



# 中国电机工程学报

ZHONGGUO DIANJI GONGCHENG XUEBAO

第 39 卷

第 23 期 (总第 634 期)

2019 年 12 月 5 日

## 目 次

(论文电子版 <http://www.pcsee.org/CN/volumn/home.shtml>)

### · 大电网规划与运行 ·

- 园区型综合能源系统多时间尺度模型预测优化调度.....王成山, 吕超贤, 李鹏, 李树泉, 赵鲲鹏 (6791)
- 基于机会约束规划的含风电场电力系统可用输电能力计算.....陈金富, 孙鑫, 段献忠, 杨增力, 等 (6804)
- 基于图分割的电力系统同调机群辨识新方法.....李雪, 姜涛, 陈厚合, 李国庆 (6815)

### · 输变电技术 ·

- 超/特高压输电线路宽频窗短时窗行波差动保护方法.....雷傲宇, 董新洲 (6826)
- 锁相环对 HVDC 系统后续换相失败的影响研究.....王子民, 傅闯, 汪娟娟, 李子林, 王学梅 (6836)
- 适用于架空线柔直的嵌套式全桥型混合 MMC 方案.....丁江萍, 吕煜, 赵西贝, 许建中, 郭春义, 等 (6844)
- 柔性直流电网主动限流开断直流故障研究.....周猛, 向往, 左文平, 文劲宇, 林卫星 (6852)
- 基于阻抗匹配的输电线路在线取能方法研究.....刘铮, 樊绍胜, 胡劫睿 (6867)

### · 智能电网 ·

- 快速动态响应同步调相机动态无功特性试验验证.....李志强, 种芝艺, 黄金军 (6877)
- 正交伪随机测量动态测试信号建模与电能表动态误差的似然函数间接测量方法.....王学伟, 王婧, 等 (6886)
- 电气化铁路接入下的电力系统概率潮流分析.....陈维荣, 姜天, 戴朝华, 袁爽 (6899)
- 直驱风电场接入弱电网宽频带振荡机理与抑制方法(二): 基于阻抗重塑的宽频带振荡抑制方法.....李光辉, 王伟胜, 刘纯, 金一丁, 年珩, 何国庆 (6908)
- 一种计及智能电网信息物理特性的分布式控制器.....王子强, 王杰 (6921)

### · 发电 ·

- GE 公司重型燃气轮机透平冷气量和燃气初温推测.....郑露霞, 张士杰, 王波, 赵丽凤, 肖云汉 (6934)
- 应用于工业余热的超临界二氧化碳布雷顿循环系统的热力学和烟分析.....陶志强, 赵庆, 唐豪杰, 等 (6944)
- CFB 锅炉内石灰石同时煅烧/硫化反应动力学及孔结构演变模拟.....陈亮, 王春波 (6952)
- 国华永发风电场风电机组控制策略优化及变频器升级应用.....于建国, 边辉, 李强, 张存佳, 高英俊 (6964)
- 热电制冷膜蒸馏实验多目标分析与优化.....李达, 杨晓宏, 田瑞, 胡俊虎, 魏文龙 (6971)
- 基于卷积神经学习的光伏板积灰状态识别与分析.....赵波, 廖坤, 邓春宇, 谈元鹏, 曹生现 (6981)

### · 电力电子与电力传动 ·

- 双向全桥串联谐振 DC/DC 变换器回流功率特性优化.....杨博, 葛琼璇, 赵鲁, 周志达 (6990)
- LCL 型逆变器并联系统母线电压质量改善方法.....周乐明, 姜捷, 陈燕东, 伍文华, 周小平, 等 (7000)
- 一种可扩展单元的高增益升压 Cuk 电路.....陈红星, 林维明, 曾涛 (7013)
- 非理想条件下 MMC-SAPF 的无源控制策略研究.....程启明, 王玉娇, 程尹曼, 沈磊, 魏霖 (7023)

### · 电机与电器 ·

- 永磁辅助同步磁阻电机设计及其关键技术发展综述.....徐媚媚, 刘国海, 陈前, 赵文祥 (7033)
- 一种复合直线开关磁阻电机高精度位置控制.....付鹏飞, 张晓东, 王璨, 潘剑飞, 黄韧, 谢文珂 (7044)
- 五相永磁同步电机单相开路故障的容错矢量控制策略.....熊聪, 许海平, 周鹏, 关涛 (7055)

### · 高电压技术 ·

- 油纸绝缘宽频介电响应谱分析及等效模型研究.....胡一卓, 董明, 谢佳成, 徐广昊, 任明, 汪可, 等 (7065)
- 高速气流对针板沿面直流放电特性的影响.....张血琴, 唐昕宇, 郭裕钧, 刘凯, 康永强, 李宇, 吴广宁 (7074)
- 特高压混合无功补偿对单相接地故障开断特性的影响研究.....杨婧婧, 刘洪顺, 何东欣, 刘兴华, 等 (7083)

### · 行业信息 ·

- 《中国电机工程学报》再创佳绩..... (7092)

### · 英文概述见论文电子版

期刊基本参数: CN11-2107/TM \* 1964 \* S \* A4 \* 302 \* zh \* P \* ¥84.00 \* 4000 \* 29\* 2019-12 版权所有 未经许可不得转载及上网

PROCEEDINGS OF THE CHINESE SOCIETY FOR  
ELECTRICAL ENGINEERING  
(PROCEEDINGS OF THE CSEE)

Vol.39 No.23 (Ser. 634)

Dec. 5, 2019

CONTENTS

(Electronic Journals <http://www.pcsee.org/EN/volumn/current.shtml>)

▪ **Power System Operation and Planning** ▪

- Multiple Time-scale Optimal Scheduling of Community Integrated Energy System Based on Model Predictive Control  
..... WANG Chengshan, LÜ Chaoxian, LI Peng, LI Shuquan, ZHAO Kunpeng (6791)
- A Chance-constrained Approach for Available Transfer Capability Evaluation for Power Systems With Wind Farm Integration  
..... CHEN Jinfu, SUN Xin, DUAN Xianzhong, YANG Zengli, et al (6804)
- A Graph Cut Approach for Separating Coherent Groups of Generators in Bulk Power Grid Using Synchrophasors  
..... LI Xue, JIANG Tao, CHEN Houhe, LI Guoqing (6815)

▪ **Power Transmission and Transformation Technologies** ▪

- Wide-frequency and Short-time Window Based Traveling Wave Differential Protection Method for  
EHV/UHV Transmission Lines ..... LEI Aoyu, DONG Xinzhou (6826)
- Study on the Influence of Phase-locked Loop on Follow-up Commutation Failure of HVDC System  
..... WANG Zimin, FU Chuang, WANG Juanjuan, LI Zilin, WANG Xuemei (6836)
- The Embedded Full-bridge Type Hybrid MMC Suitable for Overhead Line VSC-HVDC Transmission System  
..... DING Jiangping, LÜ Yu, ZHAO Xibei, XU Jianzhong, GUO Chunyi, et al (6844)
- Research on DC Fault Isolation of MMC Based DC Grid Using the Active Current-limiting Approach  
..... ZHOU Meng, XIANG Wang, ZUO Wenping, WEN Jinyu, LIN Weixing (6852)
- Research on On-line Energy Acquisition Method for Transmission Lines Based on Impedance Matching  
..... LIU Zheng, FAN Shaosheng, HU Jierui (6867)

▪ **Smart Grid** ▪

- Test Verification of Dynamic Reactive Power Characteristics of Fast Dynamic Response Synchronous Condenser  
..... LI Zhiqiang, CHONG Zhiyi, HUANG Jinjun (6877)
- Orthogonal Pseudo-random Measurement Dynamic Test Signal Modeling and Dynamic Error Indirect Test Method of  
Likelihood Function for Electricity Meter ..... WANG Xuewei, WANG Jing, et al (6886)
- Probabilistic Load Flow of Power System With Traction Power Load of Electrified Railways  
..... CHEN Weirong, JIANG Tian, DAI Chaohua, YUAN Shuang (6899)
- Mechanism Analysis and Suppression Method of Wideband Oscillation of PMSG Wind Farms Connected to Weak Grid (Part II):  
Suppression Method of Wideband Oscillation Based on Impedance Reshaping  
..... LI Guanghui, WANG Weisheng, LIU Chun, JIN Yiding, NIAN Heng, HE Guoqing (6908)
- A Distributed Control Considering the Cyber-physical Characteristics of Smart Grid..... WANG Ziqiang, WANG Jie (6921)

▪ **Power Generation** ▪

- The Cooling Air and Firing Temperature Estimation for GE's Heavy Duty Gas Turbines  
..... ZHENG Luxia, ZHANG Shijie, WANG Bo, ZHAO Lifeng, XIAO Yunhan (6934)
- Thermodynamic and Exergetic Analysis of Supercritical Carbon Dioxide Brayton Cycle System Applied to  
Industrial Waste Heat Recovery..... TAO Zhiqiang, ZHAO Qing, TANG Haojie, et al (6944)
- Kinetic Model of the Simultaneous Calcination/Sulfation Reaction and the Pore Change of Limestone in CFB Boilers  
..... CHEN Liang, WANG Chunbo (6952)
- Guohua Yongfa Wind Farm Wind Turbine Control Strategy Optimization and Frequency Converter Upgrade Application  
..... YU Jianguo, BIAN Hui, LI Qiang, ZHANG Cunjia, GAO Yingjun (6964)
- Multi-objective Analysis and Optimization of Thermoelectric Refrigeration Membrane Distillation Experiment  
..... LI Da, YANG Xiaohong, TIAN Rui, HU Junhu, WEI Wenlong (6971)
- Image Convolutional Neural Learning Based Image Recognition and Analysis Method for Dust on Photovoltaic Panel  
..... ZHAO Bo, LIAO Kun, DENG Chunyu, TAN Yuanpeng, CAO Shengxian (6981)

▪ **Power Electronics and Drives** ▪

- The Backflow Power Optimization of Dual Bridge Series Resonant DC/DC Converter  
..... YANG Bo, GE Qiongxuan, ZHAO Lu, ZHOU Zhida (6990)
- Bus-voltage Quality Improvement Method for Parallel-connected LCL-type Inverters System in Islanded Micro-grid  
..... ZHOU Leming, JIANG Jie, CHEN Yandong, WU Wenhua, ZHOU Xiaoping, et al (7000)
- A High Gain Step-up Cuk Circuit With Scalable Cell ..... CHEN Hongxing, LIN Weiming, ZENG Tao (7013)
- Research on Passive Control Strategy of MMC-SAPF Under Non-ideal Conditions  
..... CHENG Qiming, WANG Yujiao, CHENG Yinman, SHEN Lei, WEI Lin (7023)

▪ **Electirc Machines and Apparatus** ▪

- Design and Key Technology Development of Permanent Magnet Assisted Synchronous Reluctance Motor  
..... XU Meimei, LIU Guohai, CHEN Qian, ZHAO Wenxiang (7033)
- High Precision Position Control of a Composite Linear Switched Reluctance Motor  
..... FU Pengfei, ZHANG Xiaodong, WANG Can, PAN Jianfei, HUANG Ren, XIE Wenke (7044)
- Fault-tolerant Field Oriented Control for Five-phase Permanent-magnet Motors Under Single Phase Open Fault  
..... XIONG Cong, XU Haiping, ZHOU Peng, GUAN Tao (7055)

▪ **High Voltage Engineering** ▪

- Spectrum Analyzing and Modeling of Wide-band Frequency Dielectric Response of Oil-paper Insulation  
..... HU Yizhuo, DONG Ming, XIE Jiacheng, XU Guanghao, REN Ming, WANG Ke, et al (7065)
- Effect of High-speed Airflow on the Surface DC Discharge Characteristics of the Needle Plate  
..... ZHANG Xueqin, TANG Xinyu, GUO Yujun, LIU Kai, KANG Yongqiang, LI Yu, WU Guangningl (7074)
- The Influence of UHV Hybrid Reactive Power Compensation on Interrupting Characteristics in the Single Phase-ground Fault  
..... YANG Jingjing, LIU Hongshun, HE Dongxin, LIU Xinghua, et al (7083)

▪ **For Extended Summaries, Please See the Electronic Journals.**