

PROGRAM

17th International Conference on New Power System Technology

2025年新型电力系统技术国际会议

A new type of green, intelligent, and safe power system

绿色智能安全的新型电力系统

September 23-26 Hefei, China

Sponsors

Chinese Society for Electrical Engineering (CSEE)
IEEE Power & Energy Society

Co-sponsor

CIGRE Chinese National Committee

Organizers

China Electric Power Research Institute
State Grid Anhui Electric Power Co., Ltd.
Hefei University of Technology
Sungrow Power Supply Co., Ltd.

Supporters

Anhui Society For Electrical Engineering
Anhui University of Science & Technology

Publication Partners

Proceedings of the CSEE
CSEE Journal of Power and Energy Systems
New Type Power Systems
Power System Technology
Automation of Electric Power Systems
Journal of Modern Power System and Clean Energy
High Voltage Engineering
High Voltage
Global Energy Interconnection
Energy Internet
Energy and Power Journals



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17th International Conference on New Power System Technology

September 23~26, 2025 Hefei, China

Sep. 23		
Time	Content	Location
10:00-12:00 14:00-17:30	Registration & Sign-in	Hotel Lobby
10:00-12:00	Workshop 2: CIGRE CNC SC D2 Meeting (Closed-door)	Reception Hall
14:00-17:30	Workshop 2: Technology Innovation and Development of Power Information Systems, Telecommunications and Cybersecurity	Reception Hall
	Workshop 4: CSEE Young Elite Scientists Sponsorship Program Doctoral Student Academic Salon (Closed-door)	Anhui Meeting Room
	Workshop 6: CIGRE NGN China Workshop	Yunnan Meeting Room I, II
	Workshop 5: IEEE PES WIP Workshop	Yunnan Meeting Room III
	Workshop 7: Workshop on Efficient Collection and Transmission Technology for Offshore Wind Power (Closed-door)	Beijing Meeting Room
	Workshop 3: Frontiers and Challenges in New-Type Distribution System Technologies	Fujian Meeting Room

2025 年新型电力系统技术国际会议

2025 年 9 月 23-26 日 中国·合肥

9 月 23 日		
时间	内容	地点
10:00-12:00 14:00-17:30	注册报到	大厅
10:00-12:00	专题会议 2：CIGRE 中国国家委员会专委会 D2（闭门）	会见厅
14:00-17:30	专题会议 2：电力信息通信与网络安全技术创新与发展	会见厅
	专题会议 4：中国电机工程学会青年人才托举工程博士生专项学术沙龙（闭门）	安徽厅
	专题会议 6：CIGRE NGN China 研讨会	云南一二厅
	专题会议 5：IEEE PES WIP 研讨会	云南三厅
	专题会议 7：远海风电高效汇集送出技术研讨会（闭门）	北京厅
	专题会议 3：新型配电系统技术前沿与挑战	福建厅

Sep. 24		
Time	Content	Location
09:00-12:30	Opening Ceremony & Keynote Session	Ballroom
14:00-17:30	Panel 1: Provincial-Level New Power System and Electric Power Quantum Technology	Reception Hall
	Panel 2: CSEE JPES Forum: Application of Large-Scale Artificial Intelligence Models in New Power Systems	Yunnan Meeting Room I, II
	Panel 3: Risk Warning and Prevention of Extreme Events in Power Systems Under Climate Change	Anhui Meeting Room
	Oral Session 1	Huangshan Meeting Room I
	Oral Session 2	Fuyang Meeting Room II
	Panel 4: New Energy Operation and Electricity Market	Yunnan Meeting Room III
	Panel 5: Engineering Technologies for Controllable Nuclear Fusion Power Engineering	Beijing Meeting Room
	Panel 6: Application of Power Robotics in New Power Systems	Fujian Meeting Room
	Workshop 8: Grid-forming Technology Appraisal Meeting (Closed-door)	International Hall
	Poster Session 1	3/F Foyer

Sep. 25		
Time	Content	Location
9:00-12:00	Workshop 1: Frontiers and Challenges of Power System Operation and Control Technology under the Dual Carbon Goals	Platinum Hanjue Hotel 286 Room, 2F
	Panel 9: Energy Internet Forum: Power Meteorology and Accurate Source-Load Forecasting Technology	Reception Hall
	Panel 8: Uncertainty and Operational Control Technologies for Renewable Energy Power Systems under Dual-Carbon Goals	Anhui Meeting Room
	Oral Session 3	Yunnan Meeting Room I, II

9月24日		
时间	内容	地点
09:00-12:30	开幕式及主旨报告	大宴会厅
14:00-17:30	专题研讨会 1：省域新型电力系统与电力量子技术	会见厅
	专题研讨会 2：CSEE JPES 论坛：人工智能大模型在新型电力系统的应用	云南一二厅
	专题研讨会 3：气候变化下电力系统极端事件风险预警与防控	安徽厅
	论文宣讲 1	黄山厅
	论文宣讲 2	阜阳厅
	专题研讨会 4：新能源运营与电力市场	云南三厅
	专题研讨会 5：可控核聚变电力工程技术	北京厅
	专题研讨会 6：电力机器人在新型电力系统的应用	福建厅
	专题会议 8：构网技术鉴定会（闭门）	国际厅
	海报张贴 1	三层序厅

9月25日		
时间	内容	地点
9:00-12:00	专题会议 1：双碳目标下电力系统运行控制技术前沿与挑战	合肥白金汉爵大酒店 二楼 286 厅
	专题研讨会 9：电力气象与源荷精准预测技术	会见厅
	专题研讨会 8：双碳目标下新能源电力系统不确定性及运行控制技术	安徽厅
	论文宣讲 3	云南一二厅

Sep. 25

Time	Content	Location
9:00-12:00	Panel 12: Optimal Control and Dynamic Energy Coordination in Microgrids/New Distribution Systems	International Hall
	Panel 7: Coordinated Control of Multi-Terminal VSC-HVDC Transmission Systems under Dual-Carbon Goals	Yunnan Meeting Room III
	Panel 10: Dynamic Characteristics and Simulation Modeling Technology of New Distribution Systems	Beijing Meeting Room
	Panel 11: Intelligent Operation and Optimization Technology for Green Integrated Energy Systems	Fujian Meeting Room
	Poster Session 2	3/F Foyer
14:00-17:30	Workshop 9: CSEE Young Elite Scientists Sponsorship Program Academic Salon (Closed-door)	Reception Hall
	Panel 15: Aggregation of Flexibility Resources and Resilience in New Distribution Systems	Anhui Meeting Room
	Oral Session 4	Yunnan Meeting Room I, II
	Panel 14: Key Technologies for Collaborative Operation and Planning of Large-Scale Electric Vehicles and Smart Grids	International Hall
	Panel 13: Security and Stability of Power Systems with High Penetration of Renewable Energy	Yunnan Meeting Room III
	Panel 16: Assessment and Mitigation of Power Quality Impacts on the Grid under the Influence of New Energy and Electric Railway Systems	Beijing Meeting Room
	Panel 17: Modeling of Power Electronic Equipments for Stability Analysis of New-Type Power Systems	Fujian Meeting Room
	Poster Session 3	3/F Foyer

Sep. 26

Time	Content
9:00-12:00	Technical Visit

9月25日

时间	内容	地点
9:00-12:00	专题研讨会 12: 微电网 / 新型配电系统优化控制与动态能量协同	国际厅
	专题研讨会 7: 双碳目标下多端柔性直流输电系统协同控制	云南三厅
	专题研讨会 10: 新型配电系统动态特性与仿真建模技术	北京厅
	专题研讨会 11: 绿色综合能源系统智慧运行与优化技术	福建厅
	海报张贴 2	三层序厅
14:00-17:30	专题会议 9: 中国电机工程学会青年人才托举工程学术沙龙 (闭门)	会见厅
	专题研讨会 15: 新型配电系统灵活性资源聚合与韧性	安徽厅
	论文宣讲 4	云南一二厅
	专题研讨会 14: 规模化电动汽车与智能电网协同运行与规划关键技术	国际厅
	专题研讨会 13: 高比例新能源电力系统安全性与稳定性	云南三厅
	专题研讨会 16: 电气化铁路及新能源影响下电网电能质量影响评估与治理	北京厅
	专题研讨会 17: 适应新型电力系统稳定分析的电力电子设备建模	福建厅
	海报张贴 3	三层序厅

9月26日

时间	内容
9:00-12:00	技术参观

1. Introduction

The International Conference on New Power System Technology (PowerCon) was jointly initiated by Chinese Society for Electrical Engineering and IEEE Power and Energy Society in 1998. The Conference is organized alternatively in China and other Asian Pacific countries each year. It is a premier platform that brings together power and electrical engineers, academics, industrial leaders and engineering students from all over the world to share their knowledge and findings for the advancement of the electrical power and energy sector.

PowerCon 2025 is the 17th in its series. It is organized by China Electric Power Research Institute, State Grid Anhui Electric Power Co., Ltd., Hefei University of Technology, and Sungrow Power Supply Co., Ltd. PowerCon 2025 will take place in Hefei, capital city of Anhui Province located in eastern China during September 23-26, 2025.

Participation in PowerCon 2025 offers an opportunity to meet with hundreds of experts and benefits from face-to-face interaction with key decision makers in the field of power and energy.

2. Organization

Sponsors:	Chinese Society for Electrical Engineering (CSEE) IEEE Power and Energy Society (IEEE PES)
Co-sponsors:	CIGRE Chinese National Committee
Organizers:	China Electric Power Research Institute State Grid Anhui Electric Power Co., Ltd. Hefei University of Technology Sungrow Power Supply Co., Ltd.
Supporters:	Anhui Society for Electrical Engineering Anhui University of Science & Technology
Publication Partners:	Proceedings of the CSEE CSEE Journal of Power and Energy Systems New Type Power Systems Power System Technology Automation of Electric Power Systems Journal of Modern Power Systems and Clean Energy High Voltage Engineering High Voltage Global Energy Interconnection Energy Internet Energy and Power Journals

3. Venue

Empark Grand Hotel Anhui

Address: No. 5558 Huizhou Avenue, Binhu New District, Hefei, Anhui Province

Contact: Mrs. Tan Yan

Mobile: +86 17730037377

4. Committees

Conference Chairman: Shu Yinbiao

Vice Chairs: Chen Mei, Chi Yung Chung

4.1 Technical Committee

Chairs: Ding Lijian, Wang Weisheng

Vice Chairs: Xiang Nianwen, Feng Shuanglei

Members: Pu Tianjiao, Hu Jiabing, Ding Lei, Wang Shouxiang, Wu wenchuan, Yuan Yue, Yang Ming, Cheng Lin, Zhang Pei, Liu Nian, Hu Bo, Lin Jin, Ding Yi, Yao Wei, Zhao Jinquan, Sun Guoqiang, Xiao Huafeng, Hu Qinran, Li Weilin, Hua Haochen, Zheng Xiaodong, Li Gengfeng, Hu Haitao, Li Yong, Jiang Tao, Huang Wentao, Liu Chengxi, Hu Junjie, Chen Shi, Hao Lili, Yu Tao, Qin Wenping, Jin Tao, Sun Yuanyuan, Wang Qianggang, Wang Yuanyuan, Gao Chong, Li Bo, Li Yalou, Xu Yuan, Huang Yuehui, Qiu Xinjie, Guo Yongjun, Zhang Daorong, Wang Liufang, Gao Bo, Tang Wei, Zhu Taiyun, Ding Guocheng, Wu Hongbin, Huang Haihong, Sun Wei, Ma Mingyao

4.2 Organizing Committee

Chair: Zhao Jianjun

Vice Chair: Xiang Nianwen, Zhang Daorong, Liu Min, Ye Jin

Members: Yang Hejun, Shao Bingbing, Chen Qingtao, Zhang Ankai, Meng Xiaoxiao, Yang Yue, Feng Zixi, Yang Xiaodong, Ma Yinghao, Jie Bao, Li Qiyue, Sun Lei, Zhang Dabo, Zheng Bin, Guo Yuanyuan, Xu Zhengyu, Zhu Tengyi, Ding Jinjin, Zhang Chenchen, Fu Xiangning

8. Technical Program

8.1 Opening Ceremony & Keynote Session

Opening Ceremony

Chair: Chen Mei

Time: 9:00-9:30, Sep. 24

Room: Ballroom

Time	Agenda
09:00-09:30	Opening & Welcome Speech
	Shu Yinbiao Academician of Chinese Academy of Engineering President of Chinese Society for Electrical Engineering The 36th President of International Electrotechnical Commission
	Guest Speeches

开幕式及主旨报告

开幕式

主持人：陈 梅

时 间：9 月 24 日，9:00-9:30

会 场：大宴会厅

时间	日程
09:00-09:30	开幕致辞
	舒印彪 中国工程院院士 中国电机工程学会理事长 第 36 届国际电工委员会主席
	嘉宾致辞

Keynote Session

Chair: Ding Lijian, Wang Weisheng
Time: 9:30-12:25, Sep. 24
Room: Ballroom

Time	Keynote Session
09:30-09:55	<i>Development Trends of China's Energy and Power System under the Dual Carbon Goals: A Discussion on a New Energy System of Non-Fossil Electricity-Hydrogen-Carbon Coupling</i> Zhou Xiaoxin Academician of the Chinese Academy of Sciences Honorary President of China Electric Power Research Institute Co., Ltd. IEEE Fellow.
09: 55-10: 20	<i>The Energy Transition in Canada</i> Claudio Cañizares Fellow of the Canadian Academy of Engineering Fellow of the Royal Society of Canada Foreign Fellow of CSEE IEEE Fellow Professor of University of Waterloo, E&CE Department
10:20-10:45	<i>Thoughts on China's Carbon Peak and Carbon Neutrality Strategy and Pathways</i> Yuan Liang Academician of the Chinese Academy of Engineering President of Anhui University of Science and Technology Vice Chairman of the Anhui Association for Science and Technology
10:45-11:10	<i>CIGRE Strategic Direction and Technical Focus</i> Rannveig S. J. Løken CIGRE Vice-President Technical Chair of Norwegian Committee of CIGRE

主旨报告

主持人：丁立建 王伟胜
时 间：9月24日, 9:30-12:25
会 场：大宴会厅

时间	主旨报告
09:30-09:55	<i>双碳目标下我国能源电力系统发展趋势研究 - 试论非化石电 - 氢 - 碳耦合的新型能源体系</i> 周孝信 中国科学院院士 电气与电子工程师协会 (IEEE) 会士 中国电力科学研究院名誉院长
09: 55-10: 20	<i>加拿大能源转型</i> Claudio Cañizares 加拿大工程院院士 加拿大皇家科学院院士 中国电机工程学 (CSEE) 会外籍会士 滑铁卢大学教授
10:20-10:45	<i>我国碳达峰碳中和战略及路径思考</i> 袁 亮 中国工程院院士 安徽理工大学校长 安徽省科学技术协会副主席
10:45-11:10	<i>CIGRE 战略方向与技术重点</i> Rannveig S. J. Løken 国际大电网委员会 (CIGRE) 副主席 CIGRE 挪威国家委员会主席

11:10-11:35	<i>Development and Challenges of the New Power System</i> Rao Hong Academician of the Chinese Academy of Engineering Chief Scientist of China Southern Power Grid
11:35-12:00	<i>The Role of All-Vanadium Redox Flow Battery in Future Demand-Side Power System Transition</i> Chi Yung Chung Fellow of the Canadian Academy of Engineering IEEE PES President-Elect Head of Department of Electrical and Electronic Engineering The Hong Kong Polytechnic University
12:00-12:25	<i>ESG Engineering for a Greener Tomorrow</i> Ir. Prof. Dr. Jeffrey Chiang Choong Luin President of The Institution of Engineers, Malaysia (IEM) Professor of SEGi University, Faculty of Engineering, Built Environment & IT

11:10-11:35	<i>新型电力系统的发展与挑战</i> 饶 宏 中国工程院院士 中国南方电网首席科学家
11:35-12:00	<i>全钒液流电池在未来的电力系统需求侧转型中的作用</i> 钟志勇 加拿大工程院院士 IEEE PES 候任主席 香港理工大学电机及电子工程学系系主任
12:00-12:25	<i>ESG 工程: 共创绿色未来</i> 郑宗联 马来西亚工程师学会 (IEM) 主席 世纪大学教授

8.2 Panels

Panel 1: Provincial-Level New Power System and Electric Power Quantum Technology



Chairs: Liufang Wang
State Grid Anhui Electric Power Company Co., Ltd.



Long Zhao
State Grid Anhui Electric Power Company Co., Ltd.



Xiaodong Yang
Hefei University of Technology

Time: 14:00-17:40, Wednesday, Sep. 24

Room: Reception Hall, 1F

Time	Agenda
14: 00-14: 20	Reflections and Practices on Building Provincial-level New Power Systems Rui Zhang Deputy Chief Engineer/Director of Development Department State Grid Anhui Electric Power Company Co., Ltd.
14: 20-14: 40	Latest Advances in Large-Scale Fluctuating Water Electrolysis for Hydrogen Production from New Energy and Hydrogen-Electricity Coordination Technology Wei Wei Professor Zhejiang University
14: 40-15: 00	Key Technologies and Applications of Intelligent Computing-driven Simulation Analysis for Urban Power Grids Keyan Liu Professor-level Senior Engineer China Electric Power Research Institute

15: 00-15: 20	Thoughts on Synchronization Operation and Power Quality Issues of Grid-Connected Converters in Power-Electronized Power Systems Xiaoming Zha Professor Wuhan University	
15: 20-15: 40	Aggregated Regulation of Public Buildings and Its Strategies and Mechanisms for Grid Interaction Xiaolong Jin Associate Professor Tianjin University	
15: 40-16: 00	Coffee Break	
16: 00-16: 20	AI-Based Fault Diagnosis System for Primary Equipment in UHVDC and Applications Huafeng Xiao Professor Southeast University	
16: 20-16: 40	Wind and Solar Energy Monthly-Scale Forecasting Technology Based on Dynamics and Machine Learning Chuanhui Wang Chief Expert Anhui Public Meteorological Service Center	
16: 40-17: 00	Progress in Quantum Science Research and Industrialization Yong Zhao Researcher Quantum Technology (Hefei) Industrial Research Institute	

Research Progress of Quantum Precision Measurement Technology and Its Application in Power Systems

17: 00-17: 20

Fangwen Sun

Professor/Senior

University of Science and Technology of China



Microscopic Diamond Quantum Sensor Devices and Systems

17: 20-17: 40

Qijing Lin

Assistant Dean / Director of the Institute of Intelligent Sensing and Systems / Professor

Xi'an Jiaotong University



Panel 2: CSEE JPES Forum: Application of Large-Scale Artificial Intelligence Models in New Power Systems



Pei Zhang

Tianjin University



Tao Yu

South China University of Technology

Chairs:

Time: 14:00-17:00, Wednesday, Sep. 24

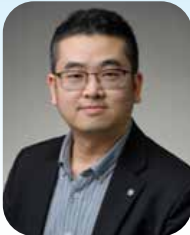
Room: Yunnan Meeting Room I, II, 3F

Time	Agenda
14: 00-14: 20	Application, Practice, and Future Prospects of Deep Reinforcement Learning in Modern Power System Operation Optimization Dong Yan Engineer China Electric Power Research Institute (CEPRI) 
14: 20-14: 40	The Applications of Artificial Intelligence Technologies and LLM in the Domain of Guangdong Power Grid Dispatching Xinlei Cai Leading technical expert of Southern Power Grid Corporation Guangdong Power Grid Power Dispatching and Control Center 
14: 40-15: 00	AI-Powered Smart Electricity Usage Perception Technology Tao Yu Professor South China University of Technology 

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15: 00-15: 20	<i>AI-Powered Modern Power Systems: Practice and Future Prospects</i> Lingyu Liang Professor Southern Power Grid Artificial Intelligence Technology Co., Ltd	
15: 20-15: 40	<i>Intelligent Monitoring and Early Warning Technology and System for Three-Phase Heavy Load and Overload of Distribution Transformers</i> Zhouyang Ren Professor Chongqing University	
15: 40-16: 00	Coffee Break	
16: 00-16: 20	<i>Application and Prospect of Intelligent Acceleration Technology for Grid Operation Optimization</i> Wei Renjie R&D Engineer China Electric Power Research Institute, Artificial Intelligence Research Department	
16: 20-16: 40	<i>Time-Domain Simulation based on Physics-Informed DeepONet</i> Pei Zhang Professor Tianjin University	
16: 40-17: 00	<i>Key Technologies and Applications of Data-Driven Dynamic Stability Control for High-Proportion New Energy Power Systems</i> Jing Ma Professor and Doctoral Supervisor Shanghai University of Electric Power	

Panel 3: Risk Warning and Prevention of Extreme Events in Power Systems Under Climate Change

Chairs:		
	Gengfeng Li Xi'an Jiaotong University	Yuanyuan Wang Changsha University of Science & Technology
Time: 14:00-17:00, Wednesday, Sep. 24		Room: Anhui Meeting Room, 3F

Time	Agenda	
14: 00-14: 20	<i>Disaster-Tolerant Defense Strategies for Power Cyber-Physical Systems Against Targeted Attacks</i> Dongqi Liu Associate professor Changsha University of Science and Technology	
14: 20-14: 40	<i>Modeling and Optimal Control of AC/DC Microgrids</i> Li Wang Associate professor Changsha University of Science and Technology	
14: 40-15: 00	<i>Fault Analysis and Relay Protection of HVDC Grids with DC circuit Breakers</i> Yanxun Guo Associate professor Zhengzhou University	

Panel 4: New Energy Operation and Electricity Market

Chair:

Xuanyuan Wang
State Grid Jibei Electric Power Company Co., Ltd.

Leijiao Ge
Tianjing University

Time: 14:00-16:40, Wednesday, Sep. 24

Room: Yunnan Meeting Room III, 3F

Time	Agenda
14: 00-14: 20	<i>Research on End-to-End Intelligent Operation for Novel Distribution Power Systems</i> Lilin Cheng Lecture Hohai University
14: 20-14: 40	<i>Why did the Market-Oriented Reform of Electricity Prices Achieve Both Price Reduction and Efficiency Improvement? Empirical Study Based on Pilot Policies in the Electricity Spot Market</i> Guoxing Zhang Director of the Office of Discipline Development and Planning, Lanzhou University Lanzhou University
14: 40-15: 00	<i>Thoughts on the Application of Grid-forming Technology in Xinjiang Power Grid</i> Xiqiang Chang Chief Engineer State Grid Xinjiang Electric Power Co., Ltd

15: 00-15: 20

The Special Issues Regarding Relay Protection for Variable-Speed Pumped Storage Units

Jian Qiao
Associate professor
North China Electric Power University



15: 20-15: 40

Method for Direct Current De-icing of Overhead Ground Lines without Power interruption

Weiye Peng
Postgraduate
Changsha University of Science and Technology



15: 40-16: 00 **Coffee Break**

16: 00-16: 20

Explainable Physical Deep-Learning Model for Overhead Transmission Line Icing-Thickness Prediction

Hui Hou
Professor
Wuhan University of Technology



16: 20-16: 40

An Improved Method of Traveling Wave Protection for DC Lines based on the Compensation of Line-Mode Fault Voltage

Dalin Mu
Assistant Researcher
Southwest Jiaotong University



16: 40-17: 00

Coordinated Restoration Method of Hybrid AC/DC Distribution Network with Electric Buses Considering Transportation System Influence

Bo Zhang
Postdoctoral Researcher
North China Electric Power University



15: 00-15: 20	<i>Research Progress on Modular Gravity Energy Storage Technology</i>	Yanbo Chen Professor North China Electric Power University	
15: 20-15: 40	<i>Key Technologies and Practices for New-Type Power Systems Under Dual Carbon Goals</i>	Xiaotao Chen Professor Qinghai University	
15: 40-16: 00	Coffee Break		
16: 00-16: 20	<i>Design and Evolution Path Analysis of Electricity-Carbon Market Mechanism in High-Penetration Renewable Energy Power Systems</i>	Yujuan Fang Tsinghua University	
16: 20-16: 40	<i>Multiple Spatial-Temporal Scale Coordinated Frequency Regulation of Diversified Frequency Regulation Resource for New Power System</i>	Zhongwen Li Professor Zhengzhou University	

Panel 5: Engineering Technologies for Controllable Nuclear Fusion Power Engineering

		
Chairs: Yanan Wu Hefei Institutes of Physical Science, Chinese Academy of Sciences		Weibin Li Southwestern Institute of Physics
Time: 14:00-16:40, Wednesday, Sep. 24		Room: Beijing Meeting Room, 3F

Time	Agenda	
14: 00-14: 20	<i>Progress in Power Supply for the International Thermonuclear Experimental Reactor</i>	Jinchao Li ITER Electrical Systems Program Manager International Thermonuclear Experimental Reactor Organization
14: 20-14: 40	<i>Controlled Fusion Power Supply Technology</i>	Yingqiao Wang Division Director Southwestern Institute of Physic
14: 40-15: 00	<i>Superconducting Electrical Engineering for Controlled Fusion</i>	Jinggao Qin Deputy Director of ASIPP Hefei Institutes of Physical Science, Chinese Academy of Sciences

15: 00-15: 20	<i>Development of Fusion Power Supply Technology in IFPP HUST</i> Yong Yang Associate Professor Huazhong University of Science and Technology	
15: 20-15: 40	<i>Power Quality and Energy Storage for Fusion Power Supplies</i> Jing Lu Associate Researcher Hefei Institutes of Physical Science, Chinese Academy of Sciences	
15: 40-16: 00	Coffee Break	
16: 00-16: 20	<i>Design of a High-Current Low-Ripple Power Converter for Magnetic Load Application</i> Chunguang Zhang Ph.D. Southwestern Institute of Physics	
16: 20-16: 40	<i>The Development of DC Interruption in Tokamak Device</i> Hua Li Associate Researcher Hefei Institutes of Physical Science, Chinese Academy of Sciences	

Panel 6: Application of Power Robotics in New Power Systems

	
Chairs: Guo Rui State Grid Intelligence Technology Co., Ltd.	Dian Songyi Sichuan University

Time: 14:00-17:40, Wednesday, Sep. 24 **Room:** Fujian Meeting Room, 3F

Time	Agenda	
14: 00-14: 20	<i>Kinematics Analysis and End Control of Mobile Continuum Robots</i> Songyi Dian Professor Sichuan University	
14: 20-14: 40	<i>Research and Application of Robotic Technology with Embodied-AI in Complex Confined Spaces</i> En Li Researcher The Institute of Automation of the Chinese Academy of Sciences	
14: 40-15: 00	<i>Key Technologies and Practical Challenges of Live-line Maintenance Robots for Distribution Networks</i> Erbao Dong Associate Professor The University of Science and Technology of China	

Research and Application of Key Technologies for Live Working Robot

15: 00-15: 20

Shaosheng Fan

Professor
Changsha University of Science and Technology

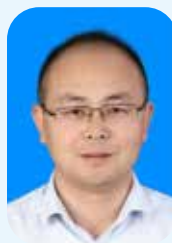


An Initial Exploration and Application of Embodied Intelligence Technology in Electric Power

15: 20-15: 40

Guozheng Peng

Deputy Chief Engineer of Artificial Intelligence Research department
China Electric Power Research Institute



15: 40-16: 00

Coffee Break

Integrated Design of a Wall-Climbing Hexapod with Negative-Pressure Adsorption and Cable-Driven Manipulator for Power Equipment Maintenance

16: 00-16: 20

Xingxing You

Associate Researcher
Sichuan University



Safety-Critical Model Predictive Trajectory Tracking Control for Transformer Inspection Robots Based on Control Barrier Functions

16: 20-16: 40

Yiwei Liao

Associate Professor
Sichuan University



Semi-supervised Learning-based Foreign Object Segmentation Technology Inside GIS Equipment

16: 40-17: 00

Bin Guo

Associate Professor
Sichuan University



Image Enhancement Under Transformer Oil Based on Adaptive Multi-stage Denoising

17: 00-17: 20

Yuzhong Zhong

Associate Professor
Sichuan University



Mobile Continuum Manipulator: an Overview of Its Applications, Technologies And Prospects in the Electric Power Industry

17: 20-17: 40

Hongwei Fang

Associate Researcher
Sichuan University



Panel 7: Coordinated Control of Multi-Terminal VSC-HVDC Transmission Systems under Dual-Carbon Goals



Chairs:
Xueguang Wu
High Voltage Research Institute, China
Electric Power Research Institute



Bingbing Shao
Hefei University of Technology

Time: 9:00-11:40, Thursday, Sep. 25

Room: Yunnan Meeting Room III, 3F

Time	Agenda
9: 00-9: 20	<i>Advanced Methodologies on Modelling HVDC Converters in Real Time</i> Yi Zhang Vice-President R&D and Chief Technology Officer (CTO) RTDS Technologies Inc., CANADA 
9: 20-9: 40	<i>Research on Key Technologies of Flexible Power Transformers</i> Tongzhen Wei Professor Institute of Electrical Engineering, Chinese Academy of Sciences 
9: 40-10: 00	<i>Operation and Control Technology for Large-scale New energy Cluster Transmission via VSC-HVDC</i> Wei Huang Deputy Director of the Institute of HVDC and Power Electronics of CSG Electric Power Research Institute Research Institute of China Southern Power Grid Co., Ltd. 

System Supporting Techniques of Controllable Line Commutated Converter

10: 00-10: 20

Jun Yang

Deputy Director of High Power Converter Section
HVDC Department, China Electric Power Research Institute,
CHINA



10: 20-10: 40

Coffee Break

Application Experience of Coordinated Control in the Zhangbei VSC-HVDC Project

10: 40-11: 00

Nannan Wang

R&D Expert
NR Electric Co., Ltd., China



Oscillation Risks and Mitigation Methods of GFM-HVDC Power Systems for Renewable Energy

11: 00-11: 20

Qiang Fu

Assistant Research
The Hong Kong Polytechnic University



Research on Operation Control Strategy of HVDC Converter Based on IGCT

11: 20-11: 40

Song Li

Research and Development Engineer
Huairou Laboratory, China



Panel 8: Uncertainty and Operational Control Technologies for Renewable Energy Power Systems under Dual-Carbon Goals



Chairs: Bo Hu
Chongqing University



Yuehui Huang
National Renewable Energy Laboratory,
China Electric Power Research Institut



Hejun Yang
Hefei University of
Technology

Time: 9:00-12:00, Thursday, Sep. 25

Room: Anhui Meeting Room, 3F

Time	Agenda
9: 00-9: 20	<i>Efficient Assessment Methods for the Reliability of Integrated Energy Systems</i> Changzheng Shao Associate professor Chongqing University
9: 20-9: 40	<i>Data-Model Jointly Driven Uncertainty Analysis of Power System Operation With High-Penetration Renewables</i> Can Wan Professor Zhejiang University
9: 40-10: 00	<i>Data-Driven Platform for Vehicle to Grid: Exploration and Practice in Shenzhen</i> Jun Zhong Senior Engineer Shenzhen Power Supply Co., Ltd

Key Technology of Flexible Regulation and Intelligent Restoration in Rural Distribution Network

10: 00-10: 20

Lu Zhang
Professor
China Agricultural University



10: 20-10: 40

Coffee Break

Interactive Optimization Scheduling Methods for Transmission and Distribution Systems under High Renewable Energy Penetration

10: 40-11: 00

Hongjun Gao
Associate professor
Sichuan University



Exploring the Flexibility of Computing Loads for Enhancing the Resilience of Power and Energy Systems

11: 00-11: 20

Chengjin Ye
Researcher
Zhejiang University



Efficient Solution Method for Multi-scenario Optimization Problems Based on State Similarity and Its Three Typical Applications

11: 20-11: 40

Kai Hou
Associate professor
Tianjin University



Distributed Optimal Operation and Control of Smart Decarbonized Active Distribution Networks

11: 40-12: 00

Wenfa Kang
Postdoc Researcher
Aalborg University



Panel 9: Energy Internet Forum: Power Meteorology and Accurate Source-Load Forecasting Technology



Chairs: Ming Yang
Shandong University



Bo Wang
Renewable Energy Department, China Electric Power Research Institute

Time: 9:00-11:40, Thursday, Sep. 25 Room: Reception Hall, 3F

Time	Agenda
9: 00-9: 20	<i>Distributed Wind and Photovoltaic Power Forecasting Technology</i> Xiaosheng Peng Associate professor Huazhong University of Science and Technology 
9: 20-9: 40	<i>Neural Network-Based Ocean Wave Forecasting with Applications Using Large Language Models</i> Haiqing Yu Associate Professor Shandong University 
9: 40-10: 00	<i>Renewable Energy Power Forecasting Method Driven by Electric-Meteorological Multimodal Data</i> Xiaochong Dong Postdoctoral Researcher Tsinghua University 

10: 00-10: 20	<i>Data-Driven Conditional Probabilistic Forecasting of Renewable Energy Power</i> Sen Wang Lecturer Nanjing Institute of Technology 
10: 20-10: 40	Coffee Break
10: 40-11: 00	<i>M2WLLM: Multi-modal Multi-task Ultra-short-term Wind Power Prediction Algorithm Based on Large Language Model</i> Hang Fan Lecturer North China Electric Power University 
11: 00-11: 20	<i>Exploration of Artificial Intelligence Applications in the Field of Renewable Energy Power Forecasting</i> Zhe Zhang Researcher Huadian Electric Power Research Institute 
11: 20-11: 40	<i>Multi Scale Source-Load Forecasting Considering Spatial-Temporal Correlation</i> Juan Yan Professor Anhui University 

Panel 10: Dynamic Characteristics and Simulation Modeling Technology of New Distribution Systems



Chair: Chengxi Liu
Wuhan University

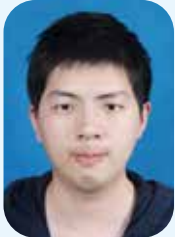


Jiehui Zheng
South China University of Technology

Time: 9:00-13:00, Thursday, Sep. 25

Room: Beijing Meeting Room, 3F

Time	Agenda
9: 00-9: 20	Coordinated Planning and Operation Methods of Data Centers and Energy Systems for Low-Carbon Computing Services Tong Qian Associate professor South China University of Technology 
9: 20-9: 40	Grid-Compliance-Oriented Simulation Modeling Techniques for Large-Scale Type-3 Wind Farms Hongyi Wang Power system engineer Windey Energy Technology Group Co.,Ltd. 
9: 40-10: 00	Dynamic Modeling, Simulation and Digital Twin Applications for New Distribution Systems Yangkan Song Chief Engineer (R&D Director) Digital Twin Research Center for Energy and Power Systems, Sichuan Energy Internet Research Institute,Tsinghua University 

10: 00-10: 20	Topology Identification Technology For Distribution Networks Fanyuan Si Associate Professor Beijing Jiaotong University 
10: 20-10: 40	Event-triggered Robust State Estimation for Distribution Systems Considering Quick Dynamics Manyun Huang Associate Professor Hohai University 
10: 40-11: 00	Basic Theory and Methodology of Agricultural Energy Internet Xueqian Fu Associate Professor China Agricultural University 
11: 00-11: 20	Cyber-attack Resilient V2G-based Grid Frequency Control via Adversarial Generative Predictive Reinforcement Learning Jian Sun Associate Professor Southwest University 
11: 20-11: 40	High-Speed Railway Vehicle-Network Broadband Excitation-Based Impedance Measurement Technology and Applications Haidong Tao Associate Researcher Southwest Jiaotong University 

11: 40-12: 00	<i>Practices and Prospects of Scheduling and Control Technologies for High-Proportion Distributed Renewable Energy Integration</i> Ruifeng Zhao Senior Technical Expert at Southern Power Grid/Manager Guangdong Power Grid Co., Ltd. Power Dispatch Control Center 
12: 20-12: 40	<i>Automated Modeling and Dynamic Simulation Platform for New Distribution Networks</i> Yongjian Luo Postdoctoral researcher Wuhan University 
12: 40-13: 00	<i>Integrating Multi-Neural DAE Experts into Power System Dynamic Component Modeling for EMTP-Type Simulation</i> Shilin Gao Associate Professor Sichuan University 

Panel 11: Intelligent Operation and Optimization Technology for Green Integrated Energy Systems

 Chairs: Shi Chen Sichuan University  Yinghao Ma Hefei University of Technology	
Time: 9:00-12:40, Thursday, Sep. 25 Room: Fujian Meeting Room, 3F	
Time	Agenda
9:00-9:20	<i>Anomaly Detection in Power Systems</i> Saddam Aziz Dr (Senior Member IEEE,USA) The Hong Kong Polytechnic University 
9:20-9:40	<i>Stochastic Optimization for Joint Energy-reserve Dispatch Considering Uncertain Carbon Emission</i> Yingjun Wu Associate Professor Hohai University 
9:40-10:00	<i>Research on Key Technologies for Comprehensive Utilization of Residual Pressure Resources in Natural Gas Pipeline Network</i> Zhang Anan Dean Southwest Petroleum University 

A Dynamic Aggregation Method for Heterogeneous User-side Flexible Energy Resources

10:00-10:20

Junru Chen

Professor
Xinjiang University



10:20-10:40

Coffee Break

Capacity Planning of Low-Carbon Microgrid Considering Robust Short-Term Off-Grid Operation

10:40-11:00

Xiong Wu

Associate Professor
Xi'an Jiaotong University



PowerBiMIP: An Open-Source Bilevel Mixed-Integer Programming Toolbox for Power Systems

11:00-11:20

Shuai Lu

Associate Professor
Southeast University



Intelligent Stability Analysis and Control of Converter-Dominated Power Systems with High Renewable Penetration

11:20-11:40

Cheng Liu

Professor
Northeast Electric Power University



Polar Clean Energy Utilization Technology: Exploration and Prospects

11:40-12:00

Yixun Xue

Professor
Taiyuan University of Technology



Spatiotemporal Decomposed Dispatch of Integrated Energy System Considering Risks

12:00-12:20

Jianquan Zhu

Professor
South China University of Technology



Optimization and Scheduling of Integrated Energy Systems with Spatio-Temporal Coupling

12:20-12:40

Ning Yan

Associate Professor
Shenyang University of Technology



Panel 12: Optimal Control and Dynamic Energy Coordination in Micro-grids/New Distribution Systems



Chairs: Wei Sun
Hefei University of Technology



Lei Yu
CSG Electric Power Research Institute Co., Ltd.

Time: 9:00-12:00, Thursday, Sep. 25 **Room:** International Hall, 3F

Time	Agenda
9: 00-9: 20	<i>AI-Enabled Optimization Technologies for Multi-Microgrid Systems</i> Leijiao Ge Associate Professor Tianjin University 
9: 20-9: 40	<i>Research and Practice on AC/DC Microgrid Technologies for High-Reliability Power Supply</i> Yubo Yuan professorate senior engineer State Grid Jiangsu Electric Power Company Ltd., Electrical Power Research Institute 
9: 40-10: 00	<i>Whole-Process Resilience Enhancement for Distribution Network Against Extreme Disasters</i> Shan Cheng Professor China Three Gorges University 

Synergistic Regulation Strategy for Power and Green Hydrogen Chemical Engineering Systems

10: 00-10: 20

Zhouyang Ren
Professor
Chongqing University



10: 20-10: 40 **Coffee Break**

Flexible Control Technology for New Distribution Networks

10: 40-11: 00

Lei Yu
Professor
CSG Power Research Institute Co., Ltd



Introduction to Engineering Applications of Low-Voltage Flexible Distribution Technology for Voltage Regulation

11: 00-11: 20

Yongxiang Cai
Associate Professor
Guizhou Power Grid Electric Power Research Institute Co., Ltd



Key Technologies for Planning and Operation of Microgrids and Integrated Energy Systems

11: 20-11: 40

Dongdong Li
Professor
Shanghai University of Electric Power



Virtual Inertia for Suppressing Voltage Oscillations and Stability Mechanisms in DC Microgrids

11: 40-12: 00

Gong Lin
Professor
Hunan University



Panel 13: Security and Stability of Power Systems with High Penetration of Renewable Energy



Chairs: Tao Jiang
Northeast Electric Power University



Wenping Qin
Taiyuan University of Technology

Time: 14:00-16:20, Thursday, Sep. 25

Room: Yunnan Meeting Room III, 3F

Time	Agenda
14: 00-14: 20	<i>Xinjiang New Energy Characteristics Profile: A Big Data-Driven Approach</i> Junru Chen Professor Xinjiang University 
14: 20-14: 40	<i>Thoughts and Practices on Adaptive Blackout Defense Technology under Strong Uncertainty</i> Zhaowei Li Senior Engineer NARI Group Stability Control Company 
14: 40-15: 00	<i>Transient Stability of Grid-forming Converters</i> Xialin Li Professor Tianjin University 

15: 00-15: 20

Deep Feedback Learning for Power System Short-Term Voltage Stability Enhancement

Lipeng Zhu
Professor
Hunan University



15: 20-15: 40

Analysis and Enhancement Methods of Frequency Response Characteristics for High Proportion Renewable Energy Power Systems

Pupu Chao
Associate professor
Dalian University of Technology



15:40-16: 00

Coffee Break

16: 00-16: 20

Integrated Solution for Source-Grid-Load-Storage System

YanHui Xia
Director of the Nanjing Research Institute
Sungrow Power Supply Co., Ltd.



Panel 14: Key Technologies for Collaborative Operation and Planning of Large-Scale Electric Vehicles and Smart Grids



Chairs: Junjie Hu
North China Electric Power University



Rui Cheng
North China Electric Power University



Ye He
Hefei University of Technology

Time: 14:00-17:40, Thursday, Sep. 25

Room: International Hall, 3F

Time	Agenda
14: 00-14: 20	<i>Resilience Enhancement of Urban Distribution Power Systems with Large Scale Vehilce to Gird Support</i> Tianyang Zhao Associate Professor Xi'an Jiaotong University
14: 20-14: 40	<i>Time-of-Use Power Matching: EV Aggregators Enabling Clean Consumption</i> Yue Xiang Professor Sichuan University
14: 40-15: 00	<i>Hybrid Planning for EV Charging Stations Based on Graph Auto-encoder Algorithm</i> Andrew Wu Senior Lecturer Hong Kong Polytechnic University

The Energy-intensive load Control Method for New Energy Consumption

15: 00-15: 20

Siyang Liao
Associate Professor
Wuhan University



Electric Vehicle Flexibility Analysis and Control from the Perspective of Power-Transportation Integration

15: 20-15: 40

Yunfei Mu
Professor
Tianjin University



15: 40-16: 00

Coffee Break

Research and Prospects on the Integration of Electric Vehicles and Power System

16: 00-16: 20

Ye Yang
Seinor Engineer
State Grid Smart Internet of Vehicles Co.,LTD.



Pricing Strategy for Slow Charging of Electric Vehicles Considering User Preferences and Network Constraints

16: 20-16: 40

Rui Cheng
Assistant Professor
North China Electric Power University



Progress in Pilot Development and Standard Formulation of Managed Charging Programs in Residential Areas

16: 40-17: 00

Huiming Zhang
Seinor Engineer
China Electric Power Research Institute



17: 00-17: 20

LLM-Powered Multi-Agent Intelligence for Smart P2P Energy Trading

Chengwei Lou
Associate Professor
China Agricultural University



17: 20-17: 40

Calculation Method and Platform Development of the Available Capacity for Charging Facilities Integrated into Distribution Networks

Xiaoming Wang
Seinor Engineer
State Grid Anhui Electric Power Research Institute



Panel 15: Aggregation of Flexibility Resources and Resilience in New Distribution Systems

**Chairs:** Shouxiang Wang
Tianjin University

Qinran Hu
Southeast University

Time: 14:00-17:20, Thursday, Sep. 25

Room: Anhui Meeting Room, 3F

Time	Agenda
14: 00-14: 30	Co-Optimised Scheduling of Multi-Microgrid System Based on Reputation Point Trading Mechanism Hongkun Wang Associate Dean College of Mechanical and Electrical Engineering, Shihezi Shihezi University 
14: 30-15: 00	AI-Empowered Flexible Control of Electrolyzers Sheng Chen Professor Hohai University 
15: 00-15: 20	Resilience Assessment and Enhancement for Power-traffic Networks under Natural Disasters Difei Tang Associate Professor School of NARI Electrical and Automation, Nanjing Normal University 

15: 20-15: 40	<i>Technology and Practice of Vehicle- Station-Grid Interaction with Full Elements of "Source-Grid-Load-Storage"</i> Yi Pan Senior Engineer Research Institute of State Grid Jiangsu Electric Power Co., Ltd.	
15: 40-16: 00	Coffee Break	
16: 00-16: 20	<i>Operational Optimization of New Power Distribution Systems Considering Flexibility Resource Uncertainty</i> Wenlong Liao Assistant Professor, MSCA Fellow, JSPS Fellow School of Engineering, University of Leicester, United Kingdom	
16: 20-16: 40	<i>Interpretable Data-Driven Simulation with Fast Ultrasonic Detection for Battery Health Estimation</i> Olivia Peng Assistant Professor Queen's University Belfast	
16: 40-17: 00	<i>V2Sim: An Open-Source Urban-Scale Co-Simulation Platform for Coupled Power-Transportation Networks</i> Tao Qian Lecturer Southeast University	
17: 00-17: 20	<i>A Resilience-oriented Incentive Pricing Strategy for Power-Transportation Network Against Flood Hazards</i> Bo Li Assistant Professor Guangxi University	

Panel 16: Assessment and Mitigation of Power Quality Impacts on the Grid under the Influence of New Energy and Electric Railway Systems

			
Chairs:	Haitao Hu Southwest Jiaotong University	Yuanyuan Sun Shandong University	
Time: 14:00-17:00, Thursday, Sep. 25		Room: Beijing Meeting Room, 3F	
Time		Agenda	
14: 00-14: 30	<i>The Power Quality Issues and Countermeasures in New-era Distribution Networks</i>	Mingxing Zhu Professor Anhui University	
14: 30-15: 00	<i>Resonance Amplification Mechanism and Interaction Analysis Method in Power-Electronics-Based Power Distribution and Utilization Systems</i>	Hao Yi Professor Xi'an Jiaotong University	
15: 00-15: 20	<i>Harmonic Modeling and Harmonic Interaction Analysis of Inverter Grid-connected System</i>	Shunfu Lin Professor Shanghai University of Electric Power	

15: 20-15: 40	<i>Analysis and Countermeasures of the Current Situation of Power Quality in the New - type Power System</i> Haijun Liu Senior Engineer China Electric Power Research Institute (CEPRI)	
15: 40-16: 00	Coffee Break	
16: 00-16: 20	<i>Power Grid Planning and Operation Technology Based on Digital Twin</i> Hao Bai Senior Engineer CSG Electric Power Research Institute Co., Ltd.	
16: 20-16: 40	<i>Analysis and Suppression of Low-Frequency Oscillations in Grid-Forming Converter-Interfaced Renewable Energy Systems</i> Yang Wang Researcher Sichuan University	
16: 40-17: 00	<i>Stability Assessment and Impedance Measurement of Renewable Energy Sources Integrated into High-Speed Railway Power Supply Systems</i> Haidong Tao Associate Researcher Southwest Jiaotong University	

Panel 17: Modeling of Power Electronic Equipments for Stability Analysis of New-Type Power Systems

Chairs:		
	Yalou Li China Electric Power Research Institute	Yi Zhang RTDS Technologies Inc.

Time: 14:00-17:00, Thursday, Sep. 25
 Room: Fujian Meeting Room, 3F

Time	Agenda	
14:00-14:20	<i>New Energy Modeling for Stability Analysis of New-Type Power Systems</i> Yalou Li Chief Engineer of Power System Department China Electric Power Research Institute (CEPRI)	
14:20-14:40	<i>Modelling Power Electronics Circuits on Real Time Simulator</i> Yi Zhang Vice President R&D and CTO RTDS Technologies Inc.	
14:40-15:00	<i>The Modeling and Application Progress of the Grid-forming Power Electronic Equipment</i> Wenfeng Li Deputy director of the Power System Department China Electric Power Research Institute Co., LTD	

15:00-15:20

Modelling and Control of Large-Scale Renewable Energy Stations with Energy Storage

Wei Yao
Professor
Huazhong University of Science and Technology



15:20-15:40

Electromagnetic Transient Modeling Technology for High-Penetration Power Electronics in Large Power Grid Analysis

Qing Mu
Director
China Electric Power Research Institute (CEPRI)



15:40-16:00 **Coffee Break**

16:00-16:20

Modelling and Simulation Challenges in the UK Power Network

Agustí Egea-Álvarez
Full Professor at the University of Strathclyde and Networks Operational Performance Manager at ScottishPower Energy Networks



16:20-16:40

Development and Application of Electromagnetic Transient Simulation Models for Various Types of HVDC Systems In Power System Analysis

Xiao Lei
Deputy Director
China Electric Power Research Institute(CEPRI)



16:40-17:00

Frequency/Voltage Stability Mechanism and Low-Frequency Oscillation Characteristics Study in Grid-Forming Converter Systems

Chang Li
Associate Professor
Hefei University of Technology



8.3 Workshops

WS 1: Frontiers and Challenges of Power System Operation and Control Technology under the Dual Carbon Goals



Chair: Pengfei Tian
China Electric Power Research Institute

Time: 9:00-10:20, Tuesday, Sep. 25

Room: Platinum Hanjue Hotel, 286 Room, 2F

Time	Agenda
9:00-9:20	<i>Generalizable Topology Feature Representation for Power System Intelligent Dynamic Security Assessment</i> Changgang Li Professor Shandong University 
9:20-9:40	<i>Stability Control Technology of Sub/Super-Synchronous Oscillations in High-Proportion Renewable Energy Power Grids with Impedance Matching</i> Haibo Xu Professor-level Senior Engineer State Grid Electric Power Research Institute 
9:40-10:00	<i>Coordinated Voltage Control for Power Systems with High Proportion of Converter-based Resources Integration</i> Qian Zhou Level-4 Staff State Grid Jiangsu Electric Power Co., Ltd. Electric Power Research Institute 

10:00-10:20

Research on Modeling and Simulation Technology of High Penetration Distributed Generation Connected to Power Gridt

Pengfei Tian

Deputy Director
China Electric Power Research Institute (CEPRI)



WS 2: Technology Innovation and Development of Power Information Systems, Telecommunications and Cybersecurity



Chairs: Jianming Liu
Chinese Society for Electrical Engineering

Time: 14:00-16:40, Tuesday, Sep. 23 Room: Reception Hall, 3F

Time	Agenda	
14:00-14:20	Discussion on 6G Technology Innovation and Development Songlin Sun Director of the Electronic Information Engineering Department, School of Information and Communication Engineering Beijing University of Posts and Telecommunications	
14:20-14:40	<i>Terahertz Near-Field Communication: Channel Characteristics and Efficient Estimation Methods</i> Hongwei Wang Associate professor University Of Electronic Science And Technology Of China	
14:40-15:00	<i>Research on the Evolution of Security Risks in New Business Systems in the Public-Private Interactive Network Environment</i> Dong Liu Professor Shanghai Jiao Tong University	

15:00-15:20	<i>Challenges and Responses of Implementing Artificial Intelligence in the Power Industry to Ensure Its Own Security</i>	Meng Han Researcher Zhejiang University	
15:20-15:40	<i>Research on Network Abnormality Detection for Power Monitoring System Based on Artificial Intelligence</i>	Zhiliang Wang Associate professor Tsinghua University	
15:40-16:00	<i>The New Trend Towards General Artificial Intelligence-Multimodal World Models and Autonomous Evolution</i>	Wenjun Wu Professor Beihang University	
16:00-16:20	<i>Exploration of the Prospects of Semiconductor Quantum Computing and Its Applications in Power Industry</i>	Gang Cao Professor University Of Science And Technology Of China	
16:20-16:40	<i>Cloud-edge-end Collaborative Intelligent Agent for Power Equipment Health Management and Control</i>	Li Ruan Associate professor Beihang University	

WS 3: Frontiers and Challenges in New-Type Distribution System Technologies

	
Chair: Xiaoli Meng China Electric Power Research Institute	Yuwei Shang China Electric Power Research Institute

Time: 14:00-15:40, Tuesday, Sep. 23

Room: Fujian Meeting Room, 3F

Time	Agenda
14:00-14:20	<i>New Distribution System Multi-Agent Stochastic Game and Application</i> Tengfei Ma Associate Researcher Institute of Electrical Engineering, Chinese Academy of Sciences 
14:20-14:40	<i>Medium and Short-Term Forecasting of Power Generation and Supply</i> Zhixiong Liu Associate Professor Wuhan University 
14:40-15:00	<i>Technology Development and Grid Applications of Generative Artificial Intelligence for New-Type Distribution Systems</i> Youbo Liu Professor Sichuan University 

15:00-15:20

Inertia Dynamics in Hybrid AC/DC Grids: Provision Management and Dissipation

Pengfeng Lin

Assistant Professor
Shanghai Jiao Tong University



15:20-15:40

High-Quality Development of Distribution Grids: Insights from Zhejiang Practices

Chao Zhu

Senior Engineer
State Grid Zhejiang Economic Research Institute



WS 4: CSEE Young Elite Scientists Sponsorship Program Doctoral Student Academic Salon

Chair: Jianghao Dong, Chinese Society For Electrical Engineering

Time: 14:10-17:08, Tuesday, Sep. 23

Room: Anhui Meeting Room, 3F

Time	Agenda	
14:10–14:18	<i>Research on Microgrid Modeling and Operation Optimization in Extreme Low-Temperature Environments</i> Haohui Ding Southeast University	
14:18–14:26	<i>Coordinated Optimization and Operation of Urban Power-Transportation Systems Empowered by Photovoltaic Pavement</i> Bochen Shi Guangxi University	
14:26–14:34	<i>Short-Circuit Current Limitation in Power Systems: A Transmission Expansion Planning Framework with Topology Adjustment</i> Haocheng Hua Sichuan University	
14:34–14:42	<i>Mechanical Behavior Characterization and Regulation of Power Devices</i> Peng Sun Chongqing University	

14:42–14:50	<i>Data-Driven Modeling and Control of Wireless Power Transfer Systems</i>	Zhifan Li Wuhan University	
14:50–14:58	<i>Integrated Packaging Technology for Embedded Multi-Die SiC Power Modules</i>	Jie Li Zhejiang University	
14:58–15:06	<i>Fault-Tolerant Technology for Dual Three-Phase Permanent Magnet Synchronous Motor Systems</i>	Chongchen Li Tiangong University	
15:06–15:14	<i>Economic Loss Evaluation of Sensitive Industrial Customers Caused by Voltage Sags</i>	Shunyi Li Sichuan University	
15:14–15:22	<i>P2P Trading and Network Management for Distributed Renewable Energy Consumption</i>	Junkai Li Tianjin University	

15:22–15:30	<i>Open-Circuit Fault Diagnosis Method for MMC Based on Kalman Filter and Fault Capacitor Voltage Model</i>	Weiye Yang Anhui University	
15:30–15:40	Coffee Break		
15:40–15:48	<i>Novel Modulation Algorithm for Vienna Rectifier</i>	Qingyan Zhang Hefei University of Technology	
15:48–15:56	<i>A Fault Tolerant T-type Arm Multiplexing Modular Multilevel DC-DC Converter for HVDC Grids</i>	Hao Zhang Zhejiang University	
15:56–16:04	<i>Semantic-Aware Channel Access for Virtual Power Plants Considering Jamming Attacks</i>	Chengrong Lin Chongqing University	
16:04–16:12	<i>Energy Mode Analysis and Load Frequency Regulation for Thermal Power Units</i>	Weiming Ji North China Electric Power University	

16:12–16:20	<i>Impact of Demand Response on Abnormal Electricity Consumption Behavior: A Data-Driven Analysis</i> Xidong Zheng Fuzhou University	
16:20–16:28	<i>Dynamical characteristics analysis of modern power systems via strength perspective</i> Guang Hu Zhejiang University	
16:28–16:36	<i>Coordinated Operation of Integrated Electricity and Green Hydrogen Supply Chain Systems</i> Wenhao Jia Xi'an Jiaotong University	
16:36–16:44	<i>Key Technology of Electric Field Adaptive Bushing Based on Nonlinear Composite Materials</i> Zhiwen Huang Tsinghua University	
16:44–16:52	<i>Optimization of Modulation Strategies for Three-Phase Three-Level Converters</i> Yushuo Pei Hebei University of Technology	

16:52–17:00	<i>Two-Stage Common-Mode EMI Filter Optimization Based on Insertion Loss Resonance Characteristics</i> Zhuo Qing Hunan University	
17:00–17:08	<i>Power Balance Optimization Strategy for Renewable Energy Systems Considering Power-Frequency Multi-Spatial-Temporal Coupling</i> Ming Pei China Agricultural University	

WS 5: IEEE PES WIP Workshop



Chair: Ying Huang
The Chair of IEEE PCCC WIP
Associate Dean of the School
of Electrical Engineering
Zhejiang University



Tong Wang
Professor
North China Electric Power
University



Pingping Han
Hefei University of
Technology

Time: 14:00-16:40, Tuesday, Sep. 23

Room: Yunnan Meeting Room III, 3F

Time	Agenda
14:00-14:20	Activate women's potential, accelerate SDGs Ruomei Li Professorate Senior Engineer CIGRE Member IEEE PCCC WIP Chair (2010-2021) 
14:20-14:40	Industry-Education Integration: Cultivating Talent for the Energy and Power Sector--Postgraduate Education at CEPRI Xiaojing Ma Professor China Electric Power Research Institute 
14:40-15:00	Safe and Stable Operation and Challenges of New-Type Power Systems Shiyun Xu Professorate Senior Engineer Director of the Safety and Stability Office of the System Institute of China Electric Power Research Institute 

15:00-15:20	Fault Protection and Prevention of Power System Distribution Network Under Extreme Climate Change Yuanyuan Wang Professor Changsha University of Science and Technology 
15:20-15:40	MLE Criterion - Multi-task Transient Stability Assessment for Power Systems under Dynamic Heterogeneous Graph Architecture Wenping Qin Professor Taiyuan University of Technology 
15:40-16:00	Coffee Break
16:00-16:20	Fundamental Configurations and Key Technologies of Electricity-Hydrogen Integrated Energy Hubs: A Comprehensive Review Yue Teng Professorate Senior Engineer State Grid Anhui Electric Power Research Institute 

WS 6: CIGRE NGN China Workshop



Chairs:

Bo Lei

China Southern Power Grid
Electric Power Research
Institute



Mengjun Liao

China Southern Power Grid
Electric Power Research
Institute



Ren Liu

China Southern Power Grid
Electric Power Research
Institute

Time: 14:00-17:00, Tuesday, Sep. 23

Room: Yunnan Meeting Room I, II, 3F

Time	Agenda
14:00-14:20	Work Summary Report of the 2nd Term of CIGRE NGN China, CIGRE Bo Lei Chair of CIGRE NGN China China Southern Power Grid Electric Power Research Institute
14:20-14:40	Protection Challenges and Impedance Misinterpretation in IBR-Dominated Transmission Systems Kassem El Cheikh Ali Postgraduate Researcher Imperial College London
14:40-15:00	Analysis and Protection of MMC Valve-side Single-phase-to-ground Fault Gen Li Professor North China Electric Power University

15:00-15:20	AI For Science in Power Systems: Key Technologies and Applications Yishen Wang Distinguished Young Expert China Electric Power Research Institute
15:20-15:40	Virtual Energy Storage Systems in Distributed Smart Grid Yue Zhou Professor Tianjin University
15:40-16:00	Coffee Break
16:00-16:20	Business Prospect of BESS in German's Power Electric Market Jonas Brucksch Research Associate RWTH Aachen University
16:20-16:40	Power Forecasting and Time-sequential Production Simulation Technology of Power System with High Proportion of Renewable Generation Ming Cheng Researcher China Southern Power Grid Electric Power Research Institute
16:40-17:00	Thrive with Digital, Accelerating Power Distribution Intelligence Yifei Liu Global Marketing Director Huawei electric power digitalization BU

WS 9: CSEE Young Elite Scientists Sponsorship Program Academic Salon

Chair: Jianghao Dong, Chinese Society For Electrical Engineering

Time: 14:10-17:56, Tuesday, Sep. 25

Room: Reception Hall, 3F

Time	Agenda	
14:10–14:20	High-Performance Silicon Carbide Superjunction Device Technology	Hengyu Wang Zhejiang University 
14:20–14:30	Key Technologies of Fast Protection and Fault Ride-Through for Flexible DC Systems	Jiawei He Tianjin University 
14:30–14:40	Cable Insulation Degradation Behavior and Suppression Under Multi-Physical Fields	Yunxiao Zhang Fuzhou University 
14:40–14:50	Health Prediction and Operation Management for Distribution Transformers Cluster Considering Distributed Energy Resources Integration	Yuwei Shang China Electric Power Research Institute Co., Ltd. 

14:50–15:00	Autonomous Controllable Real-Time Simulation Technology for New Power Systems	Tianyu Guo CSG Research Institute Co., Ltd. 
15:00–15:10	High-Safety, Wide-Environmental Adaptability Battery Energy Storage Integration Technology	Xi Cao China Huaneng Clean Energy Research Institute Co., Ltd. 
15:10–15:20	Creep Damage Magnetic-Acoustic Detection Technology for Main Steam Pipes in Ultra-Supercritical Power Plant Boilers	Lisha Peng Tsinghua University 
15:20–15:30	Coffee Break	
15:30–15:38	High-Resilience Coordination Operation Mechanism and Method for Urban Buildings and Distribution Networks	Meng Song Southeast University 
15:38-15:46	Gridded Cemented Riprap Technology for Scouring Protection of Offshore Wind Turbine Foundations	Wei Wang Science and Technology Research Institute, China Three Gorges Corporation 

15:46-15:54

Charge Transport and Reliability Study of Insulation in High-Voltage Power Module Packaging

Yalin Wang

Shanghai Jiao Tong University

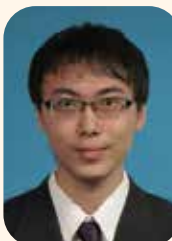


15:54-16:02

Analysis of Fault Characteristics in New Power System

Teng Feng

State Grid Economic and Technological Research Institute Co., Ltd.



16:02-16:10

Advanced Dielectric Adaptive Material Models and Application Technology

Xiao Yang

North China Electric Power University



16:10-16:18

Green Hydrogen and Chemical Integration System for Renewable Energy Consumption

Yiwei Qiu

Sichuan University



16:18-16:26

Thermal Fatigue State Monitoring of Power Converters

Jun Zhang

Hohai University



16:26-16:34

Low-Iridium-Based Composite Oxide PEM Electrolysis Anode Reaction Study

Ligang Chen

SPIC Hydrogen Energy Science and Technology Development Co., Ltd.



16:34-16:42

Impedance Measurement and Matching Device for Medium-Low Voltage DC Distribution Systems

Pengwei Chen

Nanjing University of Aeronautics and Astronautics



16:42-16:50

Commercial Platform Technology and Application Demonstration for Virtual Power Plants in Electricity Markets

Jiaqing Fan

Shanghai Power Equipment and Engineering Co., Ltd.



16:50-16:58

Key Technology for Controlling Creep Properties of Zirconium Alloy Cladding for Nuclear Applications

Weitong Lin

China Nuclear Power Technology Research Institute Co., Ltd.



16:58-17:06

Accurate Assessment and Prediction of Offshore Wind Energy Resources

Kan Yi

Science and Technology Research Institute, China Three Gorges Corporation



17:06–17:14	<i>Single-Stage Isolated Soft-Switching DC-AC Converter for AC/DC Microgrids</i>	Xiang Zhou Xi'an Jiaotong University	
17:14–17:22	<i>Full-condition Performance Study of Supercritical CO2 Brayton Cycle for Lead-cooled Fast Reactors</i>	Yujia Zhou Xi'an Thermal Power Research Institute Co., Ltd.	
17:22–17:30	<i>Modeling and Control of Hydropower and Pumped Storage Units</i>	Yang Zheng Wuhan University	
17:30–17:48	<i>Wide-Area Active Secure Control of Renewable Energy Power Systems Under Cyber Attacks</i>	Xiahou Kaishun South China University of Technology	
17:38–17:46	<i>Quantitative Risk Analysis of Evolutionary Cross Domain Attack from Energy Internet and Optimization of Classified Protection</i>	Fanrong Wei Huazhong University of Science and Technology	

17:46–17:56	<i>Hierarchical Distributed Broadband Oscillation Analysis of Renewable Energy Grid-Connected Systems Considering Electromagnetic Transients</i>	Qianying Mou Shandong University	
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8.4 Oral Sessions

Oral Session 1

Chair: Lei Sun

Time: 14:00-18:00, Wednesday, Sep. 24

Room: Huangshan Meeting Room I, 3F

Time	Paper Number	Title	Author
14:00	2025CP0346	Redesign of Current Controller to Improve Low-Frequency Stability of Grid-Following Inverters in SCR = 1 Grids	Guangda Ma, Chuan Xie, Cheng Li, Hengzhi Dai, Yuxin Wang, Jianxiao Zou
14:10	2025CP0383	Design and Simulation of DC De-icing Device Based on Uncontrolled Rectifier	Junfeng Wang, Yang Cheng, Songyuan Cao, Shenghu Li
14:20	2025CP0084	Dynamic Mode Switching Control Architecture for Grid-Following/ Forming Converters in High Renewable Penetration MMC-HVDC Systems	Ting Wang, Xueguang Zhang
14:30	2025CP0221	Discussion on the Dynamic Performance of LLC Resonant Converter: A Nonlinear Perspective	Jie Chen, Yong Wang
14:40	2025CP0423	Design and Control of 6-DoF Active Magnetically Controlled Aerostatic Linear Motor	Koichi Matsuda, Jiahao Zhu
14:50	2025CP0418	Passive Hybrid Common-Mode EMI Filter for DC-AC Converters With Reduced Common-Mode Inductance	Zhuo Qing, Peng Guo, Qianming Xu, An Luo
15:00	2025CP0302	Coordinated Frequency Regulation Parameter Tuning of GFL and GFM Inverters Using Bayesian Optimization	Sirui Qi, Hongyun Chen, Hongxin Li, Xianli REN, Yi LU, Hui Qi
15:10	2025CP0336	DC Fault Ride Through Strategy of DC Collection and DC Transmission System for Inland Renewable Energy	Guokang Yu, Haotian Di, Wang Xiang, Qian Liang, Junchen Wei, Peng Yao

15:20	2025CP0429	Research on the Optimization of Bidding Mechanism of Multiple Power Sources in Yunnan Based on the Perspective of Synergy between Spot Market and Medium and Long-term Markets in Southern China	Xiangrui Liu, Weiheng Li, Mengfei Xie, Qian Liang
15:30	2025CP0133	Fast-Converging Hybrid GA-PSO for Reactive Power Optimization in Power Systems	Xipeng Cai, Xinyi Chen, Yihua Zhu, Qihui Liu*, Chao Luo, Xueshen Cui
15:40	2025CP0154	Human-Machine Collaborative Autonomous Fault Recovery Framework Based on Graph Deep Reinforcement Learning	Mingming Zhou, Qianqian Zhang, Zhenhuan Ding, Pei Zhang
15:50	2025CP0116	A New Coordinated Control Approach for Short-term Energy Storage-assisted Thermal Power Unit in Frequency Regulation	Weiming Ji, Feng Hong, Lu Liang
16:00	2025CP0165	Research on the Application and Innovation of Coal - fired Power Molten Salt Energy Storage System in the New Power System	Shiwei liao, Tao Ding, Hongning Ni, Dewei Wu, Yao Xu, Haiyan Liao
16:10	2025CP0239	Exploring the Potential of Large Language Models in Grid-scale High-voltage Transformer-less Battery Energy Storage Systems	Yilin Liu, Xiqi Wu, Xu Cai, Fuwen Wang
16:20	2025CP0244	A Reconfigurable Converter-Based Centralized Equalization System for Battery Energy Storage Systems	Changhao Li, Wei Lou, Jiaqing Zhang, Shuping Wang, Binbin Zhang, Xianbin Qi
16:30	2025CP0366	Performance study of natural convection thermal management for energy storage in full-pack immersed lithium-ion batteries	Chaoran Yang, Kehan He, Xi Cao, Qianlei Shi, Yizhao Chen, Mingyi Liu, Chuanliang Xiong, Chengjun Wen, Bailian Peng, Chuazhao Cao, Haodong Lei, Xiaofan Ping, Qian Cheng, Wei Liu, Xing Ju

16:40	2025CP0584	Thermal Management of Liquid Cooled Lithium Ion Batteries via an Electro Thermal Fluid Coupled Surrogate Model	Xiaoming Li , Beibei Wang, Ti Dong, Wenjiong Cao
16:50	2025CP0033	Virtual Power Plant Energy Management and Spot Electricity Market Trading Strategy based on Deep Reinforcement Learning Algorithm	Zheming Liang, Shuo Zhang, Jianqi Ye
17:00	2025CP0251	Semantic-Aware Channel Access for Virtual Power Plants Considering Jamming Attacks	Chengrong Lin, Bo Hu, Changzheng Shao, Kaigui Xie
17:10	2025CP0505	Privacy-Preserving Distributed Optimization Scheduling based on Subspace Perturbation	Shijie Lu, Fan Sheng, Yonghui Sun, Chenxu Yin, Liang Zhao, Yunfan Meng
17:20	2025CP0547	Bidding Strategy for Flexible Aggregation of Distributed Energy Resources	Kangyang Yu, Tianbo Zhu, Di Liu, Qinzhe Liu, Junhong Guo, Rongfu Sun, Zesen Wang, Yunpeng Xiao
17:30	2025CP0434	Enhanced Preventive Defense against Cyber-Physical Attack with Propagation Features	Chunhan Bai, Fanrong Wei, Xiangning Lin, Chengcheng Sun
17:40	2025CP0388	Regulating electronic structure of sub-2 nm IrO ₂ nanocrystals with N atoms for enhanced acidic oxygen evolution performance	Ligang Chen, Chunji Li, Wei Zhao, Maorong Chai
17:50	2025CP0298	Research Progress on Rogowski Coil Errors in the Context of New-Type Power Systems	Chengcheng Zhang, Zhongran Yao, Jingke He, Zhenhua Li, Zhenxing Li
18:00	2025CP0566	Image enhancement under transformer oil based on adaptive multi-stage denoising	Hu Qiang, Yuzhong Zhong, Xuke Zhong, Quan Xiao, Xingxing You, Songyi Dian

Oral Session 2

Chair: Bao Xie

Time: 14:00-18:00, Tuesday, Sep. 24

Room: Fuyang Meeting Room, 3F

Time	Paper Number	Title	Author
14:00	2025CP0161	A Multi-Agent Reinforcement Learning-Based Energy Management Optimization Method for Renewable-Based Hydrogen Production Systems	Tiance Zhang, Lei Yang, Heng Nian, Jianyong Zhao, Leilei Chen, Dong Han
14:10	2025CP0290	Optimal Operation and Dispatch of Power-to-Hydrogen Systems Considering Node Flexibility and Transmission Flexibility	Caiyi Du, Ting Wang, Xueguang Zhang
14:20	2025CP0462	Green Hydrogen Production through Ammonia Decomposition using Non-Thermal Plasma	Xuan Wu, Bin Li, Ling Chen, Nianwen Xiang, Weijiang Chen, Shaojun Xu, Lijian Ding
14:30	2025CP0097	Analysis on factors affecting of system power fluctuation for electric tractor	Ziqian Zhang, Long Cheng, Shuang Qiu
14:40	2025CP0445	Dispatching Strategy for Electric Vehicle Aggregators in Joint Energy-Ramping Markets Incorporating Heterogeneous Characteristics	Xing Chen, Xiyang Guan
14:50	2025CP0459	Charging Load Forecasting for Electric Vehicles Based on User Satisfaction and Road Traffic Models	Mengchao Gong, Hejun Yang, Zhi Guan, Anxin He, Jingdong Huang, Jingjing Yu
15:00	2025CP0461	Research on the schedulable potential evaluation of electric vehicles based on GMM clustering model	Xianyang Cui, Sheng Zhou, Fusheng Lan, Wuxiao Chen , Yilu Wang, Tao Jin

15:10	2025CP0063	Active Power Oscillation of Paralleled Synchronous Generator and Grid-Forming Inverter: A Comparative Study	Jiawei Zhao, Huijie Cheng, Jingbo Dong
15:20	2025CP0086	Research on Renewable Energy Investment and Power Generation Strategies of Energy Suppliers Considering Risk Aversion	Zheng Tian, Jiazhu Xu, Danhu Li, Hao Hu
15:30	2025CP0215	Probabilistic Short-term Forecasting of Wind Power Generation via ARIMA Assisted Neural Network with Quantile Regression	Zhanyuan Sheng, Zhemiao Wu, Haotian Liu, Chenhui Lin
15:40	2025CP0312	Distributionally Robust Optimal Dispatch for Distribution Networks Considering Dynamic Spatial Correlation of PV Power Output	Ma Xin, Yuan Yue, Shi Wenhui
15:50	2025CP0351	Dynamic Model Identification to Multi-DFIG Integrated Power System Based on Extended Recursive Least Squares Method	Yang Liu, Shenghu Li, Zhuang Wang
16:00	2025CP0354	Inertia Estimation Method for Renewable Power Systems Considering Frequency Response	Ming Pei, Lin Ye, Licheng Sha, Haiyun Wang, Liping Yang, Yong Tang
16:10	2025CP0377	Ultra-Short-Term Photovoltaic Power Prediction Based on Cloud Image Features	Yanxing Cui, Yong Wang, Jikang Luo, Huiying Fan, Su Guo
16:20	2025CP0399	Short-Term Power Prediction Method for Wind Farms Based on Feature Selection and Power Characteristic Guidance	Yuxi Liu, Xiaosheng Peng, Changxiao Liu, Ming Cheng, Xinyi Lai, Siyu Lu, Cui Yanxing, Wang Yong, Luo Jikang, Fan Huiying, Guo Su
16:30	2025CP0404	An Unbalanced Carrier-Based Discontinuous PWM for Current Harmonic Reduction in Dual-Input Three-Level Inverters	Yushuo Pei, Yu Tang, Xin Shan

16:40	2025CP0417	Data-Driven Optimization of Social Welfare in Microgrids	Feng Chao, Feng Jie, Yang Liang, Hou Yuhan, Li Xunrui, YuanYue
16:50	2025CP0460	Ultra-short-term Forecasting of Distributed Photovoltaic Based on Multivariate Interpolation and Electrical Clustering	Lidanlan Tao, Ming Yang, Qiangsheng Bu, Fei Luo, Zhigang Ye
17:00	2025CP0466	Comparative Study of Sequence-Impedance-Based and State-Space-Model-Based Stability Analysis Methods for Grid-Connected Converter	Yaci Yu, Zhijie Liu, Yuanzong Song, Kejun Li, Baihe Su, Hao Zhang, Ye Tao, Na Song, Yanli Gan
17:10	2025CP0498	DC Storage Configuration Methods for Grid-Forming Type-IV Wind Turbine with DC Storage System	Jiaqi Yang, Chuang Liu, Xiao Yu, Shaoran Mao, Zhiqian Yang
17:20	2025CP0544	Enhanced Average-Value Modeling and Fault Protection Strategies for Offshore MTDC Grids Integrated With DC Wind Farms	Xing Zhou, Rui Li, Zhaogang Li, Ruanming Huang, Ran Guo, Jiaying Wang, Chou Ma, Xiang Fu
17:30	2025CP0545	Multi-Step Wind Power Forecasting Based on LSTM-ASSA-Informer	Ziwei Zhang, Sen Wang, Yonghui Sun, Yao Wang, Peibiao Chen, Haoran Dai
17:40	2025CP0548	Economic dispatching model with cascade hydropower stations considering reserve capacity optimization allocation	Jingwei Xu, Yupeng Xiao, Zhantao Fan, Shiqi Liu, Dawei Liao, Yiping Chen
17:50	2025CP0565	Wind Power Prediction Using Spatiotemporal Capsule Graph Reasoning	Xiaozhe Song, Geng-Chen Li, Xu Jiang, Changjiang Wang, Song Gao, Gang Du
18:00	2025CP0342	Device-Level Micro-Modeling of Half- and Full-Bridge Modular Multilevel Converter for EMT Simulation	Zijie Meng, Jianzhong Xu, Shuhao Cao, Bin Yuan, Zezhou Chang, Liming Bo, Yueshuang Bao

Oral Session 3

Chair: Yue Yang

Time: 8:30-12:00, Tuesday, Sep. 25

Room: Yunnan Meeting Room I, II, 3F

Time	Paper Number	Title	Author
8:30	2025CP0322	Design of quick-open/quick-close arc extinguishing switches common to 10kV and 35kV cable line power supply operation	Zhenning Chen, Shaolei Wu, Meitang Xie, Bowen Liu, Yuxi Zhang, Wei Wang
8:40	2025CP0043	Review of Electronic Transformer Condition Assessment	Chenyi Yang, Xingyan Wu, Jian Liu, Zhenhua Li, Zhenxing Li, Yanchun Xu
8:50	2025CP0057	Research on Error Characteristics of Low-Frequency Electromagnetic Voltage Transformers	Xuan Li, Min Dai, Jiang Guo, Hui Li, Yong Liu
9:00	2025CP0077	Impact of Demand Response on Abnormal Electricity Consumption Behavior: A Data-Driven Analysis	Xidong Zheng, Jingzheng Li, Huangbin Chen, Wanghao Wang, Qinyu Huang, Tao Jin
9:10	2025CP0115	Transfer Entropy-Based Analysis for Understanding the Propagation Process of Voltage Dynamic Response Under Sustained Perturbations	Haifeng Zhang, Song Gao, Yifu Zhang, Shuyu Zhou, Mingfeng Wang, Deyou Yang
9:20	2025CP0168	Research on Risk Assessment and Control of Power Grid Operation with High-Proportion of Renewable Energy Based on Dynamic Weighting Method	Zhiyi Zhou, Qun Yu, Zongxiu Liu, Boyang Ji, Yuying Chen, Jingbo Zhao
9:30	2025CP0197	Research and Analysis on the Emergency Concepts and Technological Development of New Distribution Networks	Cheng Guan, Jie Feng , Tianyu Wang
9:40	2025CP0198	Short-term Load Forecasting Based on Feature Screening and Improved Nstransformer	Boyang Ji, Qun Yu, Jiongcheng Yan, Zhiyi Zhou

9:50	2025CP0206	Analysis of Photovoltaic Power Generation Potential of Lunar Bases Based on the Calculation of Solar Irradiance on the Moon	Wenru Zhu, Haohui Ding, Qinran Hu
10:00	2025CP0231	Method based on the BiLSTM-CGAN for generating samples of power outage scenes under extreme weather effects	Minhui Zuo, Na Cao, Qingzhe Li, Qun Yu, Jingbo Zhao
10:10	2025CP0266	A Model Predictive Control-Based Adaptive Virtual Impedance Consistency Control Strategy	Xiaoxuan Chen, Liping Jiao, Yang Zhuang, Dianbo Chen*
10:20	2025CP0307	Automatic Generation of Power System Relay Protection Setting Coordination Diagrams Based on Graph Neural Networks	Mingliang Jin, Chen Yang, Yingying Wang, Jin Zhang, Jingyu Wang, Dongyuan Shi
10:30	2025CP0405	Research on the Effectiveness of Submarine Cable Protection Measures and Strengthening Protection Techniques	Shiguan Zhang, Degao Zhu, Xiaojun Li , Xiaowei Huang, Tai Pang, Yuanhong Chen, Deping Zhao, Linzhuo Wang, Cong Wu, Weijia Zhang
10:40	2025CP0508	Impact of Distributed Generation Capacity and Siting on Under-Frequency Load Shedding Control Performance	Weilin Liu, Yingjian Jia, Kaiming Luo, Huiyu Liu
10:50	2025CP0494	Identification Method of Interturn Short Circuit Faults for Transformer Based on A Fast Algorithm for Tellegen Quasi-power Theorem	Lu Guoxin, Liu Shiming, Kang Yongqi
11:00	2025CP0353	Adaptive hybrid synchronization control based on grid-connected inverter impedance identification	Guiyuan Li, Yihong Huang, Weihuang Huang, Dongxiao Cai, Zhu Guo, Chao Hong
11:10	2025CP0527	Damping Characteristics Analysis of Sub-Synchronous Oscillation for Interactions between Wind Turbines	YaJie Li, Qianying Mou, Xiaolong Wang

11:20	2025CP0514	Operation Optimization for Power System with Multiple Reserve Resources Based on Deep Reinforcement Learning	Liang Zhao, Chenxu Yin, Fan Sheng, Yonghui Sun, Peibiao Chen, Haoran Dai
11:30	2025CP0390	Dynamic Characteristics of Inventory Control Strategy for Supercritical CO ₂ Brayton Cycles	Yujia Zhou, Yifan Zhang, Hongzhi Li, Yu Yang, Kailun Li, Mingyu Yao
11:40	2025CP0556	Integrated Design of a Wall-Climbing Hexapod with Negative-Pressure Adsorption and Cable-Driven Manipulator for Power Equipment Maintenance (Guo Rui and Dian Songyi)	Yufeng Zhang, Di Hu, Jinfeng Zhang, Zhongxiang Liu, Xingfu Jin, Zhong Chen, Wei Yang, Guofei Xiang, Xingxing You, Songyi Dian
11: 50	2025CP0588	Safety-Critical Model Predictive Trajectory Tracking Control for Transformer Inspection Robots Based on Control Barrier Functions	Lai Wei, Yiwei Liao, Juntong Liu, Songyi Dian
12: 00	2025CP0032	Configuration Management for BIM Design of HPR1000	HE Wei-ting, LIN Xin-jun, CHAI Wei-dong, WANG Xin, DENG Jia-wan

Oral Session 4

Chair: Qiyue Li

Time: 14:00-17:50, Tuesday, Sep. 25

Room: Yunnan Meeting Room I, II, 3F

Time	Paper Number	Title	Author
14:00	2025CP0249	Research on Low Carbon Economic Dispatch in Power Systems Considering Deep Peak Shaving and Demand Response	Shuyan Liu, Jiazhu Xu, Danhu Li, Zhenglu Shi, Yingting Ye
14:10	2025CP0480	Method for generating a set of secondary faults in power systems under typhoons and their secondary disasters	Qingzhe Li, Na Cao, Qun Yu, Minhui Zuo, Jingbo Zhao
14:20	2025CP0474	Segmented non-energized ice-melting method for overhead ground wires	Weiyi PENG, Yuanyuan WANG, Yujie DU, Yongfei MA
14:30	2025CP0294	Single-Phase Grounding Protection Method for AC Microgrids Based on Single-Ended Ranging	Liuming Jing, Qinghua Liu, Jinxuan Guo, Jiahe Wei
14:40	2025CP0319	Coordinated Multi-Time-Scale Planning of Battery-Hydrogen Hybrid Energy Storage for Renewable-Rich Distribution Networks	Jiayang Yu, Qirun Sun, Yue Yuan
14:50	2025CP0470	Sensitivity Analysis of Planetary Boundary Layer Schemes for Wind Speed Forecasting at Wind Farms	Haoyu Ma, Ming Yang, Menglin Li, Jianfeng Che, Wei He, Boyang Du
15:00	2025CP0318	Two-Stage Resilient Dispatch Strategy for Distribution Networks Using Mobile Energy Storage	Xunrui Li, Qirun Sun, Yue Yuan
15:10	2025CP0304	Reliability Analysis of Electrical Connector Based on Constant Stress Accelerated Degradation Test Under Wind Load	Yu Feng, Jingjie Wang, Zhenning Chen, Hongkang Li, Jinye Wang, Wei Wang

15:20	2025CP0317	Research on key technology of arc suppression switch for live line work in distribution network	Wang Jingjie, Feng yu, Wu Shaolei, Li Feilong, Bai Xiaohang, Yongzheng Zhang, Yongzheng Zhang, Wang wei, Wei Wang
15:30	2025CP0320	Design and Experimentation of a De-icing Robot	YuXiang Zuo, Kai Wu, ShangKun Cheng, RuoTong Shi, Wei Wang
15:40	2025FP0385	Collaborative Decarbonisation Pathways for Small and Medium Enterprises in Urban District	Yoshiyuki Kimura, Yoshiki Yamagata
15:50	2025CP0149	Research on the Control Method of DC Microgrid with Multi-Module Pulse Load	Tangan Wang, Yongqi Liu, Tao Lei, Xiaobin Zhang
16:00	2025CP0419	An Open-Circuit Fault Diagnosis Method for MMC Based on Kalman Filter and Fault Capacitor Voltage Model	Weiye Yang, Yan Tian, Zhiwu Yu, Siyuan Lu, Yichun Yan, Cungang Hu
16:10	2025CP0444	Research on The Design and Control Method of Controllable Demagnetization Module of Magnet Power Supply Based on synchronous Rectification	Hao Yin, Liuwei Xu, Jun Li, Yanan Wu, Baocan He, Zhiwei Mao, Huafeng Mao, Liang Tan
16:20	2025CP0124	AC Excitation-based Tunneling Magnetoresistance Sensor System for PV String Current Detection	Yiqun Tang, Leipeng Zhang, Bing Li, Wei Qiu, He Yin, Wenxuan Yao
16:30	2025CP0064	Phase Feedforward Compensation for Enhancing VSG Transient Synchronization Stability	Zhao jiawei, Cheng Huijie, Dong Jingbo
16:40	2025CP0156	Repetitive control bandwidth design for grid-connected inverters based on FIR internal model filter	Mingzhe Zhu, Mingyu Lin, Wenrui Huang

16:50	2025CP0201	The Effect of Grid-forming Converter on the Small-Signal Stability of Grid-following Converters, from a Circuit Perspective	Guang Hu, Huanhai Xin, Yu Tang, Jiang Dai, Shiyang Li, Yan Chen
17:00	2025CP0352	A super Converter for High Penetration of New Energy and Power Electronic Grids	Guiyuan Li, Weihuang Huang, Yan Li, Teng Liu, Runbin Cao, Dongxiao Cai
17:10	2025CP0591	Kinematics Analysis and End Control of Mobile Continuum Robots	Quan Xiao, Xuke Zhong, Songting Yang, Yexing Lang, Jiaxin Liu, Songyi Dian
17:20	2025CP0155	Optimized control strategy for the power and frequency response of LVSM based on fuzzy control	Mingzhe Zhu, Xitian Tong, Wenrui Huang
17:30	2025CP0555	Research on Voltage Stability and Transmission Capacity Enhancement of Nagqu and Ngari Regions Power Grids in Tibet	Wankai YANG, Guangyao QIAO, Xiaoming LUAN, Yunfei XU
17:40	2025CP0592	Semi-supervised Learning-based Foreign Object Segmentation Technology Inside GIS Equipment	Xuke Zhong, Quan Xiao, Minyang Guo, Jianeng Tang, Jiaxin Liu, Songyi Dian, Bin Guo
17:50	2025CP0582	Mobile Continuum Manipulator: An Overview of its Applications, Technologies and Prospects in the Electric Power Industry	Yuqi Zhu, Quan Xiao, Xingxing You, Hongwei Fang, Liangcheng Liu, Bin Guo, Songyi Dian
18:00	2025FP0024	Resilient Distributed Frequency Regulation of Renewable Generators under Communication Interruptions	Shuo Yuan, Caisheng Wang, Feng Lin, Le Yi Wang

8.5 Poster Sessions

Poster Session 1

Time: 13:00-15:30, 15:30-17:30, Tuesday, Sep. 24

Room: 3/F Foyer

1. New-Type Energy Storage System

Paper Number	Position	Title/Authors
2025CP0226	P1	Title: Design of Motor/Generator for Flywheel Energy Storage System With Low Standby Eletromagnetic Loss Author: Pingli Zhang, Jiangtao Yang, Zhenyu Li, Shoudao Huang
2025CP0282	P2	Title: Quantitative analysis and evolution of capacity contribution between Si and graphite in Si/graphite composite anodes Author: Li Tao, Di Hu, Zhu Lin, Sun Kai, Gong Lili, Peng Tan
2025CP0583	P3	Title: Interfacial Engineering of Free-Standing Porous Vanadium Nitride/Nickel Foam Electrodes for High-Mass-Loading Supercapacitors Author: Ziqiang Wu
2025CP0021	P4	Title: Overview of Rotor Vibration and Its Suppression Methods in Bearingless Motors Author: Haohui Wang, Yu Wang, Xiaoyu Lei
2025CP0073	P5	Title: Issues and Research Status of Epoxy Resin Insulating Materials for Power Systems Author: Wei tingting
2025CP0078	P6	Title: Optimization of High-Proportion Distributed PV Integration Based on Distribution Network Interconnection and Modular Mobile Energy Storage Systems Author: Licheng Sun , Min Pan, Shenglong Zhu , Cheng Zhao, Ming Wang, Jiangquan Wang , Hongquan Xu

2025CP0132	P7	Title: Progress in the study of thermal conductivity enhancement in calcium-based thermochemical energy storage Author: Jiakang Yao, Gangyao Zhao*, Zhehui Zhao, Na Cheng, Sixing Zhang, Zhen Li , Xiaoqiang Zhang, Zongkun Chen, Zhixiang Zhu
2025CP0178	P8	Title: Study on 3D Modeling and AC Loss Characteristics of CORC HTS Cable Author: Xiu Wang, Wei Feng, Donglin Hu, Peng Zhang, Xuan Ruan, Fuyou Zhao
2025CP0246	P9	Title: Research on Outlier Detection for Retired Batteries Based on Variational Autoencoder Author: Yuhang Wang, Xiaoming Wang, Jingyi Ni, Wenguang Zhao
2025CP0255	P10	Title: Preliminary Exploration of the Application of Large Models in Generating Load Transfer Plans for Distribution Networks Author: Mo Feng, Ji Qiao, Jiateng Li, HaoYu, Meizhao Liu, Hanning Mi
2025CP0279	P11	Title: A method for optimizing the configuration of grid-forming energy storage or synchronous condenser under the constraint of renewable energy multiple station short-circuit ratio Author: Yujiao SUN
2025CP0280	P12	Title: Sensitivity Analysis of LFO Modes with Respect to Guide Vane Opening of Power Systems of Direct-Drive Pumped Storage Generator Author: Zhixiong Xu, Shenghu Li, Weijian Xia
2025CP0289	P13	Title: Research on the Electromagnetic Transient Simulation of Grid-forming Energy Storage in the Power Grid of desert, Gobi and desertfication land Author: Xiaobei Fu, Xiao Lei, Yani Wu, Weiwei Wang, Kedong Luan, Limin Yang
2025CP0311	P14	Title: Multiple Energy Storage Coordinated Optimal Scheduling for Integrated Energy Systems with CCPP Considering Wind Power Uncertainty Author: Dipai Zhang, Junjie Ma, Han Wu

2025CP0340	P15	Title: Research and Application of Key Technologies for High-voltage Cascade Energy Conversion Chain Author: wei guo, xuan hu, qin chen, bingshuo zhou
2025CP0364	P16	Title: Equivalent circuit modelling in pumped-hydro energy storage systems Author: Shuangqing Yan, Yang Zheng
2025CP0433	P17	Title: A Improved Starting Performance Method of Induction Motors in an Energy Storage based black-start Isolated System Author: Xiaoxiao Meng, Xizhi Chen, Xun Mao
2025CP0442	P18	Title: A Coordinated Adaptive Control Strategy for Off-Grid Operation Based on VSG Rotational Inertia and Damping Coefficients Author: Shihao Ban, Liuwei Xu, Jing Lu, Baocan He, Yanan Wu, Yunxiang Tian
2025CP0443	P19	Title: Multi-Objective Optimal Control of CHB-Based Energy Storage Converters Under Unbalanced Grid Voltage Conditions Author: Xiang Fang , Yanan Wu, Yunxiang Tian, Jing Lu, Jun Li, Huafeng Mao, Liang Tan, Gang Li, Guifa Huang
2025CP0495	P20	Title: Embedded Low-Illumination Fault Enhancement Network Detection Technology for Battery Target Inspection Author: Xin Liu, Haihong Huang, Yuhang Wang, Wenjing Chang, Qiyue Li, Yongqi Cao
2025CP0496	P21	Title: Multi objective optimization based on double-layer capacity configuration method for inland electric ships Author: Shiyu Wang, Jianhui Su, Yan Du, Yang Liu, Rui Fang, Yanzi Zhao
2025CP0516	P22	Title: Optimized Allocation of Energy Storage in Power Fusion Station Considering Voltage Fluctuation Author: Shijia Meng, Yan Du, Qibiao Wu, Jinxing Wang, Hao Zhang, Qiming Zhu
2025CP0518	P23	Title: Dynamic Fuzzy-based Control Strategy for Optimal Power Allocation of Hybrid Energy Storage in Photovoltaic-Storage Charging Stations Author: Qibiao Wu, Yan Du, Shijia Meng, Jinxing Wang, Hao Zhang , Qiming Zhu

2025CP0561	P24	Title: Research on Optimal Operation Strategy of Mobile Energy Storage-Driven Flexible Distribution System for High-Proportion Renewable Energy Integration Author: Xi Yang, Jingzhong Zhou, Chengzhi Ma, Dongmei Li, Yiliang Wu, Li Zeng
2025CP0564	P25	Title: Capacity configuration based on distributed PV and storage dual-layer operation optimization strategy Author: Weiwei Ma, Xubao Liu
2025CP0570	P26	Title: Integrated Design and Application of Distributed Compressed Air Energy Storage System Author: Wei Ma, Weihua Zeng, Ruonan Hu, Guansen Wang, Yuguang Xie, Tao Zhou, Renfeng Chen

2. Electric Vehicle Management and Scheduling

Paper Number	Position	Title/Authors
2025CP0096	P27	Title: Comparative studies on different isolation disposal technologies for full-scale electric vehicle fire Author: Xianli Zhu, Jiaqing Zhang, Yi Guo
2025CP0101	P28	Title: Dynamic Spatio-Temporal Prediction of EV Charging Power Based on K-GRU-Informer Coupled Multi-Factor Training Author: Lei Wang, Jiyang Ma, Yao Wu, Jie Kong
2025CP0212	P29	Title: Charging optimization strategy for electric vehicles considering the interest coordination of multi-stakeholders Author: Yu Zhang, Lunlai Wan, Lili Gong
2025CP0218	P30	Title: A Link-based Approach for Efficient Electric Vehicles Charging Coordination in Coupled Power-Transportation Networks Author: Bochen Shi, Wei Dai, Hui Liu, Hui Hwang Goh, Xipeng Liu, Huan Zheng
2025CP0326	P31	Title: Simulation for the Joint Planning of Photovoltaic–Storage–EV Charging Stations Considering EV Dispatchability Author: WenZheng Wang, BaoZhu Liu, JunJie Hu
2025CP0327	P32	Title: Data-Mechanism Hybrid-Driven Model for Electric Vehicle Participation in Grid Peak Regulation Author: BoHui Wang, JunJie Hu, BaoZhu Liu
2025CP0446	P33	Title: Load Prediction of electric vehicle charging station based on GCN-BiLSTM Author: Weibo Yuan, Jinjin Ding, Can Wang, Xincun Shen, Li Zhang
2025CP0449	P34	Title: Energy Storage Battery Multi-State Joint Estimation Based on CNN-LSTM Author: Liu HuiZhou, Sheng Jinma, Li Hongpeng, Zhu Jie, Hu Ying, Yang Gang
2025CP0471	P35	Title: Electric Vehicles as Grid-Flexible Resources: Coordinated Charging and V2G Strategies Toward 2050 Author: Chen Jin, Jinming Hou, Xunyan Lyu, Qing He, Haiyang Jiang, Ershun Du

2025CP0483	P36	Title: Multi-Site Electric Vehicle Charging Load Forecasting Using Enhanced Spatio-Temporal Transformer with Uncertainty Quantification Author: Liguang Shi, Yiwen Shi, Ying Wu, Lisheng Li, Yang Hu, Han Li
2025CP0500	P37	Title: Coordinated Optimization Strategy for EV Reserve Potential Assessment and Real-Time Scheduling Considering User Willingness Author: Wangchao Dong, Jinjin Ding, Bo Peng, Wenguang Zhao, Zheng Tian, Hongbin Wu
2025CP0520	P38	Title: Lithium-ion battery SOC estimation based on the joint algorithm of MILS online parameter identification and fuzzy control-improved Extended Kalman Filter Author: Haozeng Wang, Kun Yin, Shiyu Wang, Jiahong Li, Ziqiang Du, Jianhui Su
2025CP0562	P39	Title: Optimal Control and Real-time Simulation Validation of Large-scale Electric Vehicles Participating in Frequency Regulation Author: Xun Jiang, Meiqin Mao*, Xing Ge

3. High-voltage insulation technology

Paper Number	Position	Title/Authors
2025CP0037	P40	Title: Long-Term Surface Flashover Characteristics of SF6-Epoxy Solid Insulation under Superimposed AC/DC Voltage Author: Ling Xiang, Xiaoxiao Lv, Xiaoyu Yang, Simiao Chen, Xiaoang Li, Qiaogen Zhang
2025CP0488	P41	Title: Interface-Functionalized LDH/Epoxy Insulators: Synchronizing Flame Self-Extinguishment and Improved Dielectric Loss Author: Xianhua Huan, Bingbing Hu, Chao Gao, Fusheng Zhou, Jiahe Yu, Yushun Zhao
2025CP0001	P42	Title: Influence of Cable Termination Loads on Defect Localization Results Author: Xiaosi Lin, Chaoran Li, Lihui Cai, Qingbin Guo, Zhijie Cheng, Jiawen Chen
2025CP0014	P43	Title: Comparative analysis of aging state of composite insulator by nuclear magnetic resonance and infrared spectrum Author: Yi Zhang
2025CP0015	P44	Title: Simulation analysis of surface electric field of insulation support cylinder under particle interference Author: Yi Zhang, Xin Chen, Yong Fang
2025CP0095	P45	Title: Effects of Externally Applied DC Bias on the Intrinsic Point Defects of ZnO Varistor Ceramics During Sintering Author: Yiming Xie , Haitao Yang, Jie Wu, Xiaoyu Hu, Wei Liu
2025CP0110	P46	Title: Electric Field Optimization of Basin Insulator in 550 kV Gas Insulated Switchgear using Functionally Graded Insulation Structure Author: Guobao Zhang, Lan Sun, Jianlin Li, Hengyang Zhao, Lei Zhang, Wenhui Han, Weimin Huang, Hao Li, Wendong Li

2025CP0120	P47	Title: Calculation and analysis of metal sheath ground loop current when AC and DC cables are laid in the same tunnel Author: Xingxing Zhou, Lv Cui, Zhe Chen, Honglei Li, Xinao Cao, Aiqing Ma, Yunzhi Zhou
2025CP0129	P48	Title: Electric field environment detection near residential buildings and high-voltage power lines based on an optical crystal electric field sensor Author: Zeru Niu, Zhehao Pei, Xing Fan, Mengting Su, Tao Wen
2025CP0143	P49	Title: Research on Standardized Design of Online Monitoring System in the Context of Large-Scale Renewable Energy Integration Author: Feng Wang, Jiangang Bi, Shuai Yuan, Hao Yu, Wenzhi Chang, Yuan Xu
2025CP0172	P50	Title: Simulation Study on Moisture Exchange Characteristics at the Oil-Paper Interface under Temperature-Varying Conditions Author: Zhiyuan Sha, Shilan Wang, Tao Wen, Yi Zhao, Qiaogen Zhang, Weijiang Chen
2025CP0181	P51	Title: Study on the temperature rise of full-epoxy high-frequency transformer based on thermal network modeling Author: Qiuyu Shi, Weiguo Li, Ye Li, Guoliang Zhao, Huadong Sun, Guangyao Qiao
2025CP0196	P52	Title: Effect of Electrode Loss Morphology and Thickness on Electric Field Distribution in Self-Healing Metallized Film Capacitors Author: Dezhao Kong, Xuan Ruan, Peng Zhang, Wei Feng, Donglin Hu, Fuyou Zhao, Fuyou Zhao
2025CP0199	P53	Title: Integrated Rydberg atomic heterodyne electric field sensor for partial discharge signal detection Author: Enhui Wang, Jiaqi Geng, Teng Tian, Rujia Qiu, Long Zhao
2025CP0200	P54	Title: Noise infected Partial Discharge Pattern Recognition For Generator Stators Based on Feature Enhancement with ShuffleNetV2 Lightweight Network Author: Peng Ling, Chenyang Xiong, Xiaosheng Peng, Hao Wu, Jun Jiang, Wenhan Huang

2025CP0216	P55	Title: Effect of Impulse Corona on Lightning Withstand Level and Overvoltage under Multiple Lightning Strikes Author: Tongshu Ding, Jiachen Gao, Zhikang Shuai, Jianwen Nie, Tingxiu Jiang
2025CP0224	P56	Title: A Novel Method for Local Aging Location of High-Voltage Cables Based on Impedance Differential Mapping Author: Anzhe Wang, Ge Wang, Jianjun Yuan, Yuli Wang, Jiankang Zhao
2025CP0225	P57	Title: Time-Frequency Domain Reflectometry-Based Cable Defect Localization and Enhanced Methodology Author: Ge Wang, Anzhe Wang, Jianjun Yuan, Yuli Wang
2025CP0234	P58	Title: Indoor SF ₆ Leakage Monitoring Technology Using Pumped Infrared Spectroscopy with Intelligent Purging and Its Application in High-Voltage Insulation Equipment Author: Yunhua He, Bin Li, Xueting Cheng, Lei Liu, Zheng Zhong, Ruijian Pan
2025CP0242	P59	Title: A Phase-Field Study of Elliptical Hole Morphology Effects on Dielectric Breakdown in Ceramic Insulators Author: Yu Zhen, Xiaozhi Liang, Chunhui Miao, Qian Zhao, Yong Ni
2025CP0270	P60	Title: Investigation on Tension Response Mechanisms of Overhead Conductors under Coupled Thermo-Aerodynamic Loading Conditions Author: Yuan Hegang, Zhang Wei, Huang Rui, Liu Jianning, Qian Jiatai, Guo Yucheng, Yizhou Rao
2025CP0285	P61	Title: Calculation and analysis of electromagnetic induction of DC cable metal sheath when AC and DC cables are laid in the same tunnel Author: Lv Cui, Xingxing Zhou, Zhe Chen, Honglei Li, Xinyu Wu, Aiqing Ma, Xinao Cao
2025CP0330	P62	Title: Partial Discharge Location in Cable Joints by a Mobile PD system with the Combined HFCT Sensor Author: Xuefeng Zhao, Lu Pu, Kai Yang, Wei Duan, Zeli Ju, Haofei Sun, Zhe Hou, Xiahaoyue Yun, Sen Teng, Jianfeng Liang, Xinhao Dong

2025CP0343	P63	Title: Assessment of cable current carrying capacity under harmonic disturbance Author: Yufei Fu, Zhong Fu, Cheng Chen, Jinhui Wei, Aihua Zhao, Jianyi Xue
2025CP0395	P64	Title: Reliability Design Enhancement of DC Support Metallized Film Capacitors for VSC-HVDC Converter Valve Author: Jialong Wang, Yong Yang, Shilong Gao, Qi Li, Tao Zhang, Guiyou Fan
2025CP0409	P65	Title: Characterization of Metal Particle Motion under the Influence of Surface Charge Accumulation Author: Zhiyi Guo, Yixuan Fang, Zhong Fu, Yufei Fu, Shaowei Chen, Jianyi Xue
2025CP0410	P66	Title: Optimization of Surface Conductivity of GIL Spacer for Electric Field Regulation Under Electro-thermal Coupling Field Author: Bowen Xing, Zhiyi Guo, Jinhui Wei, Yixuan Fang, Jianyi Xue
2025CP0413	P67	Title: Layout Scheme of Inter-Phase Spacers for Anti-Galloping on 110-kV Transmission Lines Author: Liyang Wang, Xinyu Gao, Bin Cao, Liming Wang
2025CP0507	P68	Title: Denoising of GIS Partial Discharge Signal based on SSA-VMD Author: Haibin Zhang, Xin Liu, Shilei Huang, Ruiting Jiao, Chenchen Zhang, Qiyue Li
2025CP0525	P69	Title: Physics-Guided Ultrasonic Defect Detection for GIS Spacer Insulators Author: Mingzhi Peng, Yao Xu, Yongbo Hu, Tiantian Liu, Ruiting Jiao, Yongheng Wu
2025CP0528	P70	Title: Research on 30 Angle Difference Uninterrupted Power Supply Loop Closing Control Method of Distribution Network Author: Linlin Jin, Qiang Li, Kang Wang, Shaobo Liu

2025CP0534	P71	Title: A Subpixel Level Positioning and Suppression Method for Raindrop Interference in the Development Image of Arc Flashover of Insulator Strings under Thunderstorm Strong Convective Environment Author: Zhizheng Wang, Bingbing Dong
2025CP0549	P72	Title: Study on the Effect of Aluminum oxide Filler Morphology on Mechanical Properties of Epoxy Composite Insulation Materials Author: Yao Zheng, Chao Gao, Fusheng Zhou, Guoli Wang, Zhiwen Ji, Xianhua Huan
2025CP0550	P73	Title: Study on the Effect of Aluminum oxide Filler Surface Characteristics on the Insulating Properties of Epoxy Composites Author: Yao Zheng, Chao Gao, Fusheng Zhou, Guoli Wang, Zhiwen Ji, Xianhua Huan
2025CP0567	P74	Title: Research on Deformation Characteristics of Transformer Continuous Transposed Cables under Cyclic Loading Author: Zhi Yang, Shaoan Wang, Haofan Lin, Qunjun Guo, Yi Zhao, Yige Lu

4. Hydrogen production from renewable energy resources

Paper Number	Position	Title/Authors
2025CP0134	P75	Title: The Visible-Light-Responsive Photoactivity for H ₂ Production using P3OT/g-C ₃ N ₄ Heterojunction Author: Xiaolan Li, Lei Wang, Yan Liu

5. Integrated energy system

Paper Number	Position	Title/Authors
2025CP0009	P76	Title: Research on Optimal Power Configuration of Wind-Solar-Thermal-Storage Multi-energy Complementary Projects Author: Junhui Liu, Yihan Zhang, Shanshan Xu, Xinxin Huang, Anbang Xie, Wenjing Zu, Yao Lu
2025CP0026	P77	Title: Research on the impact of integration of renewable energy sources within industrial parks on Line Protection Author: Zhong Siwei, Cao Gengxin, Li Xiang, Zhu Junjie
2025CP0036	P78	Title: Research on Implementation Pathways for Green Electricity Consumption in Zero-Carbon Parks Author: Junhui Liu, Yihan Zhang, Wenjing Zu, Shanshan Xu, Anbang Xie, Yao Lu
2025CP0092	P79	Title: A Multi-Timescale Distributed Robust Optimization Model for Parks Integrated Energy Systems Considering Renewable Energy Uncertainties Author: Wei Lou, Shen Fan, Yu Wang, Ping Wang, Jianze Li, Jian Wei
2025CP0106	P80	Title: Research on Microgrid System of Lunar Research Station Based on Multi-Source Electric Power Router Author: Zhi Yang, Zhao Hongxiao, Yong Shi, Shuang Wang, Peng Wu, Yu Liu, Zhilong Hu
2025CP0137	P81	Title: Decision-making Model for Integrated Energy Service Provider Considering Energy Storage and Energy Conversion Devices Author: Yuemin Liu, Liping Huang, Donglin Hu, Wei Feng, Peng Zhang, Xuan Ruan
2025CP0152	P82	Title: Research on key technology of bending control for strain clamp of transmission line Author: Huang Shuang De, Chen Kai, Liu Rui, Wang Jia Yin
2025CP0184	P83	Title: Multi-time scale optimal scheduling based on multi-energy storage integrated energy Author: Dongyang Yu, Deqi Huang, Can Jiao

2025CP0188	P84	Title: Reactive Power and Voltage Cooperative Optimization in Renewable-Rich Power Systems Using DDPG Author: Yunlin Zhang, Huizhou Liu, Yimin Zhu, Xijun Ren, Weisheng Wang
2025CP0189	P85	Title: Cost-Optimal Shared Energy Storage Allocation in Multi-Microgrid Systems with Information-Constrained Author: Minmin Huang, Xiaohu Cheng, Chunyu Ge
2025CP0247	P86	Title: A Bi-level Collaborative Optimization Study on the Operation of CCHP Systems Considering Concentrated Solar Power Integration Author: Jing Chen, Yingjun Wu, Juefei Wang, Kaipeng Chen, Zhengxi Yin, Jiayan Lu, Jiayan Lu
2025CP0252	P87	Title: A Novel Modular Multilevel Converter Based Energy Storage System with Reduced Power Switches Author: Youjie Shi, Changyue Zou, Ting Hou, Lingfei Li, Yihong Huang, Hao Yuan
2025CP0335	P88	Title: Optimizing Low-Carbon Economic Dispatch in Coal Mine Energy Systems via CCUS-P2G Synergy Author: Yu Duan, Rui Liang, Zhihao Qiao, Zixuan Feng, Kaize Liang
2025CP0402	P89	Title: Research on Carbon Trading Strategy of Integrated Energy System Based on Transformer Model and Metaverse Author: Song Zhang, Yang Cao, Fan Zhang, Qiang Hu, Yangyang Liu, Zedan Zhang
2025CP0422	P90	Title: Cross-regional Power Grid Collaborative Optimization Considering Time-of-use Fixed Power Control of Tie Lines Author: Li Guan, Peipei Yang, Wenwu Zhang, Zhidong Chen, Tianyi Zhang
2025CP0482	P91	Title: Interval Dynamic State Estimation for IEGS Based on Multi-Source Measurement Data Fusion Author: Weihong Yao, Feixiong Chen, Zhenguo Shao, Zhenyu Wang, Fukun Zhang, Zhilong Chen
2025CP0589	P92	Title: Optimized Operation of Integrated Energy Systems in Steel Industrial Parks Considering Hydrogen Metallurgy and Carbon Capture Author: Yuqin Wang, Zitong Huang, Hui Wang, Zhijia Yang, Wancheng Xu, Binpu Li

6. New power system supporting carbon and neutrality

Paper Number	Position	Title/Authors
2025CP0023	P93	Title: Spatio-Temporal Parameter Identification in Power Grids Using Graph Neural Networks Author: Peng Yuan, Renjie Wei, Yishen Wang, Xi Chen, Siyan Liu, Xinying Wang, Xinying Wang
2025CP0046	P94	Title: High-Sensitivity Cavity Ring-Down Spectroscopy for Online Monitoring of SF ₆ Decomposition Products in High-Voltage Equipment Author: Xu Zhengjie, Zhao Yue, Xu Xiaoxiao, Chen Ying, Hang Chen, Cheng Wei
2025CP0144	P95	Title: Coordination of Topology Adjustment and Unit Commitment for Short-circuit Current Suppression: A Voltage-Stability-Constrained Approach Author: Haocheng Hua, Tianqi Liu, Chuan He
2025CP0151	P96	Title: Operational Characteristics of Electrical Equipment in High-Energy-Consuming Enterprises Author: Bowen Zheng, Chang Liu, Mingming Pan, Zhong Zhuang, Meimei Duan, Kejie Fang, Yixuan Huang, Yongjun Li
2025CP0158	P97	Title: Dynamic mixing properties in GIS in eco-friendly retrofitting process Author: Hengyang Zhao, Chen Wang, Chen Hang, Fengxiang Ma, Qian Du, Qiming Qin, Jiahai Zhang, Zhipeng Zhang
2025CP0170	P98	Title: Optimization Design and Performance Analysis of High speed Permanent Magnet Motor Author: Yuexin Li, Taibo Zhu
2025CP0190	P99	Title: A Multi-source Renewable Energy Optimization Approach via Physics-Informed Neural Networks for Carbon Footprint Reduction in ADNs Author: Siyan Liu, Zhuang Tang
2025CP0240	P100	Title: A power source planning method suitable for the transmission of new energy from 'sand, salt land and desert' areas. Author: BA Wei, WANG Qiao, FANG Duo

2025CP0248	P101	Title: Electricity and Carbon Trading Considering Carbon Emission Environmental Pollution of Industrial Customers Author: Juefei Wang, Yingjun Wu, Jing Chen, Weijie Yao, Xueyan He, Zhengxi Yin
2025CP0256	P102	Title: Research on the Transmission Capacity of the Renewable Power Sources VSC-HVDC Islanded Delivery System Under Steady-State Voltage Constraints Author: Yujiao SUN
2025CP0265	P103	Title: Allocation and Frequency Control Parameter Optimization of Converter-Interfaced Generation Author: Lisen Wang, Yunfeng Wen, Shichen Zhou, Hongxin Li, Guobin Fu, Kaixuan Yang
2025CP0273	P104	Title: Enviroeconomic-Adequacy Oriented Multi-Objective Capacity Optimization for Hybrid-energy Complementary Power Systems Author: Li Pai, Lu Hui, Zhang Jinping, Liu Siyang
2025CP0284	P105	Title: Assessment Method for the Maximum Renewable Energy Accommodation Limit in Power Grids under Electricity Spot Market Author: Yangyang Liu, Nian Liu, Jie Huang, Zhen Wang, Kai Jiang
2025CP0292	P106	Title: Physics-Guided Data-Driven Power Flow Fitting for LV Distribution Networks Considering Measurement Errors Author: Yanhe Yin, Gui Zhou, Fazhong Zhang, Guohao Li, Zenan Zheng, Yuxin Lu
2025CP0301	P107	Title: A Low-Carbon Generation Expansion Planning Method for Provincial Power Grids Considering the Synergy of Electricity, Hydrogen and Carbon Elements Author: Lei Wang, Nian Liu, Jie Huang, Zhen Wang, Kai Jiang
2025CP0303	P108	Title: Design and Optimization of an Axial-Radial Hybrid Flux PMSM with High Torque Density and Reduced Cogging Torque Author: Yang Lu, Yang Kai, Xiong Fei, Luo Cheng
2025CP0306	P109	Title: Error Source Analysis and Tracing for Distributed Carbon Metering Systems Author: Lin Fan, Jing Xu, Yongfu Liu

2025CP0323	P110	Title: Revenue-oriented Scenario Selection via the Large Language Model Author: Shenglei Du, Yalu Sun, Qian Yang, Dezhen Kong, Ding Li, Mingchen Ma
2025CP0325	P111	Title: Short-term complementary scheduling for inter-regional hydropower-wind-PV system based on dual-layer optimization method Author: Lu Hui, Zhang Zhenyu, Zhang Jinping, Cheng Ming
2025CP0427	P112	Title: Influence of High Proportion of New Energy on Second Frequency Regulation Capability of Power System Author: Wenbo Yang, Xiaohai Wang, Hongguang Zhang, Lei Chen, Zhiguo Yang, Fei Xu
2025CP0430	P113	Title: Regional Power Grid Partitioning Using Graph Deep Learning Author: Wenlong Shi, Lizhen Zhang, Jianjun Zhang, Lixun Zhao, Wenping Qin, Runquan Meng
2025CP0439	P114	Title: Optimal Scheduling of Hybrid Pumped Storage Considering Peak-shaving and Flexibility Enhancement Author: Zhanxing Xu, Qiang Liu, Yizhou Wang, Haowei Wu, Na Zhong, Feilong Hong, Yang Li
2025CP0440	P115	Title: Optimal dispatching of power systems considering complementarity of hydropower-photovoltaic-pumped storage Author: Yizhou Wang, Yang Li, Feng Wu, Xinyan Guo, Naike Wang
2025CP0467	P116	Title: CARBON EMISSION FLOW CALCULATION METHOD FOR POWER DISTRIBUTION NETWORKS CONSIDERING DISTRIBUTED GENERATION AND ENERGY STORAGE Author: Zhenyu Wang, Feixiong Chen, Zhenguo Shao, Weihong Yao, Fukun Zhang, Zhilong Chen
2025CP0468	P117	Title: Hierarchical electricity-carbon coupling optimization considering transmission and distribution coordination Author: Junkai Li, Qingfei Fan, Zhentao Han, Jinshan Luo, Qixiang Wang, Yu Bai
2025CP0476	P118	Title: Low Carbon Dispatch of Integrated Energy System Considering Joint Carbon Emission-Green Certificate Trading Mechanisms Author: Yue Teng, Ziqiang Wu, Di Wang, Hong Zhang, Mingjie Yu, Hongbin Wu

2025CP0538	P119	Title: Cloud-Based Verification System for Relay Protection Devices Targeting Multi-Source Heterogeneous Device Ecosystem: Standardized Templates and Automated Implementation Author: Liangliang Song, Shuyi Zhuang, Zhe Hou, Chengzhi Yan
2025CP0575	P120	Title: Mechanism Analysis and Optimization Method of Uncertainty Complementarity in Renewable Energy Systems Author: Peidong Han, Yuehui Huang , Pai Li, Jinping Zhang

Poster Session 2

Time: 8:30-10:00, 10:00-11:30 Tuesday, Sep. 25

Room: 3/F Foyer

1. New Power System Construction and Advanced Technology

Paper Number	Position	Title/Authors
2025CP0004	P1	Title: Superimposed Current Magnitude-Based Faulty Phase Selector Performance Recovery Strategy for Full-Scale Renewable Energy Grids Author: Zhang Lin, Wang Hongbin, Zhao Zhiwei, Chen Xun, Xiong Limeng, Li Zhengtian
2025CP0010	P2	Title: Robust Fine-Tuning of Large Language Models for Retrieval Augmented Generation in Power Grid Dispatching Regulations Author: Ying Zou, Ying Liu, Sai Zhang, Bochuan Song, Xiao Liang
2025CP0012	P3	Title: Research on Optimal Control of Voltage Quality Prediction in Multi-time Scale Distribution Network Author: Chuanxin Wen, Shu Zheng, Yao Yin, Zhijie Ma, Yuanyuan Sun, Haidong Yu
2025CP0017	P4	Title: InDet-YOLO: An Optimized YOLO-Based Framework for Accurate Insulator Defect Detection Author: Zhiwei Zou, Wei Sun, Weihao Shi, Rujia Qiu, Lu Xing, Yunan Jin
2025CP0018	P5	Title: Research on the Component Analysis and Disposal Plan of Firefighting Wastewater from Large Oil-filled Equipment Fire Accidents in UHV Converter Substations Author: Lingxin He, Yi Guo, Jiaqing Zhang, Guocheng Ding, Rui Liu
2025CP0028	P6	Title: Two-stage Power System Scheduling Model Considering Transmission Line Dynamic Capacity Expansion Risk Author: Zhengnan Gao, Jianbo Guo, Shicong Ma, Tiezhu Wang, Shixiong Fan, Dongqi Li

2025CP0031	P7	Title: Parameter Measurement of Four AC Transmission Lines on Same Tower under High Induced Voltage Author: Dali XIAO, Yao XIAO, Xiaoxing WEI, Bingyuan TAN, Jun DENG, Shuai YAN
2025CP0035	P8	Title: Anti-interference TMR Current Sensor Based on Adaptive Wavelet Threshold Denoising Author: Siyuan Liang, Jicheng Yu, Changxi Yue , Feng Zhou, Xiaodong Yin, Kai Xiao
2025CP0038	P9	Title: Intelligent Acceleration Techniques for Joint Electricity Market Clearing — A Review Author: Renjie Wei, Yishen Wang, Mengjie Shi, Xinying Wang, Shuya Lei
2025CP0041	P10	Title: Substation scene anomaly discrimination based on multi-stage combination strategy Author: YeDong Li, Kuan Wang, ChengJun Tang, YanFeng Wu, Liang Tao, QiYin Dai
2025CP0045	P11	Title: Deep Learning for Net Load Forecasting: Double-layer GRU Model Author: Xiaojun He, Shizheng Sun
2025CP0058	P12	Title: Stability and Adaptive Inertia-Damping Coordinated Control of Grid-Forming Converter Author: Honglian Zhou, Xiaohui Qin, Hongzhi Liu, Rong Pan, Yuqi Fan, Baodi Ding,
2025CP0059	P13	Title: Stability Analysis of Wind Power DC Delivery Systems Supported by SMES Author: Hongzhi Liu, Xiaohui Qin, Rong Pan, Yuqi Fan, Jie Bai, Qi Zhou
2025CP0060	P14	Title: Unsupervised Multi-Accent Augmentation for Automatic Speech Recognition in Electric Systems Author: Ying Liu, Shaohe Wang, Qiang Zhang, Xiao Liang, Ying Zou, Zhihao Wang
2025CP0091	P15	Title: Weak Link Identification and Security Assessment Method Based on Critical Line Author: Biao Wang, Chuan He, Xi Ye, Jiawei Hu, Jian Gao, Xinwei Sun

2025CP0098	P16	Title: A Collaborative Integration Method of Large and Small Models for Power Grid Dispatching Tasks and Its Application in Intelligent Decision-Making Author: Lan Ren, Xinying Wang, Shuya Lei, Yishen Wang, Renjie Wei, Tiechui Yao
2025CP0099	P17	Title: Research on Non-Contact Fire Detection and Early Warning Technology for Power Transformers Author: He Yang, Liu Rui, Guo Yi
2025CP0103	P18	Title: Research of Temporary Overvoltage Suppression Method based on Controllable Energy Dissipation Principle for Renewable Energy Power Stations Author: Zhe Cheng, Leilei Guan, Guoliang Zhao, Weiguo Li, Guangyao Qiao, Hongjin Pan
2025CP0114	P19	Title: An Ultra High Speed Computation Method for the Reachability Matrix of Undirected Graphs Based on Vertex Sets Author: Yiguang Fang, Jiehong Xu, Juan Ma, Peiwen Qi
2025CP0118	P20	Title: Equivalent Modeling of Grid-forming Energy Storage System for Load Modeling Author: Qi Wang, Pandeng Luo, Bo Chen, Bing Zhao, Jie Hao, Zhiwei Zheng
2025CP0126	P21	Title: Study on Fire Extinguishing Performance of Environment-Friendly Aqueous Film-forming Foam for UHV transformer Author: Fengju Shang, Jiaqing Zhang, Yi Guo, Sun Tao, Youjie Sheng
2025CP0142	P22	Title: Analysis of multi-UAV mission planning technology for overhead transmission line inspection Author: Xuyang Miao, Tao Sun, Daqin Yang, Dongmei Du, Qing He
2025CP0146	P23	Title: Multi Dimensional Comparison Testing Technology and Device Development for Cross Interval Digital Energy Metering Author: Jianshun Ding, Danhua Liu, Fei Lin, Qiqi Shu, Yin Gao, Aiqiong Ji, Huizhu Guo, Xuan Li

2025CP0148	P24	Title: Distributed Photovoltaic Power Load Forecasting Based on Least Squares Support Vector Machine Author: Youjun Wang, Qiang Xu, Chengjuan Chu, Qianqian Shi, Lulu Du, Min Li
2025CP0150	P25	Title: A novel power system state estimation method based on parallel graph convolutional neural network Author: Bin Chen , Buqing Deng, Rong Ye
2025CP0159	P26	Title: Network-aware renewable consumption method a transactive mechanism with spatio-temporal coupled dynamic operating envelope Author: Junkai Li, Qingfei Fan, Ke Li, Lipeng Xie, Youwen Zhang, Yu Bai
2025CP0160	P27	Title: Day-Ahead Operation Optimization among Electric Vehicles, Agent and Distribution Network Considering Spatial-Temporal Characteristics Author: Junkai Li, Chi-yung Chung
2025CP0162	P28	Title: Substation Fire Situation Severity Evaluation System Based on AHP-CRITIC Method Author: Liu Rui, Zhang Jiaqing, Li Jianlin, Guo Yi, Zhou Zheng, Dong Xiang
2025CP0164	P29	Title: A Memory-Augmented Graph Attention Network for Topology Identification with Incomplete Data in Distribution Networks Author: Ziyang Wu, Yong Chen, Lizhong Cui, Jing Qian
2025CP0166	P30	Title: Construction of target mode of power grid regulation and control integration Author: Jinghui Wang
2025CP0167	P31	Title: Application and Discussion of RPA Technology in Electric Power Dispatching System Author: Donglin Hu, Min Zhang, Yaquan Wang, Yuanpei Chen, Haozhen Zhang, Runsong Ma, Yang He
2025CP0171	P32	Title: A Multi-Task Learning Model with Dilated Convolution for Industrial NILM Author: Jianfeng Zhang, Bo Liu, Wenpeng Luan, Bochao Zhao, Jindou Yuan, Xumei Zhang

2025CP0175	P33	Title: Research on UAV Intelligent Inspection and Maintenance System for Transmission Lines Based on LiDAR and Brain-Inspired Intelligent Algorithms Author: Chao Li, Pengcheng Xue, Cheng Liu, Yangzhi Wei, Qingyu Meng, Tao Liang
2025CP0177	P34	Title: Study on the New Dispatching Mode of Active Distribution Network Oriented to the Coordination between the Main Grid and the Distribution Network Author: Yang Cao, Song Zhang, Qinyu Meng, Huazhi Mu, Chunlu Chen, Lei Sun
2025CP0179	P35	Title: Fault Line Selection Method of Small-Current Grounded Medium-Voltage Systems Based on Coordinated Multiple Measurements Information from the Low-Voltage Side Author: Bowei Hu, Wenpeng Luan, Bo Liu, Ruiyao Jia
2025CP0191	P36	Title: Method for setting device-level alarm thresholds for wide-frequency oscillations in new power system Author: Chen Fan, Zhiqiang YAO, Guoqing Zhao, Hao Ren, Yudun LI, Zhengtang LIANG
2025CP0194	P37	Title: Online Assessment Method for Transient Voltage Stability Margin Based on Convolutional Long Short-Term Memory Network Author: Lingli Zhu, Xuan Ruan, Peng Zhang, Runsong Ma, Yang He, Fuyou Zhao
2025CP0203	P38	Title: A Photovoltaic DC Series Arc Fault Identification Method Based on SGA-1D-CNN Author: Lijun Chen, Zhihong Xu
2025CP0228	P39	Title: Micro-deformation monitoring of power line tower based on GB-SAR Author: Jiaxian Huang, Jingjing Zhang, Yan Zhang, Rui Cao, Xiaohui Tao, Xianjun Qi
2025CP0229	P40	Title: Research on deformation monitoring of power facilities based on MIMO radar Author: Chuang Wang, Jingjing Zhang, Yan Zhang , Rui Cao, Xiaohui Tao, Xianjun Qi
2025CP0232	P41	Title: Modeling and Analysis of Harmonic Coupling Characteristics of Grid-connected Systems with Multiple Photovoltaic Units Author: Jiale HONG, Hongkun CHEN

2025CP0236	P42	Title: Analysis of Trends in Typical Power System Operation Mode Author: Shaoxu Hao, Qinyong Zhou, Runzhao Lu, Songtao Zhang, Dian Chen, Xiangfei Meng
2025CP0245	P43	Title: Application of Artificial Intelligence Technology in Protection of Electric Power Systems Author: Pengrun Li, Xuejun Li
2025CP0261	P44	Title: A method for SOC estimation of lithium batteries based on Non-contact detection Author: Rujia Qiu, Teng Tian, Long Zhao, Xin Liu, Enhui Wang, Jiaqi Geng, Wangchao Dong, Zheng Fang
2025CP0262	P45	Title: Review on Power System Ancillary Services Classification and Market-based Acquisition Mechanisms Author: SUN Shumin, CHENG Yan, XING Jiawei, YANG Song, WANG Gongrun, ZHAO Jinquan
2025CP0263	P46	Title: Reviews on Inertia and Primary Frequency Regulation Ancillary Service Market Mechanism Design Author: XING Jiawei, WANG Yuejiao, CHENG Yan, YU Peng, YI Yu, ZHAO Jinquan
2025CP0277	P47	Title: Analysis of the Influence of Reverse Power Flow on Transformer Leakage Magnetic Characteristics under Photovoltaic Grid Connection Author: Jie Wu, Yiming Xie, Xiaoyu Hu, Haoran Zhao, Gang Zhou
2025CP0278	P48	Title: Sub-Synchronous Oscillation Suppression of Encapsulation Model Wind Power Grid-Connected System Through Sub-Synchronous Damping Controller Author: Yinhan Zhang, Shuang Feng, Jiaxing Lei
2025CP0291	P49	Title: Power System Optimal Dispatch Driven by Intelligent Operators based on Safe Reinforcement Learning Author: Shuya Lei, Renjie Wei, Yishen Wang, Dong Yan, Xinying Wang, Sai Dai
2025CP0299	P50	Title: An SOC Balancing Control Scheme for Parallel Modularized UPS Moduels Based on Partial Power Converter Author: Ziyi Sun, Feng Li, Xiaoyuan Li, Yvyong Huang, Wenping Qin, Ruipeng Lu

2025CP0300	P51	Title: The Partial Power Converter Scheme and its Control for Distributed Energy Storage System Author: Wenping Qin, Xiaoyuan Li, Feng Li, Ziyi Sun, Changtai Fang, Yvyong Huang
2025CP0305	P52	Title: Research Status and Development Trend of Special Tools for Live Working in Distribution Networks Author: Shaolei Wu, Yu Feng, Jingjie Wang, Yaofeng Zhang, Wei Wang
2025CP0308	P53	Title: Selection of Multi-sine Signals for the Probing-based Load Modeling Approach Author: Jianxin Zhang, Haonan Fang, Ying Wang, Chao Lu, Huanhuan Yang, Tuo Jiang
2025CP0314	P54	Title: Defect Detection Method of Basin Insulator Based on Pulse Ultra-Wideband MIMO Radar Array Author: Panlong Zahng, Xianjun Qi, Yan Zhang, Rui Cao, Xiaohui Tao, Jingjing Zhang
2025CP0316	P55	Title: Research on intelligent coordinated control and dynamic network self-healing mechanism for distributed photovoltaic systems based on 5G Author: Jianwei Wei, Lin Su, Bicheng Hu, Xiaohui Hu, Lingtao Sun
2025CP0334	P56	Title: Innovative Applications based on Supercapacitor Products in Construction Site Author: Jimin Zeng, Renge Li, Entao Qin, Xiangcong Wang
2025CP0339	P57	Title: Online Inertia Assessment and Security Analysis for Power Systems with High Penetration of Renewable Energy Author: Jing Feng, MA Shiyin, Song Dongwen
2025CP0350	P58	Title: Chronological Operation Simulation-Based Strategic Energy Storage Deployment and Capacity Planning Considering System Static Voltage Stability Author: Ruoyu Wang, Wanli Jiang, Qingchao Sun, Jialiang Li, Mingze Xu, Shunbo Lei
2025CP0365	P59	Title: Power Oscillation Suppression Strategy for Virtual Synchronous Generators Based on Multi-Stage Proportional Correction of Power Deviation Author: Jinzhong Li, Leixin Liang, Yan Du, Yuguang Xie, Jianhui Su

2025CP0370	P60	Title: Transformer Fault Diagnosis System Based on Fusion of Knowledge Graph and Large Language Model Author: Zhenwei Zhang, Tianguang Lu, Qinzhen Wu
2025CP0371	P61	Title: Voltage Sag Characteristics Analysis and Source Identification in New Power System based on GMM Author: Shunyi Li, Ying Wang, Huaxi Yu, Yunzhu Chen, Wenxi Hu
2025CP0376	P62	Title: Electromagnetic Transient Modeling and Simulation Analysis of IGCT-based HVDC Using ADPSS Author: Zhijian Zhang, Zhang Xing, Xujiang Chen, Xiaoming Qiao, Xiangxu Wang, Shiqi Liu
2025CP0379	P63	Title: A Subgraph Boundary Equivalence Method for Reachability Matrix of Undirected Graphs Author: Yiguang Fang , Juan Ma, Jiehong Xu, Peiwen Qi, Yue Sun
2025CP0382	P64	Title: Resonance Risk Assessment Software for Power-electronized and High Cable-ratio Distribution Network Author: Shun Tao, Zheheng Xu, Shuo Yang, Yonghai Xu, Hong Wang
2025CP0384	P65	Title: Measurement and Analysis of Transformer Vibration Under Dynamic Stray Current Author: Bo Tan, Xianghan Wang, Zhuohong Pan, Guangyu Yuan
2025CP0387	P66	Title: Reforming Inter-Provincial Power Settlements in China with Global Market Insights Author: Qinglin Meng, Lei Liu, Fanjie Meng, Yan Song, Jianbin Xu, Guanqiao Zhao, Jingsheng Sun, Yezhao Xu, Yanjing Liu, Dong Liu
2025CP0394	P67	Title: Impact Analysis of Feature Parameter Selection on CNN-Based Fault Detection Algorithms in LCC HVDC Transmission Systems Author: Xueyou Zhang, Yinfeng Liao, Wei Ruan, Bin Wang, Huan Ma

2025CP0396	P68	Title: Research on the Risk Assessment of Transient Overvoltage in the Multi-Voltage Level New Energy Transmission System Author: Xuanyuan Wang, Haitao Liu, Zhanpeng Chen, Dehai Zhang, Haibo Li, Zongxiang Lu, Ying Qiao
2025CP0400	P69	Title: A Multi-Time Scale Rolling Optimization Method for Power Purchase Decision of Electricity Retail Connected with Medium and Long-Term and Spot Trading Author: Yankun Feng, Xinyan Su, Rui Lu, Qiang Li, Peiheng Qi
2025CP0401	P70	Title: Transient voltage stability margin evaluation of novel power system based on SDAE-BiLSTM Author: Chen Li, Weigang Jin, Xingyao Xiang, Xinqin Lv, Tao Lin, Jun Li
2025CP0411	P71	Title: Short-Term Load Forecasting Model for Distribution Network Based on Hybrid QPSO-Bilstm Model Author: Haiting Huang, Jiran Zhu, Xiaoyu Yang, Di Zhang, Keyan Liu, Yong Li, Jiayan Liu, Haiguo Tang
2025CP0414	P72	Title: A power system fault assessment methodology from a power-based perspective Author: Jinghao Teng, Yuanyuan Sun*, Na Song, Yanli Gan, Yahui Li, Xiaolei Hou
2025CP0428	P73	Title: Experimental Study on Icing and Deicing of Distribution Lines Author: Yue Li, Anjiang Liu, Chen Dou, Yuejing Wang, Wei Huang
2025CP0441	P74	Title: Research on safety distance early warning of power operation based on multi-scene fusion 3D point cloud modeling Author: Suo Wang, Yuzhen Dong, Honghe Liu, Xiongfen Huang, Jinbo Cai, Zhaozhong Chen, Xiaoxiao Meng
2025CP0448	P75	Title: A Temporal-Structural Graph Learning Framework for Robust State Estimation in Distribution Networks Author: Tianran Jin, Zhenbiao Qi, Shen Fan, Huan Xue

2025CP0450	P76	Title: A Data-Mechanism Hybrid Driven Based Transient Voltage Stability Constrained Reactive Voltage Control Author: Qiang Wang, RuiLin Yang, XiaoJing Zhang, JinQuan Zhao, ZiChen Zhao, ZiKang Zhao
2025CP0451	P77	Title: Online Assessment of Dynamic Reactive Power Reserve in Power Systems Based on Graph Convolutional Networks Author: Tian Wang, JinMing Wang, ZhenDong Cui, ZiKang Zhao, JinQuan Zhao, ZiChen Zhao
2025CP0454	P78	Title: Hosting Capacity Assessment of Distributed Renewable Energy Resources Integrated into Distribution Networks via Microgrids Author: Jian Chen, Youjun Wang, Lulu Du, Qiang Xu, Ming Li, Hao Zhang
2025CP0455	P79	Title: Companion Circuit-Based Short-Circuit Current Calculation for DC Distribution Networks with Converter Current Limiting Author: Chuan Zhang, Zhiguo Yan, Honglin Zhou, Zhimin Wang, Zhenzhong Xiong, Peiyang Li, Jianquan Liao
2025CP0465	P80	Title: Improved YOLO11 for Metal Oxide Surge Arrester Defect Detection Author: Shenghong Wang, Shuliang Mi, Tianze Huang, Yongqiang Wei
2025CP0469	P81	Title: A Novel Hierarchical Optimal Scheduling and Control Method Based on Prediction–Tracking–Correction for Advanced Distribution Systems Author: Tianqin Mao, Shouxian Wang, Qianyu Zhao, Dongli Jia, Zhaoying Ren
2025CP0479	P82	Title: Failure Prediction of Transmission Corridor under Strong Wind and Ice Coating Based on Dimension Reduction-Gravity Search-Extreme Learning Machine Author: Songyuan Cao, Yang Cheng, Yuhan Song
2025CP0484	P83	Title: Research on grid frequency characteristics and its impacts on UFLS under distributed PV integration Author: Jinsheng Liu, Ziqiang Wang, Zeqi Chen, Yizhe Sun, Lianxing Deng

2025CP0485	P84	Title: Multi-parameter identification method for wide-frequency oscillation in new power system Author: Yudun LI, Zheng XU, Chen FAN, Na LI, Kongming SUN, Deling FAN
2025CP0486	P85	Title: Distributed state estimation of active distribution network based on multi-index partitioning and WLS Author: Chen Luo , Yuting Hua, Yueming Yu, Rui Wang, Lei Ding, Chaoqun Wang
2025CP0487	P86	Title: A Review of Short-Circuit Current Calculation of Grid-Forming Converter Author: Jiawei Zhu, Yalou Li, Wenjia Xu, Ping Ding, Kaiyao Wan
2025CP0492	P87	Title: An Improved Scenario Reduction Method for Stochastic Day-Ahead Unit Commitment under High Renewable Energy Penetration Author: Feng Shuhai, Wang Ziheng, Liu Zijie, Yan Jun, Hao Lihua, Wang Beibei, Wu Zhiqiang, Ding Zhengkai
2025CP0503	P88	Title: From Modular to End-to-End: Practical Exploration of Vision-Language-Action(VLA) Systems in Power Distribution Grid Inspections Author: Ankai Zhang, Rui Song, Zheng Wang, Chen Wang, Chuanqi Zhao, Jiazheng Zhu
2025CP0504	P89	Title: Load Dispatch Applying Koopman MPC for Non-convex Optimization in Interconnected Power Systems Author: Tongming Liu, Tian Liu, Xiaofei Wang
2025CP0510	P90	Title: Modeling of Pseudo-Measurement Physical Quantities Based on Differentiated Distributed Photovoltaic Grid-Connection Control Modes and Distribution Network State Estimation Author: Rui Wang, Yuting Hua, Yueming Yu, Chen Luo, Lei Ding
2025CP0515	P91	Title: Research on polarization current line protection for characteristic identification of weak faults in new type power systems Author: Zexin Zhou, Yarong Guo, Xingguo Wang

2025CP0519	P92	Title: Active distribution network coordination optimization strategy integrating controllable loads and energy storage resources Author: Xiaoming Wang, Wenguang Zhao, Jingyi Ni, Haojie Song, Xinlong Liang, Hongbin Wu
2025CP0521	P93	Title: Acceleration of short-term voltage stability assessment by interaction between commercial time-domain simulator and deep neural network Author: Yun Yu, Shiyang Li, Weiyi Ding, Kequan Lin, Siting Zhu, Xuexia Quan
2025CP0530	P94	Title: Research on the Status and Key Technologies of Power Artificial Intelligence Applications Author: Jiazheng Zhu, Mengjie Shi, Jiannan Xu, Yingqiang Zhang, Xiao Liang, Ankai Zhang
2025CP0540	P95	Title: Hybrid Retrieval Enhancement and Domain Prompt Guidance Based Auxiliary Decision-Making for Differentiated Scenarios in Power Equipment Operation and Maintenance Author: Xu Jiannan, Zhu Jiazheng, Zhao Ruyi, Zhao Qi, Zhao Baohua, Shi Mengjie
2025CP0541	P96	Title: Insulator Defect Detection Method for Transmission Lines Based on Modified ViT Model Author: Zhao Ruyi, Li Li, Xu Jiannan, Zhao Qi, Zhao Baohua, Shi Mengjie
2025CP0546	P97	Title: Research on Modeling and Simulation Technology of Encapsulated New Energy Models for Large-Scale Power Grid Simulation Author: Yongjing He, Qing Mu, Yu Cheng, Guying Zhuo, Runtian Pang, Xiaomin Qiao
2025CP0554	P98	Title: Optimization Modeling for Joint Market Clearing of Energy and Ancillary Services Incorporating MW-dependent Ramp Rates Author: SHI Xinhong, FENG Shuhai, WANG Delin, ZHANG Xu, WANG Ziheng, ZHENG Yaxian
2025CP0557	P99	Title: Simulation Method for Power Line Anomaly Risk Caused by Heavy Rainfall Using the POT-GPD-Gamma Mixture Model and Markov Chain Author: Bin Chen, Rui Li, Kang Yue, Shiguang Nie, Xianrui Yun, Changhong Wang, Bin Xu

2025CP0559	P100	Title: Impedance Regulation Features Of Auto-Transformer With Built-In Impedance Winding Author: Zhi Yang, Jiangyang Zhan, Quanjun Guo, Haofan Lin, Yi Zhao, Lei Han
2025CP0574	P101	Title: Transmission Capacity Analysis of Low-Frequency AC Transmission Overhead Line under New Energy Delivery Scenario Author: Ruonan Hu, Gaoshan Hou, Lijun Xie, Xiaoyu Zhang, Cheng Zhao, Minghao Fan
2025CP0141	P102	Title: Design of Transmission Scenario Agents Based on Multimodal Large Models Author: Ji Kun, Shang Wendi, Yin Youlong
2025CP0529	P103	Title: Reactive Power Coordinated Control for Nearby VSC-HVDC to Suppress Commutation Failure of LCC-HVDC Caused by Sending-End Faults Author: Wei Wang, Song Gao, Gang Du, Jiarui Wang, Jiajun Zhang, Lei Wang

2. Power System Resilience

Paper Number	Position	Title/Authors
2025CP0011	P104	Title: Constructing A Guaranteed Power Grid Under Extreme Weather Conditions Author: Fu Yu, Zhang Tianfang, Xu Jing, Zhang Danfeng, Kong Dezheng
2025CP0030	P105	Title: Enhanced High Voltage Cable Current Carrying Capacity by Externally Wrapped Phase Change Materials Author: Tianyu Ruan, Qi Shen, Jincheng Yu, Kongyang Huang, Zhen Gao, Yanjie Le
2025CP0048	P106	Title: Optimized Phasor Differential Protection Scheme Based on Disparity in Positive-Sequence Power Factor Angle Variation Characteristics Author: Shuyang WANG, Yibin ZHENG, Hong CAO, Yonghui SONG, Jiaqi LIU, Xiangping KONG
2025CP0056	P107	Title: Probability Modeling of Distribution Network Equipment Failure Based on Finite Element Simulation Fault Mechanism Analysis Author: Shun Yang, Dawei Wang, Qianyun Miao, Zhengxiang Zhu, Xinxu Yan, Lili Hao
2025CP0094	P108	Title: Unit Maintenance Scheduling Optimization Considering Flexible Maintenance Windows and Compressible Unit Maintenance Durations Author: Yongjia Qiao, Jianhu Lv, Xiaorui Guo, Jingxiao Jiang, Ying Wang, Wenjie Mei, Kaifeng Zhang
2025CP0112	P109	Title: A Single-end Protection Principle for Flexible DC Collection System Based on Energy Polarity Author: Dai Feiyang, CAO Hong, SONG Yonghui, LIU Jiaqi, LIU Ningning
2025CP0128	P110	Title: Study on the Influence of Cable Layer Spacing on Fire Spread in High-Voltage Cables within Full-Scale Utility Tunnels Author: Tao Sun, Jiaxue Liu, Xuyang Miu, Haolan Chen, Jian Chen, Jiaqing Zhang

2025CP0243	P111	Title: Evaluation and Identification of Weak link in Power System under Extreme Storm Condition Author: Haijun Yu, Jinjin Ding, Yuanzhi Li, Lijun Wang, Weibo Yuan, Xunting Wang
2025CP0295	P112	Title: Research on Enhancing Cybersecurity Resilience in New Power Systems Author: Tengyan Wang, Nige Li, Lu Chen
2025CP0296	P113	Title: Secondary Voltage Control of Islanded Microgrids under FDI Attacks Author: Zhenglong Wang, Wei Sun, Jinzhu Yu, Jing Chen, Huizhou Liu, Fei Lin
2025CP0324	P114	Title: A Distribution Network-Microgrid Coordinated Optimization Method Based on Dynamic Networking and Electricity Price Incentives Author: Taiyu Gu, Ye Tian, Kejian Shi, Zhaochen Liu, Jinwen Pan
2025CP0331	P115	Title: Robust Resilience-Oriented Planning of Islanded Microgrid Integrating Network Reconfiguration for Typhoon Disaster Scenarios Author: Yuhao Zhou, Zhi Wu, Bingliang Shan, Shigong Jiang, Cunqiang Huang
2025CP0397	P116	Title: Robustness Assessment of Multiple Oscillation Mitigation Strategies for Offshore Wind Farm Grid- Connected MMC-HVDC Systems Author: Mingze Gang, Lingfei Xiong, Yaling Bai, Zheng Zhao, Yiming Zhang, Qichen Chen
2025CP0412	P117	Title: Meteorological Attribution of a UHV Transmission Line Failure: A Case Study of the 2025 Conductor Breakage and Tower Collapse in Brazil Author: Shuanglong Jin, Xiaolin Liu, Rui Hu, Zongpeng Song, Bo Wang, Linlin Pan
2025CP0438	P118	Title: Multi-Fault Typical Scenario Set Generation Method Based on Power Flow Tracing Matrix Author: Boyu Yi, Shaofan Zhang, Yanchun Cai, Yanhong Li, Fayang Tian, Qianyu Zhao

2025CP0478	P119	Title: Parallel Restoration of Transmission System Based on Breadth-first Search Assisted Partitioning and Skeleton Path Selection Author: Dai Cui, Zhaowei Ling , Guangyu Zhu, Meishan Zhang, Yang Liu , Gengfeng Li, Yiheng Bian
2025CP0497	P120	Title: A Stable Operation Domian Analysis for Induction Motors Starting in an Black-start Islanded Microgrid with Paralleled Battery Energy Storages Author: Xun Mao, Wangchao Dong, Chenxi Liu, Kai Lv, Zhen Wang, Yong Zhan
2025CP0499	P121	Title: Commutation Failure Inversion Simulation of the UHVDC under AC Faults based on online-offline Data Fusion Author: Xun Mao, Wangchao Dong, Chenxi Liu, Kai Lv, Zhen Wang, Yong Zhan
2025CP0501	P122	Title: The Power System Restoration Model and Its Fast Solution Method Considering Uncertainty of New Energy Output Author: Xun Mao, Kai Lv, Chenxi Liu, Wangchao Dong, Zhen Wang, Yong Zhan
2025CP0551	P123	Title: Climate-Adaptive Planning of Power Systems with High Renewable Penetration under Extreme Weather Scenarios Author: Zhiyuan Ma, Xing Chen, Fangxin Hou, Zhanghua Zheng, Zijian Zhao, Fang Yang, Feimin Zhang
2025CP0578	P124	Title: A Stability Enhancement Method of Grid-forming Inverter with Reshaped Impedance Based on Current Controller Author: Feng Zhang, Hui Sun, Jinjin Ding, Bo Peng, Bin Xu
2025CP0332	P125	Title: Power System Resilience Enhancement by Pumped Storage under Extreme Weather Author: Chen Qingyue, Zhao Tianchen, Dan Yangqing, Zhang Gong, Zhou Yibo
2025CP0349	P126	Title: A Stability Enhancement Method of Grid-forming Inverter with Reshaped Impedance Based on Current Controller Author: Lei Yun, Fangze Wu, Yiyang Gao, Yuhong Zhang, Yilang Jiang, Jingqi Yang, Lining Su, Dan Huang, Zeyu Zhang

Poster Session 3

Time: 13:00-15:30, 15:30-17:30, Tuesday, Sep. 25

Room: 3/F Foyer

1. AC/DC Distribution System

Paper Number	Position	Title/Authors
2025CP0044	P1	Title: Distributed event-triggered control for isolated AC-DC hybrid microgrids Author: Zhaojie Yu, Xin Cai
2025CP0174	P2	Title: Operating Principle and Experimental Study of Hybrid Commutation Converter Valve Author: Weihao Hao, Jinchuan Guo, Guanglin Yu, Yongwen Chen, Yanhua Liu
2025CP0241	P3	Title: Mechanism Research and Simulation of Cable Carbonization in Low-Voltage Power Distribution Systems Author: Wanrong He, Zhihong Xu
2025CP0297	P4	Title: Event-Triggered Finite-Time PID-like Sliding Mode Control for Microgrids Author: Jinzhu Yu, Wei Sun, Zhenglong Wang, Dunjun She, Fei Lin, Huizhou Liu
2025CP0347	P5	Title: HINet: Preliminary Exploration of the Scientific Calculation Dataset Constructing Method for the Distribution Equipment Health Index Author: Zhehao Qi, Jinli Wang, Yuwei Shang, Limei Zhou
2025CP0361	P6	Title: A comprehensive energy efficiency evaluation method for low-voltage DC distribution network based on energy router Author: Hong Zhang, Jingzhong Li, Yuguang Xie, Bin Xu, Di Zhang
2025CP0373	P7	Title: Admittance Passivation Design for LC-Type Grid-Tied Inverters Based on State Feedback Control Author: Hengzhi Dai, Chuan Xie, Guangda Ma, Cheng Li, Zhiwei Zhao, Yuxin Wang

2025CP0535	P8	Title: A knowledge distillation-based incremental reinforcement learning method for optimal operation of distribution networks Author: Jie Zhao, Jun Feng, Bin Feng, Lei Dong, Rui Ge
2025CP0536	P9	Title: A Novel AC Line Protection Principle for Distribution Networks Based on Active Control of Multi-Port Solid-State Transformers Author: Ningning LIU, Dongxing HU, Hong CAO, Jiaqi LIU, Mingliang ZHAO, Shuyang WANG, Dan LI
2025CP0560	P10	Title: Transient Characteristics of Typical Faults in Ultra-High Voltage Hybrid Cascaded Converter Stations Author: Jiao Zhou, Lei Wang, Weimin Yang
2025CP0595	P11	Title: Equipment Defect Detection in Drone-based Distribution Line Inspection with Image, Author: Yingjie Liu, Hui Wang, Tao Wen, Yuanpeng Tan, Lili Liu, Ankai Zhang

2. Power Electronics, Packaging and System Integration

Paper Number	Position	Title/Authors
2025CP0258	P12	Title: High-Precision Detection of Open/Short-Circuit Defects in Chips via Multi-Scale Fractal and Quantized Mapping Author: Teng Tian, Long Zhao, Rujia Qiu, Enhui Wang, Jiaqi Geng, Xiaoyu Hu
2025CP0425	P13	Title: A 200kV/ μ s Common-Mode Transient Immunity Capacitively-Coupled Digital Isolator Author: Hangyu Xu, Weiwei Ma, Yibo Yin, Xuequan Huang
2025CP0204	P14	Title: Optimized Control Strategy of M3C Based on the Third Harmonic in Equal Frequency Interconnection Author: Chen Zhang, Zhichang Yang, Gaoshan Hou, Yingpei Wang, Guoliang Zhao, Bao Liu
2025CP0250	P15	Title: A Device Screening Approach based on Artificial Bee Colony Algorithm for Parallel Connection of SiC MOSFET Author: Ying Ma, Yanqi Wang, Helong Li, Zhiqiang Liu
2025CP0254	P16	Title: Per-unit Value Conversion Method for Modeling of Renewable Energy Grid-connected System Author: Hangyu Sun, Jian Zhang, Wenfeng Li, Dongping Ai, Hui Wang, Zhichen Geng
2025CP0259	P17	Title: CNN-Based Adaptive Matching and Topological Reconstruction for Diamond NV Center Multi-Axis Magnetic Gradient Imaging Author: Teng Tian, Rujia Qiu, Jiaqi Geng, Enhui Wang, Long Zhao, Zhiwei Zou
2025CP0272	P18	Title: A New Low-Profile Differential Composite Probe For Near-field Test Author: Lei Wang, Quan Huang, Chengyang Luo, Guoguang Lu

2025CP0286	P19	Title: Stability Analysis of Peak-Current-Control Buck-Boost Converter with input LC filter Based on Generalized Feedback Theorem Author: Mingzhu Fang, Tao Luo, Yang Zhu, Zhi Yang, Xianbin Qi, Helong Li
2025CP0341	P20	Title: Comparative TID Response Between Conventional and Isolation-Ring Dual-Gate LDMOS in Domestic IGBT driver Author: Ji-Hao Chen, Gang Liu, Ming-Xin Gao, Xue-Quan Huang
2025CP0369	P21	Title: Design of IGBT Secondary Drive Chip for Applied Power Electronic Systems Author: Gang Liu, Qiang Xu, Xiaoyu Bie, Kangwei Xing
2025CP0416	P22	Title: Reliability Assessment for Thyristor Valves in Line-Commutated Converter High-Voltage Direct Current Transmission Systems Author: Lin Zhu, Zhong Chen, Wei Yang, Di Hu, Mingmin Zhao, Jiangang Bi, Yinxiao Zhu
2025CP0511	P23	Title: Packaging Layout Optimization and Lifetime Assessment of Paralleled SiC Power Devices Based on the Rainflow Algorithm Author: Xi Yang, Yongqiang Tan, Chong Gao, Weitang Zhang, Jian Jiao, Jingzhong Zhou

3. Power engineering education

Paper Number	Position	Title/Authors
2025CP0153	P24	Title: Analysis on the corrosion of overhead ground wire of 110kV transmission line Author: Huang Shuang De, Zhou Fang Rong, Liu Rui
2025CP0187	P25	Title: Comparative analysis of panchromatic and multispectral fusion of Gaofen-2 in the buffer area of transmission lines Author: Huang Shuang De, Zhou Fang Rong, Liu Rui
2025CP0333	P26	Title: Research and Development of Simulation Training Platform for Intelligent Substation Relay Protection Devices Based on CMS 61850 Author: Yichun Wu, Yingjie Pan, Sifan Zou, Xiaojia Qin, Raoqi Xu
2025CP0408	P27	Title: Design and Implementation of a Dynamic E-Learning System for Project Management Knowledge of Power Grid Enterprises Based on AI Technology Author: Mingde Cui, Keyi Chen, Kun Yu, Rui Mao, Jun Yan, Xijun Gou

4. Virtual power plant technology

Paper Number	Position	Title/Authors
2025CP0085	P28	Title: Optimal Bidding Model for Virtual Power Plant Participating in Spot Market Author: Yawen Xie, Kuan Zhang, Nian Liu
2025CP0269	P29	Title: Electrified Highways Virtual Power Plant and Its Decarbonization Approach Author: Yue Zhu, Zhipeng Lv, Fei Yang, Hao Li, Shan Zhou, Zhihui Zhang, Yunting Ma
2025CP0432	P30	Title: Secondary Frequency Regulation Strategy of Power Systems with Virtual Power Plant Author: Zongqi Gu, Boxi Zhou, Xiaolei Wang, Xiaohan Shi
2025CP0477	P31	Title: Robust Optimization Scheduling of Multi-Resource VPP Source-Load Dual Uncertainties Author: Botao SHI, Hongchun SHU, Guangbin ZHANG, Guangxue WANG, Shunguang LEI, Wei HUANG
2025CP0539	P32	Title: Research on Business Models of Virtual Power Plants and Roadmap for VPPs in China Author: Zhanghua Zheng, Zhiyuan Ma, Haojie Wang, Di Wang, Jiamei Li, Qian Ai

5. Wide Bandgap Semiconductor and Energy Conversion

Paper Number	Position	Title/Authors
2025CP0257	P33	Title: Thermo-Mechanical Regulation of SiC Power Module Based on Cu-Mo-Cu Clip Author: Peng Sun, Yuxi Liang, Ningyi Li, Jiakun Gong, Zheng Zeng
2025CP0431	P34	Title: Optimization Analysis Research of Station Charging Modules Based on Wide Bandgap Devices Author: Di Hu, Zhong Chen, Lin Zhu, Tao Li, Wei Yang, Chuangye Li, Peng Chen, Helong Li
2025CP0490	P35	Title: Theoretical performance limit of 4H-SiC tilted super-junction devices Author: Haoyuan Cheng, Hengyu Wang, Jiangbin Wan, Chi Zhang, Ce Wang, Kuang Sheng

6. Renewable Energy Generation Technology

Paper Number	Position	Title/Authors
2025CP0183	P36	Title: Interharmonic Power based Analysis of Sub/super Synchronous Oscillations in a VSC-HVDC Connected Renewable Power System Author: Fangqun Liao, Dan Zhang, Xilin Yan, Jieyi Xu, Yunfeng Huang, Xiaorong Xie
2025CP0002	P37	Title: An Efficient MPPT Approach for Hybrid PV-TEG Mechanism During Various Non-Static Operating Conditions Author: Chao Sun, Xiaolong Zhang, Yifei Long
2025CP0022	P38	Title: Study on the judgment method and cause of high voltage in the substation caused by photovoltaic access Author: Weiming Li, Kai Zhang, Yanjun Ma, Yue Chen, Qin Wang, Weiping Liao, Jianmin Zang, Gang Zhou
2025CP0027	P39	Title: An Efficient Power Management Control for PV-Battery-Grid incorporated Rapid EV charging stations with G2V and V2G abilities. Author: Xiaolong Zhang, Chao Sun, Mingzhou Xu
2025CP0075	P40	Title: Photovoltaic Power Forecasting Based on CEEMDAN-VMD-KAN Author: Yifei Zhang, Shifu Tian, Zhen Wang , Hongtao Dai, Yue Sheng, Yacong Wang, Qingfei Liu
2025CP0122	P41	Title: Research on voltage and reactive power optimization strategy of offshore wind farm Author: Ting Wei , Shuqian Meng, Xinyi Chen, Qihui Liu, Xipeng Cai, Yihua Zhu, Chao Luo, Xueshen Cui
2025CP0130	P42	Title: Rapid Analysis of Base Reaction Pressure for Extended Annular Foundations in Wind Turbine Systems Author: Feng WEN, Cheng BI, Yaoming XIAO, Yike GAO
2025CP0147	P43	Title: Research on the Wind Farm Power Prediction Method Based on the VMD-TCN-GJO Model Author: Li ping Huang, Yuemin Liu, Rui Liu, Peng Zhang, Xuan Ruan

2025CP0173	P44	Title: Research on the Characteristics of DC Series Arc Faults in Photovoltaic Systems Author: Manruo Yin, Tao Wen, Zhiyuan Sha, Qifan Li
2025CP0205	P45	Title: An Accurate Measurement Method for Broadband Sequence Impedance of Renewable Energy Units Based on Multi-Frequency Disturbances Author: Ren Yina, Wang Xiao, Wu Linlin, Deng Xiaoyang, Su Tianyu, Sun Yamin
2025CP0214	P46	Title: A Reinforcement Learning based Energy Allocation Algorithm for Cameras in Electric Power Networks Author: Chengrun Qiu, Qi Qiu, Feiyin Yu, Wei Zhou, Jun Xu
2025CP0238	P47	Title: Accuracy Evaluation Method for Wind Farm Equivalent Models Based on Multi-Dimensional Quantitative Consistency Assessment Analysis Author: Heming Yan, Feng Ji, Longze Kou, Yuqin Gao, Qian Guo, Ting Ma
2025CP0274	P48	Title: Optimal Capacity Allocation of Hybrid Pumped-Storage Combined with Wind-Photovoltaic Power Generation Author: Hongze Zhang, Yang Li, Long Wang, Yingjing He, Xueqin Tian, Qingyue Chen
2025CP0313	P49	Title: Distributed photovoltaic interval prediction based on the optimal HA-KDE model Author: Yili Ma, Yi Huang, Yue Yuan, Wenhui Shi
2025CP0329	P50	Title: Voltage Control Strategy to Improve the Power Transmission Capacity of Wind Storage Power Station in Weak grid Author: Jingyuan Yang, Zhen Xie, Lele Cai
2025CP0344	P51	Title: A novel control strategy for IPMSM under low carrier ratio Author: Mengwei Liu, Lifu Gao, Man Jiang, Daqing Wang, Qishuai Wang, Lingxiang Wang
2025CP0355	P52	Title: Research on Voltage Feedback Correction Control Strategy Based on Multi-type Adjustable Resources Author: Zhijie Ma, Yuanyuan Sun, Shu Zheng, Chuanxin Wen, Pengbo Shan, Yang Liu

2025CP0358	P53	Title: Decomposition Method for Medium- and Long-term Trading Electricity of Renewable Energy Based on Lagrange-Soft Actor Critic Author: Yiqian Sun, Jun Zhao, Yuehui Huang, Guoqing Li, Siyang Liu, Dagui Liu
2025CP0362	P54	Title: Analysis and Suppression Strategies of Shaft Oscillation Characteristics in Grid-Forming Full-Power Wind Turbines Author: Jingchun Chu, Hua Zhuo, Haitao Zhu, Jiafei Qiao, Bingbing Wang
2025CP0389	P55	Title: BiGRU Neural Network Incorporating Time-Series Signal Refinement and Attention Mechanism for Wind Power Prediction Author: Xinyi Liu, Laiyi Li, Zitao Wang, Jidong Luo, Shanke Liu, Lijun Yu
2025CP0392	P56	Title: HPDD-WPF: Hybrid Physical-Data Driven Model for Wind Power Forecasting Author: Yifan Tong, Lei Liu, Bo Wang, Zhao Wang, Shuaiqi Niu, Hongwei Zhao, Qiuju Chen, Bin Li
2025CP0407	P57	Title: Static Voltage Stability Analysis of Large Scale Renewable Energy delivered via multi-voltage-level transmission sections Author: Haitao Liu, Man Xu, Zhanpeng Chen, Xiao Wang, Dehai Zhang
2025CP0420	P58	Title: A distributed photovoltaic ultra-short-term prediction method based on cloud mass movement characteristics Author: Fei Wang, Chen Xing, Liping Liu, Wenhao Gao, Shumin Yan
2025CP0426	P59	Title: Comparative Study of Photovoltaic Power Forecasting Methods Based on Deep Learning Author: Zekai Cao, Dahai Zhang, Pei Zhang, Xiaoning Xu, Yanjuan Wu
2025CP0435	P60	Title: Synergistic Effects of Energy Storage with Large-Scale Hydropower and Photovoltaic Power Generation Author: Fangze Wu, Junling Wu, Jian Zhang, Lei Yun, Libo Zhang, Qian Dai, Jun Zhang, Jitai Li
2025CP0437	P61	Title: Optimization-Driven Design and Research of Piezoelectric Vibration Energy Harvesters Based on Shape Geometry Author: Wanying Huang, Yunxiao Zhang, Yuhao Liu, Hao Hu, Jinlin Zheng, Chengfeng Wu

2025CP0447	P62	Title: A smooth switching control strategy based on power compensation PQ and VSG Author: Bo Peng, Jinjin Ding, Feng Zhang, Xun Mao, Bin Xu
2025CP0456	P63	Title: Research on Bi-Level Optimization Scheduling Model and Strategy for Grid-Connected Photovoltaic-Energy Storage Systems Author: Youjun Wang, Jian Chen, Lulu Du, Qiang Xu, Ming Cheng, Aixia Zhang
2025CP0458	P64	Title: CVaR-based Optimal Scheduling of Pumped-Storage Hydropower Plants Participating in Day-ahead Energy and Ancillary Service Markets Author: Yanbo Ding, Yang Li, Feng Wu, Yuzhe Chen, Linjun Shi
2025CP0472	P65	Title: Analysis of the Influence of Energy Storage Systems Access on Sub-Synchronous Oscillation Characteristics of Wind Power Grid-Connected Systems Author: Fengbo Zhang, Keqilao Meng, Hua Li, Yongjiang Liu, Bin Cao, Yiwen Tang
2025CP0473	P66	Title: Dynamic Frequency Linearization Method based on Extreme Learning Machine Author: Tong Li, Zhihao Tian, Gang Liu, Huiling Zhang, Jing Ye
2025CP0475	P67	Title: The Study of New Characteristics of Hysteresis Current Control for Parallel Inverters Author: Honglin Zhou, Jingbo Liu, Xiaotian Wu, Chuan Zhang
2025CP0489	P68	Title: Data-Disturbance-Compensated Model-Free Adaptive Medium-Frequency Oscillation Mitigation of Offshore Wind Power via MMC-HVDC Systems Author: Bingbing Shao, Yang Yu, Ming Li, Lingfei Xiong, Peng Li, Zijun Bin
2025CP0532	P69	Title: Research on Design Methods of Large-Capacity Grid Simulators Author: Wei Dong, Yixin Yan, Long Jing, Jia Deng
2025CP0533	P70	Title: Short-term power forecasting for wind power plants considering turbine grouping Author: Zhenzhe Sun, Na Cao, Xinfeng Li, Wenjie Jia

2025CP0537	P71	Title: Static Voltage Stability Analysis and Control Strategy of Distribution Network with High Proportion Distributed PV Generation during Fault Author: MaRuichen, WANG Huichao, XIA Junrong
2025CP0552	P72	Title: Study on Transient Synchronization Stability Analysis and Current Limiting Control of Grid-Forming Converters Author: Bingbing Wang*, Chuanxing Zhu, Peng Fu, Haoyang Lei, Lei Zhu
2025CP0569	P73	Title: Improved Phasor Differential Protection Scheme Based on Converter Control Characteristic Differences in Flexible Low-Frequency AC Transmission Systems Author: Shuyang WANG, Yibin ZHENG, Hong CAO, Yonghui SONG, Ningning LIU, Xiaofei WANG
2025CP0571	P74	Title: Research on Power Coordination Control for Distribution Transformer Area with High Penetration of Distributed Photovoltaic Author: Nanchun Zhang, Ming Wu, Yu Ji, Geng Niu, Rongjun Jin, Liangzhong Yao
2025CP0576	P75	Title: A Multi-Parameter Coordinated Adaptive VSG Control Strategy for Primary Frequency Regulation of Direct-Drive Wind Power Systems Author: Yiwen Tang, Keqilao Meng, Yuefei Lü, Yupeng Qiao, Fengbo Zhang
2025CP0587	P76	Title: Research on Distributed Photovoltaic Voltage Stability Coordinated Control Based on Model-Data Hybrid Driven Approach Author: Bo Chen, Chang Liu, Liu Liu, Shuocheng Wang, Tianping Ge, Yujie Zhong
2025CP0590	P77	Title: Research on probabilistic risk scheduling and optimization method of new energy system based on source-grid-load-storage coordination Author: Zili Xu , Jingjing Wang, Zhi Li , Shun Li, Yujun Li

7. Power Electronics in Power Systems

Paper Number	Position	Title/Authors
2025CP0039	P78	Title: An Electromagnetic Compatibility Analysis and Optimization of High-Voltage Pulse Generation System Author: Jie Deng, Haoran Li, Yuyu Zhu, Yue Pan, Guozheng Zhang, Yuying Zhu
2025CP0047	P79	Title: Factory Test Technology of UHVDC Converter Valve Control System Based on Hardware Closed-loop Author: Jin Liu, Jianan Zhang, Naichen Yan, Yunpeng Liu, Lin Zheng, Tianshu Sun, Xiaolong Zhang, Shaoyan Gong
2025CP0070	P80	Title: Design of a novel wireless charging system with a secondary transformer for efficiency improvement Author: Guozheng Zhang, Haoran Li, Yuyu Zhu, Jie Deng, Yuying Zhu, Haoyu Zhang
2025CP0072	P81	Title: Steady-state Stability Limit of the Converter-interfaced Source or Load Connected to the Grid Author: Shilin Dong, Xiaoru Wang, Yang Long
2025CP0088	P82	Title: Transient Overvoltage Characteristics and Suppression Strategies of Sending-End Grid-Forming Controlled VSC-HVDC Under Fault Conditions Author: Daye Yang, Hengyue Zhang, Panjie Lian, Wenzhuo Liu, Chao Zheng
2025CP093	P83	Title: A Dual-Mode Adaptive PLL for Improving Harmonic Detection in Active Power Filters Under Weak Grid Conditions Author: Hao Ren, Lei Wang, Jie Zou, Menghao Zhang, Yuzhang He, Yulei Qin, Xiaokun Jia
2025CP0105	P84	Title: Power Losses Distribution Analysis of T-type Modular Multilevel DC-DC Converter Author: Hao Zhang, Yipeng Su, Ke Cheng, Heya Yang, Xin Xiang, Jing Sheng, Wuhua Li, Xiangning He

2025CP0109	P85	Title: Research on Real-time Electromagnetic Transient Simulation Modeling of High Proportion New Energy Power System with Multiple DC Feed-in Author: Xiaoli Zhang, Xiao Lei, Limin Yang, Lin Liu, Guangheng Pang, Yan Li
2025CP0111	P86	Title: A Single-end Protection Principle for Flexible DC Collection System Based on Energy Polarity Author: DAI Feiyang, CAO Hong, SONG Yonghui, LIU Jiaqi, LIU Ningning
2025CP0119	P87	Title: Study on The Influence of Variable Frequency Load on Power System Security and Stability Author: Qi Wang, Pandeng Luo, Bo Chen, Jie Hao, Bing Zhao, Zhiwei Zheng
2025CP0131	P88	Title: Grid-forming controller design of low-voltage ride-through for parallel energy storage converters Author: Yan Zhang, Zhaoxia Xiao, Xinyu Yang, Hongwei Fang, Alexander Micallef, Junjie Xiong
2025CP0136	P89	Title: Design and Experiment of 10kV Electromagnetic-Electronics Transformer Author: Yujie Hu, Shenglong Zhu, Shaolei Wu, Cheng Zhao, Min Pan, Zhengkai Zhang, Ming Wang, Licheng Sun, Wei Liu, Yuan Cheng
2025CP0163	P90	Title: A method for internal fault protection and anti-misoperation locking of transformers suitable for new power systems Author: Kai Fan, KaiBai Wang, ZhengWei Sun, ZhiCheng Wang, Ye Tao, HaoFu Yu, YuTong Liu
2025CP0208	P91	Title: Large-signal Stability Analysis of Grid-connected VSC: A Review Author: Ziyu Fu, Zimo Zhao, Wenhao Tong, Zhiyuan Wang, Lujie Yu
2025CP0211	P92	Title: The Small Time Step Real-Time Simulation System of HVDC System Based On Multi-FPGAs Author: Minhua Xie, Longze Kou, Lu Gao, Heming Yan, Beisi Tan

2025CP0213	P93	Title: A Multiple Switching Processing Method for Electromagnetic Transient Simulation Author: Minghui Su, Yixuan Peng, Bingtao Wei, Haijun Tang, Lu Gao, Fucun Li
2025CP0227	P94	Title: Analysis of Power Transmission Capacity for 1000kV Low-Frequency Overhead Lines Author: Jingxin Cui, Zhengang Lu, Guoliang Zhao, Zexin Zhao, Chen Jia, Luyu Yang, Zhicheng Liu
2025CP0253	P95	Title: Model reduction for switched linear blended systems based on principal component analysis Author: Ziyang Zhu, Heming Yan
2025CP0260	P96	Title: Research on the Correlation between Entropy Increase of Multimodal Coupling of Electromagnetic Fields and Quantum Tunneling of Subsurface Defects in Chips under Time-varying Current Excitation Author: Jiaqi Geng, Teng Tian, Enhui Wang, Long Zhao, Rujia Qiu
2025CP0268	P97	Title: Inspection Technology for Small Fixed-Wing UAV Clusters Author: Luo Long, Zhao Yu, Zhao Xiaomeng, Zhang Xiaozu, Huang Jingzhe
2025CP0271	P98	Title: Research on Power Grid Data Storage Fault Prediction Technology Based on LightGBM Author: Huabing Zhang, Yingyao Zhou, Jing Zhang, Jing Pan
2025CP0275	P99	Title: Power Quality Characteristics of Electric Vehicle Charging Facilities Author: DAI Shaojun, LIU Jianben, LI Ni, YIN Ting, NI Yuan, LU Yao
2025CP0276	P100	Title: Time-Domain Equivalent Modeling Method of VSC-HVDC Based on Multi-Condition Admittance Fitting for Small-Signal Stability Analysis Author: Hao Yuan, Ziqian Yang, Wangqianyun Tang, Baorong Zhou, Youjie Shi

2025CP0293	P101	Title: Region of Attraction Estimation for VSG with a Neural-Lyapunov-based Method Author: Jianxing Yang, Wei Sun, Huanren Lu, Liwen Hu, Fei Lin
2025CP0309	P102	Title: Power System Regional Inertia Evaluation Based on DREM and Sliding Window Author: Jingwen Wang, Shichen Zhou, Hongxin Li, Bangkun Liao, Mingrui Sun, Chao Zhang
2025CP0315	P103	Title: Dynamic Decoupling Control of Modular Multilevel Converters Based on Capacitor Voltage Feedback of Multi-Frequency Components Author: Shaopeng Zhang, Wang Xiang, Jinyu Wen, Zhu Guo
2025CP0338	P104	Title: Fault Diagnosis Method of Half-Bridge Switching Power Supply Based on Support Vector Machine Author: Peng Chen, Qiang-Ming Cai, Peng-Fei Yu, Li-Juan Deng, Jun-Liang Wan, Xin Cao
2025CP0356	P105	Title: Coupled Harmonic Current Source Model of Grid-connected Inverter Author: Shuo Yang, Xinyi Zhu, Yaqiong Li, Shun Tao
2025CP0359	P106	Title: Adaptive Control of Grid-Forming Cascaded H-Bridge Converter Based on J and D Author: Lele Cai, Zhen Xie, Jingyuan Yang
2025CP0360	P107	Title: Harmonic Source Parameter Identification Method Based on TCN-i Transformer Author: Yaqiong Li, Ziyu Wang, Huajia Wang, Shun Tao
2025CP0363	P108	Title: Modeling and Simulation of Phase-to-Phase Faults in Distribution Network Lines with a Thyristor-Controlled Hybrid Transformer Author: Ran Chen, Zheng Xiang, Zhiyuan Cai, Cien Xiao, Qian Feng, Xiaobin Mu, Bin Wang
2025CP0367	P109	Title: Virtual Operational Point based Parameter Identification Method for Grid-forming Energy Storage System Author: Lichao Wang, Xiaoxiao Qi, Bing Sun, Yuan Zhang

2025CP0368	P110	Title: Graphical Illustration of Fault Ride-Through for Grid-Connected Grid-Forming Inverters Author: Xiaoxiao Qi, Lichao Wang, Bing Sun, Yuan Zhang
2025CP0391	P111	Title: Design and Experimental Validation of an Input-Parallel Output-Serial (IPOS) Stacked-Bridge CLLLC Resonant Converter for Grid-Forming Applications Author: Shuhao Zhang, Qingping Li, Yunfei Xu, Guangyao Qiao, Yanjiao Jin, Qiuyu Shi
2025CP0491	P112	Title: Detection of Commutation Failure in LCC-HVDC Transmission System Based on DC Component Asymmetry of Valve Side Current Under Different Types of Faults Author: Dui Liu, Jinquan Tang, Wuyang Yi, Yulin Wang, Jun Zhao, Jietong Liu
2025CP0493	P113	Title: Efficient Dynamic Zoned Capacitor Voltage Balancing Algorithm for MMC with Full-Bridge and Half-Bridge Hybrid-Submodules Author: Hongying Peng, Qing Mu, Xin Zhou, Li Peng, Xing Zhang, Chongming Leng
2025CP0509	P114	Title: Asymmetrical Fault Ride Through Strategy of Enhanced Static Var Generator under Grid-forming Control Author: Guangzeng You, Xianglin An, Shuming Zhou, Jinyu Wang, Bobo Zhang, Cuicui Liu
2025CP0517	P115	Title: Stability-improving Controller of Grid-Forming Converters with Dual-Mode Operation Author: Wenlong Pan, Yan Du, Jinzhong Li, Yuguang Xie
2025CP0523	P116	Title: Control parameter tuning method for renewable energy stations based on short-circuit current control sensitivity index Author: Qidi Huo, Xiaojun Tang, Ziqi Wang, Qing Wang, Yan Xie, Wenman Gao
2025CP0524	P117	Title: Task Unloading and Resource Allocation in a Centralised Control System Author: Xunting Wang , Cheng Xie, Lingzhi Xia, Jianlin Li
2025CP0526	P118	Title: Comparative Analysis of Cascaded H-bridge STATCOM Modulator Harmonics for Grid Resonance Suppression in Tokamaks Author: Liang Tan, Chunyan Zhang, Baocan He, Anyong Cai, Yueping Zhang, Mingxuan Zhu, Yong Wang, Jinyi Liu

2025CP0531	P119	Title: Control Strategy of Grid-forming Energy Storage Inverter Based on Virtual Impedance Author: Zhicheng Li, Zhen Xie
2025CP0553	P120	Title: Offshore Wind Power via Low-frequency AC Transmission System based on Hybrid DRU-MMC Rectifier Author: Chuanshuang Jin, Nianwen Xiang, Bingbing Shao, Shulai Wang, Hailong Cheng, Ming Li
2025CP0581	P121	Title: Active power oscillation suppression strategy for grid-forming converter based on feedforward control Author: Yang Shang, Lidong Wang, Guangya Wang

9. Technical Visit

Date: September 26, 2025

Route 1

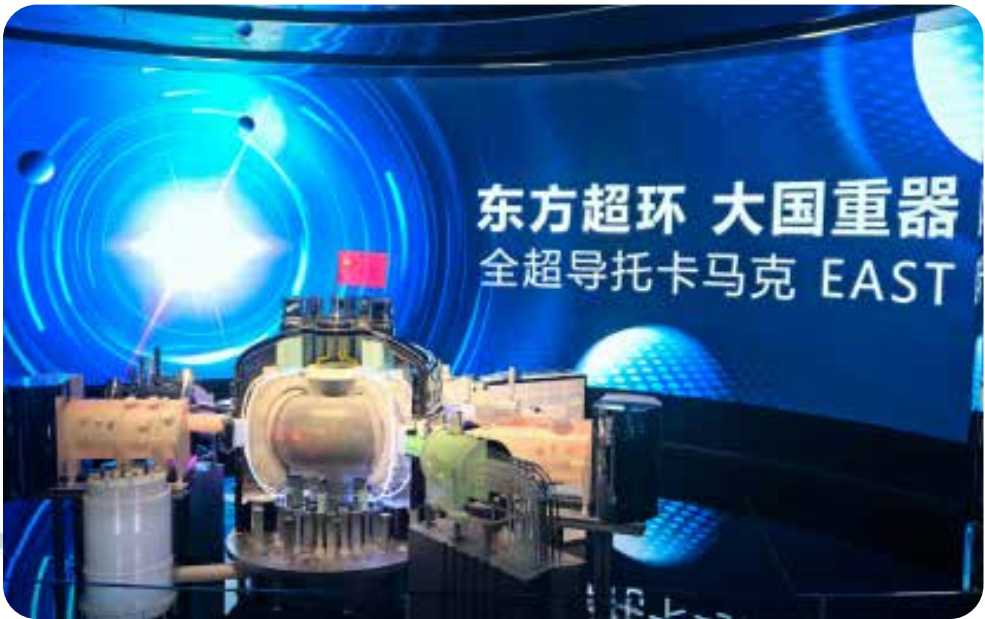
220-kilovolt Hefei Houdian Quantum Application Demonstration Substation & Fusion Innovation Exhibition Hall

Time	Schedule	Place
9:00	Gathering and Boarding	Hotel Lobby
	Shuttle Bus to Hefei Houdian Quantum Substation	
	Visit Hefei Houdian Quantum Substation	Hefei Houdian Quantum Substation
	Shuttle Bus to Fusion Innovation Exhibition Hall	
	Visit Fusion Innovation Exhibition Hall	Fusion Innovation Exhibition Hall
12:00	Back to Hotel	

The 220-kilovolt Hefei Houdian Quantum Application Demonstration Substation is located in the core area of the Quantum Technology and Industrial Center in Hefei National High-Tech Industry Development Zone. It serves as a critical power supply hub for the Hefei National Laboratory, Deep Space Exploration Laboratory, Quantum Industrial Park, and other key facilities. This demonstration substation has deployed a total of 85 units across 18 categories of quantum power technology innovations, including quantum current transformers, integrated quantum DC energy meters, quantum dot multi-parameter sensors, and 5G+ quantum technology. It is the first operational substation in China to comprehensively apply quantum measurement, quantum communication, and quantum computing. These innovations enable intelligent perception of multiple grid processes and equipment states, enhance communication security in dispatch automation and distribution automation, and explore new technological routes for large-scale grid simulation and computation. The substation serves as a model for the construction and operation of intelligent substations empowered by quantum technology.

Fusion Innovation Exhibition Hall is an important science education base of the Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences. Located in the southeast corner of the Comprehensive Research Facility for Fusion Engineering Testing (CRAFT) Park in Hefei Future Science City, as Building No. 14 of the park, the two-story above-ground structure covers a total exhibition area of 2,750 square meters. Officially completed and opened to the public in

September 2023, the exhibition hall showcases China’s major achievements and future visions in magnetically-confined fusion research.



Route 2

Lu’an megawatt hydrogen energy comprehensive utilization demonstration project

Time	Schedule	Place
9:00	Gathering and Boarding	Hotel Lobby
	Shuttle Bus to Lu’an megawatt hydrogen energy comprehensive utilization demonstration project	
	Visit Lu’an megawatt hydrogen energy comprehensive utilization demonstration project	Lu’an megawatt hydrogen energy comprehensive utilization demonstration project
12:00	Back to Hotel	

The Lu’an megawatt hydrogen energy comprehensive utilization demonstration project is jointly developed and designed by Anhui Company, China Electric Power Research Institute, Dalian Institute of Chemical Physics, Chinese Academy of Sciences and other units, which is the first verification of the integrated hydrogen energy technology chain of “production-storage-generation” with independent intellectual property rights, and the core equipment of the project “megawatt-level proton exchange membrane hydrogen production and power generation system” was approved as the first (set) major technical equipment in the national energy field in 2023. Since it was put into operation in December 2021, it has participated in the peak regulation of the power grid for many times, fully verifying the supporting role of the hydrogen energy storage system in power protection.



10. Meals and Coffee Breaks

Time		Content	Location
Sep. 23	18: 00-20: 00	Welcome Reception	Huijingge Cafeteria/Golden Century Chinese Restaurant
Sep. 24	12: 20-14:00	Lunch	Huijingge Cafeteria/Golden Century Chinese Restaurant
	15: 30-15: 50	Coffee Break	
	18: 00-20: 00	Dinner	Huijingge Cafeteria/Golden Century Chinese Restaurant
Sep. 25	10: 40-11: 00	Coffee Break	
	12: 20-14:00	Lunch	Huijingge Cafeteria/Golden Century Chinese Restaurant
	15: 30-15: 50	Coffee Break	
	18: 00-20: 00	Dinner	Huijingge Cafeteria/Golden Century Chinese Restaurant
Sep. 26	12: 20-14:00	Lunch	Huijingge Cafeteria/Golden Century Chinese Restaurant

11. Useful formation

11.1 Registration Location

Registration and Sign-in Desk at the Lobby (1F) of Empark Grand Hotel Anhui

11.2 Registration

Participants who have registered online and paid the registration fee, go to the corresponding check-in counter to report the registration number and get the information package.

11.3 Simultaneous Interpretation Headset

The delegates can find the Simultaneous Interpretation Headset on the table. Please take care of the equipment and put it back on the table after the meeting.

11.4 Delegate Badge

You are required to wear your delegate badge to all activities of the Conference.

11.5 Conference Secretariat

Bingbing Shao (Papers)

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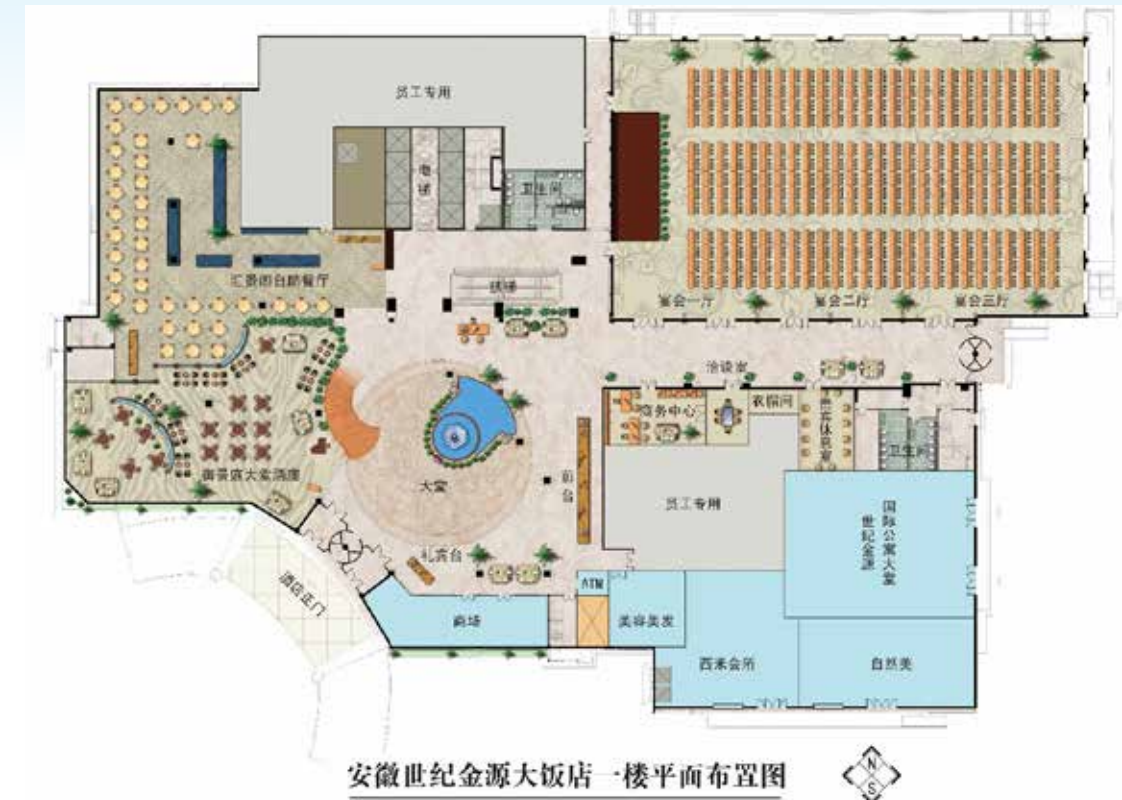
Yan Tan (Hotel)

Tel: 86 17730037377

Conference website: <https://powercon2025.csee.org.cn/index.html>

12. Layout of Conference Rooms

First-floor Layout:



Third-floor Layout:



安徽世纪金源大饭店三楼平面布置图





<https://powercon2025.csee.org.cn>

