2020 IEEE 9th International Power Electronics and Motion Control Conference (IPEMC2020-ECCE Asia)

Nanjing, China
29 November - 2 December 2020

Pages 1-709

IEEE Catalog Number: CFP20792-POD
ISBN: 978-1-7281-5302-5

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP20792-POD
ISBN (Print-On-Demand): 978-1-7281-5302-5
ISBN (Online): 978-1-7281-5301-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

Table of Contents

Mingda Guo (Nanjing University of Aeronautics and Astronautics & School of Automation, China); Qianhong Chen (Nanjing University of Aeronautics & Astronautics, China); Xin Chen and Ligang Xu (Nanjing University of Aeronautics and Astronautics, China); Guangming He (Nanjing University of Aeronautics and Astronautics & Huaiyin Normal University, China)

3003 Energy Storage Transitive Energy Control for Node Voltage Stability of Distribution Network through Bertrand Dynamic Price Auction

Jingpeng Yue (Electric Power Research Institute of Guangdong Power Grid Co., Ltd, China); Liu Lifang (Institute of Electrical and Electronic Engineering, Kaifeng University, China); Liang Xiaobin (Electric Power Research Institute Guangdong Power Grid Co., Ltd, China); Zhong Zhuoying (Guangzhou Power Supply Bureau Co., Ltd Guangdong Power Grid Co., Ltd, China); Zhao Wei and Xie Ning (Electric Power Research Institute Guangdong Power Grid Co., Ltd, China); Zhang Xiaoye (Guangdong Diankeyuan Energy Technology Co., Ltd, Guangzhou, China)

3008 An Islanding Detection Method for Microgrids Using Synchronized Small-AC-Signal Injection

Haoyang Zheng (Xi'an Jiaotong University, China); Zeng Liu (Xi'an Jiaotong University & Virginia Tech, China); Ronghui An and Jinjun Liu (Xi'an Jiaotong University, China)

3014 A Modified Particle Swarm Optimization Based Algorithm for the Energy Management Strategy of a Regional Integrated Energy System

Yiru Chen, Lou Fei and Ying Jiang (State Grid Zhejiang Marketing Service Center Metrology Center, China); Qichao Ye (State Grid Zhejiang Electric Power Research Institute, China); Ning Wang (State Grid HangZhou Power Supply Company, China); Guangyao Ying (State Grid Zhejiang Electric Power Research Institute, China)

3021 Sliding Mode Flux Observer Based Predictive Field Oriented Control for Induction Machine Drives

Haotian Xie (Technical University of Munich, Germany); Fengxiang Wang (Quanzhou Institute of Equipment Manufacturing, Chinese Academy of Sciences, China); Wei Zhang (Technical University of Munich, Germany); Cristian Garcia (Universidad de Talca, Chile); Jose Rodriguez (Universidad Andres Bello, Chile); Ralph Kennel (Technical University of Munich, Germany)

3026 A Unified Startup Control Strategy for Modular Multilevel Converters from Either AC Side or DC Side

Jinyu Wang, Yang Qi and Li Zhang (Nanyang Technological University, Singapore); Jiale Yu (50 Nanyang Ave & NTU, Singapore); Yi Tang (Nanyang Technological University, Singapore)

3033 Fixed Switching Frequency Model Predictive Control for PMSM Drives With Guaranteed Control Dynamics

Xiaodong Liu (Shandong University, China); Zhenbin Zhang (School of Electrical Engineering Shandong University, China); Xinliang Yang (Shandong University, China); Garcia Cristian (Universidad de Talca, Chile); Jose Rodriguez (Universidad Andres Bello, Chile)

3039 High Performance Speed Sensorless Finite-Set Predictive Thrust Control of a Linear Induction Motor based on MRAS and Fuzzy Logic Controller

Mahmoud F. Elmorshedy (Huazhong University of Science and Technology, Wuhan, China & Faculty of Engineering, Tanta University, Egypt); Wei Xu (Huazhong University of Science and Technology, Wuhan, China); Mosaad Ali

3100 An Improved Current Feedforward Control Strategy for Multi-port Power Electronic Transformer

Zhe Wang (Institute of Electrical Engineering Chinese Academy of Sciences, China); Yaohua Li and Li Zixin (Institute of Electrical Engineering, Chinese Academy of Sciences, China); Cong Zhao (Zhongguancun Beijing & Insitute of Electrical Engineering Chinese Academy of Sciences, China); Fanqiang Gao (Chinese Academy of Sciences, Institute of Electrical Engineering, China); Yujie Hu (Institute of Electrical Engineering, Chinese Academy of Sciences, China)

3107 An IoT Platform-based Multi-objective Energy Management System for Residential Microgrids

Yajuan Guan, Wei Feng, Yanpeng Wu, Juan Vasquez and Josep M. Guerrero (Aalborg University, Denmark)

3113 An Improved Boost-type Hybrid Converter with Multiple Outputs

Zhongting Tang(Alborg University,Denmark);Yongheng Yang(Alborg University,Denmark);Mei Su(Central South University,China);Hua Han(Central South University,China);

3119 Instantaneous DC-Link Voltage Control for Electrolytic Capacitors-less PMSM Drives

Chao Zhang (Jiangsu University, unknown); Liangjie Zhu and Lei Xu (Jiangsu University, China); Xiaoyong Zhu (Jiangsu University & School of Electrical and Information Engineering, China)

3123 Suppression of DC-Link Voltage Oscillation for Electrolytic Capacitorless Inverter Control Based on Active Damping Technique

Jiali Liu, Yongchang Zhang and Wenjia Shen (North China University of Technology, China)

3128 Optimized Modulation Scheme of Three-level Dual Active Bridge Converter

Hangbin Yu and Chi Shao (Hangzhou Dianzi University, China); Anping Tong (Shanghai Jiaotong University, China); Lijun Hang and Yuanbin He (Hangzhou Dianzi University, China)

3132 An improved SPICE model of SiC MOSFET by output nonlinear capacitor optimization

Ziru Wang, Xin Yang, Yifei Ding and Jun Wang (Hunan University, China)

3138 A Low-Cost High-Bandwidth Easy-to-Design Current Sensing Circuit for SiC MOSFETs

Chengzi Yang and Mengyu Zhu (XJTU, China); Yunfei Xu (State Key Laboratory of Advanced Power Transmission Technology, China); Huaqing Li (XJTU, China); Yongbin Jiang, Laili Wang, Yunqing Pei, Hong Zhang and Yongmei Gan (Xi'an Jiaotong University, China)

3143 Analysis and Simulation of Double Resonant Path Converter with Variable Conversion Ratio

Apostolos Bakovasilis (IMEC & KU Leuven, Belgium); Patrizio Manganiello (TU Delft, The Netherlands); Wilmar Martinez (Katholieke Universiteit Leuven, Belgium); Jef Poortmans (IMEC, Belgium)

3149 Towards Lightweight Magnetic Components for Converters with Wide-bandgap Devices

Gerardo Calderon-Lopez (Compound Semiconductor Applications Catapult, United Kingdom (Great Britain)); Rebecca Todd and Andrew Forsyth (The University of Manchester, United Kingdom (Great Britain)); Jun Wang (University of Bristol, United Kingdom (Great Britain)); Xibo Yuan (The University of Bristol, United Kingdom (Great Britain)); Samer Aldhaher, Christopher H Kwan, David Christopher Yates and Paul Mitcheson (Imperial College London, United Kingdom (Great Britain)); Wenbo Wang (University of Bristol, United Kingdom (Great Britain))