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TECHNICAL PROGRAM

8th October 2018 (Monday)		
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15:30	Transformer-less Single Phase H₂D₄ Inverter with Voltage Controller for Grid-tied PV System <i>Sifat Rezwan, Shafayet Hossain, Samiha Tasnim and Md. Mizanur Rahman (North South University, Bangladesh)</i>	514
15:45	Comparative Study of Sinusoidal PWM and Third Harmonic Injected PWM on Three Phase Cascaded H-Bridge Multilevel Inverter at Various Amplitude Modulation Indices <i>Shamsul Rahimi Subki and Mohd Zaidi Mohd Tumari (Universiti Teknikal Malaysia, Melaka & Center for Robotics and Industrial Automation (CeRIA), Malaysia); Aiman Zakwan Jidin, Wan Norhisyam Abd Rashid, Norfadzlia Yusof and Muhammad Salihin Saealal (Universiti Teknikal Malaysia Melaka, Malaysia)</i>	520

9th October 2018 (Tuesday)		
Session: D2 TS14	Time: 16:15 - 17:45	Room: Ballroom 2
Renewable & Sustainable Energy		
Chair: Norhafiz Salim, Universiti Teknikal Malaysia Melaka, Malaysia		
16:15	Designing a PSCAD Based PV Simulator for Partial Shading to Validate Future PV Application Planning <i>Lou Tao Hong, Jubaer Ahmed, Hadi Nabipour-Afrouzi and Saad Kashem (Swinburne University of Technology Sarawak, Malaysia)</i>	526
16:30	Mitigating the Effect of Partial Shading by Triple-Tied Configuration of PV Modules <i>Charles Kho, Yi Lung Then and Jubaer Ahmed (Swinburne University of Technology Sarawak, Malaysia); Kermadi Mostefa (National Polytechnic School, Algeria)</i>	532
16:45	A New Five-Level Inverter Topology with Voltage Controller for Grid-Connected PV System <i>Mohammed Shihab Ibne Tarek, Asad Siam, Muhammad Zia and Md. Mizanur Rahman (North South University, Bangladesh)</i>	538
17:00	Reliability Analysis of an Integrated PV System Using Markovian Modeling <i>Hussein Abdellatif, Mohammad AlMuhaini and Muhammad Khalid (King Fahd University, Saudi Arabia)</i>	544
17:15	A Robust Interval Economic Dispatch Method Accommodating Significant Wind Power Integration <i>Honglian Ma (Xi'an Jiaotong University, P.R. China)</i>	549
17:30	Feasibility of Using Normalized De-trapped Charge for Diagnosis of Power Transformer Insulation <i>Deepak Mishra and Arijit Baral (IIT(ISM), Dhanbad, India); Nasirul Haque and Sivaji Chakravorti (Jadavpur University, India)</i>	555

9th October 2018 (Tuesday)		
Session: D2 TS15	Time: 16:15 - 17:45	Room: VIP 1
Power System Analysis		
Chair: Teresa Smit, R10 Conference Board, Australia		
16:15	Error Analysis of On-line Identification of Parameters of Synchronous Generators <i>J Qiu, Jing Wu, Xuesong Wang, Jianfeng Dai and Qiang Liu (Electric Power Planning and Engineering Institute, P.R. China); Haicheng Yu (North China Power Engineering Co. Ltd., P. R. China)</i>	559
16:30	Rotor Angle Stability Analysis of AC/DC Hybrid Power Systems with a VSC-HVDC Link <i>Mingchen Gu, Lasantha Meegahapola and Alan Wong (RMIT University, Australia)</i>	565
16:45	Research on Application of Cyber-physical System in Fault Diagnosis of Power Grid <i>Dongmei Zhao, Jiang HU and Xu Zhang (North China Electric Power University, P.R. China)</i>	571
17:00	A Decentralised Adaptive Voltage Droop Control for Inverters in Power Distribution Networks <i>Rahmat Heidari and Julio H Braslavsky (CSIRO & University of Newcastle, Australia); Maria M Seron (University of Newcastle, Australia)</i>	577
17:15	An Efficient Voltage-Behind-Reactance Synchronous Machine Model for Multi-Scale Transients Using Shifted-Frequency Analysis <i>Veerabrahmam Bathini (Visvesvaraya Technological University & Power Research & Development Consultants Pvt. Ltd., India); Nagaraja Ramappa and Parthasarathy K (PRDC, India)</i>	583
17:30	Fault Analysis of Multi-terminal Flexible DC Distribution System with RES <i>Zhihui Dai and Cheng Zhang (North China Electric Power University, P.R. China); Xi Chen and Yong Li (State Grid Baoding Power Supply Company, P.R. China)</i>	589

9th October 2018 (Tuesday)		
Session: D2 TS16	Time: 16:15 - 17:45	Room: VIP 2
Power System Economics and Energy Markets Chair: Paulette Hebert, Oklahoma State University, USA		
16:15	Optimal Dispatch Based on Chance-constrained Programming <i>Kaiwen Zeng, Bo Li and Jianing Liu (Guangdong Power Grid Power Dispatch Control Center, P.R. China); Mengqi Pan, Qi Wang and Yufeng Guo (Harbin Institute of Technology, P.R. China)</i>	595
16:30	Coordinated Scheduling of Demand Response and Energy Storage to Reduce Wind Variability Costs <i>Xuemei Dai, Kaifeng Zhang, Kun Yuan and Ying Wang (Southeast University, P.R. China); Jian Geng and Yanmin Guo (China Electric Power Research Institute, P.R. China)</i>	600
16:45	Shadow Price Analysis of Potential Northeast Asia Power System Interconnection <i>Sergei Podkovalnikov and Oleg Khamisov (Melentiev Energy Systems Institute of Siberian Branch of the RAS, Russia)</i>	606
17:00	Optimum Operation Plan for Multiple Existing EV Charging Stations <i>Yuta Susowake (University of the Ryukyus, Japan)</i>	611
17:15	Optimal Scheduling Strategy for Virtual Power Plants with Interruptible Loads <i>Allan Nerves, Christine Joyce Sampang, Clarence Laxamana and Paul Ian Ibarbia (University of the Philippines, Diliman, Philippines)</i>	616

10th October 2018 (Wednesday)		
Session: D3 TS17	Time: 08:30 - 10:30	Room: Event 3
Power Quality, Protection and Electromagnetic Compatibility Chair: Sudarmono Sasmono, Bandung Indonesia		
08:30	Simulation Model of AC Variable Frequency Speed Regulation System and Harmonic Characteristics Analysis <i>Linghua Zeng, Fan Bai and Zihui Min (Wuhan University, P.R. China)</i>	N/A
08:45	Control for High Power Dual Active Bridge DC/DC Converter During DC Fault <i>Mohammad Islah Haji Abdul Rahman (Politeknik Brunei, Brunei Darussalam)</i>	627
09:00	Evaluation of Flicker Measurement in Grid-connected Wind Turbine <i>Noman Khan, Usman Farooq, Xiongfei Wang and Pooya Davari (Aalborg University Denmark, Denmark); Lars Helle (Vestas Wind Systems A/S, Headquarter, Denmark)</i>	633
09:15	The Analysis of DC-link Voltage, Compensation Range, Cost, Reliability and Power Loss for Shunt (Hybrid) Active Power Filters <i>Lei Wang, Chi-Seng Lam and Man-Chung Wong (University of Macau, Macao)</i>	640
09:30	Modeling of Transmission Conductor Based on Two-node Isoparametric Truss Elements and Application for Ice-shedding Analysis <i>Yunyun Xie, inyan Huang and Huaiping Ding (Nanjing University of Science and Technology, P.R. China); Rui Tang (State Grid Jinan Power Supply Company, P.R. China)</i>	646
09:45	The Influence of Height Difference on the Jump Height Evaluation of Ice-shedding from Transmission Line <i>Yaxing Gong, Qixiang Li, Yunyun Xie, Yanchao Cong and Linyan Huang (Nanjing University of Science and Technology, P.R. China)</i>	652
10:00	Stochastic Co-optimization of Security Constrained Economic Dispatch and Overload Scheme <i>Xiansi Lou and Chuangxin Guo (Zhejiang University, P.R. China); Jianbo Xin (Jiang Xi Electric Power Corporation, P.R. China); Qiukuan Zhou (Institute State Grid Jiangxi Electric Power Company, P.R. China); Chen Kang (Electric Power Research Institute State Grid Jiangxi Electric Power Company, P.R. China); Shiyang Ma and Dunwen Song (State Grid Corporation of China, P.R. China)</i>	N/A

10th October 2018 (Wednesday)		
Session: D3 TS18	Time: 08:30 - 10:30	Room: VIP 1
Power System Planning and Operation Chair: Mr Rakesh Patel		
08:30	Damping Inter-Area Oscillations Using Restructuring Corrective Actions <i>Mohamad Setareh and Mostafa Parniani (Sharif University of Technology, Iran)</i>	662
08:45	Optimal Dispatch of Distributed Generation Units, Wind Farms and Energy Storage Systems <i>Mohammed A. Abdulgalil, Abubakr H. Elsayed and Muhammad Khalid (King Fahd University of Petroleum and Minerals, Saudi Arabia); Ibrahim Elamin (KFUPM, Saudi Arabia)</i>	668
09:00	Power System Resilience Through Microgrids A Comprehensive Review <i>Samad Shirzadi and Nirmal Nair (University of Auckland, New Zealand)</i>	674
09:15	Optimal Sizing, Allocation, Dispatch and Power Flow of Energy Storage Systems Integrated with Distributed Generation Units and a Wind Farm <i>Mohammed A. Abdulgalil, Ayman A. Amin, Mohammad AlMuhaini and Muhammad Khalid (King Fahd University of Petroleum and Minerals, Saudi Arabia)</i>	680
09:30	Development and Research of the Solid State Voltage Regulator Active-Adaptive Control System <i>Elena Sosnina, Rustam Bedretdinov and Ivan Lipuzhin (Nizhny Novgorod State Technical University, Russia); Andrey Smirnov (Tecom LLC, Russia)</i>	685
09:45	Study on Medium and Long-Term Generation Expansion Planning Method Considering the Requirements of Green Low-Carbon Development <i>Jing Wu, J Qiu, Xuesong Wang, Yilong Ni, Xiaoqi Han, Jianfeng Dai and Zhongming Du (Electric Power Planning and Engineering Institute, P.R. China); Xiaorong Xie (Tsinghua University, P.R. China)</i>	689
10:00	Exploring Control Theory Advancements for Economic Dispatch <i>Anupama Kowli (Indian Institute of Technology Bombay, India)</i>	695
10:15	Detection of LFO and Evaluation of Damping Improvement Using Synchrophasor Measurement <i>Chandan Kumar, Srinivas Chitturi, Chitranshi Gangrekar, Vinay Shrivastava, Abhimanyu Gartia, Minnakuri Rao and Pushpa Seshadri (WRLDC, POSOCO, India); Vivek Pandey (WRLDC, India)</i>	701

10th October 2018 (Wednesday)		
Session: D3 TS19	Time: 08:30 - 10:30	Room: VIP 2
Smart Grid & Power Engineering Education		
Chair: Muhammad Khalid, King Fahd University of Petroleum and Minerals, Saudi Arabia		
08:30	Study of the LFC Signal Dispatching Method to Compensate Short Period Power Fluctuation by Use of Many Photovoltaics <i>Jun Tamura, Ken-ichi Kondo and Jumpei Baba (The University of Tokyo, Japan)</i>	707
08:45	Analysis of Multiple Droop Control Strategies in DC Microgrid <i>Ling Ming Kong and Jianbin Xu (The Chinese University of Hong Kong, Hong Kong); Hongsheng Jiao (National University of Singapore, Singapore); Zhao Xu (The Hong Kong Polytechnic University, Hong Kong)</i>	N/A
09:00	Automated Fuse Identification Within an Operational Smart Power Grid <i>Aaron Wilson and Donald R Reising (University of Tennessee at Chattanooga, USA); Robert Hay and Ray Johnson (Electric Power Board of Chattanooga, USA)</i>	719
09:15	A Module-Based Educational Platform for Transformer Differential Digital Relay's Design and Experimentation <i>Lodu Moses Gabriel, Tombe (Shibaura Institute of Technology, Japan)</i>	724
09:30	GOOSE Protocol: IED's Smart Solution for Victoria University Zone Substation (VUZS) Simulator Based on IEC61850 Standard <i>Joevis Claveria and Akhtar Kalam (Victoria University, Australia)</i>	730

10th October 2018 (Wednesday)		
Session: D3 TS20	Time: 10:45 - 12:00	Room: Event 3
Renewable & Sustainable Energy		
Chair: Rodolfo Aguirre, Jr., University of the Philippines Los Banos, Philippines		
10:45	Automated Planning of Rooftop PV Systems with Aerial Image Processing <i>Francis Carlos dos Santos (University of Texas, USA); Jesse Thornburg and Taha Selim Ustun (Carnegie Mellon University, Pennsylvania, USA)</i>	736
11:00	An Intelligent Method for Very-Short Range Multi-Step Wind Power Forecasting <i>Adil Ahmed and Muhammad Khalid (King Fahd University of Petroleum and Minerals, Saudi Arabia)</i>	741
11:15	Design of Dual-Band Aperture Coupled Antenna for Energy Harvesting Applications <i>Faza Syahirah Mohd Noor, Herwansyah bin Lago, Maizatul Alice Meor Said and Zahriladha Zakaria (Universiti Teknikal Malaysia Melaka, Malaysia)</i>	747
11:30	Power Factor Control of Solar Photovoltaic Inverter as a Solution to Overvoltage <i>Shangari K. Raveendran, Nur Nadiah Faizura Binti Norhasmi and Vigna Kumaran Ramachandaramurthy (Universiti Tenaga Nasional, Malaysia)</i>	751
11:45	Technical Constraints of Integrating Net Energy Metering from the Malaysian Perspective <i>Pragash Celvakumaran, Jagadeesh Pasupuleti and Vigna Kumaran Ramachandaramurthy (University Tenaga Nasional, Malaysia); Padmanabhan Sanjeevikumar (Aalborg University, Denmark); Padmanathan K. (Anna University, India); Aref Pouryekta (Power Quality Research Group, University Tenaga Nasional, Malaysia)</i>	757

10th October 2018 (Wednesday)		
Session: D3 TS21	Time: 10:45 - 12:00	Room: VIP 1
Power System Planning and High Voltage Chair: Mr Rakesh Patel		
10:45	Maximizing Restorable Load Amount for Specific Substation Considering Air Conditioning Load <i>Rui Fan (Shandong University, P.R. China); Hanbing Qu (State Grid Corporation of China, P. R. China)</i>	N/A
11:00	Effects of different types of surfactants on AC breakdown voltage of refined, bleached and deodorized palm oil based CuO nanofluids <i>Nur Aqilah Binti Mohamad, Yunus Robiah, Jasronita Jasni and Mohd Zainal Abidin Ab Kadir, (Universiti Putra Malaysia, Malaysia); Norhafiz Azis (Universiti Putra Malaysia & Centre for Electromagnetic and Lightning Protection Research, UPM, Malaysia); Yaakub Zaini (Hyrax Oil, Malaysia)</i>	768
11:15	State-of-Charge Estimation of Li-ion Batteries Based on A Hybrid Model Using Nonlinear Autoregressive Exogenous Neural Networks <i>Yuxiang Zhang, Chunyu Zhao and Senlin Zhu (Shanghai Jiao Tong University, P.R. China)</i>	772

10th October 2018 (Wednesday)		
Session: D3 TS22	Time: 10:45 - 12:00	Room: VIP 2
Power System and Power Quality		
Chair: Hadi Nabipour-Afrouzi, Swinburne University of Technology, Malaysia		
10:45	Smart Testing of Power Swing Detection in IEDS <i>Dinesh Babu (Dr & Megger, India)</i>	778
11:00	Achieving Unity Power Factor at Floating Grid Conditions in a Cement Plant in India - Case Study <i>Hasan Mydin J (Power Quality India, Hyderabad, India); Praveen Sharma (Dalmia Cements, India); Rajnish Roshan (UltraTech Cements, India); Umashankar Subramaniam and H S Ranganatha Chakravarthy (Vellore Institute of Technology, India); Vigna Kumaran Ramachandaramurthy (Universiti Tenaga Nasional, Malaysia)</i>	782
11:15	Define the Limits of 11kV Motors Starting Current in Distribution Network <i>Muhammad Ashaar, Haithm Nageb and Mahmoud Jaber (Dubai Electricity and Water Authority, United Arab Emirates)</i>	788
11:30	Performance Analysis of Passive Compulsators with Different Field Current Densities used for EML Applications <i>Apurva Kulkarni (Indian Institute of Science, Bengaluru, India)</i>	791