; Xu, Dianguo
A Super Compact Isolated Self-Clamped Half-bridge LC Resonant Converter With Wide Output Range and Soft-Switching Behavior	Xiong, Wei; Stankovic, Ana
High Power Density Matrix Resonant Switched-Capacitor LED Driver	Wang, Yijie; Tan, Jingyang; Han, Shouheng; Xu, Dianguo
Investigation of the Use of Switched Capacitor Converters as LED Drivers	Alonso, J Marcos; Abdelmessih, Guirguis Z.;Dalla Costa, Marco A.;Guan, Yueshi; Wang, Yijie
Magnetically-Integrated Parallel Buck-Boost and Boost Converter as a High-Efficient High-Power-Density Off-Line LED Driver	Abdelmessih, Guirguis Z.; Alonso, J Marcos; Barboza, Igor B.;Dalla Costa, Marco A.

ILDC 2	Cumberland 2
Tuesday Oct 31	8.00 am - 10.05 am
Session Chair	Leos Kukacka
A Smart Lighting Mesh-Type Network as a Backbone Infrastructure for IoT Energy Metering Development for Smart Cities	Kippke, Matias Ariel;Arboleya, Pablo; Dalla Costa, Marco A.
The Importance of Technical Regulations for Reducing Light Pollution	Galatanu, Catalin Daniel; Canale, Laurent
Flicker Visibility with Different Spectra of White Light	Kukačka, Leoš; Necasek, Jakub; Bilek, Petr; Hergesel, Jan; Vik, Michal; Drapela, Jiri; Meyer, Jan; Stiegler, Robert; Pourarab, Morteza Hossein
LED Lighting Systems with Dedicated Light Spectra Applied to Flower Cultivation	Grazziotin, Nathália; Buriol, Guilherme; Silveira, Guilherme Ribeiro;Thomas, Djeisson Hoffmann;Dalla Costa, Marco A.

ILDC 3	Cumberland 2
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chair	Laurent Canale
Statistical Analysis of Current Mismatch in Light Emitting Diode Strings	Linhares, Matheus Vargas;Grafen, Mateus Von;Teixeira, Lucas; Alonso, Jose Marcos;Dalla Costa, Marco A.
Image Switching Methods for an Arc 3D Display Using Projectors and Its Optimal Pixel Structure	Mizushina, Haruki; Taguchi, Haruto; Seko, Kazuki; Nishiyama, Shingo; Suyama, Shiro; Yamamoto, Kenji
A Comprehensive Exploration of Smart Lighting Aspects: Area of Use, Methodologies and Purposes	Parise, Giuseppe; Kermani, Mostafa; Zissis, Georges; Cumberbatch, Toby
IEEE PAR1789 compliant low-cost permanent emergency lamp based on a series resonant converter in combination with a low-dropout current	Quintana-Barcia, Pablo J;Ribas, Javier; Rodriguez, Diego; Chinchero, Hector F.;Rico-Secades, Manuel

Metals Industry Committee

Metals 1	Cumberland 6
Monday Nov 30	1.00pm - 3.05pm
Session Chair	Özgül Dalor
THE JOURNEY TO DEVELOP A NEW IEEE STANDARD IN THE METALS INDUSTRY	Durocher, David B;Dionise, Thomas J.;Mohla, Daleep
A LWIR reflectometer for water detection on steel strip	Lopera Templado, Juan; Pereiras García, Bruno; Lopera, Juan; Rodríguez de Castro, Alejandro
Location Monitoring System to Prevent Falls of Cathodes in Industrial Electrolysis Facilities.	delaCalle, Francisco J.;Gómez, Alberto; Daniel, García; Usamentiaga, Ruben
Rail flatness measurement based on dual laser triangulation	Usamentiaga, Ruben; Daniel, García; delaCalle, Francisco J.

Metals 2	Cumberland 6
Tuesday Oct 31	8.00 am - 10.05 am
Session Chair	Juan Lopera
Hybridization of a Wind Farm and a Photovoltaic Plant in a Steelworks with an Energy Storage System	Alonso Orcajo, Gonzalo Arturo; Cano, José M.; G. Norniella, Joaquín; PEDRAYES GONZALEZ, JOAQUIN FRANCISCO; Rojas-Garcia, Carlos Hiram; Rodríguez Diez, Josué
Deep RL-Enabled Inverters: Strengthening RES Integration in Grids with Electric Arc Furnaces	Balouji, Ebrahim; Al Khatib, Safwan; Salor, Ozgul
Investigation of Battery Energy Storage Utilization Strategies for Reducing the Unscheduled Power Flows in the Interconnection Lines Caused by Multiple Electric Arc Furnace Operations	Altintas, Erinc; CADIRCI, Isik; Salor, Ozgul; taplamacioglu, muslum cengiz
An Electric Arc Furnace Model Based on Resynthesis Using Frequency Spectrum Distributions of EAF Currents	Gök, Görkem; Salor, Ozgul; taplamacioglu, muslum cengiz

Metals 3	Cumberland 6
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chair	Thomas Dionise
Fault Modeling and Reliability Impact Analysis of Modular Design in Medium Voltage Converters	Salvador Ferreira, Guilherme; Cardoso, Braz; Soares Lopes, Victor Hugo;Rocha, Anderson Vagner;Mamianja Rakotozafy, Andriamaharavo; Siala, Sami
Efficiency Characteristics of WPT System with Laminated Nanocrystalline Core Considering Nonlinear Factors Caused by Crushing and Compressing Process	Zhang, Xueying; Han, Yu; Li, Liang chen; Chen, Jiaqi; Tian, Zihan; Wu, Xiaokang; Eldeeb, Hassan H.;Xu, Guorui; Zhao, Haisen
Hybrid Ferromagnetic Core Composed of Ferrite and Nanocrystalline alloys for Wireless Charging in Electric Vehicle Application	Qiu, Yue; Zhang, Xueying; Chen, Pengfei; Tian, Zihan; Yang, Fuyao; Zhao, Haisen
Influence of Negative Excitation on Loss and Temperature Field of Dual-Excited Synchronous Condenser	Xu, Guorui; Yuan, Zeyu; Zhan, Yang; Zhao, Haisen
Influence of Temperature Rise in Stator End Region on Reactive Power Consumption Ability of Dual-Excited Synchronous Condenser	Xu, Guorui; Wang, Linge; Zhao, Haisen; Zhan, Yang

Power Systems Engineering Committee

PSEC 1	Legends A
Tuesday Oct 31	8.00 am - 10.05 am
Session Chair	Xiaodong Liang
Black Start Strategy of DRU-Based Low-Frequency AC Transmission System for Offshore Wind Power Integration	Huang, Xiaowei; Xiao, Huangqing; Huang, Ying; Liu, Tao; Yang, Ping
Transmission Structure Corrosion due to Stray Currents and Inspection Techniques: A Review	Wang, Chenyang; Chowdhury, Shaikat; Liang, Xiaodong
Stator Inter-Turn Fault Detection for Line-connected Induction Motors Using Convolutional Neural Network	Nazemi, Mohammad; Liang, Xiaodong; haghjoo, farhad
MV CABLE SHIELD GROUNDING – SAVE ENERGY, MITIGATE CABLE DERATING, AND AVOID CABLE SHIELD CORROSION	Paul, Dev
Novel Design Algorithm for LCL grid filters including Consideration of arbitrary Grid Codes	Johannliemke-Appelbaum, Simon; Gladen, Marcel; Staudt, Volker

PSEC 2	Legends B
Tuesday Oct 31	8.00 am - 10.05 am
Session Chair	Daniel Ihlenfeldt
Estimation of High Frequency Arc Conductance in High Voltage Aircraft Systems Using Modified Mayr Model	Alabani, Abir; Negrin Sanchez, Raul; Chen, Lujia; Cotton, Ian
Novel GIS-Based Methodology to Quantify the Risk of Wildfires in Overhead Transmission Lines - A Case Study	de Sousa Berredo, Alessandro Cesar; Smith, Michael
Comparative Analyses of Frequency Regulation Strategies by Modeling the Controllers of Wind Turbines in PSS/E	Chung, Yu-kai; Wu, Yuan-Kang
Impacts of Electric Vehicle Integration on Three-Phase Four-Wire Microgrids and Distribution Systems	Sinjari, Khalil; Alzahrani, Saad; Nguyen, Nga; Mitra, Joydeep
Accurate Representation of Distribution System Dynamics in Bulk System Studies by Clusters of Composite Load Models	Ramapuram Matavalam, Amarsagar Reddy; Venkatraman, Rama; Ajjarapu, Venkataramana

PSEC 3	Legends A
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chair	Kent Sayler
Transfer Function Derivation for easily scalable Two-Port Network as Basis for Filter Design	Johannliemke-Appelbaum, Simon; Gladen, Marcel; Staudt, Volker
Voltage Survivability Analysis of Power Systems	Saleh, Saleh A. M.;Alba Betancourt, Osleni Antonio Antonio;Meng, Julian; Sanchez, Zaid; Zundel, Eric; Ozkop, Emre; Ahshan, Razzaqul
Effects of Loading Levels on Harmonic Distortion in Power Transformers Due to GIC Flows	Saleh, Saleh A. M.;Zundel, Eric; Cardenas Barrera, Julian Luciano; Hill, Eugine; Meng, Julian; Morris, Greg; Brown, Scott
Pseudo Attack Based Algorithm for Detecting False Data Injection Attacks in State Estimation	Nazir, Mohammad Yasir; S, Chandrasekaran; chelliah, thanga raj
Towards Next-Generation Smart Ports: A Review on Seaport Microgrid, Smart Architecture, and Future Prospects	Sadiq, Muhammad; Su, Chun-Lien; Terriche, Yaccine; Aragon, Carlos Alfaro; Ali, Syed Wajahat; Buzna, Lubos; Parise, Giuseppe

PSEC 4	Legends A
Wednesday Nov 1	10.30 am - 12.35 pm
Session Chair	Xiaodong Liang
Capacitor Voltage Ripple Control Strategy of Lightweight Modular Multilevel Converter for Offshore Wind Power Transmission	Xiao, Huangqing; Gan, Huichen; Huang, Ying; Cai, Zexiang
Segmented Static Wires and Fault Location	Orndorff, Robert; Alvarez, Genesis B.;Ilunga, Gad; Till, Micah J.;Vance, Katelynn
Joint Management and Optimization of Residential Natural Gas and Electricity Distribution Networks Coupled via Fuel Cells	Rouholamini, Mahdi; Wang, Caisheng
Bayesian Regularization-based MPC for a Hybrid Modular Multilevel Converter	Hosseinpour, Hadis; Dragicevic, Tomislav; Benidris, Mohammed
Volt/VAR Regulation-Oriented Reliability Assessment in Distribution Systems	Hosseinpour, Hadis; MansourLakouraj, Mohammad; Benidris, Mohammed; Livani, Hanif

PSEC 5	Legends A
Wednesday Nov 1	2.00 pm -3.40 pm
Session Chair	Saleh Saleh
Design and Development of A Low-cost and Conveniently-deployable Behind-the-meter Monitoring Device	Yin, He; Yu, Wenpeng; Wu, Yuru; Qiu, Wei; Liu, Yilu
Design and Analysis of a Bidirectional Wireless Power Transfer System for Dynamic Charging of Electric Vehicles	Ifte, Khairul Amin; Islam, Md. Nahid; Hasan, Md. Kabir; Jaman, Azam; Uddin, Mohammad
Design of Data Distributed Service-Based Distributed Co-Simulation Platform of Power Systems	Wen, Jianfeng; Lin, Jiang; Chu, Chia-Chi; Zhu, Jietong; Qiu, Zitian
PMASynRM local demagnetization fault behavior study under targeted harmonic excitation	Creux, Jérémy; Haje Obeid, Najla; Boileau, Thierry; Meibody-Tabar, Farid

PSEC 6	Legends B
Wednesday Nov 1	2.00 pm -3.40 pm
Session Chair	Sergio Panetta
Causes and Consequences of Widespread Power Blackout Across Taiwan on March 3, 2022	Liu, Jian-Hong; Chu, Chia-Chi
Composite Power System Reliability Assessment Considering Uncertainty of Electric Vehicle Charging and PV Power Generation	Thapa, Jitendra; Olowolaju, Joshua; Livani, Hanif; Benidris, Mohammed
Implementation of an Online State Estimator in an Edge Computing Device for European-type Industrial LV Grids	Alsyoufi, Yamen; Cano, José M.; Alonso Orcajo, Gonzalo Arturo; Piedra, José Manuel
SWITCHGEAR RETROFITTING: A LOOK BACK OVER 40 YEARS: The Evolution and Future of Practices and Standards in Equipment Life Extension	Webb, John C

PSEC 7	Legends A
Wednesday Nov 1	4.00 pm -5.40 pm
Session Chair	Sergio Panetta
Improving Monte Carlo Analysis of Power Systems With Data Clustering and Vector Fitting	Ross, Brett; Johnson, Brian K
State-of-Charge Balancing of Supercapacitors: A Consensus-Based Approach	Li, Fei; Chang, Taozhen; Li, Heng; He, Peinan; He, Wei; Huang, Zhiwu
Influence Analysis of Sub-synchronous Oscillation on Commutation Failure for LCC-HVDC Systems	Feng, Jing; Liu, Zhijie; Li, Bingkun; Li, Liangzi; Li, Ke-Jun; Li, Jiachen
Multi-time-scale Electromagnetic Modeling of A Battery-integrated Solid-state Transformer	Li, Liangzi; Li, Ke-Jun; sun, kaiqi; Liu, Zhijie; Feng, Jing

PSEC 8	Legends B
Wednesday Nov 1	4.00 pm -5.40 pm
Session Chair	Luigi Martirano
Capacitive Behavior of Electrical Power Systems with Distributed Nonlinear Loads	Massaccesi, Andrea; Flamini, Alessandro; Loggia, Riccardo; Moscatiello, Cristina; Galasso, Alessandro; Martirano, Luigi
Smart Digital Current Simulator (SDCS) for BESS Power Management	Galasso, Alessandro; Flamini, Alessandro; Massaccesi, Andrea; Loggia, Riccardo; Moscatiello, Cristina; Martirano, Luigi
Distribution Systems Reconfiguration Considering Load Type: An Efficient Model	Mahdavi, Meisam; Schmitt, Konrad; Bayne, Stephen; Chamana, Manohar; Jurado, Francisco; Marfo, Emmanuel Attah;Awaafo, Augustine
Impact of Ambient Temperature Increase on Distribution Network Load and Configuration	Mahdavi, Meisam; Awaafo, Augustine; Jurado, Francisco; Marfo, Emmanuel Attah;Chamana, Manohar; Schmitt, Konrad; Bayne, Stephen

PSEC 9	Legends A
Wednesday Nov 1	8.00 am - 10.05 am
Session Chair	Sergio Panetta
Distribution Feeders Reconfiguration Considering Dependency of Time-Varying Loads on Grid Voltage	Mahdavi, Meisam; Awaafo, Augustine; Jurado, Francisco; Marfo, Emmanuel Attah;Chamana, Manohar; Schmitt, Konrad; Bayne, Stephen
Grid-Aware Waveform Analytics for Event Classification in Distribution Grids	MansourLakouraj, Mohammad; Hosseinpour, Hadis; Livani, Hanif; Benidris, Mohammed
Comparing Transient Stability Parameters for Different Magnitudes of PV Penetrated Power Grid.	Mishan, Ramkrishna; Abdelkader, Abdelrahman; Egan, Matthew; Benidris, Mohammed
Efficient Dynamic Simulation of Unbalanced Distribution Grids with Distributed Generators	MAMUN, M AL; Paudyal, Sumit; Kamalasadan, Sukumar
Investigation of Electric Vehicles Charging Stations in LAMBDA Microgrid Laboratory	Shirdare, Erfan; Kermani, Mostafa; Moscatiello, Cristina; Martirano, Luigi

PSEC 10	Legends B
Wednesday Nov 1	8.00 am - 10.05 am
Session Chair	Xiadong Liang
Automatic Frequency Control Ancillary Service and Virtual Inertia from BESS in Microgrid	Gu, Jyh-Cherng; Lin, Jing-Lun; Yang, Ming-Ta
Multi-Agent Reinforcement Learning-Based Maximum Power Point Tracking Approach to Fortify PMSG-Based WECSs	Tabrizi, Yazdan; Uddin, Mohammad
GENERALIZED MODEL OF AN ARC FAULT CURRENT IN A.C. &D.C.	Parise, Giuseppe; Scarpino, Pietroantonio
Determining Relationship between Load Type and Its Components in Distribution System Reconfiguration	Mahdavi, Meisam; Gopi, Pasala; Jurado, Francisco; Awaafo, Augustine; Marfo, Emmanuel Attah;Chamana, Manohar; Schmitt, Konrad; Bayne, Stephen

PSEC 11	Cumberland 5
Thursday Nov 2	8.00 am - 9.40 am
Session Chair	Sergio Panetta
DC Arc Flash above 1000 V based on Statistical Regression Analysis	Hussain, Mohammed Zahid; Brown, William; Alsafasfeh, Qais Hashim
Performance comparison between single-phase and IEEE-1547 three-phase voltage-reactive power controls for three-phase photovoltaic systems	Issa, Wisam A. M.;Pinto, João; Tolbert, Leon; Junior, Luigi Galotto
Resilience Evaluation for Power Distribution Systems Impacted by Winter Storms	Quezada, Orlando; Mandal, Paras; Galvan, Eric; Kamalasadan, Sukumar
Robustness Assessment of Distributed OPF under Communication Non-idealities using Cyber-Physical Co-simulation Framework	Paul, Subho; Gray, Nathan; Dubey, Anamika; Bose, Anjan; Touhiduzzaman, Md.; Ogle, Jim

PSEC 12	Cumberland 6
Thursday Nov 2	8.00 am - 9.40 am
Session Chair	Yuqing Dong
Development of Real-time High-Density Pulsar Data Transmission and Processing for Grid Synchronization	Qiu, Wei; Chen, Zhangqing; Tang, Sihao; Zheng, Yao; Liu, Cheng; Yin, He; Liu, Yilu; Yao, Wenxuan
Cost-Benefit Analysis of a European Dynamic Line Rating Project	Rácz, Levente; Szabó, Dávid; Göcsei, Gábor; Mátrai, Tamás; Németh, Bálint; Szücs, Gábor
Fast Frequency Response using Reinforcement Learning-Controlled Wind Turbines	Gao, Wei; Fan, Rui; Qiao, Wei; Wang, Shaobu; Gao, David Wenzhong
Data-driven based FDIAs Detection and Sensitive Feature Identification for Cyberattack Defending of Renewable Energy	Gao, Yidian; sun, kaiqi; Qiu, Wei; Ding, Zhaohao; Li, Ke-Jun; Li, Yahui

PSEC 13	Cumberland 5
Thursday Nov 2	10.00 am - 11.45 am
Session Chair	Sergio Panetta
Short-Term and Rolling Solar PV Power Forecasts: Performance Evaluation and Hyperparameter Tuning of Deep Learning Models	Paudel, Alisha; Montoya, Armando; Mandal, Paras
Temporal Convolutional Network Ensemble for Day-Ahead and Week-Ahead Electricity Price Forecasting	Lee, Nathan; Mandal, Paras
Challenges with the Black Start Capability of Hydro Units while Upgradation of Transmission Lines	Verma, Surabhi; chelliah, thanga raj
Gaussian Process Regression-based Smart Inverters' Volt-VAR Control	Olowu, Temitayo O;Debnath, Anjan; Olasupo, Isaac Oluwuyi;Sarwat, Arif

PSEC 14	Cumberland 6
Thursday Nov 2	10.00 am - 11.45 am
Session Chair	Xiadong Liang
Two-Timescale Control of Smart Inverters and Legacy Devices in Unbalanced Distribution Feeders	Olowu, Temitayo O;Inaolaji, Adedoyin; Paudyal, Sumit; Sarwat, Arif
A Real-time Cyber-Physical Simulation Testbed for Cybersecurity Assessment of Power Systems	Nguyen, Thai-Thanh; Hooshyar, Hossein; Kadavil, Rahul
Low-carbon economic dispatching for active distribution network with shared energy storage	Wang, Kang; Wang, Chengfu; Yao, Wenliang
Rolling and Day-Ahead Forecasting of Electricity Market Prices: Evaluating the Performance of DL Models with Bayesian Optimization	Darvishi Niafenderi, Sajedeh; Mandal, Paras

PSEC 15	Legends A
Tuesday Oct 31	4.00 pm -5.40 pm
Session Chair	Luigi Martirano
Distributed Collaborative Optimization Model for Multiple Park-level Integrated Energy Systems based on Improved Shapley Value	Liu, Chunling; Wang, Chengfu; Yao, Wenliang; Liu, Chao
Low-Carbon Optimal Dispatch in Active Distribution Network Considering Centralized and Distributed Energy Storage Coordination	Wang, Guoying; Wang, Chengfu; Feng, Tianyuan; Wang, Kang; Yao, Wenliang; Zhang, Zhaosong
Design and Development of a Scaled Prototype of a 250MW Hydrogenerator Fed 765 kV Transmission Lines to Test Sub-Synchronous Oscillation in Power System Laboratory	Mohale, Vijay; ALI, JAVED; chelliah, thanga raj; Hote, Yogesh Vijay
A Novel Pulsar Analog Front-end for Grid Synchronized Measurement	Zheng, Yao; Qiu, Wei; Tang, Sihao; Chen, Zhangqing; Liu, Cheng; Yao, Wenxuan

PSEC 16	Legends B
Tuesday Oct 31	4.00 pm -5.40 pm
Session Chair	Yuqing Dong
Rapid Monitoring and Defense Approach for Resilience Improvement of Grid Cyber Security	Qiu, Wei; Dong, Yuqing; Yin, He; He, Minjun; She, Buxin; Liu, Yilu
A Rapid Method for Power Grid Risk Assessment Using Fault Set Segmentation and Huffman Screening	Che, Chang; Wang, Yong; Zhang, Guozheng; Liu, Wenbo
Enhancing Data Transmission and Storage Efficiency in Power Grids through Compression of Point-on-Wave Data	Wu, Yuru; Yin, He; Qiu, Wei; Liu, Yilu
Stochastic Scheduling Strategy for Integrated Energy System Considering Probability Interval Model of Integrated Demand Response Uncertainty	Cui, Yongling; Wang, Chengfu; Wang, Kang

PSEC 17	Legends A
Tuesday Oct 31	2.00 pm -3.40 pm
Session Chair	Luigi Martirano
Shared Energy Storage Operation Mechanism Based on Cooperative Game Theory and CPS Hierarchical Architecture	Dai, Jianwei; Wang, Yong; Wang, Chengfu; Jin, Fei
Integration of Battery Energy Storage Dispatch Using Model Predictive Control for Efficient Microgrid Energy Management System	Ponce, Giovanni; Mandal, Paras; Galvan, Eric
Safe Deep Reinforcement Learning-based Real-Time Operation Strategy in Unbalanced Distribution System	Yoon, Yeunggurl; Yoon, Myungseok; Choi, Sungyun
A Neuro-Fuzzy Based Power Control of a Type-3 based Wind Energy Conversion Systems with LVRT Capability	Arifin, Md. Shamsul;Uddin, Mohammad; Yeo, Isabel; Rezaei, Nima

Power Systems Protection Committee

PSP 1	Legends F
Wednesday Nov 1	8.00 am - 10.05 am
Session Chair	Carson Bates
Single-phase Isolated VT Based Novel Structure for Power Distribution System and New Theoretical/Practical Judgement Criteria in Detecting High Impedance Earth Faults	Zhang, Hua; Su, Xueneng; Ning, Xin; Zhang, Zhenyuan; Zhang, Jian; Long, Chen; Li, Shilong; Gao, Yiwen; Zhang, Rui
Investigation of Transformer Lockout Event Caused by Breaker Failure Protection Misoperation	Korede, Ibukunoluwa Olayemi
A New Protection Scheme for Static Transfer Switch using Quasi Resonant Turn-off Technique	Bose, Veerakumar; Habib, Hany; Belcastro, Christopher Alan;Suryanarayana, Harish
Designing and Implementing Quasi Resonant Turn-off Circuit Utilized for Protection against Power Quality Issues	Bose, Veerakumar; Habib, Hany; Belcastro, Christopher Alan;Suryanarayana, Harish
A proposal to increase the operating capacity of synchronous compensators through negative excitation and effects on stability and LOE protection	Silva, Hiago Guimarães;COELHO, AURELIO L. M.

PSP 2	Legends F
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chair	Carson Bates
Surge Protection of Charging Stations Against Impinging Overvoltages due to Negative Lightning Strikes to Incoming Medium Voltage Line	Staikos, Evangelos Theocharis;Hadjicostas, Alexandros; Datsios, Zacharias G.;Peppas, Georgios D.;Antrias, Christos; Zagkoumidis, Kyriakos Pavlos; Ayfantopoulou, Georgia Theocharis;Tsovilis, Thomas E.
Evaluation of the Electric Stress on an Insulating Down-Conductor caused by Lightning Strikes through ATP-EMTP Simulations	Samaras, Pavlos K.;Staikos, Evangelos Theocharis;Datsios, Zacharias G.;Mikropoulos, Pantelis N.;Tsovilis, Thomas E.;Kokkinos, Nicholaos
Intrusion Detection System with Updated Structure and Feature Selection Algorithm for Man-In-The-Middle Attacks in the Smart Grid	Gao, Ziran; Illindala, Mahesh; Wang, Jiankang
Findings on the response of legacy line distance protection in IBR-based power systems	Quintero, Andres; Ramos, Gustavo gramos@uniandes.edu.co
From virtual relays to hybrid twin using low cost hardware-software platform	Sequeda, Warley; Ramos, Gustavo gramos@uniandes.edu.co

PSP 3	Legends F
Wednesday Nov 1	2.00 pm -3.40 pm
Session Chair	Carson Bates
Dynamic Adaptive Relaying for Distribution Grids with High Inverter-based Generation	Sawant, Jay Ramesh; Jain, Rishabh
Control Design for Energy Storage Dispatch in Existing Critical Facility Microgrids Connected to Weak Utility Systems	Montoya, Luis; Cen, Siye; Chandra, Souvik; Husain, Iqbal; Buck, Edward
Preliminary Results on the Surge Current Withstand Capability of Natural Ester Oil	Tsovilis, Thomas E.;Hadjicostas, Alexandros; Staikos, Evangelos Theocharis;Tsekouras, Konstantinos; Datsios, Zacharias G.;Peppas, Georgios D.

PSP 4	Legends F
Wednesday Nov 1	4.00 pm -5.40 pm
Session Chair	Carson Bates
An Arm Inductance Variation Identification Method for Modular Multilevel Converters	Xiao, Huangqing; He, Hongliang; Gan, Huichen; Huang, Xiaowei; Dai, Leisi; Wang, Jun
Unsupervised High Impedance Fault Detection Using Autoencoder and Principal Component Analysis	Liu, Yingxiang; Razeghi-jahromi, Mohammad; Stoupis, James
A Review of Data-Driven Solutions to Power Up Maintenance of Electrical Systems for Predictive Decision Making Through Fault Analysis	Laiton, Natalia; Sicacha, Victor; Garzon, Ana Maria;Celeita, David; Dung, Trung

Industry Track Presentations

IT 1 - Industry Practices, Case Studies and Lessons Learned	Legends G
Tuesday Oct 31	8.00 am - 10.05 am
Session Chair	Adil Usman
Reactive Power Requirement for Solar PV Plants	Sanjeev Bhatia, Bechtel
Adding Multi-Megawatt Solar PV to an Industrial Plant	Carson Bates, NEI
Ground Fault detection for Inverters in Solar PV Plants	Sanjeev Bhatia, Bechtel

IT 2 - Industry Practices, Case Studies and Lessons Learned	Legends G
Tuesday Oct 31	10.30 am - 12.35 pm
Session Chair	Keith Waters
Cybersecurity Protection for Electrical Infrastructure	Keith Waters, Schneider Electric
Introduction to Datacenters	Willam Schaumann, Burns & McDonnell
Seismic Certification Standards for Electrical Equipment for Building Code Applications	Jeffrey Gatscher, Schneider Electric
The Need for DC Power Distribution Protective Devices	John Shea, Schneider Electric

IT 3 - Industry Practices, Case Studies and Lessons Learned	Legends G
Tuesday Oct 31	2.00 pm -3.40 pm
Session Chair	Adil Usman
Application of Medium Voltage Current Source Inverter (CSI) Drives Advanced Features for Incoming Power Systems: Example Cases in the Industrial Applications	Adesh Khan, Rockwell
Integration of Permanent-Magnet Synchronous Hydro Generators into a Campus MicroGrid	Timothy Coyle, KFI Engineers
Practical experience with induced phenomena on US and Central-European double-circuit transmission lines	Richard Cselko, Budapest University of Technology and Economics
A Technilogical Breakthrough in the EAF Process Area	A. Mordeglia, Danieli Automation

Special Panel Sessions

SPS 1	Legends G
Monday Oct 30	1.00pm - 2.30 pm
High Efficiency Electric Motors for Industry and Electric Vehicles	
Session Chair	Adil Usman
Rajib Mikail, (ABB US Corporate Research	
Ghanshyam Shrestha, (ABB IEC LV Motors Division)	
Vandana Rallabandi, (ORNL)	
Adeeb Ahmed, (Ford Motor Company)	

SPS 2	Legends G
Wednesday Nov 1	10.30 am - 12.00 pm
Time Series Power Flow for Transmission and Distribution Studies for a Future with High Renewable Penetration	
Session Chair	Adil Usman
Moderator	Xuan Wu,F469 Sr. Manager, Standards, AES US Utilities
Ravikanth Varanasi (1998 & Co, a part of Burns and McDonnell)	
Hui Zhang (New Energy Technologies, AES Corporation)	
Piyasak Poonpun (Sacramento Municipal Utility District)	
Rajarshi Roychowdhury (Adv Studies, AES US Utilities)	

SPS 3	Legends G
Monday Oct 30	3.30 pm - 5.10 pm
Microgrids with Batteries as an Anchor Resource	
Session Chair	Adil Usman
Keith Waters (Schneider Electric)	
Bill Brown (Schneider Electric)	
Ryan Egly (Schneider Electric)	
Joel Skelley (Schneider Electric)	

Chapters and Membership Department Presentations

CMD 1	Legends G
Wednesday Nov 1	2.00 pm -3.40 pm
Session Chair:	Dr. Cselkó Richárd , Dr. Roozbeh Kabiri
Model Predictive Critical Soft-Switching Enabling High-Performance Software-Defined Power Electronics: Converter Configuration: Efficiency, and Redundancy	Liwei Zhou, Matthias Preindl, Columbia University, USA
Control Solutions for Multiphase Permanent Magnet Synchronous Machine Drives Applied to Electric Vehicles	Andres Mauricio Sierra Gonzalez, Edorta Ibarra, University of Basque Country, Spain
Online Monitoring and Segmental Ageing Location for Power Cables Based on Leakage Current Measurement	Yang Wu, Pinjia Zhang, Tsinghua University, China
Evaluation of the Use of Gallium Nitride Semiconductors in the Power Control Stage of an LED Luminaire	Igor Bertoncello Barboza, Marco Antônio Dalla Costa, Federal University of Santa Maria, Brazil

CMD 1	Legends G
Wednesday Nov 1	4.00pm - 5.30 pm
Session Chair:	Dr. Roozbeh Kabiri, Dr. Cselkó Richárd
Potential of Hybrid semiconductor devices for next-generation variable-speed motor drives	Pedro Henrique Gomes Vilela, Bernardo Oliveira Menezes, Federal University of Santa Maria, Brazil
Smart- BESS: Improving the reliability and flexibility of battery energy storage systems	Alvaro Lucio Costa Amorim, Barbara Santos Peixoto, Federal University of Santa Maria, Brazil
Diving into High-speed communication: A Tap Transformer-Based Full-Duplex Underwater Wireless Power and Data Transfer System	Zichao Sun, Harbin Institute of Technology, China

Graduate Student Poster Competition

GSPC	Legends PreFuction
Wednesday Nov 1	9.00 am - 4.00 pm
Note: All Posters Should be Displayed by 9.00 am. Presenters must be with their posters from 2.00 pm - 4.00 pm for judging	
Session Chair:	Payman Deghanian
Challenges with the Black Start Capability of Hydro Units while Upgradation of Transmission Lines	Surabhi Verma, Indian Institute of Technology Roorkee (IIT Roorkee)
Joint Operation of Mobile Wind Turbines and Hydrogen Storage Units for Power Grid Resilience	Jinshun Su, The George Washington University
Active Power Decoupling in Cascaded H-Bridge Converter using Secondary-Stage Isolated DC-DC Converters	Muhammad Zarkab Farooqi, IIT Delhi
A Digital Twin-Based Approach for Fault Diagnosis and Performance Improvement of Complex PV System	Mahmoud Abdelaal, Florida International University
Hybrid Sub-Harmonic Synchronous Machines	S M Sajjad Hossain Rafin, Florida International University
Coordinated Operation and Control for Mitigating Pulsed Load Effects in Multi-Microgrid Networks	Ahmed Aghmadi, Florida International University
Comparison of Machine Learning Models for Week-Ahead Load Forecasting in Short-term Power System Planning	Joshua Olowolaju, University of Nevada, Reno
Deep Reinforcement Learning Based Resilience Enhancement in Power System under the Electromagnetic Pulse Strikes	Ruotan Zhang, George Washington University
Twin Condition Monitoring of 5L-ANPC Inverter based on Semiconductor On-State Resistance Estimation	Majid Fard, University of Kentucky
Estimating and Planning the Potential of Small Geothermal Power Plants in Hungary	Janos Gianone, Budapest University of Technology and Economics
TBD	Firas Saidi, South Mediterranean University
Scheduling Nocturnal Battery-Electric Locomotives to Enhance Renewable Energy Utilization	Farid Kochakkashani, George Washington University
Detection of Fault Locations in Transmission Networks Using RTDS and Machine Learning	Jitendra Thapa, Michigan State University
Design of Data Distributed Service-Based Distributed Co-Simulation Platform of Power Systems	Wen Jianfeng, University of Liverpool
Pulsed load impact mitigation-based HESS for Microgrids	Hossam Hussein, Florida International University
Short-term Wind Power Forecasting Method Based on Attention Mechanism and Multi NWP Sources	Haonan Dai, North China Electric Power University
A Three-Phase WPT System with Improved Misalignment Tolerance by Using an Effective Reactive Power Compensation Technique	Hao-En Liu, National Chung Hsing University
Artificial lift method selection of an onshore well and economic studies	Iskandar Ghorbel, Polytech Sfax
Empowering Offshore Wind Farms with Hydrogen Transportation and Wind Curtailment Mitigation	Chengzhi Xie, George Washington University
Blockchain-Assisted Resilient Control for Distributed Energy Resource Management System (DERMS)	Seerin Ahmad, Texas A&M University-Kingsville
Physics-Informed Model for High-Impedance Fault Detection: Harnessing Environmental Drivers with Kernel Methods and Gaussian Processes	Mohammad Ensaf, University of Pittsburgh
Current Source Inverter for Medium Voltage Motor Drive Applications	Sneha Narasimhan, North Carolina State University
Quantum-Inspired Machine Learning Demonstration using a Physics-based Ising Solver Chip	Ameya Khot, Texas A&M University-Kingsville
Reliability Assessment of Distribution System with Adaptive Droop Control	Hadis Hosseinpour, Michigan State University
Systematic Review on Artifcial Intelligence and Big Data Technologies in Healthcare	Sana Dahmani, HTW Berlin