

2026 11th Asia Conference on Power and Electrical Engineering (ACPEE 2026)

Macao, China

14-17 April 2026

Pages 1–587

IEEE Catalog Number:
ISBN:

CFP26E58-POD
979-8-3315-6068-3



Copyright © 2026, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** 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:	CFP26E58-POD
ISBN (Print-On-Demand):	979-8-3315-6068-3
ISBN (Online):	979-8-3315-6067-6
ISSN:	2996-2927

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

Study on the Influence of Optimizing Arrester Configuration to Reduce Overvoltage on Canceling Closing Resistor of Circuit Breaker for 750 kV Transmission Line	1
<i>Zha Zhipeng, Li Zhenqiang, Lou Ying, Wan Lei</i>	
An Accurate Prediction Method for Ampacity of Overhead Transmission Lines Based on Hyperparameter Optimization and Ensemble Model	7
<i>Tao Wang, Hongyun Xie, Lei Wang, Junwei Yao</i>	
Accurate Prediction of Dynamic Line Rating for Overhead Transmission Lines Based on GWO-VMD-GRU	13
<i>Tao Wang, Hongyun Xie, Lei Wang, Junwei Yao</i>	
Structural Strength Analysis of Transmission Part of 20Hz Low-Frequency on Load Tap Changer	19
<i>Xingyu Pei, Yong Chen, Hongyuan Wu, Xu Cheng, Jianbiao Li, Qiang Zhu, Shihao Zhang</i>	
Automatic Modeling with Power Flow Start-up and Frequency Characteristics Computation for HVDC	26
<i>Wangchao Dong, Xun Mao, Kai Lv, Wei Tang, Zhen Wang, Li Guo, Yong Zhan, Zhendong Tan, Yang Pu</i>	
Online Ice-Covered Suppression Strategy Research for 500kV Regional Power Grid Interconnection Line Based on Phase Shifting Transformer	32
<i>Jun Wu, Yan Gan, Chuihui Zeng, Jia Chen, Xiangde Sun, Jiawei Liu, Zhe Wang, Jiaxin Yuan</i>	
Study on the Temperature Distribution of 1100 kV GIS Composite Bushing under the Impact of Wind and Partial Discharge	38
<i>Pipei Zhang, Peng Wang, Jiangwei Wang, Dan Wang, Jie Li, Wei Shi</i>	
Research on Grounding Solutions for Ultra-long Distance Tunnel GIL	43
<i>Hao Wu, Zaibao Xiong, Kang Xie, Zhenyi Zhu, Guang Su, Junhao Guo</i>	
Design of Compact Split-Core Current Transformer with Adjustable Air-Gap Housing for OPGW Energy Harvesting	49
<i>Quanyong Fu, Huoran Hu, Ke Chen, Xiao Qin, Maosheng Li, Chongchong W</i>	
Protection Principle for DRU-MMC Hybrid DC Transmission Lines Based on the Geometric Invariance of Transient Voltage-Current Trajectories	54
<i>Kaiqi Sheng, Guibin Zou, Xiuyan Wei, Shuo Zhang, Xiaobin Zhao, Junjie Feng, Yiping Lu</i>	
Research on UAV-Based Non-Contact Live-Line Detection Technology for High-Voltage Transmission Lines	60
<i>Fengkai Guo, Xiangkun Zhang, Ang Lu, Fuchang Lin</i>	
Simulation Analysis of the Inter-Turn Short Circuit Fault in EHV Power Transformers and its Impact on Differential Protection	70
<i>Kanghai Zhang, Boyu Li, Zhiguo Hao, Zhiwei Lu, Shuyan Pan, Zhongxin Xue</i>	
An Online Estimation Method for Wave Impedance of MMC-HVDC Grids Based on Least Squares	76
<i>Yang Song, Xiuyong Yu</i>	
Study on the Influence Range of DC Grounding Electrodes on DC Bias in AC Power Grids	82
<i>Xuefang Tong, Bo Tan, Mian Fan</i>	

Research on Oil Level Detection Technology and Application for Oil-Filled Terminations of High-Voltage Cables Based on Terahertz Echoes	88
<i>Zhaoyun Huang, Gang Xiong, Lige Liu, Qianglin Fu</i>	
Multiphysics Analysis and Experimental Study of a Novel Waterproof Material for Distribution Cable Joints	93
<i>Ben Wu, Handi Weng, Jian Wang, Ziqi Lin, Zhenyu Zhang, Ting Zhu</i>	
A New Protection and Operational Boundary for AC Transmission Lines in the New Type Power System	98
<i>Yarong Guo, Weilin Hou, Tiezhu Wang, Shicong Ma</i>	
A Trajectory-Sensitivity-Based Parameter Identification Method for HVDC Control Systems Based on Limiting	105
<i>Xiaobo Wang, Zhe Chen, Kemin Dai, Pupu Chao, Shilu Wang, Weixing Li</i>	
Load-Dependent Performance and Safety Assessment of DS-PST Based Online Ice-Covered Method for 500kV Regional Power Grid Interconnection Line	110
<i>Jun Wu, Yan Gan, Chuihui Zeng, Jia Chen, Xiangde Sun, Jiawei Liu, Tianyu Ren, Jiaxin Yuan</i>	
Mechanism of Electromagnetic Interference Caused by GIL Shell Circulation on Secondary Cables and Comprehensive Anti-interference Solution	115
<i>Hao Wu, Zaibao Xiong, Taoning Jiang, Zhenyi Zhu, Guang Su, Junwen Yin, Xiaokun Hua</i>	
A Centralized Optimization Clearing Model for Large-scale Hydropower Participation in the Inter-provincial Market	125
<i>Lei Cui, Dan Zeng, Shuhai Feng, Yaxian Zheng, Xian Zhang, Ziming Ma</i>	
A Bi-level Model for Wind and Photovoltaic Power Prediction under Extremely Cold Disasters with Uncertainty Scenarios	133
<i>Xiaohui Wang, Tong Li, Wei Cheng, Yi Wan, Tian Ni, Hui Hou</i>	
Optimization Method for Power System Restoration Decision-Making Considering the Active Frequency Support Capability of Wind Power and Energy Storage	138
<i>Xueping Gu, Jiajun Wei, Rongtao Meng, Yibo Jiao, Shaoyan Li, Yansong Bai, Jiasong Li, Ke Liu</i>	
Benders Decomposition-Based Assessment and Optimization of Spatio-Temporal Coordination Capacity in Multi-Regional Power Grids	146
<i>Xuan Hu, Hongkun Chen, Qi Hu, Jingqiu Yan, Jiangrui Xu, Zuogang Guo, Liangshu Huang</i>	
Multi-Scenario Collaborative Planning and Economic Evaluation for Community-Level Shared Energy Storage	154
<i>Yuqi Shan, Na Zhang, Zixin Zhang, Yufei Jin, Yutong Liu, Ziyang Xiang</i>	
Calculation and Allocation Methods for Reserve Costs in High-Proportion Renewable Energy Power Systems	159
<i>Xiaoyu Shao, Li Wang, Min Yang, Zihan Zhang</i>	
Optimal Scheduling of IES Considering Multi-Path Hydrogen Utilization	164
<i>Feiyu Peng, Jiajie Peng, Zijian Ye, Mengyao Liu</i>	
Seasonal Analysis of a Low-Carbon IES Dispatch Model with P2G Considering Multi-Market Mechanisms	169
<i>Jiajie Peng, Feiyu Peng, Zijian Ye, Mengyao Liu</i>	

Optimal Dispatch of Offshore Wind-Hydrogen-Ammonia System Considering Three-tier Ammonia Reserve Mechanism	174
<i>Qikun He, Yuxuan Zhao, Ke Tan, Zhaoxia Jing, Disi Mai</i>	
Resilience Enhancement of Electricity-Heat-Hydrogen Integrated Energy System under Ice Disasters	180
<i>Yujia Wang, Dongrui Quan, Haipeng Xie</i>	
An Intra-Day Allocation Strategy Using PMP for Hybrid Energy Storage in Shanxi's Frequency Regulation	186
<i>Zikui Lv, Gang Li, Yu Lu, Xiao Zhou, Zixuan Wang, Mengke Duan, Hao Xu, Hao Zhang</i>	
Optimal Scheduling of AC/DC Distribution Systems with Multi-Resource Flexibility for Enhancing Operational Adaptability	193
<i>Yanbo Hai, Dong Pan, Xuli Wang, Hui Zhang, Ru Ling, Shiwei Li, Yansong Zhao, Qian Xiao</i>	
Enhanced Network—Flow—Based Unit Commitment for Virtual Power Plant Applications	198
<i>José Delgado, Alejandro Angulo</i>	
Managing Flexibility Delivery Risk with Differentiated Market Prices for Virtual Power Plants	203
<i>Hexin Qu, Xuan Wei, Zhaohao Ding</i>	
DPPO-Based Real-Time Dispatch for IEHS with Wind Power Uncertainty	210
<i>Sihan Li, Bingshen Tong, Zhilin Sun, Menglin Zhang, Jie Teng, Yang Lei</i>	
Two-Stage Stochastic Scheduling of Grid-connected Wind-Hydrogen-Storage Systems with Electrolyser Clusters under Wind Power Uncertainties	215
<i>Yuting Deng, Fulin Fan, Jialong Zhou, Jinhai Jiang, Chuanyu Sun, Rui Xue, Kai Song</i>	
Restoration Strategy of Active Distribution Network Considering Battery Swapping Stations and Dynamic Island Partition	221
<i>Xudong Jin, Zhihong Wang, Lei Sun, Li Zhang</i>	
Resilient Planning of Island Integrated Energy Systems with P2G2P and Heat Recovery via Distributionally Robust Optimization	227
<i>Xuyuan Zhang, Wenzheng Li, QiCao</i>	
Multi-timescale Scheduling Strategy of Integrated Energy System in Wastewater Treatment Plant via Adaptive Distributionally Robust Optimization	232
<i>Lujin Yao, Haining Pan, Xiaoyi Zhu</i>	
Optimal Energy Management of Hydrogen-Blended Integrated Power-Gas Systems via Sequential Convex Programming	238
<i>Ahmed Rabee Sayed, Mostafa Shaaban, Ahmed Osman-Ahmed, Faisal Alkaabneh, Mohammad Hamdan Abdelfatah Ali</i>	
Study on the Accuracy and Applicability of DC and Linearized Power Flow Methods Based on Different Approximation Strategies	244
<i>Jiangning Li, Xinli Song, Shaohang Hao, Yikang Wang</i>	
Efficient Tracing and Restoration Adjustment of Non-Convergent AC Power Flow Based on an Adaptive Linear Power Flow Model	253
<i>Jiarui Long, Zhifang Yang</i>	

Hierarchical Collaborative Optimal Scheduling of Flexible Loads Based on Improved Particle Swarm Optimization Algorithm	258
<i>Yu Liang, Jinhua Huang, Huiying Lu, Haiming Xiong, Shiyong Dai, Guojian Xie</i>	
Optimal Planning of Embedded VSC-HVDC for Urban Power Grids with High Load Density	264
<i>Zhenyong Niu, Ting Guo, Yufei Zhang, Liangde Xu, Yong Wang, Yilin Zhong, Yujun Li, Zhengchun Du</i>	
An Online Real-Time Optimization Method for Coordinated Management of Distributed Resources in AC/DC Distribution Systems	269
<i>Yansong Zhao, Hong Zhu, Shiwen Su, Wenlu Ji, Honghua Xu, Kai Sun, Qian Xiao</i>	
Multi-Objective Configuration Optimization of Electricity-Heat-Hydrogen Multi-Energy Synergistic Integrated Energy Systems and Synergistic Effect Analysis Under Extreme Weather Conditions	274
<i>Zihao Liao, Dingrong Ou, Xurui Huang, Peng Dai, Yiping Yang, Zesong Wang, Ying Yang, Kang Bie</i>	
Frequency-Constrained Unit Commitment Incorporating Wind Farm PFR Parameters and System Damping Dynamics	282
<i>Min Wang, Pengfei Zhu, Chaoyang Du, Zhenxin Huang</i>	
Intra-Day Coordinated Dispatch of a Sending-End System Considering Receiving-End Primary Frequency Regulation Reserve Constraints and Cross-Regional Generation Cost Differences	288
<i>Jia Lv, Jia Tang, Qinghua Shang, Ziao Jiang, Lin Guan</i>	
Dynamic Economic and Low-Carbon Dispatch of Integrated Energy Systems Based on the EWM-PPO Algorithm	294
<i>Junyao Li, Jiajun Xu, Jinjin Zhao, Junjie Zhong, Chun Chen, Yi Su</i>	
Integrated Zero-Carbon Planning for the Full Lifecycle of Charging Stations: Coupling Planning and Operational Phases	301
<i>Yingjie Li, Danhui Lai, Zeqi Zhang, Ningrui Zhou</i>	
Storage Duration and Thermal Capacity Trade-offs in Carbon-Constrained Wind–PV–Thermal Systems	306
<i>Yuyang Yan, Husam I. Shaheen, Bo Yang, Yi Zuo, Ghamgeen I. Rashed, Vinko Lešić</i>	
A Multi-time Scale Scheduling Strategy For Microgrids With Hybrid Energy Storage Systems	311
<i>Shuting Liu, Yuanbao Wu, Hanqing Lan, Junhao Li, Qingquan Zhang, Anqi Chen, Peng Lu</i>	
Linearized Bus-Splitting Configuration Models for VRE Curtailment Minimization in Power System Operations	317
<i>Pee Jay N. Gealone, Adonis Emmanuel DC. Tio</i>	
In-Disaster Emergency Dispatch with Unit Commitment and Transmission Switching via Approximate Dynamic Programming	322
<i>Hongrui Lu, Yuxiong Huang, Gengfeng Li, Di Zhang</i>	
The Optimization of Multi-Energy Industrial Park Considering Production Flexibility and Multi-Market Participation	330
<i>Yuchen Fang, Lingyang Li, Minglei Bao, Hengyu Hui, Chao Guo</i>	
Multi-Objective Coordinated Optimization of Onshore Wind Farm Considering Wake Effect and Fatigue Load Distribution	337
<i>Jiangao Li, Yuanjin Gao, Xingwang Li, Xiaoxue Zhai, Wei Wu</i>	

Coordinated Planning of Grid-Forming and Grid-Following SVGs for Static and Dynamic Voltage Support	342
<i>Xu Jiang, Ding Wang, Xiaozhe Song, Qinhao Chen, Yun Liu</i>	
Research on Distributed Collaborative Scheduling Strategy for Electric Vehicles Considering Dynamic Traffic Flow and Dynamic Electricity Pricing	348
<i>Xin Su, Qian Zhang, Tianxi Qin, Zhanhao He, Yuchen Shan, Xingchen Tan, Hui Jin, Yifan Weng</i>	
A Multi-Objective Unit Commitment Model for Enhancing Operational Flexibility in Power Systems	355
<i>Mengjie Teng, Yuhong Zhao, Chen Chen, Zehui Yan</i>	
Power System Emergency Control Model Based on Refined Assessment of Outage Losses	360
<i>Zhengyang Jin, Jiapeng Li, Le Liu, Xuming Chen, Huaiyu Qi, Yujun Li</i>	
Multi-Source Coordinated Dispatch Strategy under Renewable Energy Droughts	365
<i>Xiaojie Pan, Bo Yang, Dejun Shao, Mengxuan Shi, Yajun Wu, Husam I. Shaheen</i>	
Electrical Carbon Emission Prediction of Urban Areas with LSTM-Kalman Filter	371
<i>Yushi Chen, Zifei Wang, Yanlu Huang, Zhiwei Dai, Fan Zhang</i>	
Construction of IoT-Driven System Architecture and Design of Core Technologies for Intelligent Control system in Smart Agricultural Parks	377
<i>Lifang Guo, Xiaoquan You, Jitao Lv</i>	
Linear Approximation of Optimal Reactive Power Flow Model for Inverter-based Power Systems	383
<i>Junhua Fu, Hua Sun, Yuejian Wu, Xiaoming Dong, Chengfu Wang, Yong Wang</i>	
Impedance Prediction of PMSG in Circuit Form Under Variable Operating Points	388
<i>Zicheng Wang, Duange Guo, Xingyu Shi, Yanjian Peng</i>	
Adaptive Support Vector Machine Based for Optimal Sizing of Renewable Generation and Battery Storage for Standalone Households	393
<i>Sina Shakeri, Hossein Ansari, Amin Mahmoudi, Solmaz Kahourzade</i>	
Dynamic Equivalent Modeling of New Energy Stations by Maintaining Sub/Super-Synchronous Oscillation Characteristics	399
<i>Wei Wang, Jinmian Lu, Li Zhang, Zhengfeng Wang, Jingjing Wang, Xincun Shen, Wei Ma</i>	
Research on Control Strategies for Renewable Energy and Electromagnetic Transient Modeling of New Power Systems	404
<i>Hongming Shen, Congying Wu, Zhihong Xiao, Xi Lu, Peili Yan</i>	
Smart GFM Inverter Design and HIL Validation for Stability Support in Small-Scale PV Systems	409
<i>Varun Nand, Shuai Zhou, Tek Tjing Lie</i>	
Condition-Aware and Structure-Constrained Wind Speed Scenario Generation Method for Cold Waves	415
<i>Yiting Jin, Zhaoyan Wang, Da Xu, Weifeng Peng, Yichen Bao, Shufeng Dong</i>	
Scenario Generation of Wind-Solar Output Under Multiple Weather Types Based on an Improved Generative Adversarial Network	423
<i>Tao Wang, Zhongdan Zhang, Min Xu, Lei Ni, Jun Zhang, Wangwang Bai, Xiang Wang</i>	
Research on Typical Wind and Solar Power Output Scenarios Generation Method Based on Quadratic Clustering Algorithm	428
<i>Yuchen Zhang</i>	

Dynamic Characteristics and Enhanced Renewable Energy Control For Large-Scale Hydro–PV And Grid-Forming VSC-HVDC Sending System Following DC Pole-Blocking Fault	433
<i>Baorong Zhou, Ziqian Yang, Ye Zhang, Wangqianyun Tang, Hancheng Gong, Lin Guan</i>	
Mechanism-Driven Surrogate-Assisted Dynamic Reactive Power Capacity Optimization for Converter-Dominated Systems	439
<i>Ziqian Yang, Wangqianyun Tang, Ye Zhang, Baorong Zhou, Zihan Cai, Lin Guan</i>	
A Full-Order Model Reduction Method for Large-Capacity Photovoltaic Systems in Weak-Grid Conditions Considering Time-Scale Modes	445
<i>Xiang Li, Jun Yang, Chaohao Qian, Jingyi Xie, Boxi Li</i>	
Physics-Data Driven Weak Point Identification for Voltage Stability in Receiving-End Power Grids	450
<i>Chaoming Zheng, Yangqing Dan, Zhouzhenyan Hong, Zhiheng Shen, Feifei Sun, Xiahui Zhang, Hongji Yang</i>	
Asymmetrical Fault Control Strategy for Distributed Photovoltaics Considering Capacity Constraint	455
<i>Yuehui Hu, Xiaobin Wang, Zhaoru Han, Fang Shi</i>	
Step-by-step Progressive Identification of Parameters for The Electromagnetic Transient Model of Grid-Forming Energy Storage	460
<i>Sida An, Yahong Lv, Zengping Wang, Tong Wang</i>	
Research on Wide-band Oscillation Suppression Strategy of LCL Three-phase Grid-connected Inverters Based on Frequency-selective Feedforward Compensation	465
<i>Tianhao Zhu, Hui Xiao, Jiale Lei, Yichi Zhang, Linjun Zeng</i>	
Hybrid Control Strategy for Renewable Energy Grid-connected Converters Applicable to a Wide Range of Short-Circuit Ratios	473
<i>Jianxiang Xie, Jiaqi Wu, Zhu Guo, Jingjing Huang, Jingyi Li, Zhengcheng Luo</i>	
A Unified Closed-Loop Dynamic Model for a CPV/T-Powered PEM Electrolysis System with Thermal Management	478
<i>Yu Hou, Minghao Wang, Fujun Niu, Daming Zhao, Kashem Muttaqi, Zhaohui Tang</i>	
A Frequency-Partitioned Sensitivity Weighting-Based Parameter Identification Method for Converter Control of Low-Frequency Direct-Drive Wind Turbines	483
<i>Muyang Shao, Pupu Chao, Haohan Cui, Mingzhen Li, Haihua Liu</i>	
Distributed Event-triggered Cooperative Control for Flywheel Energy Storage Array Systems	489
<i>Yi-Wen Xu, Pin Liu</i>	
Hydrogen Energy Storage for Standalone Microgrids: A Study of Australian Remote Community	495
<i>Owen Hill, Solmaz Kahourzade, Amin Mahmoudi</i>	
Converterless Power-over-Fiber Auxiliary Power Supply With Closed-Loop Voltage Regulation	501
<i>Liangliang Zou, Zhengchun Xie, Wei Hua, Jiading Gu, Fujin Deng, Zheng Wu</i>	
A One-Dimensional Model for Reversible Solid Oxide Cell Stacks with Low Computational Cost	506
<i>Jun Pan, Zihao Liao, Xurui Huang, Yiping Yang, Ying Yang, Zesong Wang, Jun Jiang, Zexin Zhao</i>	
Joint Simulation Framework for Coupled Electricity–Carbon Trading in Integrated Energy Systems under Carbon Neutrality	511
<i>Tianyou Xie, Ping Zhao, Ronggen Wang, Weiling Wu, Xin Sun, Wenxuan Liu, Binghao He, Junhua Zhao</i>	

International Experience and Insights on Energy Storage Price Formation Mechanisms	518
<i>Zhaoyu Chong, Lizi Zhang, Ying Zhang</i>	
Multi-Constraint Lagrangian Safe SAC for Grid-Connected Power-to-Hydrogen Systems in Energy and FCAS Markets	524
<i>Chongze Bi, Jianhua Wang, Xiaokuan Jin, Tao Peng, Hongwei Mu, Runhao Geng</i>	
Location of Energy Storage to Reduce Influence of LFO Based on Electrical Distance Weighted by Equipment Participation Factor	534
<i>Yunsong Yan, Ming Li, Yi Tang, Xiaolei Qu</i>	
Dynamic Modeling and Unified Control of Back-to-Back Converter-based Flywheel Energy Storage Systems	539
<i>Tzu-Yi Wei, Kha Tung Nguyen, Truong Hoang Bao Huy, Tien-Dat Le, Christina Papadimitriou, Phuong H. Nguyen</i>	
Aggregation Method for Wide-Area Multi-Type Energy Storage Stations Considering Electrical Coupling and Operational Characteristics	545
<i>Boqian Yang, Yunchao Sun, Wei Hu, Shaofeng Liu, Jichen Li, He Sheng</i>	
Control Strategy Research for Grid-Forming Doubly-Fed Induction Generator Employing Uncontrolled Rectification	551
<i>Jiateng Wang, Wenyao Ye, Zheren Zhang, Zheng Xu</i>	
Long-Term Simulation of Energy Storage Systems Based on System Dynamics and Capacity Credit Calculation	556
<i>Haoxiang Zhang, Zhen Huang, Youbo Liu, Junyong Liu</i>	
A Novel Two-Stage Trading Strategy of D-2 Contracts Decomposition for Wind Farms: Tackling Dual Settlement and Implementation Rules	561
<i>Xili Du, Haochen Gong, Youbo Liu, Yuben Tang, Sashuang Sun, Zhuoyu Wang</i>	
Historical Scenario Probability Modeling and SAO-DBSCAN-Based Scenario Reduction for Wind Power Systems	566
<i>Jiawei Gao, Zhaobin Du, Guoduan Zhong, Zhi He, Xinyu Chang, Renqi Yang, Di Cai, Zirui Huang</i>	
Lyapunov-Based Nonlinear Control of Power-Decoupled Current Source Inverter for Hydrogen Energy Grid Integration	572
<i>Yizhu Wang, Minghao Wang, Zhaohui Tang, Daming Zhao, Fujun Niu</i>	
A Progressive Configuration Method for Grid-Forming Renewable Units and Grid-Forming Energy Storage with Analytically Embedded Short-Circuit Ratio Constraints	578
<i>Yingjun Zhuo, YuXiang Huang, Ziqian Yang, Wangqianyun Tang, Ligang Zhao, Lin Guan</i>	
Researches on Modulation Schemes and Equivalent Circuit for Multi-Voltage-Level DC Converter inside Distributed Energy Storage System	583
<i>Jiachen Tian, Hao Yin, Jianheng Lin, Kashem Muttaqi, Minghao Wang</i>	
Optimal Operation of Virtual Power Plants Considering Internal Carbon Cycle: Based on CCS-P2G Coupled System	588
<i>Ting Pan, Qiao Zhao, Siyuan Tian, Qingping Zhou, Jiangyan Zhao</i>	
Fully Distributed DMPC-UKF Framework for Cyber-Resilient Control of Islanded AC Microgrids	594
<i>Saima Ali, Laiq Khan, Amin Mahmoudi</i>	

Application of Microgrid Systems in Power Supply Assurance for Major Events	600
<i>Tieying Tang, Xiaofeng Cai, Zhuobin Tong, Lifang Liu</i>	
Unbalance Compensation for Autonomous AC Microgrid	606
<i>Daming Zhang, Xiaoyan Zhu, John Fletcher</i>	
Application of Green Integrated Energy Systems in a Large-Scale Stadium	612
<i>Ting Xiao, Jingpeng Yue, Yuhan Liu, Lintao Li</i>	
Characterizing Multi-Time Scale Demand Response Capacity of Microgrids Based on Operation Feasible Region	620
<i>Chuang Zhou, Zhaoyan Wang, Da Xu, Yuwei Chen, Shufeng Dong</i>	
Robust Scheduling of Integrated Energy Systems via PPO: Discovering Profit Inversion under Ladder-Type Carbon Trading	625
<i>Jiajun Xu, Junyao Li, Junjie Zhong, Jinjin Zhao</i>	
Accurate and Robust Realization of DN-Aggregated VPPs for Primary Frequency Support	632
<i>Zirong Xu, Youbo Liu, Zhiyuan Tang, Tingjian Liu, Ji'ang Liu, Junyong Liu</i>	
iZEN: An Energy World Model Framework Bridging Planning and Operation in Industrial Microgrids	637
<i>Donglai Sun, Weiwei Shen, Weiming Zhang, Xiang Gao</i>	
Adaptive Frequency-Secure Unit Commitment With Wind-Based Virtual Inertia Support	643
<i>Shu Yang, Le Fu, Yao Wang, Guanqun Zhuang, Chao Chen, Yue Yang</i>	
Optimal Dispatching Methods for Virtual Power Plants Participating in Market Transactions	648
<i>Jiaqi Yao, Li Zhang, Chengfu Wang</i>	
A Two-Stage Optimization Restoration Strategy for Transmission Networks with High Wind Penetration	653
<i>Zheng Zhou, Yiheng Bian, Dingyuan Luo, Qirui Shen</i>	
Technical Solutions for Integrating High-Penetration Renewable Energy	659
<i>Zhankui Zhang, Baichuan Teng, Miao Zhu</i>	
Day-Ahead Optimal Scheduling of Internet Data Centers Fine Grained Batch Workloads and Cooling System Thermal Inertia	664
<i>Haitao Liu, Zhangshuo Chen, Lun Xu, Chen Chen, Xingjie Yin, Zihan Sun</i>	
A Pre-Disaster Resilience Enhancement Method for Integrated Energy Systems Using Multi-Type Flexible Resources	669
<i>Mingxuan Jiang, Gengfeng Li, Yiheng Bian</i>	
Coordinated Optimization of Wind-Photovoltaic-Storage Configuration for Park Microgrids	675
<i>Yiwei Xiao, Binyong Cao, Rui Wu, Feng Chen</i>	
Multi-Objective Optimization Model for Energy Stations Based on the Energy-Exergy-Anergy Multi-Flow Mechanism in Integrated Energy Systems	681
<i>Peiyang Wu, Dan Wang, Hongjie Jia</i>	
A Forecast-Free Energy Management Strategy for V2G-Enabled Microgrids via Deep Reinforcement Learning	687
<i>Boyu Xu, Qingsong Hua, Mingyu Wang, Li Sun</i>	

Optimal Planning of PV-Dominated Distribution Systems Considering Seasonal Hydrogen Storage	692
<i>Li Zhang, Qinyue Guan, Menglin Zhang, Jin Tan</i>	
Steady-state Modeling and Optimal Scheduling Method for Flexible DC Multi-Microgrids Based on a Novel Three-Port Converter	697
<i>Jian Zhang, Xucheng Huang, Shengjun Huang, Tao Zhang</i>	
The Design of a Frequency-adaptive Ignition System Based on High-Voltage Piezoelectric Converter	705
<i>Hongbing Xiao, Shuanggen Gong, Ge Li, Junze Fang, Peiyuan Guo, Man Bao</i>	
A Series-Parallel Hybrid Sequence MPC Method for Parallel Five-Level ANPC Inverters	710
<i>He Duan, Chunshui Du, Pujing Yu</i>	
Dual-Degree-of-Freedom DPWM Strategy for High-Power-Density VSC in Urban Power Systems	716
<i>Haizhou Ying, Ye Tao, Pengfei Chen</i>	
A Method for Constructing Parameter Security Domains of Grid-Connected Converters Considering Control Interactions	722
<i>Yong Sun, Baoju Li, Jiajun Zhang, Guannan Wu</i>	
Large Signal Stability and Parametric Analysis of Hybrid System with Grid-Following Converter and Grid-Forming Converter	727
<i>Lu Chen, Boyuan Zhao, Peng Su, Lei Chen, Hu Fan, Jiaheng Zheng</i>	
Fast Thermal Overload Defense and Smooth Ride-Through Control for Converters in Resilient Urban Distribution Networks	733
<i>Ye Tao, Haizhou Ying, MengYa Lin, Jizeng Cai, Zichen Wang, Yingqi Wang, Chihan Zhou, Guojie Tian</i>	
Supercapacitor-Integrated MMC for Power Quality Compensation and RBE Management of Co-Phase TPSS	738
<i>Xiang Liu, Fan Peng, Rui Kong, Yinyu Chen, Wei Wang, Minwu Chen</i>	
Passivity-Based Control of an Active Rectifier-Based Receiver for a Dynamic Wireless Power Transfer System	744
<i>Zixuan Xu, Menglin L. N. Chen, Kerui Li, Xinyang Su, Zhao Xu</i>	
Small-Signal Impedance Modeling of Modular Multilevel Matrix Converter for Stability Analysis of Low-Frequency Transmission System	749
<i>Shengyuan Ji, Haitao Zhang, Chenting Zhao, Yamin Sun, Xiao Wang, Xiuli Wang, Xifan Wang</i>	
A Quasi-Two-Stage Buck-LLC Based ISOP System with Natural Input-Voltage Sharing	755
<i>Yinghui Zhang, Peng Bao, Derong Lin, Huasong Fang</i>	
Comparative Study on Dual Active Bridge Based Quasi-Two-Stage Partial Power Processing Topologies	761
<i>Wenjie Bi, Zhengmei Lu, Miao Zhu, Pengfeng Lin</i>	
Switch-Multiplexed Quasi-Two-Stage Boost-DAB Converter Realizing Zero-Voltage Switching Across the Full Power Range	770
<i>Zhengmei Lu, Wenjie Bi, Miao Zhu, Chuanchuan Hou</i>	
Quasi-Single-Stage AC/DC Converter with CLLC Resonant Topology for Photovoltaic Integration and Grid Resilience Enhancement	776
<i>Yuxi Wang, Qing Fu, Benfei Wang, Yifei Qiao, Xiaoping Zhou, Muhammad Amjad</i>	

Ripple Suppression Strategy for Photovoltaic Converters Based on the BAS-PSO Algorithm	781
<i>Yuan Jing, Qing Fu, Benfei Wang, Xiaoping Zhou, Muhammad Amjad, Canbing Li</i>	
Multiplexed Quasi-Proportional Resonant Control of MMC for Mitigating Harmonic Voltage in Medium-Voltage Distribution Network	786
<i>Huaiyu Qi, Jiapeng Li, Zhengyang Jin, Yujun Li, Yilin Zhong, Peng Zhan</i>	
Research on Digital Synchronous Rectification Control Strategy for LLC Resonant Converter	791
<i>Feng Zhang, Yanbin Liu, Qiang Jia, Yiliang Hu, Jingwen Li</i>	
Effects of the Injected Triangle Current on Output Voltage of Double Star Rectifier with Active Inter-phase Reactor	796
<i>Jingfang Wang, Xiulong Gao, Hanlin Chen</i>	
Design of DC-DC Power Supply for Manned Spacecraft Lithium-Ion Battery Charging	802
<i>Anqi Li, Zheng Zhao, Wenhao Geng, Feng Yu, Qian Zhang, Nan Yang</i>	
Investigation on Improved PSFB Soft-Switching Technology	808
<i>Fang Fei</i>	
Reducing PV Curtailment and Battery Degradation Using Multi-Agent Deep Reinforcement Learning-Based Volt-VAR Optimization	814
<i>Amirsaleh Norouzmahani, Sina Shakeri, Saeid Esmaeili, Amin Mahmoudi, Solmaz Kahourzade</i>	
Multi-Model Data-Driven Dynamic State Estimation and Fault Diagnosis of Virtual Synchronous Machines	819
<i>Hanshan Qing, Abhinav Kumar Singh, Efstratios Batzelis</i>	
LFO Modal Identification and PSS Parameter Tuning Based on CEEMD-Prony Method	824
<i>Zhouyue Hu, Shuyi Li, Zhaoru Han</i>	
Analysis of Fault Current Characteristics of Virtual Synchronous Generator Considering Phase Angle Jump	830
<i>Yahong Lv, Tong Wang</i>	
A Regional Power Grid Frequency Response Modeling Method Considering Tie-Line Power Variations	835
<i>Shuaiqi Jiao, Qifang Chen, Mingchao Xia, Mingshen Wang, Qianhao Sun, Yubin Wang</i>	
Small Signal Stability Analysis of Grid-Connected New Energy System with High Inertia Energy Storage Type Doubly-Fed Condenser	840
<i>Yang Bai, Qingsong Zhang, Hua Ye</i>	
Small-Signal Stability Analysis of Wind Farm Integration System via MMC-HVDC Based on LTP Theory	845
<i>Zewen Li, Jianhang Zhu, Yue Wu, Hengwang Zhou, Jiali Kui, Hongqiang Xiao, Hao Deng, Dongsheng Jin</i>	
Instantaneous Transient Stability Assessment and Severity Grading via Modified Transformer	851
<i>Yuankang Li, Tinghui Zhou, Ligang Zhao, Yinsheng Su, Tannan Xiao, Ying Chen</i>	
Multi-Objective Optimization Design of Virtual Inductance for Grid-Forming Converters	857
<i>Yaci Yu, Yuzhe Wang, Ye Tao, Yanyu Ma, Tianlong Liu, Yuxiang Kuang</i>	
Analysis and Simulation of Harmonics Generated by Voltage Transformer Rectified Power Supply and Its Solutions	862
<i>Diyong Lu, Jie Chen, Shi Zhang, Peixia Lin</i>	

Transient Stability Margin Assessment of Synchronous Grids with Embedded HVDC	867
<i>Yixuan Peng, Hang Qi, Changgang Li, Yutian Liu</i>	
Deep Reinforcement Learning Based Transient Voltage Stability Emergency Control	872
<i>Weigang Jin, Tao Lin, Jiayi Wang, Jun Li, Zhengyang Lin, Chen Li, Jiawei Zhang</i>	
Graph Attention-Based Eigenvalue Estimation Method For Small Signal Stability Assessment	877
<i>Yun Hong, Shunxin Wei, Hongyu Liu, Tong Chen, Ying Xue, Peilong Gao</i>	
Optimization Control Strategy for Power Sharing of PV-VSG Grid-Connected Optimizer	882
<i>Mingli Zheng, Xinyang Su, Fujun Zheng, Junwei Chai, Zhao Xu</i>	
Oscillatory Stability Challenges in the European Power System: Lessons for Next-Generation Grids	888
<i>Rossita Maclean, Xueqin Amy Liu, Robert James Best, Connor Duggan, Gareth McLorn, David McGowan</i>	
Switching Mechanism and Stability Analysis of Dual-DVSC Parallel Systems	894
<i>Zhenyong Niu, Xiaoxiang Wei, Ting Guo, Tao Liu, Liangde Xu, Yujun Li</i>	
Reactive Power Optimization Based on A Particle Swarm Optimization Method Accelerated by Neural Networks and Guided by Sensitivity Information	899
<i>Boxiang Huang, Yiming Zheng, Yiwen Xie, Dongliang Li, Yuwei Chen, Shufeng Dong</i>	
Damping Adaptive Regulation of SG-VSG Heterogeneous Parallel System under Weak Grid Based on COI Frequency Response	905
<i>Jing Li, Zhenyong Niu, Zhu Guo, Hongwei Zhao, Di Cai, Kaiwen Hu</i>	
Industrial Park Load Modeling with EV-Charging-Dominant Centralized Charging Stations	912
<i>Yucheng Wang, Boyang Zhao, Xiuli Wang, Qiuming Xu, Lei Yu, Yuan Lyuzerui</i>	
A TPE-Lightgbm Method for Predicting Power Carbon Emissions of High-Energy-Consuming Enterprises Based on Dynamic Weighted Loss	923
<i>Zifei Wang, Yushi Chen, Yanlu Huang, Zhiwei Dai, Fan Zhang</i>	
A Load Forecasting Method for Data Centers Based on MHSA-GRU	931
<i>Di Zhang, Kaiyu Chen, Wanjin Li, Xin Shi, Feng Gao</i>	
Diffusion Based Data Generation for Power Systems	937
<i>Xueyang Zhang, Shengjun Huang, Rui Wang, Tao Zhang</i>	
A Short-Term Load Forecasting Method Based on Adaptive Data Cleaning and CNN-BiLSTM-Attention	943
<i>Ziqi Fan, Shuolin Zhang, Pengfei Chen, Yingying Wang</i>	
ConvGNNs-Based Fast Estimation Model for Photovoltaic Capacity of Distribution Grid	949
<i>Shuting Lin, Zhongjie He, Weihao Chen, Liucun Lu, Sijian Zhang</i>	
Learning Periodic Signals: Why Unified Diffusion Beats Transformers and Ensemble Methods	956
<i>Dengke Ruan, Fei Xiong, Xingjie Zhang, Kai Li, Wei Luo, Gang Xiao, Zijie Lei, Xinggan Peng</i>	
CNN-LSTM-Based Condition Assessment and Fault Diagnosis of Converter Transformer Equipment Using a Variable-Weight Target-Proximity Method	962
<i>Xiao Liang, Yang Wang, Yingqiang Zhang, Tianhang Long, Yi Yang</i>	
High-Fidelity Generation of Transient Scenarios of Power Systems via TCN-CVAE	967
<i>Jianhan Ding, Ruisheng Diao, Huang Ying</i>	

Knowledge-Enhanced LLM for Intelligent Power System Fault Handling	973
<i>Liangcai Zhou, Linlin Liu, Zhihao Sun</i>	
A Hierarchical Clustering Method for Flexible Loads Based on t-SNE Dimensionality Reduction and CFSFDP Algorithm	979
<i>Huiying Lu, Yu Liang, Xudong Song, Jinhua Huang, Haoxi Xiang, Junhong Chen</i>	
Generalizable DOA Estimation Across Arbitrary Snapshot Numbers via a Single Model	985
<i>Yunye Su, Xianpeng Wang, Yuehao Guo, Dandan Meng</i>	
Embedding a Transformer Neural Network Into Branch-and-Cut for Fast Transmission-Constrained Unit Commitment	990
<i>Zhouyue Hu, Zhaoru Han, Chao Wang, Zheng Guo</i>	
Knowledge-Improved Validation and Replay Scheme for Reliable Application of Deep Learning Power Flow Model	995
<i>Jia Lv, Yongzhe Li, Jia Tang, Qinghua Shang, Lin Guan</i>	
DDPM-Enhanced Data Generation and Multi-Source Fusion for Decoupled Distribution State Estimation	1002
<i>Yeran Guo, Jie Zhao, Li Wang, Qiting Gao</i>	
JSD-Guided Smart Sensing and CNN-BiGRU Framework for Wind Power Interval Prediction	1008
<i>Zan Xiao, Linjun Zeng, Hongyi Ma, Hao Lin, Guoguo Yi, Ge Yan</i>	
GridML-Plus: An Improved Machine Learning Model for Predicting Grid Stabilities in Power Grids	1013
<i>Md Ariful Islam, Zhangjie Liu, Mei Su</i>	
Research on Global Optimal Operation and Maintenance Strategy of Distribution Network Based on Multimodal Large Model	1021
<i>Wang Xigui, Zhang Yongming, Gu Wenping, Zhang Jinghong, Wang Min</i>	
Multi-Scale Fine-Grained Source-Load Prediction Based on LSTM-XGBoost Ensemble Model	1027
<i>Xianmin Wang, Lei Feng, Baolin Liu, Xi Zhang, Dajun Si, Hongyin Liu</i>	
Weakly Supervised Non-Intrusive Load Monitoring via State-Anchored Frozen Large Language Model Adaptation	1033
<i>Yisheng Gao, Bo Liu, Yutong Wu, Wenpeng Luan, Haishen Liang, Kai Wang</i>	
Research on Key Technologies for Online Automatic Diagnosis of Multi-band Dynamic Data Consistency	1038
<i>Haidong Zhang, Yong Wang, Jun Sun, Sichun Liu, Ning Wang, Ruicheng Dai, Jintao Yu, Yuanzheng Jia</i>	
An Imitation Based Reinforcement Learning Method for Power Network Reconfiguration Under Random Line Fault Scenarios	1043
<i>Chenhao Zhang, Yu Zou, Xueping Gu</i>	
Spatial-Temporal Data Augmentation and Prediction in Power Systems Based on WGAN-ConvLSTM	1048
<i>Qing Peng, Wenjun Pang, Yaodong Li, Xianfu Gong, Xian Zhang, Guibin Wang</i>	
<i>Mahmoud Mohamed Sayed Mohamed Hemdan</i>	
Resource Allocation for Resilient Distribution Systems Based on Multisource Data-Driven Failure Scenario Generation	1053
<i>Nuoling Sun, Naixuan Zhu, Hao Chen, Yu Li, Yining Li, Gengfeng Li, Yiheng Bian</i>	

SBEMA: Knowledge-Driven LLM Agent with Progressive Tool Disclosure and Multi-Stage Validation for Smart Battery Energy Management	1059
<i>Rui Wang, Zhuang Zheng, Xiaowei Luo</i>	
A Generative Large Language Model-Based System for Power System Operational Situation Awareness and Decision Support	1064
<i>Yinye Shen, Guokun Cui, Ruiyang Weng, Zhuoying Wang, JiaYe Feng, Jingman Li</i>	
Physics-Aware Graph Reinforcement Learning for Millisecond-Level Dispatch of High Proportion Renewable Energy Power Grids	1069
<i>Bingzhang Li, Yinye Shen, Fengrui Liu, Guokun Cui, Chenlu Lei, Ruiyang Weng, Wenxi Zeng</i>	
Transformer-Enhanced Constrained Reinforcement Learning for Load Frequency Control in High- Renewable Multi-Area Grids	1075
<i>Huili Ye, Rui Zhang, Shuli Wen, Miao Zhu, Yuchen Zhang</i>	
Federated Reinforcement Learning for PV Inverters Enabled Voltage Regulation of Medium-Low Voltage Unbalanced Distribution Grids	1081
<i>Xiao Liu, Youbo Liu, Yongdong Chen, Zhiyuan Tang, Hongjun Gao, Zhengbo Li</i>	
Intelligent Evaluation Method for Load Regulation Effect of Multi-Source Data Fusion for New Power Systems	1086
<i>Yinxia Yuan, Zhenping Li, Xinyu Zhi, Xiuliang Liu</i>	
Agent-Driven Topology Assembly: Trustworthy LLM Dispatch Reasoning in Distribution Networks	1091
<i>Haolan Yang, Zhengbo Li, Ruolin Yin, Shurui Ding, Xianrui Wang, Youbo Liu</i>	
Accurate Analysis of Power Marketing Policy Risk Based on Policy Interpretation Agent	1097
<i>Bin Liu, Yang Ji, Yao Fu, Xuan Wang, Zhihui Li, Zhenlong Li</i>	
DA-LSTM Photovoltaic Power Strong Fluctuation Scenario Prediction Based on KNN Similar Time Period Features Fusion	1102
<i>Yuyang Wang, Wei Hu, Yunchao Sun, Boqian Yang, Yipu Li, Yaru Cai</i>	
Seasonal Similarity for Behind-the-Meter PV Disaggregation in LV Networks	1108
<i>Thomas Hull, Xueqin Amy Liu, Robert Best, Che Cameron</i>	
Research on Electric Shock Diagnosis under Insulation Defects Based on Bi-GRU-ATT	1114
<i>Renliang Liu, Yao Liu, Zhiheng Wu, Fang Guo, Hangye Cai</i>	
Research on Non-Intrusive Load Monitoring Method Based on Deep Learning	1119
<i>Zhenyu Deng, Qingyuan Ma, Shenwang Li, Pinghui Guo, Li Liu, Thomas Wu</i>	
Photovoltaic Power Forecasting Based on Pretrained TimeGPT and Few-Shot Adaptation	1125
<i>Xin Deng, Changfa Liu, Yuqi Zhou, Weijie Xu, Xuan Li, Weiyao Wu, Jiaqi Ruan</i>	
Reliability Analysis Method for Distribution Network Protection Devices Based on Improved DFT-Adaptive DBN Model	1130
<i>Weixiang Qiao, Jing Niu, Ke Shi, Kaibo Wang, Jiwei Jin</i>	
Photovoltaic Hosting Capacity Assessment Using Attention Mechanism and Model-free Deep Reinforcement Learning	1135
<i>Yu Zhang, Yuanhang Huang, Hongsheng He, Na Rong</i>	

Distributed Photovoltaic Anomaly Detection Method Based on Multi-Scale TCN with Bi-GRU	1140
<i>Chunming Yang, Jing Zeng</i>	
A Multi-Agent Cognitive Isolation Framework for Defect-Driven Power Grid Document Assessment	1146
<i>Jingjing Yang, Zhiqi Ao, Haowen Ren, Haibo Zhu, Lifu Ding, Minghao Wang, Xuejun Jiang, Qinmin Yang</i>	
An Adaptive Algorithm Selection and Load Forecasting Framework for New Power Systems Integrating Task Profiling and MATD3	1151
<i>Dong Wang, Tianlong Wang, Taojing Zhang, Jiahao Liu, Yanyi Huang</i>	
A Novel Sheath-Core Detection System for Wire-Stripping of Power Distribution Live-line Operation Robots	1160
<i>Yuepeng Wang, Yifei Meng, Panpan Zhao, Weichen Cui, Bingchao Du, Zeyang Yu</i>	
Linear Matrix Equation-Based Coordinated Control Strategy for Voltage Limit Violations in Low-Voltage Distribution Networks	1168
<i>Lizhi Pan, Yushu Cheng, Yun Ge, Yongbo Shi</i>	
A Generalized CIM Parsing and Topology Modeling Framework for Distribution Networks	1175
<i>Zhenchong Wu, Zhaoyan Wang, Da Xu, Yiting Jin, Siyuan Chen, Shufeng Dong</i>	
An Active and Reactive Power Coordinated Optimal Dispatch Method for Enhancing Electric Vehicle Hosting Capacity in Distribution Networks	1183
<i>Mingjun He, Yang Wang, Xinyu You, Yongxiang Cai, Zihong Song, Zongsheng Li, Jiahang Sun</i>	
Resilience Security Region Characterization of Distribution Networks with Renewable Energy under Extreme Weather Events	1191
<i>Danyang Xu, Hao Wu, Jiawei Qu, Fengqi Lyu, Qingsong Li, Zeyu Liu, Kai Hou</i>	
Probabilistic Quantification Method for Economic Benefits of Distribution Network Hosting Capacity Improvement for Electric Vehicles	1197
<i>Yu Lei, Liu Yinliang, Lin Xinhao, Xia Weiyi</i>	
A Voltage Violation Evaluation Method for Distribution System with Distributed PVs Based on Feeder Classification	1205
<i>Can Chen, Xiao Wang, Xiaoyang Deng, Tianyu Su</i>	
Optimal Dispatching Strategy of Urban Distribution Network Considering Meteorological Forecast Uncertainty under Extreme Heat	1211
<i>Xinyi Yang, Hongjun Gao, Keng-Weng Lao, Haibo Li, Tengfei Ma, Yong Li, Weipeng Zhou, Jiayi Hao Chenghao Shi</i>	
Comprehensive Evaluation of Distributed Photovoltaic Access Schemes in Distribution Networks Considering Source Load Time Series Characteristics and Dynamic Harmonic Risks	1218
<i>Jiaojiao Wang, Juntao Zhou, Hanjun Wang, Quanchao Zheng</i>	
Research on Distribution Network Planning Model Integrating Aboveground and Underground Spatial Information of Urban Planning	1224
<i>Zixuan Guo, Zhicong Qiu, Chang Xu, Jingxing Ma, Ya Chen, Lixiang Lin, Rui Gao, Yunfan Zhang</i>	
Multi-Objective Reactive Power Optimization in Active Distribution Networks Based on a Hybrid BES-QPSO Algorithm	1230
<i>Defeng Li, Yonghao Liu, Qingxiang Liang, Xudong Song, Lei Chen, Yao Guo, Bude Su, Hongkun Chen</i>	

Spatio-Temporal Collaborative Optimization Strategy for Electric Vehicle Charging and Swapping Oriented to Distribution Network Operation	1236
<i>Zhiwei Wang, Wei Jiang, Xinyun Guo, Aihua Zhou, Min Xu, Zhiqi Xu</i>	
A Hybrid Fault Tree-Markov Chain Approach for Dynamic Fault Risk Prediction of Active Distribution Networks Under Typhoon Events	1242
<i>Bude Su, Lei Chen, Hongkun Chen, Yi Zheng, Yifei Li, Xiaoxuan Guo</i>	
Aggregated Flexibility of Building VPP Subject to the Uncertainties of Meteorological Variables: Modeling and Characteristics	1248
<i>Shuo Liang, Xiaolong Jin, Fangyi Zhao, Zhongda Chu, Yanyu Qin, Yuchen Dong, Jiarui Zhang</i>	
A Static Aggregation Model for Power Boundary Characterization of Distribution Networks	1254
<i>Wenliang Wang, Yudun Li, Kuan Li, Bingdi Jia, Yifei Guo</i>	
Compressed Distributionally Robust Optimization for Resilience Enhancement of Distribution Networks Under Uncertainty	1259
<i>Le Fu, Yue Yang, Shusen Ni</i>	
Fast Assessment of Power Deficiency in Distribution Networks Considering LVRT Cluster Differences	1264
<i>Yanyu Ma, Ye Tao, Yaci Yu, Tianlong Liu, Yuzhe Wang</i>	
Active-Reactive Coordinated Voltage Optimization in Emerging Distribution Networks: An Approximate Dynamic Programming Approach	1269
<i>Tong He, Han Wang, Runfan Zhang, Gengfeng Li</i>	
Enhancing Distribution System Resilience via Adaptive Control Mode Switching of Soft Open Points	1276
<i>Shunyao Zhang, Yiheng Bian, Di Zhang, Gengfeng Li</i>	
Atmospheric Corrosion-induced Interturn Short Circuit in a 21 kV Dry-type Air-core Shunt Reactor	1282
<i>Liu Lingxia, Wang Yang, Francisco Chiuminatto, Ramon Andrade</i>	
Research on Key Equipment Selection and Protection Technology for Substations in Sandy Gobi Desert Environments	1289
<i>Tian Jing, Dan Chen, Pengfei Wang, Siyu Pan, Jianning Liu</i>	
Influence of Turn-to-Turn and Disk-to-Disk Faults on the Frequency Response of a Transformer	1294
<i>Elliton O. S. R. Brandão, Estácio T. W. Neto, Gustavo P. Lopes</i>	
Vibration Diagnosis and Seismic Research of Cold Source Reducer in CFI System of Nuclear Power Plant	1299
<i>Xiaoliang Fu, Yang Chen, YiWei Mao</i>	
Research and Application of Steam Path Efficiency Increase Retrofit for LP Modules of Nuclear Power Plant Steam Turbines	1304
<i>JieYun Zhang, XiaoLiang Fu, YingFeng Xiong</i>	
Experimental Study and Preventive Measures for Galvanic Corrosion of Duplex Stainless Steel Seawater Butterfly Valves	1310
<i>Chen Yang, Yang Shaowei, Fu Xiaoliang, Wang Guobin</i>	
Non-invasive Lithium Battery Diagnosis by Magnetic Field Sensing and Machine Learning Assisted Recognition	1315
<i>Qiqi Chen, Keyu Duan, Wenchao Miao, Xuecheng Sun</i>	

Real-time Preventive Islanding Scheme of Transmission Network Under Storm Attack	1320
<i>Wuyuan Hu, Pratik Harsh, Mahmoud Shahbazi, Jing Jiang, Hongjian Sun</i>	
Research on Multi-Parameter Fault Localization System for Ultra-Long Distance Tunnel GIL	1325
<i>Zaibao Xiong, Zhenyi Zhu, Lanjun Yang, Jiancheng Li</i>	
Multi-modal Deep Learning Diagnosis of Offshore Wind Turbine Bearing Faults: Collaborative Analysis of Vibration Signals and IoT Temperature Monitoring Data	1331
<i>Jize Cui, Zhile Yang, Yuanjun Guo</i>	
Study on the Influence of Air Gap Length on Partial Discharge in Epoxy Resin Defects of Switchgear	1340
<i>Hongchun Qu, Xin Wang, Dongdong Li, Changxing Yang, Yuxin Peng, Liang Cheng</i>	
A Hierarchical Screening Method for High-Risk Scenarios in Power Systems Based on Multi-Dimensional Risk Indicators	1346
<i>Zheng Guo, Chao Wang, Zhouyue Hu</i>	
A Fault Prediction Method for DC Charging Pile Contactors Based on Large Language Models	1352
<i>Biwu Fang, Zhouming Liu, Gongshu Lu, Zhe Cheng, Haofan Li, Liu Wei, Youwei Jia</i>	
An Early Diagnosis Method for Asynchronous Motor Rotor Bar Failures Based on Multi-Channel Deep Feature Fusion and Simulation Data	1357
<i>Shuangqiang Luo, Yuemin Zhang, Huidan Han, Yahong Qian, Shikang Zhang, Xiaoyun Gong</i>	
A Deep Embedding Clustering Method for Signal Decoupling in Nuclear Main Pump Condition Monitoring	1363
<i>Tongjian Zhang, Shujian Li, Taibo Yang</i>	
A Time-Varying Supply Reliability Assessment Method for Power system with High-penetration Renewable Energy	1369
<i>Xiaowei Ma, Qinyi Li, Chao Huo, Ying Wang, Penghan Li, Shiyu Liu</i>	
Failure Mechanism Analysis and Permanent Magnet Retrofit Strategy for Reducers in Nuclear Power Plant Filtration Systems	1374
<i>Yingfeng Xiong, Yiwei Mao, Hanbin Chen, Jie Yang, Huiqiang Lin, Wu Yang</i>	
Research on Comprehensive Energy System Security Protection Strategies for Dealing with Data Anomalies and Network Attacks	1380
<i>Guokun Cui, Keng-Weng Lao, Yinye Shen, Yiqing He, Lerong Huang, Fengrui Liu, Ruiyang Weng</i>	
Research on Intelligent Diagnosis of Performance Faults in Displacement Sensors for Active Magnetic Bearings in Power Generation System	1385
<i>Xueying Chen, Shujian Li, Chengning Zhou, Jiaxin Liu</i>	
Technology of Remote Routine Test for Relay Protection in Conventional Substation Based on Waveform Self-Construction	1392
<i>Lei Wang, Libo Zhang, Chenlin Deng, Jianhang Zhang, Long Tang, Ran Ding</i>	
Spatiotemporal Alignment-based Dynamic Weighted Multi-modal Data Fusion for GIS Equipment Condition Monitoring	1398
<i>Peng Wang, Jie Li, Wei Shi, Jiangwei Wang</i>	
Faulty Section Location Method for Single-Phase-to-Ground Fault in Neutral Non-Effectively Grounded System Based on Generalized Transient Zero-Sequence Energy	1405
<i>Yan Wang, Houlei Gao, Ao Shen</i>	

Characterization of DC Partial Discharge in SF6 Using PMT and Photon Counting Method	1411
<i>Yixuan Zhou, Weiqi Qin, Qian Wang, Weiguo Li, Xu Yang, Changhong Zhang, Chuanyang Li, Jinliang He</i>	
Research on Pricing Strategies for Demand Response Resources Participating in the Spot Market	1416
<i>Qiao Zhao, Ting Pan, Qingping Zhou, Siyuan Tian, Jiangyan Zhao</i>	
Quantitative Assessment Method for Grid Carbon Emission Reduction Contributions Based on Banzhaf Interaction	1421
<i>Shuowei Li, Zhiyong Shi, Xiaoning Ye, Yuchen Cao, Yuluo Bu, Shicong Zhang</i>	
Spatiotemporal Carbon-Emission-Flow-Based Low-Carbon Scheduling for Integrated Source-Load-Storage Energy Systems	1426
<i>Yiwei Fan, Xing Yan, Guangxing Wang, Hanxiao Hua, Wencai Shao</i>	
Fully Decentralized P2P Energy Trading in Electric-Hydrogen Integrated Energy Systems with Hybrid Renewable Energy	1431
<i>Jinlong Yang, Pengcheng Chen, Wangzhuo Yang, Shuwang Du, Bo Chen</i>	
Comparative Analysis of Price Cap Mechanisms in U.S. Electricity Markets and Implications for China	1436
<i>Yang Xu, Jiahua Hu, Ying Wu, Ying Zhang</i>	
Techno-Economic Analysis With Environmental Performance Considerations For Fluorescent-To-LED Lighting Retrofits	1441
<i>Sultan Sh. Alanzi</i>	
Probabilistic Carbon Flow Analysis in Power Systems	1447
<i>Yishan Jiang, Dawei Ma, Chao Liu, Zhenda Yu, Zerui Li, Wenjun Lv</i>	
Quantum Game Coordination Mechanism for Transformer District Prosumers with Grid Constraints	1453
<i>Jingwen Xu, Yi Chen, Qing Luo, Ruichong Li, Jiayue Wang</i>	
Zero Trust Architecture for Secured Energy Trading Platforms with Cryptographic Continuous Verification	1460
<i>Remon Das, Shaira Zahin Khan, Md Sharif Robbani, Md Raisul Islam, Sajedul Islam</i>	
Joint Market-Clearing Framework for Carbon Emission Allowances, Green Certificates, and Electricity Based on ADMM Method	1466
<i>Yusong Yang, Ruhao Zhu, Runfan Zhang, Gengfeng Li, Chenxing Yang, Yaxian Zheng</i>	
A Potential-Game Framework for Co-Clearing Electricity, Carbon Allowance, and Tradable Green Certificate Markets	1472
<i>Zhenting Tian, Yusong Yang, Runfan Zhang, Ruhao Zhu, Gengfeng Li, Zhaohong Bie</i>	
Electricity Spot Market Price Risk Evaluation Model Considering the Regulation Capacity of BS Transceivers and Backup Energy Storage	1477
<i>Hongji Yang, Qiaofeng Wu, Zhaoyang Wu, Jixiao Chen, Yiyang Wu, Chao Guo</i>	
Analysis of the Mechanisms and Impacts of New Energy Power Markets in China and Abroad	1485
<i>Zhiyong Shi, Shuowei Li, Xiaoning Ye, Yuluo Bu</i>	
The Balancing Group Mechanism in Germany and Its Implications for the Development of China's Electricity Market	1490
<i>Qin Yabin, Cao Yuanyuan, Zou Peng, Xie Yi, Zhang Chao, Li Yumin</i>	

Research on the Loading Test Method for Propulsion Motors under Wide Temperature Ranges and Low Pressure Conditions	1495
<i>Jinhua Liang, Haiping Xu, Fei Chen, Wei Liu, Peng Zhou, Xi Chen</i>	
Torque Ripple Mitigation of Switched Reluctance Motors Using an Optimized Generalized Two-Stage Torque Sharing Function	1500
<i>Chenyi Zhao, Hanqi Liao</i>	
Convex Mean-Field Charging Scheduling of Large-Scale EV Populations	1506
<i>Ge Chen, Ji Zhang, Pengfei Su, Haoran Deng</i>	
Structural Design Optimization and Manufacturing Process Enhancement for High-Altitude Permanent Magnet Propulsion Motors	1513
<i>Jinhua Liang, Haiping Xu, Fei Chen, Chen Gong, Shu Liu, Peng Zhou</i>	
Robust PMSM Traction Control for Electric Vehicles: An Improved Reaching Law Based Non-Singular Fast Terminal Sliding Mode Approach	1518
<i>Guolong Zhong, Guangping Li, Li Liu</i>	
A Novel Exponential Reaching Law for Without Weighting Factor Predictive Torque Control of Permanent Magnet Synchronous Motors	1523
<i>Kaiyuan Huang, Fengjin Wu, Zongkai Huang</i>	
Coordinated Optimization of Delivery Routes and Charging Strategies for Electric Logistics Vehicles	1528
<i>Yulin Yang, Zilong Cai, Jian Wang, Xi Wang, Xihui Zhang, Shibin Gao</i>	
Differentiated Time-of-Use Pricing for EV Charging to Enhance Multi-feeder Photovoltaic Integration	1536
<i>Hanchen Mao, Jingzhi Zhao, Chunyi Wang, Puliang Sun, Rongxi Cui, Ming Hu, Xiaoting Yang</i>	
Robust Pre-allocation Strategy of Electric Buses for Enhancing Distribution Network Resilience	1545
<i>Guilian Wu, Nuoling Sun, Naixuan Zhu, Wenhui Wu</i>	
Joint Energy Scheduling of Quay Cranes and Electric Logistics Vehicles: A Case Study of Port Charging Station Regulation Profiling	1551
<i>Yantao Sun, Yujia Guo, Ruoting Xu, Shouquan Tang, Songwei Guo, Youwei Jia</i>	
Energy Management Strategy for All-Electric Ships Considering States of Batteries	1557
<i>Kaishui Liang, Tiankai Yang, Shaoman Liu, Qun Guo</i>	
Two-Stage Coordinated Optimization Framework for EV Charging Station Considering Three-phase Balancing and Demand Response	1562
<i>Junjie Luo, Yuming Zhao, Shan He, Youwei Jia</i>	
Hierarchical Energy Flow Coordination for Dual-Motor All-Electric Helicopter Propulsion Under Dynamic Flight Conditions	1568
<i>Yuhang Yang, Yaozu Lai, Wang Huaizhi</i>	
Load Characteristic Analysis of eVTOL Propulsion Motors Based on Data-Model Hybrid-Driven Approach	1574
<i>Zhu Chen, Wang Huaji, Wang Huaizhi</i>	
Design and Performance Analysis of a Wireless Power Transfer Based EV Charging and BLDC Traction System	1581
<i>Amit Sarker, Murshedur Rahman, Hammad Nazir</i>	

V2G Operation Strategy for Electric Bus Stations in Multi-Stage Markets	1587
<i>Zhongguang Yang, Weipeng Liang, Yang Du, Lingyu Guo, Simin Wu, Jicheng Hui, Yangguang Lu</i>	
A Tripartite Stackelberg Game Framework for EV-Operator-Customer in Integrated Energy Parks	1592
<i>Zehui Yan, Gengfeng Li, Mengjie Teng, Zhaohong Bie</i>	
Reconfigurable Compensation Topology for Efficient Wireless Energy Conversion in Electric Vehicle CCCV Charging with Zero Voltage Switching	1597
<i>Liangxi He, Wenkai Ye, Yalun Li, Hewu Wang</i>	
Electric Vehicle V2G Charging and Discharging Scheduling Strategy Considering User Willingness and Travel Probability	1603
<i>Fangjia Zhang, Liang Chen</i>	
Load Signature Modeling and Charging Guidance for Electric Vehicles Based on Virtual Features Labelling	1608
<i>Chaochuang Wang, Yu Liu, Zhenhuan Li, Ping Wang, Lu Zhou, Fengshun Zhang, Qinran Hu, Tao Qian</i>	
A Multi-Scale Attention-Based Temporal Network for IGBT Junction Temperature Prediction	1614
<i>Zheng-Wei Du, Kai-Yi Yang, Zekai Bi, Rui Wu, Wen-Yan Yin</i>	
Online Monitoring of Short-Circuit Current: An Interpretable Graph Deep Learning Method Based on Hierarchical Graph Attention	1619
<i>Hongyu Liu, Ying Xue, Yun Hong, Shunxin Wei, Peilong Gao, Tong Chen</i>	
Causal Graph-Guided Multi-source Data Fusion for Power System State Estimation	1625
<i>Chao Wang, Zheng Guo, Zhouyue Hu</i>	
Operational Analysis of Kuwait's Peak-Load Days Using Profiling, Clustering, and Correlation Studies	1631
<i>Sultan Sh. Alanzi, Osama D. Alhossen, Ghada Shehada</i>	
Research on Temperature Optimization and Application of Nuclear Auxiliary Building in Nuclear Power Plant	1638
<i>Xiaoliang Fu, XiaoYou You, SongPing Chen, Peng Li, Xiang Jiang Min</i>	
Indirect Estimation of Industrial Non-Electric Energy via Spatio-Temporal Association Matrix Under Data Incompleteness	1644
<i>Xingqi Liu, Chengjie Tong, Xuan Liu, Jiadong Wang, Jing Zhang, Wenwen Li</i>	
Technical Research on Modification of Auxiliary Boiler System in Hot Standby Condition for Nuclear Power Plant	1650
<i>TingYan Xie, Xiaoliang Fu, YingFeng Xiong</i>	
Research on the Safety Evaluation of the Power Industry Chain for New Electricity System under the New International Situation	1656
<i>Wenjing Ruan</i>	
HIL Simulation of Multi-Objective Power Quality Mitigation for High-Penetration Renewables and New Loads	1661
<i>Xiaoming Wang, Wenguang Zhao, Bin Xu, Hao Zheng, Yadong Jiao, Mingxing Zhu, Fangfang Zhang</i>	
Environmental Friendliness Assessment of the Distributed Generation Facilities Life Cycle	1671
<i>Elena Sosnina, Olga Masleeva, Evgeny Kryukov, Yaroslav Petukhov</i>	

Research on Adaptive Semantic Task Map Construction and Autonomous Inspection Strategy for Substation Robots	1676
<i>Kaibo Dai, Qun Yang, Hongbin Cao, Chunxiang Mao</i>	
Mapping the Research Landscape of the Power Internet of Things: A Bibliometric Study on Hotspots and Emerging Frontiers	1681
<i>Yajun Zou, Wei Wang, Yu Zhang, Zedong Zhang</i>	
Arrhenius Normal Life Stress Modeling for Multilayer Ceramic Capacitors Lifetime Prediction	1686
<i>Maryam Alsawadi, Mohammed Abdulmajid, Omar Kittaneh</i>	
Comparative Statistical Lifetime Modeling of Red AlGaInP LEDs Under Multi-Stress Accelerated Life Testing: Lognormal Versus Weibull Analysis	1691
<i>Ahowd S. Bahashwan, Mohammed Abdulmajid, Omar Kittaneh</i>	
Techno-Economic Analysis of a Geothermal Coupled Off-Grid Agricultural Integrated Energy System	1696
<i>Qiang Ji, Lin Cheng, Qiyang Wang, Kaidi Huang, Zhen Dai, Ergang Zhao</i>	
A Review of Resilience Research on Integrated Energy Systems Oriented towards Cyber-Physical-Social Integration	1701
<i>Jie Hu, Sihan Liao, Yinye Shen, Guokun Cui, Jia Hu, Ziwei Li</i>	
Condition Monitoring and Assessment of Novel Nuclear Power Systems: Multi-Fault Diagnosis and Localization in Reactors	1710
<i>Shujian Li, Xueying Chen, Tongjian Zhang, Jiancheng Lv, Taibo Yang, Zhan Xing</i>	
Data Centers Leveraging Spatiotemporal Flexibility For Coordinated Optimization With Power Systems: A Comprehensive Review	1716
<i>Yunfei Shao, Aoxiang Zhang, Wenyi Zhang, Xudong Li, Junyu Chen, Xiongnan He, Cheng Lyu, Zhao Xu</i>	
Anti-Crosstalk Method for Differential Magnetoresistive Sensors in Renewable Energy Grid Connection	1722
<i>Qingyuan Ma, Zhenyu Deng, Shenwang Li, Pinghui Guo, Li Liu, Thomas Wu</i>	
An Intelligent Model for Non-outage Retrofit of Substation RP & IAE Based on PINN and MTSA	1728
<i>Ke Shi, Jing Niu, Weixiang Qiao, Jiwei Jin, Xing Zhang</i>	
GMEAC Framework for Condition Assessment and Risk Early Warning of Substation RP & IAS Equipment	1733
<i>Ke Shi, Jing Niu, Weixiang Qiao, Jiwei Jin, Yi Qi</i>	
Comparative Analysis and Improvement Research on Ratio Methods for Transformer Oil Chromatography	1738
<i>Qingdong Zhu, Xucheng Wang, Juntao Lv, Jie Ren</i>	
From Binary to Multi-level: A Finite-Field Based Perturbation Signal Generation Method for Power System Broadband Impedance Detection	1744
<i>Yang Huang, Jianhua Wang, Chongze Bi, Ziyi Xia</i>	
Research on Dry wet Transition Control of Supercritical Coal fired Power Generation Unit Based on Fuzzy Weighted Model Predictive Control	1749
<i>Zhuoyue Shi, Xiao Wu</i>	
Application of Artificial Intelligence Technology in Railway Signal Automatic Control	1754
<i>Jian Nie, Qing Shi, Minglong Zhang</i>	

Analysis of Physical Transmission Delay Effect in District Heating Networks Based on Security Region	1759
<i>Yaqian Zheng, Dan Wang, Hao Cheng, Peiyang Wu</i>	