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Technical Program

Day	Time	Prosperity	Joy	Peace
Wed	14:00-16:00	OS1: *High efficient power conversion for DG and renewable power systems I*	OS2: *Integration and control of multiple power converters and systems I*	OS3: *Power electronic converters and controls, including high voltage and high power converters I*
	16:15-18:00	PS1: *High efficient power conversion for DG and renewable power systems; power electronic converters and controls, including high voltage and high power converters*	PS2: *Integration and control of multiple power converters and systems; novel technology for DG*	PS3: *Power electronic converters and controls, including high voltage and high power converters II*
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	10:15-11:55	OS7: *DG interfacing technology to the grid*	OS8: *DG and converter interfacing technologies for utility grids and power quality*	OS9: *Power electronic converters and controls, including high voltage and high power converters IV*
	14:00-16:00	OS10: *DG interfacing technology to the grid II*	OS11: *Power semiconductor devices and high efficient conversion*	OS12: *Power electronic converters and controls II*
	16:15-18:00	PS4: *Applications of wind systems, photovoltaic systems, small hydro units, marine energy systems, fuel cells, microturbines, combined heat and power generators, etc.; ground current suppression, DC injection suppression and EMI filter design; new power semiconductors*	PS5: *Energy storage, energy management, microgrids and hybrid energy systems; control, communication and monitoring of DGs and renewable energy systems*	PS6: *DG and converter interfacing technology for utility grids and power quality; islanding detection, safety protection and standards of DG systems*
Fri	08:30-09:50	OS13: *Applications of new energy systems*	OS14: *Control, communications and monitoring of DGs and renewable energy systems*	OS15: *Energy storage, and energy management*
	10:15-11:35	OS16: *Applications of new energy systems II*	OS17: *Control, communications and monitoring of DGs and renewable energy systems II*	OS18: *Microgrids; DG interfacing technology to the grid*

Wednesday, June 16

14:00 - 16:00

OS1: High efficient power conversion for DG and renewable power systems I

Modeling of Stand-alone Variable Speed Diesel Generator using Doubly-Fed Induction Generator
Donghua Wang (Curtin University of Technology, Australia); Chem Nayar (Curtin University of Technology, Australia); Cong Wang (China University of Mining & Technology(Beijing), P.R. China)

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The Analysis of Power Loss Caused by the Truncation Error of MPPT Algorithms
Xing Zhang (Hefei University of Technology, P.R. China); Le Zha (Hefei University of Technology, P.R. China); Fang Liu (Hefei University of Technology, P.R. China)
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Medium Voltage Power Conversion Technology for efficient Windpark Power Collection Grids
Peter K. Steimer (ABB Ltd., Switzerland)
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A High Frequency DC Link Single Phase PWM Rectifier
WenJie Zhu (Southeast University, P.R. China); Keliang Zhou (Southeast University,, P.R. China); Li ZHU (Southeast University, Nanjing , China., P.R. China); Xiu'e Su (Southeast University, P.R. China)
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Improved Pulse -Width Modulation of Diode-Assisted Buck-Boost Voltage Source Inverter
Yan Zhang (Xi'an Jiaotong University, P.R. China); Jinjun Liu (Xi'an Jiaotong University, P.R. China)
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A Simplified Analysis of DC-DC Converters Applied as Maximum Power Point Tracker in Photovoltaic Systems
Roberto Coelho (Federal university of Santa Catarina, Brazil); Filipe Concer (Federal university of Santa Catarina, Brazil); Denizar Martins (Federal university of Santa Catarina, Brazil)
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OS2: Integration and control of multiple power converters and systems I

Initial Rotor position Control for Permanent Magnet Synchronous Generator Speed Sensorless Drive in Wind Power System
Kinglon Woo (XJ Flexible transmission system corporation, P.R. China); Weizheng Yao (XJ Flexible transmission system corporation, P.R. China)
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A Consideration of Bidirectional Superposed Dual Active Bridge DC-DC Converter
Toshiro Hirose (Nishimu Electronics Industries Co., Ltd, Japan); Hirofumi Matsuo (Graduate School of Science and Technology, Nagasaki University, Japan)
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Intelligent Protection for Embedded Generation using Active Impedance Estimation
Mark Sumner (University of Nottingham, United Kingdom); David Thomas (University of Nottingham, United Kingdom); Liangzhong Yao (AREVA T&D Technology Centre, United Kingdom); Ram Parashar (AREVA T&D Technology Centre, United Kingdom); Masoud Bazargan (AREVA T&D Technology Centre, UK, United Kingdom); Abdullah Abusorrah (University of Nottingham, United Kingdom)
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A Fast Algorithm for Three-level SVPWM in NPC Inverters Based on Traditional Three-level SPWM
Li (Xi'an Jiaotong University, P.R. China)
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Power electronic interfaces for Ultra-Available dc Micro-grids
Alexis Kwasinski (The University of Texas at Austin, USA)
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An Approach to Improve Efficiency of EV Batteries Charger under Light Load
Li Jingxin (Beijing Jiaotong University, P.R. China); Niu Liyong (Beijing Jiaotong University, P.R. China); Gong Minming (Beijing Jiaotong University, P.R. China); Wang Jianqiang (Beijing Jiaotong University, P.R. China)
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OS3: Power electronic converters and controls, including high voltage and high power converters I

Implementation of FPGA Control for Multilevel Boost Converter used for PV Applications
Hamdy Radwan (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mostafa Mousa (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mahrous Ahmed (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mohamed Orabi (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt)
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A Study on Dynamic Power Flow Caused by the Grid-connected PV Systems
Yan Li (Huazhong University of Science & Technology, P.R. China)
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Sensorless Control for PMSG in Direct-Drive Wind Turbine
Shuying Yang (Hefei University of Technology, P.R. China)
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A Novel PWM Control Method for Switching DC-DC Converters with Improved Dynamic Response Performance
Jinping Wang (Southwest Jiaotong University, P.R. China); Jianping Xu (Southwest Jiaotong University, P.R. China)
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Design of a Transcutaneous Power Regulator for Artificial Hearts
Kam-cheung Tang (The Hong Kong Polytechnic University, Hong Kong); Siu Chung Wong (The Hong Kong Polytechnic University, Hong Kong); Chi Kong Tse (Hong Kong Polytechnic University, Hong Kong)
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Control of Cascade Multilevel Inverter Using Fuzzy Logic Technique
Rabee' Alabbasi (University of Basrah, Iraq)
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16:15 - 18:00

PS1: High efficient power conversion for DG and renewable power systems; power electronic converters and controls, including high voltage and high power converters

Small Signal Modeling of Digital V2 Control for Buck Converter with Pulse Frequency Modulation
Yanyan Jin (Southwest Jiaotong University, P.R. China); Jianping Xu (Southwest Jiaotong University, P.R. China); Guohua Zhou (Southwest Jiaotong University, P.R. China); Changbao Mi (Southwest Jiaotong University, P.R. China)
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A Novel Envelope Curve Modulation Method for the SPWM Controlled High Frequency Link Matrix Inverter
Zhaoyang Yan (Yanshan University, P.R. China); Wei Zhang (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Qian Zhang (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Jianxia Li (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Yingnan Zheng (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Weiyang Wu (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China)
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Study on Control Strategy of Maximum Power Capture For DFIG in Wind Turbine System
Zhen Xie (HeFei university of technology, P.R. China)
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Implementation of a DC Power System with PV Grid-Connection and Active Power Filtering
Yu-En Wu (National Kaohsiung First University of Science and Technology, Taiwan)
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Li Xiao (Zhejiang University, P.R. China); Wenping Zhang (Zhejiang University, P.R. China); Chengrui Du (Zhejiang University, P.R. China); Wu Xiaotian (Zhejiang University, P.R. China); Dehong Xu (Zhe Jiang University, P.R. China)
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Du shaowu (Hefei University of Technology, P.R. China); Yi Zhang (Hefei University of Technology, P.R. China); Xiangzhi Meng (Hefei University of Technology, P.R. China); Anming Zhong (Hefei University of Technology, P.R. China)
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High Frequency Link Single-Phase Grid-Connected PV Inverter
Li ZHU (Southeast University, Nanjing , China., P.R. China); Keliang Zhou (Southeast University,, P.R. China); WenJie Zhu (Southeast University, P.R. China); Xiu'e Su (Southeast University, P.R. China)
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Bo Yuan (Xi'an Jiaotong University, P.R. China); Xu Yang (Xi'an Jiaotong University, P.R. China); Dong Li (Xi'an Jiaotong University, P.R. China)
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An Improved MPPT Method for Photovoltaic Power Generation System
Pei-chun Qiu (Beijing Jiaotong University, P.R. China); Daqiang Bi (Tsinghua Univeristy, P.R. China); Baoming Ge (Beijing Jiaotong University, P.R. China)
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Di LU (Xi'an University of Architecture & Technology, China, P.R. China); Li Xiang (Xi'an University of Architecture & Technology, P.R. China); LIU Chen (Xi'an University of Architecture & Technology, P.R. China)
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Improved Phase shifted Control Method for Isolated Asymmetric HB Bidirectional Converter
Hongxia Wu (Huangshi Institute of Technology, P.R. China); Mao YE (Huangshi Institute of Technology, P.R. China)
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Design of Boost-Flyback Converter with small Capacitor for Energy-Storage
Hongxia Wu (Huangshi Institute of Technology, P.R. China); Xuejun Ma (Huangshi Institute of Technology, P.R. China)
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A Novel Topology Family of Single stage ACDC Converter with PFC
Jinhua Liu (Hubei Normal University, P.R. China)
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Planar Bus bar Optimum Design in High-Power Converters Based on FEM Analysis
Hui Zhang (China University of Mining and technology, P.R. China)
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Research on Hardware-in-the-Loop Simulation of Active Power Filter
Xiaopin Yang (Wuhan university, P.R. China)
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Parallel Operation of Active Power Filters Based on Boost Converter Control
Liu Yang (Wuhan University, P.R. China); Xiaoming Zha (Wuhan University, P.R. China)
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A novel soft switch for Buck converter
Weiping Zhang (North China University of Technology, P.R. China); Xiaoqiang Zhang (North China University of Technology, P.R. China); Shisheng Xiao (North China University of Technology, P.R.

China)
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PS2: Integration and control of multiple power converters and systems; novel technology for DG

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Guoliang Yang (Yanshan University, P.R. China); Yangpin Zhu (Yanshan University, P.R. China)
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A New Control Strategy for Three-phase Four-wire UPQC When Voltage Fluctuating on Its DC Side
Tan Zhili (School of Mechanical & Electronic Information, China University of Geosciences, P.R. China); Zhu Dongjiao (School of Mechanical & Electronic Information, China University of Geosciences, P.R. China)
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A new method to design the dc voltage controller for UPQC
Zhu Dongjiao (School of Mechanical & Electronic Information, China University of Geosciences, P.R. China); Tan Zhili (School of Mechanical & Electronic Information, China University of Geosciences, P.R. China)
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Bifurcation Behavior of Wind Energy Generation Systems
Zhen Li (The Hong Kong Polytechnic University, Hong Kong); Siu Chung Wong (The Hong Kong Polytechnic University, Hong Kong); Chi Kong Tse (Hong Kong Polytechnic University, Hong Kong); Grace Chu (The Hong Kong Polytechnic University, Hong Kong)
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Topology Family and the Simulation of "BOOK" Differential Single Stage Inverter
Zhaoyang Yan (Yanshan University, P.R. China); Jianxia Li (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Wei Zhang (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Qian Zhang (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Yingnan Zheng (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China); Weiyang Wu (Institute of Electrical Engineering of Yanshan University Yanshan University, P.R. China)
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Decoupling Control Strategy of Single Phase SPWM Parallel Inverter
Xu Shungang (Southwest Jiaotong University, P.R. China)
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Application study of multi-phase coupled array integrated magnetic in VRM
Li Hongzhu (Liao ning Technical University, P.R. China); Chen Zhengyi (Liao ning Technical University, P.R. China)
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Yang Wang (University of Tsinghua, P.R. China); ZongXiang Lu (Tsinghua University, P.R. China); Yong Min (Tsinghua University, P.R. China); Shanshan Shi (Tsinghua University, P.R. China)
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A research of combined multifunctional three phase grid-connected Inverter/Active power filter for PV system
Haoran Bai (Qingdao Agriculture University, P.R. China); Shuqi Shang (Qingdao Agriculture University, P.R. China)
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A New PFC Converter with Reduced Output Bus Capacitors
Yuan Yisheng (East China Jiaotong University, P.R. China)
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A New Interleaved Three-Level Inverter
Yuan Yisheng (East China Jiaotong University, P.R. China)

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Synchronous PI Current Control Technique for Three-Phase PFC Rectifier for PMSG Wind Generation System
Yingtao Ma (Tsinghua University, P.R. China); Xudong Sun (Tsinghua University, P.R. China); Jianyun Chai (Tsinghua University, P.R. China)
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High-reliability and Harmonic-sharing Dual Parallel Topology for Active Power Filter
Baifeng Chen (Wuhan University, P.R. China); Xiaoming Zha (Wuhan University, P.R. China)
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Comparison between Approximate and Accurate Line Voltage THD, Case II: Multilevel Inverter with Equal DC Sources
Naeem Farokhnia (Amirkabir University of Technology, Iran); Hadi Vadizadeh (Sadra University, Iran); Fariba Anvari asl (Sadra University, Iran); Fatemeh Kadkhoda (Sadra University, Iran)
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Tieling Zhang (Vestas Singapore, Singapore)
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Yan Zhao (China Electric Power Research Institute, P.R. China); Xuehao Hu (China Electric power research Institute, P.R. China); Guangfu Tang (China Power Electric Research Institute, P.R. China); Zhiyuan He (China Power Electric Research Institute, P.R. China)
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Control of Photovoltaic generation Assisted by Repetitive controller
Xin Tang (Changsha university of science and technology, P.R. China)
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PS3: Power electronic converters and controls, including high voltage and high power converters II

Research of Optimal Control of 3-phase Integrating Magnetic VRM based on State Variable Feedback Linearization Control Method
Cai Fu (Liaoning Technical University, P.R. China); Yugang Yang (Liaoning Technical University, P.R. China); Li Hongzhu (Liao ning Technical University, P.R. China)
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The Dynamic Analysis of Power MOSFET in Buck Converter
Weiping Zhang (North China University of Technology, P.R. China); Xiaoqiang Zhang (North China University of Technology, P.R. China)
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A New Compensation Network of LCC Resonant Converter
Xiaohan Guan (North China University of Technology, P.R. China)
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Digital Control Capacitor Charging Power Supply for High Power RSD Pulse Generator
Gu Herong (Yanshan University, P.R. China); Deyu Wang (Yanshan University, P.R. China); Lingling Cao (Hunan University of Arts and Science, P.R. China); Xiaoqiang Guo (Yanshan University, P.R. China)
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A novel Indirect Current Control for Single-Phase PWM Rectifier at low Switching frequency
Fan Shengfang (Huazhong University of Science and Technology, P.R. China); He Liqun (Huazhong University of Science and Technology, P.R. China)
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Analysis of Topology and PWM Strategy for A New Multiple Input and Multilevel Inverter
Xuefeng Hu (Nanjing University of Aeronautics and Astronautics, P.R. China); ChunYing Gong (Nanjing University of Aeronautics and Astronautics, P.R. China); Jiayan Zhang (Anhui University of

Technology, P.R. China)
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Digital Control and Simulation of Parallel Current Mode for Buck Converter
Liu Xiaodong (Anhui University of Technology, P.R. China); Ye Yang (Anhui University of Technology, P.R. China); Deng Jiaojiao (Anhui University of Technology, P.R. China); Yan-Fei Liu (Queens University, Canada)
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Research on Single-Stage Inverter Based on Bi-Directional Buck DC Converter
Bin Qiu (Nanjing University Of Aeronautics And Astronautics, P.R. China); Yundong Ma (Nanjing University Of Aeronautics And Astronautics, P.R. China); Qing Cong (Nanjing University Of Aeronautics And Astronautics, P.R. China)
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Research on the Passivity-Based Control Strategy of Buck-Boost Converters with a Wide Input Power Supply Range
Wang Bingyuan (Aeronautical Automation Collage, P.R. China)
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A Neutral-Point Potential Control Method for Three-Level Inverters by Injecting Zero-sequence Voltage
Jinghua Zhou (North China University of Technology, P.R. China)
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The comparative Study of Different Methods about Constructing Switching Table in DPC for Three-level Rectifier
Wu Wenjun (Xi'an University of Technology, P.R. China); Yanru Zhong (Xi, P.R. China); Wang Jianjun (Engineer, P.R. China)
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A control method of three-level PWM rectifier under the imbalanced three-phase grid voltage
Jinghua Zhou (North China University of Technology, P.R. China)
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Research on Transient Behavior of SRM as Its Phase Windings are Broken
Yugang Yang (Liaoning Technical University, P.R. China); Cai Fu (Liaoning Technical University, P.R. China); Linhong Li (Liaoning Technical University, P.R. China); Peng Hu (Liaoning Technical University, P.R. China)
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The novel digital control restraining circulating currents strategy based on tracing the transient average current in parallel inverter system
Luhua Shi (Hubei university of automotive technology, P.R. China); Hongtao Shan (Hubei university of automotive technology, P.R. China); Yong Kang (Huazhong University of Science and Technology, P.R. China)
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Rotating Transformation and Resonant Control based Feedback Control Strategy for Dynamic Voltage Restorer System
Suxuan Guo (Wuhan University, P.R. China); Dichen Liu (Wuhan University, P.R. China)
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Primary Side Control Circuit of a Flyback Converter for HBLED
Du shaowu (Hefei University of Technology, P.R. China); Feng Zhu (Hefei University of Technology, P.R. China); Qian Pei (Zhejiang University, P.R. China)
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A Novel control strategy of LCL-VSC based on notch concept
Chun Liu (Hefei University of Technology, P.R. China)
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Sliding Mode Control for Stabilizing DC-link of DC-DC Converter
Warit Thammasiriroj (King Mongkut's University of Technology North Bangkok, Thailand); Thanis Nuchkrua (King Mongkut's University of Technology North Bangkok, Thailand); Suthida

Ruayariyasub (King Mongkut's University of Technology North Bangkok, Thailand)
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Harmonic Elimination Control of a Five-Level DC-AC Cascaded H-bridge Hybrid Inverter
Georgios S. Konstantinou (The University of New South Wales, Australia); Sridhar R. Pulikanti (The University of Sydney, Australia); Vassilios Agelidis (The University of New South Wales, Australia)
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Estimating the Electrical Parameters of Induction Motors at Standstill Using RLS Method
Yanhui He (Xi'an Jiao Tong University, P.R. China); Yupeng Feng (Xi'an Jiao Tong University, P.R. China); Yue Wang (Xi'an Jiaotong University, P.R. China)
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Thursday, June 17

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OS4: High efficient power conversion for DG and renewable power systems II

High-frequency DC Link Flyback Single Phase Inverter for Grid-connected Photovoltaic System
Alian Chen (Shandong University, P.R. China); Shao Daming (Shandong University, P.R. China); DU Chunshui (Shandong University, P.R. China); Chenghui Zhang (Shandong University, P.R. China)
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Development of High-Gain High-Efficiency Grid-Connected Inverter for PV Module
Omar Abdel-Rahim (Aswan Faculty of Engineering-South Valley university, Egypt); Mahrous Ahmed (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mohamed Orabi (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt)
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Adaptive Maximum Power Point Tracker in Photovoltaic Grid-connected System
Haining Wang (Hefei University of Technology, P.R. China); JianHui Su (Hefei University of Technology, P.R. China); Chem Nayar (Curtin University of Technology, Australia); Peng Zhang (Hefei University of Technology, P.R. China)
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Excitation for Establishing Voltage of Switched Reluctance Generator at Low Rotor Speed
Hao Chen (China University of Mining & Technology, P.R. China)
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OS5: Integration and control of multiple power converters and systems II

Evaluation of Current Controller Performance and Stability for Voltage Source Converters Connected to a Weak Grid
Tarjei Midtsund (Norwegian University of Science and Technology, Norway); Jon Are Suul (Norwegian University of Science and Technology, Norway)
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DC Pre-excitation Application in Three-phase Induction Motor Drive System
Hu Sideng (Tsinghua University, P.R. China); Zhengming Zhao (Tsinghua University, P.R. China); Ting Lu (Tsinghua University, P.R. China); Liqiang Yuan (Tsinghua University, P.R. China)
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Design Consideration of Modified SEPIC Converter for LED Lamp Driver
Mokhtar Ali (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mohamed Orabi (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mahrous Ahmed (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Abdelali El-Aroudi (Rovira i Virgili, Spain)

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NPC Multilevel Multistring Topology for Large Scale Grid Connected Photovoltaic Systems
Samir Kouro (Ryerson University, Canada); Kebede Asfaw (Ryerson University, Canada); Rhys Goldman (Ryerson University, Canada); Ryan Snow (Ryerson University, Canada); Bin Wu (ELCERU, Canada)
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OS6: Power electronic converters and controls, including high voltage and high power converters III

Modeling and Control of Three-Phase Multilevel Inverter-Based STATCOM
Tzeng-Shong Yeh (National Kaohsiung University of Applied Sciences, Taiwan); Huang-Fu Jhu (National Kaohsiung University of Applied Sciences, Taiwan); Hsiao-Wei Sung (National Kaohsiung University of Applied Sciences, Taiwan)
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Analysis and Experimental Results of Switched-Resonator-Based Buck-Boost and Inverting-Buck Converters
Masoud Jabbari (Isfahan University of Technology, Iran)
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Analysis and Implementation of a Novel Space Vector Modulation Strategy for Multilevel Inverter about the Operations in the Overmodulation Region
Yie-Tone Chen (National Yunlin University of Science & Technology, Taiwan)
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A Parallel Soft-Switching Push-Pull Converter Applied In Automotive Inverters
Yuan Yisheng (East China Jiaotong University, P.R. China)
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OS7: DG interfacing technology to the grid

Amplitude limiting for the Photovoltaic (PV) Grid-Connected Inverter with the function of active power filter
DU Chunshui (Shandong University, P.R. China); Chenghui Zhang (Shandong University, P.R. China); Alian Chen (Shandong University, P.R. China)
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Robust Control of PMSG Wind Turbine Systems with Back-to-Back PWM Converters
Ki-Hong Kim (Yeungnam University, Korea); Yoon-Cheol Jeung (Yeungnam University, Korea); Dong-Choon Lee (Yeungnam University, Korea); Heung-Geun Kim (Kyungpook National University, Korea)
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A Series Compensator Based on AC-AC Power Converters with Virtual Quadrature Modulation
Bingsen Wang (Michigan State University, USA)
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Dead-Zone Digital Controllers for Improved Dynamic Response over Wide Load Range in Tri-state Boost PFC Converter
Fei Zhang (Southwest Jiaotong University, P.R. China); Jianping Xu (Southwest Jiaotong University, P.R. China); Haikun Yu (Southwest Jiaotong University, P.R. China); Ping Yang (Guilin University of Electronic Technology, P.R. China)
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A Single-Inductor Dual-Output Buck Converter with Pulse-Train Control
Xueshan Liu (Southwest Jiaotong University, P.R. China); Jianping Xu (Southwest Jiaotong University, P.R. China); Jinping Wang (Southwest Jiaotong University, P.R. China); Qingbo Mu

(Southwest Jiaotong University, P.R. China)
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OS8: DG and converter interfacing technologies for utility grids and power quality

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Chengkuan Wan (Yanshan university, P.R. China); Geng Yang (Tsinghua University, P.R. China); Weiyang Wu (Yanshan University, P.R. China); Wei Zhang (Tsinghua University, P.R. China)
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Hua Geng (Ryerson University, Canada); David Xu (Ryerson University, Canada); Bin Wu (ELCERU, Canada); Geng Yang (Tsinghua University, P.R. China)
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A Novel PLL for Grid Synchronization of Power Electronic Converters in Unbalanced and Variable-Frequency Environment
Xiong Fang (Xi'an Jiaotong University, P.R. China); Yue Wang (Xi'an Jiaotong University, P.R. China); Ming Li (Xi'an Jiaotong University, P.R. China); Ke Wang (Xi'an Jiaotong University, P.R. China); Wanjun Lei (Xi'an Jiaotong University, P.R. China)
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Distribution Network Reactive Power Optimization Based on Ant Colony Optimization and Differential Evolution Algorithm
Yulin Zhao (Northeast Agricultural University, P.R. China); Qian Yu (Northeast Agricultural University, P.R. China); Chunguang Zhao (Harbin Electric Power Bureau, P.R. China)
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OS9: Power electronic converters and controls, including high voltage and high power converters IV

A Novel Three-Phase Quasi-Soft-Switching DC/AC Inverter
Weimin Wu (Shanghai Maritime University, P.R. China); Pan Geng (Shanghai Maritime University, P.R. China); Jianming Chen (Shanghai Maritime University, P.R. China); Yinzhong Ye (Shanghai Institute of Technology, P.R. China); Tianhao Tan (Shanghai Maritime University, P.R. China)
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High Frequency and High Power Density Transformers for DC/DC Converter used in Solar PV System
Junwei Lu (Griffith University, Australia)
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A General Internal Model Principle Based Control Scheme for CVCF PWM Converters
Wenzhou Lu (Southeast University, P.R. China); Keliang Zhou (Southeast University,, P.R. China); YunHu Yang (Southeast University, P.R. China)
pp. 485-489

Design of Current-Controller with PR-regulator for LCL-Filter Based Grid-Connected Converter
Guohong Zeng (Beijing Jiaotong University, P.R. China); Tonny Rasmussen (Technical University of Denmark, Denmark)
pp. 490-494

14:00 - 16:00

OS10: DG interfacing technology to the grid II

A new islanding detection approach using wavelet packet transform for wind-based distributed

generation
Walid G. Morsi (University of New Brunswick, Canada); Liuchen Chang (University of New Brunswick, Canada); Chris Diduch (University of New Brunswick, Canada)
pp. 495-500

Grid-Connected Power Converter with Islanding Detection and Active Power Filter Functions
Jia-Min Shen (National Kaohsiung University of Applied Sciences, Taiwan); Hurng-Liahng Jou (National Kaohsiung University of Applied Sciences, Taiwan, Taiwan); Jinn-Chang Wu (National Kaohsiung Marine University, Taiwan)
pp. 501-506

United System of TSC and SVG for Reactive Power Compensation
Weifeng Guo (Harbin Institute of Technology, P.R. China); Dianguo Xu (Harbin Institute of Technology, P.R. China); Jian Wu (Harbin Institute of Technology, P.R. China); Liguo Wang (Harbin Institute of Technology, P.R. China)
pp. 507-511

Two-Degree-of-Freedom Current Regulation of Grid-connected Inverters in Microgrid
Gu (University, P.R. China)
pp. 512-515

Predictive DC Voltage Control for Three-phase Grid-connected PV Inverters Based on Energy Balance Modeling
Fanbo He (Tsinghua University, P.R. China); Zhengming Zhao (Tsinghua University, P.R. China); Ting Lu (Tsinghua University, P.R. China); Liqiang Yuan (Tsinghua University, P.R. China)
pp. 516-519

A simple design of DC power system with multiple source-side converters to operate stably under constant power load
Tran Duong (National University of Singapore, Singapore); Haihua Zhou (National University of Singapore, Singapore); Ashwin Khambadkone (National University of Singapore, Singapore)
pp. 520-525

OS11: Power semiconductor devices and high efficient conversion

High Voltage Power MOSFET with Reduced JFET Area Design
Feng-Tso Chien (Feng Chia University, Taiwan); Tien-Chun Li (Feng Chia University, Taiwan); Ping-Hung Lai (Feng Chia University, Taiwan); Chien-Nan Liao (National Central University, Taiwan); Yao-Tsung Tsai (National Central University, Taiwan)
pp. 526-529

Comparison of Termination Structure Design by Device Simulator
Chiennan Liao (National Central University, Taiwan); Ping-Hung Lai (Feng Chia University, Taiwan); Tien-Chun Li (Feng Chia University, Taiwan); Feng-Tso Chien (Feng Chia University, Taiwan); Yao-Tsung Tsai (National Central University, Taiwan)
pp. 530-533

A New UPS Converter Applied with One Set of Batteries
Yuan Shiying (East China Jiaotong University, P.R. China); Cao Hui (East China Jiaotong University, P.R. China); Yuan Yisheng (East China Jiaotong University, P.R. China)
pp. 534-537

Design and Implementation of LLC Resonant Converter with High Efficiency at Light Load Condition
Ya-Chun Chen (National Cheng Kung University, Taiwan); T. J. Liang (Cheng Kung University, Taiwan); Wei-Jing Tseng (National Cheng Kung University, Taiwan); Jia-You Lee (National Cheng Kung University, Taiwan); Lung-Sheng Yang (National Cheng Kung University, Taiwan)
pp. 538-542

Distributed Operation of Multiple Shunt Active Power Filters Considering Power Quality Improvement Capacity
Siyu Leng (Florida State University, USA); Il-Yop Chung (Florida State University, USA); David

Cartes (Florida State University, USA)
pp. 543-548

Research on Soft Starter of Asynchronous Electromotor Based on Magnetically Controllable Reactor
Su Yuan (Tian Jin university, P.R. China)
pp. 549-552

OS12: Power electronic converters and controls II

An n-Level Flying Capacitor based Active Neutral-Point-Clamped Converter
Sridhar R. Pulikanti (The University of Sydney, Australia); Georgios S. Konstantinou (The University of New South Wales, Australia); Vassilios Agelidis (The University of New South Wales, Australia)
pp. 553-558

The dual-loop control strategy of railway static power regulator for V/V electric traction system
FuJun Ma (Hunan university, P.R. China)
pp. 559-564

A New Class of Single-Phase Multilevel Inverter
Yaosuo Xue (Siemens Corporate Research, USA); Madhav Manjrekar (Siemens Corporate Research, USA)
pp. 565-571

FPGA-Based Multi-level Inverter Multi-carrier Pulse Generation Theory and Implementation Method
Jinghua Zhou (North China University of Technology, P.R. China)
pp. 572-576

The Stability Analysis and Determination of Multi-module Distributed Power Electronic Systems
Dan Hou (Xi'an Jiaotong University, P.R. China); Jinjun Liu (Xi'an Jiaotong University, P.R. China); Hao Wang (Xi'an Jiaotong University, P.R. China); Wei Huang (Xi'an Jiaotong University, P.R. China)
pp. 577-583

A New Voltage Sag Generator Base on Power Electronic Devices
Dongyu Li (Tsinghua University, P.R. China); Honglin Zhou (Tsinghua University, P.R. China); Geng Yang (Tsinghua University, P.R. China); Shuai Xiao (Tsinghua University, P.R. China)
pp. 584-588

16:15 - 18:00

PS4: Applications of wind systems, photovoltaic systems, small hydro units, marine energy systems, fuel cells, microturbines, combined heat and power generators, etc.; ground current suppression, DC injection suppression and EMI filter design; new power semiconductors

Review of FRT Requirements for Integration of Wind Energy in China and Europe
Zhang Yong (Beijing Technology and Business University, P.R. China); Liu Zaiwen (Beijing Technology and Business University, P.R. China)
pp. 589-592

Development of 22KW Experimental Platform for Wind Power Generation System Using SCIG
Yulin Yang (YanShan University, P.R. China); Yidong Chen (YanShan University, P.R. China); Zhiyun Jia (YanShan University, P.R. China); Wang Liqiao (Yanshan University, P.R. China); Weiyang Wu (Yanshan University, P.R. China)
pp. 593-596

Design and Performance Analysis of a Doubly Excited Brushless Machine for Wind Power Generator Application
Huijuan Liu (Beijing Jiaotong University, P.R. China)
pp. 597-601

Impacts of Doubly-fed Wind Turbine Generator Operation Mode on System Voltage Stability
Ming Ding (Hefei University of Technology, P.R. China); Li Bin (Hefei University of Technology, P.R. China); Han Ping (Hefei University of Technology, P.R. China)
pp. 602-606

Analysis of Doubly Excited Brushless Machine with Radially Laminated Magnetic Barrier Rotor
Huijuan Liu (Beijing Jiaotong University, P.R. China)
pp. 607-610

A New Sensorless Control Strategy used in Direct-drive PMSG Wind Power System
Shengwen Fan (North China University of Technology, P.R. China); Peng Wang (PE & MD Engineering Research Center, North China University of Technology, P.R. China); Chunxue Wen (North China University of Technology, P.R. China)
pp. 611-615

An Integrated Control Method for Three-Level NPC Based PWM Rectifier-Inverter
Yingchao Zhang (University of Tsinghua, P.R. China); Zhengming Zhao (Tsinghua University, P.R. China); Ting Lu (Tsinghua University, P.R. China); Liping Jin (Chongqing Communication Institute, P.R. China)
pp. 616-620

Study on transient stability of grid-connected large scale wind power system
Han Ping (Hefei University of Technology, P.R. China); Ming Ding (Hefei University of Technology, P.R. China); Li Bin (Hefei University of Technology, P.R. China)
pp. 621-625

Winding Structure of Switched Reluctance Motor Based on Three-Phase Bridge Converter and Its Influence on Torque Ripple
Dong Zhang (Beijing Institute of Technology, P.R. China); Dong Lei (Beijing Institute of Technology, P.R. China); Ming Qin (Beijing Institute of Technology, P.R. China); Xiaozhong Liao (Beijing Institute of Technology, P.R. China)
pp. 626-630

A Three Order Harmonic Injection Method to Reduce Current Harmonics for High Speed PM Generator
Haoran Bai (Qingdao Agriculture University, P.R. China)
pp. 631-634

Single-Phase Hybrid Clamped Three-Level Inverter Based Photovoltaic Generation System
Alian Chen (Shandong University, P.R. China); Weiyu Wang (Shandong University, P.R. China); DU Chunshui (Shandong University, P.R. China); Chenghui Zhang (Shandong University, P.R. China)
pp. 635-638

Research on Three-Level Static Synchronous Compensator
Yulin Zhao (Northeast Agricultural University, P.R. China); Qiuyan Liang (Jia Musi University, P.R. China); Shoutian Dong (Northeast Agricultural University, P.R. China); Qi Zhao (Northeast Agricultual University, P.R. China)
pp. 639-644

A Novel Sector Partition Method for Phase to Phase Voltage Synthesis Control Strategy of Matrix Converter
Mingming Shi (Nanjing University of Aeronautics and Astronautics, P.R. China); Bo Zhou (Nanjing University of Aeronautics and Astronautics, P.R. China); Yiran Mao (Nanjing University of Aeronautics and Astronautics, P.R. China)
pp. 645-649

Development of Single-phase Photovoltaic Grid-connected Inverter Based on DSP Control
Hao Zhou (University of Science and Technology Beijing, P.R. China); Chuan Gao (Beijing Green Power Co.,Ltd, P.R. China)
pp. 650-653

Development of a 450A/600V 6-in-1-package Intelligent Power Module (IPM)
Yulin Zhong (Institute of Electrical Engineering, China Academy of Sciences, P.R. China)
pp. 654-657

A real time digital test bed for a smart grid using RTDS
Passinam Tatcho (Florida State University, USA); Yan Zhou (Florida State University, USA); Hui Li (Florida State University, USA); Liming Liu (Florida State University, USA)
pp. 658-661

Operational Reliability Evaluation of Generating System Considering Ageing Failure
Xianjun QI (Hefei University of Technology, P.R. China); Ming Ding (Hefei University of Technology, P.R. China); Wang Xingqiang (Hefei University of Technology, P.R. China); Jingsai HU (Hefei University of Technology P.R. China, P.R. China)
pp. 662-669

Smart Grid: Challenges, Research Directions and Possible Solutions
Walid G. Morsi (University of New Brunswick, Canada); Liuchen Chang (University of New Brunswick, Canada); Chris Diduch (University of New Brunswick, Canada); Fatouma Bagnan Beidou (University of New Brunswick, Canada)
pp. 670-673

Cogeneration System Utilizing Waste Heat from Sintering-Cooling Process
Jie LI (Northeastern University, P.R. China)
pp. 674-677

Study on Loss Allocation of Power Distribution Network with Distributed Generation
Wei Li ming (Jilin Institute of Architecture and Civil Engineering, P.R. China); Lin Jun (Jilin University, P.R. China)
pp. 678-680

PS5: Energy storage, energy management, microgrids and hybrid energy systems; control, communication and monitoring of DGs and renewable energy systems

Control of Inverter-interfaced Distributed Generation Systems in Different Operation Modes
Davood Khani (Sahand University of Technology, Iran); Ahmad Sadeghi Yazdankhah (Sahand University of Technology, Iran)
pp. 681-684

Research on combination of series and parallel with Supercapacitor Module
Enhui Zhang (Institute of Electrical Engineering Chinese Academy of Sciences, P.R. China); Zhiping Qi (Institute of Electronic Engineering, Chinese Academy of Sciences, P.R. China); Tongzhen Wei (Institute of Electronic Engineering, Chinese Academy of Sciences, P.R. China)
pp. 685-690

Verification of the Equivalent Model of the Inverter in Microgrid
Shanshan Shi (Tsinghua University, P.R. China); ZongXiang Lu (Tsinghua University, P.R. China); Yong Min (Tsinghua University, P.R. China)
pp. 691-695

Fuel Cell UPS System without Bulky DC Electrolytic Capacitors
Chengrui Du (Zhejiang University, P.R. China); Li Xiao (Zhejiang University, P.R. China); Wu Xiaotian (Zhejiang University, P.R. China); Wenping Zhang (Zhejiang University, P.R. China); Dehong Xu (Zhe Jiang University, P.R. China)
pp. 696-702

A combined protection and control strategy to enhance the LVRT capability of a wind turbine driven by DFIG
Dongdong Li (Shanghai University of Electric Power, P.R. China); Huajie Zhang (Shanghai University of Electric Power, P.R. China)
pp. 703-707

Research of Real-Time Database System for Microgrid
Ming Ding (Hefei University of Technology, P.R. China); Xie Tian (Hefei University of Technology, P.R. China); Lei Wang (Hefei University of Technology, P.R. China)
pp. 708-712

Energy Management of Hybrid DC and AC Bus Linked Microgrid

Dong Bo (Tsinghua University, P.R. China); Yongdong Li (Tsinghua University, P.R. China); Zheng Zedong (Tsinghua University, Beijing, P.R. China)
pp. 713-716

A Novel Three-port Bi-directional DC-DC Converter
Jun Xie (HeFei University of Technology, P.R. China); Xing Zhang (Hefei University of Technology, P.R. China); Chongwei Zhang (Hefei University of Technology, P.R. China); Shengyong Liu (HeFei University of Technology, P.R. China)
pp. 717-720

Proportional-Resonant Based High-Performance Control Strategy for Voltage-Quality in Dynamic Voltage Restorer System
Suxuan Guo (Wuhan University, P.R. China); Dichen Liu (Wuhan University, P.R. China)
pp. 721-726

Multiple-Port DC/DC Converter for Power flows Management in Electric Vehicles
Xing Zhang (Hefei University of Technology, P.R. China); Shengyong Liu (HeFei University of Technology, P.R. China); Jun Xie (HeFei University of Technology, P.R. China)
pp. 727-730

Adaptive Passivity-Based Control Strategies of Doubly Fed Induction Wind Power Generator Systems
Hua Xue (Shanghai University of Electric Power, P.R. China); Yufei Wang (Shanghai University of Electric Power, P.R. China); Fan Yang (Shanghai University of Electric Power, P.R. China)
pp. 731-734

Design of Common Communication Platform of Microgrid
Rui Bi (Hefei university of technology, P.R. China); Ming Ding (Hefei University of Technology, P.R. China); Xu (Hefei University of Technology, P.R. China)
pp. 735-738

Adaptive Optimal Fuzzy Control of Asymmetric Nonlinear Chua's Circuit Chaos Systems
Yufei Wang (Shanghai University of Electric Power, P.R. China); Xiu Yang (Shanghai University of Electric Power, P.R. China); Hua Xue (Shanghai University of Electric Power, P.R. China)
pp. 739-743

Research on No-load Grid-connection Control Strategy For Doubly-fed Wind Power System
Wang Yong (Yanshan University, P.R. China); Zhang Chun-Jiang (Yanshan University, QinHuangDao, China, P.R. China); Chai Xiu-Hui (Yanshan University, P.R. China); Kan Zhi-Zhong (Yanshan University, P.R. China)
pp. 744-747

Research on Control Strategies for Distributed Inverters in Low Voltage Micro-grid
Hongbing Chen (Hefei Univerty of Technology, P.R. China)
pp. 748-752

Dynamic Modeling of Large Scale Power System with FACTS and DFIG type Wind Turbine
Xiaoyan Bian (Shanghai University of Electric Power, P.R. China)
pp. 753-758

MPPT Control Strategy for Off-grid Wind Power System
Dong Liu (Beijing Jiaotong University, P.R. China); Zhensheng Wu (Beijing Jiaotong University, P.R. China); Hui Wang (Beijing Jiaotong University, P.R. China); Tianjian Wang (Beijing Jiaotong University, P.R. China)
pp. 759-764

Optimization of Design and Application of Micro-grid Energy Management System Data Acquisition System
Liang Zhou (Hefei University of Technology, P.R. China); Ming Ding (Hefei University of Technology, P.R. China); Rui Bi (Hefei university of technology, P.R. China)
pp. 765-768

A fuzzy control for a fuel cell generation system based on Field Programmable Gate Array
Fan Yang (Shanghai university of electric power, P.R. China)
pp. 769-772

Forecasting Power Output for Grid-connected Photovoltaic Power System without using Solar Radiation Measurement
Tao Cai (Huazhong University of Science & Technology, P.R. China); Shanxu Duan (Huazhong University of Science and Technology, P.R. China); Changsong Chen (Huazhong University of Science & Technology, P.R. China)
pp. 773-777

Electro-Thermal Coupling Finite Element Analysis and Optimization Design of Current Lead in SMES
Jing Ma (Beijing Jiaotong University, P.R. China); Ruifang Liu (Beijing Jiaotong University, P.R. China); Hongjie Zhang (China Electric Power Research Institute, P.R. China)
pp. 778-781

PS6: DG and converter interfacing technology for utility grids and power quality; islanding detection, safety protection and standards of DG systems

Research of Automatic Bus Transfer in Substation with DG Connected
Lei Wang (Hefei University of Technology, P.R. China); Ming Sun (Hefei University of Technology, P.R. China)
pp. 782-785

Real Time Digital Simulation (RTDS) of a novel Battery-integrated PV System for High Penetration Application
Yan Zhou (Florida State University, USA); Hui Li (Florida State University, USA); Liming Liu (Florida State University, USA)
pp. 786-790

Structure design and its parameter optimization of output filter in Current balance compensation inverter for electrified railway
Wang Guo (Lanzho Jiaotong University, P.R. China); Tian Mingxing (Lanzhou Jiaotong University, P.R. China); Ren Enen (Lanzhou Jiaotong University, P.R. China)
pp. 791-795

Power Quality Active Control Research of Building Integrated Photovoltaic
Shaoping Luo (Shaoyang Institute, P.R. China); An Luo (Hunan University, P.R. China); Zhipeng LV (Hunan University, P.R. China); Yao Shen (Hunan University, P.R. China); Lu Guo (Hunan University, P.R. China); Wenqian Jiang (Guangxi Electric Power Test & Research Institute Limited Company, P.R. China)
pp. 796-801

A Novel Optimized LCL-Filter Designing Method for Grid Connected Converter
Guohong Zeng (Beijing Jiaotong University, P.R. China); Tonny Rasmussen (Technical University of Denmark, Denmark); Remus Teodorescu (Aalborg University, Denmark)
pp. 802-805

Distributed Energy Resources in Grid Interactive AC Microgrids
Xiongfei Wang (Aalborg University, Denmark); Josep Guerrero (Technical University of Catalonia, Spain); Zhe Chen (Aalborg University, Denmark); Frede Blaabjerg (Aalborg University, Denmark)
pp. 806-812

A Novel Digital Phase-Locked Loop for Distributed Grid-Connected Power Generation Systems under Unbalanced and Distorted Utility Conditions
Xiangdong Sun (Xi'an University of Technology, P.R. China); Qi Zhang (Xi'an University of Technology, P.R. China); Biying Ren (Xi'an University of Technology, P.R. China); Yanru Zhong (Xi'an University of Technology, P.R. China)
pp. 813-817

APF for Harmonic Voltage Resonance Suppression in Distribution System
Xiaofeng Sun (Yanshan University, P.R. China); Jian Zeng (Yanshan University, P.R. China); Zhe Chen (Aalborg University, Denmark)
pp. 818-822

An Improved Droop Controller for Grid- Connected Voltage Source Inverter in Microgrid

Yajuan Guan (Yanshan University, P.R. China); Weiyang Wu (Yanshan University, P.R. China); Xiaoqiang Guo (Yanshan University, P.R. China); Gu Herong (Yanshan University, P.R. China)

pp. 823-828

Compensation of Control Delay and Discrete Control Error in Predictive Direct Power Control for Three-level PWM Rectifier

Ting Lu (Tsinghua University, P.R. China); Zhengming Zhao (Tsinghua University, P.R. China); Fanbo He (Tsinghua University, P.R. China); Liqiang Yuan (Tsinghua University, P.R. China); Yingchao Zhang (University of Tsinghua, P.R. China)

pp. 829-834

Investigation of Control Scheme for PWM VSR under Three-Phase Voltage Unbalance Conditions

Feng Xu (Southeast University, P.R. China); Ming Cheng (Southeast University, P.R. China); Jianzhong Zhang (Southeast University, P.R. China); Keliang Zhou (Southeast University,, P.R. China)

pp. 835-840

Low Voltage Ride-through of Wind Farms using STATCOM Combined with Series Dynamic Breaking Resistor

Linyuan Zhou (Xi'an Jiaotong University, P.R. China); Jinjun Liu (Xi'an Jiaotong University, P.R. China); Fangcheng Liu (Xi'an jiaotong university, P.R. China)

pp. 841-845

Research of Intellective High Quality Inverter- Based Distributed Power Supply System Collocating SVC

Zhipeng LV (Hunan University, P.R. China); An Luo (Hunan University, P.R. China); Ke Zhou (Guangxi Electric Power Test & Research Institute Limited Company, P.R. China); Wenqian Jiang (Guangxi Electric Power Test & Research Institute Limited Company, P.R. China); Lu Guo (Hunan University, P.R. China); Yao Shen (Hunan University, P.R. China)

pp. 846-851

Study of Adaptive Fault Current Algorithm for Microgrid Dominated by Inverter Based Distributed Generators

Han Yi (China Electric Power Research Institute, P.R. China); Hu Hao (China Electric Power Research Institute, P.R. China); Zhang Xia (China Electric Power Research Institute, P.R. China)

pp. 852-854

An Effective Anti-islanding Method for Multi- Inverter-Based Distributed Generation

Gu (University, P.R. China)

pp. 855-858

Two Islanding Detection Circuits based on the Impedance Variation for the Micro-grid

LI Jun (South East University, P.R. China); Huang Xue-liang (South East University, P.R. China); Chen Xiao-hu (Nanjing Institute of Technology, P.R. China); Xie Miao (South East University, P.R. China); Xu Wen (South East University, P.R. China)

pp. 859-863

Forecasting of wind speed based on wavelet analysis and support vector machine

Zhou Songlin (Hefei University of Technology, P.R. China); Meiqin Mao (Hefei University of Technology, P.R. China); Liuchen Chang (University of New Brunswick, Canada)

pp. 864-867

Techno-economical Analysis of Vanadium redox and Lead-acid batteries in Stand-alone Photovoltaic systems

Guozhen Hu (Huazhong University of Science & Technology, P.R. China); Shanxu Duan (Huazhong University of Science and Technology, P.R. China); Tao Cai (Huazhong University of Science & Technology, P.R. China); Changsong Chen (Huazhong University of Science & Technology, P.R. China)

pp. 868-872

Friday, June 18

08:30 - 09:50

OS13: Applications of new energy systems

Research on the Complex Vector Control Strategy for MW level Permanent Magnet Synchronous Wind-driven Generator

WANG Ling-xiang (Hefei University of Technology, P.R. China)

pp. 873-877

Study on Neutral-Point Voltage Balance of 3- level NPC inverter in 3-Phase 4-Wire System

Wenping Zhang (Zhejiang University, P.R. China); Li Xiao (Zhejiang University, P.R. China); Chengrui Du (Zhejiang University, P.R. China); Wu Xiaotian (Zhejiang University, P.R. China); Dehong Xu (Zhejiang University, P.R. China)

pp. 878-882

Characteristics and Experimental Study on a Novel Tangential/Radial Hybrid Excitation Synchronous Machine

Shushu Zhu (Nanjing University of Aeronautics and Astronautics, P.R. China); Chuang Liu (Nanjing University of Aeronautics and Astronautics, P.R. China); Yihao Xu (Nanjing University of Aeronautics and Astronautics, P.R. China); Xiang Zhou (Nanjing University of Aeronautics and Astronautics, P.R. China)

pp. 883-886

Dynamic Equivalence to Induction Generators and Wind Turbines for Power System Stability Analysis

Shenghu Li (Hefei University of Technology, P.R. China); Zhengkai Liu (Heifei University of Technology, P.R. China); Xinjie Hao (Hefei University of Technology, P.R. China); Shusen Jia (Hefei University of Technology, P.R. China)

pp. 887-892

OS14: Control, communications and monitoring of DGs and renewable energy systems

Efficiency of Kinetic Hydropower System

Yan Du (Hefei University of Technology, P.R. China); Xiangzhen Yang (Hefei University of Technology, P.R. China)

pp. 893-897

Development of High Gain and Efficiency Photovoltaic System Using Multilevel Boost Converter Topology

Mahrous Ahmed (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mostafa Mousa (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mohamed Orabi (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt)

pp. 898-903

Simulation on Control Strategies of Grid-connected Inverters

Hongbin Wu (Hefei University of Technology, P.R. China); Hui Sun (Hefei University of Technology, P.R. China); Liang Cai (Hefei University of Technology, P.R. China); Xiaofeng Tao (Hefei University of Technology, P.R. China)

pp. 904-908

Constant Power Flow Control of Point of Common Coupling for High Proportion Photovoltaic Microgird

Lingwei Zheng (East China University of Science and Technology, P.R. China); Shirong Liu (Hangzhou Dianzi University, P.R. China); Qinghe Xu (Hangzhou Dianzi University, P.R. China); Eisuke Shimoda (Shimizu Corporation, Japan); Hirotoshi Esaki (Chugoku Electric Power CO., INC, Japan); Shigeyuki Suzuki (Meidensha Corporation, Japan)

pp. 909-913

OS15: Energy storage, and energy management

Dynamic Economic Dispatch for Microgrids Including Battery Energy Storage

Xiaoping Liu (Hefei University of Technology, P.R. China); Ming Ding (Hefei University of Technology, P.R. China); Jianghong Han (Hefei University of Technology, P.R. China); Pingping Han (Hefei University of Technology, P.R. China)

pp. 914-917

Applications of Battery Energy Storage System (BESS)for Energy Conversion Base in Expo 2010

Wei Shi (University of Beijing Jiaotong, P.R. China); Jiuchun Jiang (University of Beijing Jiaotong, P.R. China); Suoyu Li (University of Beijing Jiaotong, P.R. China); Siqi Lin (University of Beijing Jiaotong, P.R. China); Peifeng Lin (University of Beijing Jiaotong, P.R. China); Feng Wen (University of Beijing Jiaotong, P.R. China)

pp. 918-923

BoS Cost Savings and LCOE Reduction for a 10 MW PV System with the 500 kW Transformerless Inverter

Chia-Han Hung (Advanced Energy Industries, Inc, P.R. China); Jack Gilmore (Advanced Energy Industries, Inc, USA); Ching-Ping Victor Huang (Advanced Energy Industries, Inc, Taiwan); Pei-Gang Dai (Shanghai Guangdian Electric Group, P.R. China); Wei Zhu (Shanghai Guangdian Electric Group, P.R. China)

pp. 924-928

A Novel Control Strategy for Hybrid Energy Storage System to relieve battery stress

Fangcheng Liu (Xi'an jiaotong university, P.R. China); Jinjun Liu (Xi'an Jiaotong University, P.R. China); Linyuan Zhou (Xi'an Jiaotong University, P.R. China)

pp. 929-934

10:15 - 11:35

OS16: Applications of new energy systems II

Development of Grid Connected Power Conditioner System Compatible with Fuel Cell Applications

Hala Rslan (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mahrous Ahmed (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mohamed Orabi (APEARC, Aswan Faculty of Engineering, South Valley University, Egypt); Mohamed Youssef (Bombardier Transportation Industry, Canada)

pp. 935-941

A Study of the Reduction of the Regional Aggregated Wind Power Forecast Error by Spatial Smoothing Effects in the Maritime Canada

Yu Han (Nova Scotia Power, Canada); Liuchen Chang (University of New Brunswick, Canada)

pp. 942-947

A New Approach to Achieve Maximum Power Point Tracking for PV System with a Variable Inductor

Longlong Zhang (Zhejiang University, P.R. China); Gerry Hurley (National University of Ireland, Galway, Ireland); Werner Wölfle (National University of Ireland, Galway, Ireland)

pp. 948-952

Research of Power Source Calibrating Device of High Voltage Parameters Based on DDS

Zhentao Zhou (Hohai University, P.R. China); Hui Deng (Hohai University, P.R. China); Lijie Sun (Hohai University, P.R. China)

pp. 953-957

OS17: Control, communications and monitoring of DGs and renewable energy systems II

Reliability Evaluation of Distribution System with Wind Farms Based on Network-Equivalent Method

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