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IEEE

IEEE PES Power & Energy Society®

中国南方电网 CHINA SOUTHERN POWER GRID 超高压输电公司

2024年IEEE直流技术与系统国际会议暨IEEE直流电力系统技术委员会(中国)年会

2024 IEEE International Conference on DC Technology and Systems

IEEE PES China Satellite Technical Committee-DC Power System Annual Meeting

大会指南 PROGRAM

Oct. 19, 2024- Oct. 20, 2024
Zhuhai · China

Organizer:

IEEE PES China Satellite Technical Committee-DC Power System
South China University of Technology
IEEE PES Guangzhou Chapter

Guider:

IEEE
IEEE PES
CSG EHV Power Transmission Company
The Hong Kong Polytechnic University
University of Macau

Co-Oganizer:

Guangdong Energy Internet Innovation Center
National Engineering Research Center of UHV Technology and Novel Electrical Equipment Basis
CSG Joint Laboratory for Safe Operation of DC Transmission Equipment and Submarine Cables
Hengqin Digital Zero Carbon Island Communal Laboratory
Zhuhai DC Transmission and Power Electronics Technology Industry Promotion Association

大会APP

图片直播二维码

热烈欢迎各位嘉宾和代表

参加2024年IEEE直流技术与系统国际会议！

Welcome all guests and representatives to attend the

2024 IEEE International Conference on DC Technology and Systems!

目 录

一、2024年IEEE直流技术与系统国际会议日程一览表

时间 Time / 地点 Place		海泉湾维景国际大酒店·天王星 大堂（酒店三层）/OCEAN SPRING GRAND METROPARK HOTEL SPRING PLAZA Lobby（3rd floor）								
10月18日	14:00-22:00	代表报到、领取资料/Registration								
时间 Time / 地点 Place		海泉湾维景酒店·天王星会议中心主会场（凯旋宫宴会厅）Main Venue of GRAND METROPARK HOTEL SPRING PLAZA Conference Center	分会场一（太平洋演播厅）Session 1 Pacific Lecture Theater		分会场二（马德里厅）Session 2 Madrid Room	分会场三（米兰厅）Session 3 Milan Room	分会场四（突尼斯厅）Session 4 Tunisia Room	分会场五（安卡拉厅）Session 5 Ankara Room	分会场六（北冰洋厅）Session 6 Arctic Room	
10月19日	9:00-9:30	嘉宾致辞 Welcome Speech								
	9:30-9:40	论文表彰 Paper Commendation								
	9:40-12:10	特邀主旨报告 Keynote Speech								
	12:30-13:30	3层塞维雅/1楼四海轩 午餐（自助餐）/Lunch（Buffet）								
	14:00-17:30	特邀主旨报告 Keynote Speech								
	18:00-19:30	3层塞维雅/1楼四海轩 晚餐（自助餐）/Dinner（Buffet）								
	19:30-20:00		直流电力系统技术委员会（内部会议）IEEE PES China Satellite Technical Committee - DC Power System							
	20:00-22:00		直流输变电设备技术分委会（内部会议）DC Transmission and Transformation Equipment Subcommittee		直流输电控制保护技术分委会（内部会议）DC Transmission Control & Protection Subcommittee	直流配电网技术分委会（内部会议）DC Distribution Network Subcommittee	直流输配电系统仿真技术分委会（内部会议）DC Transmission and Distribution System Simulation Subcommittee	低压直流技术分委会（内部会议）Low Voltage DC Technical Subcommittee	直流系统规划与设计分委会（内部会议）DC System Planning & Design Subcommittee	
时间 Time / 地点 Place				分论坛一：直流输变电装备技术（大西洋厅）Sub-forum 1: DC power transmission and transformation equipment technology (Atlantic Room)	分论坛二：直流输电控制保护技术（马德里厅）Sub-forum 2: DC transmission control and protection technology (Madrid Room)	分论坛三：直流配电网技术(含低频输电技术)（米兰厅）Sub-forum 3:DC distribution network technology (including low-frequency transmission technology) (Milan Room)	分论坛四：直流输配电系统仿真技术（突尼斯厅）Sub-forum 4:DC transmission and distribution system simulation technology (Tunisia Room)	分论坛五:低压直流技术（安卡拉厅）Sub-forum 5:Low Voltage DC Technology (Ankara Room)	分论坛六：直流系统规划与设计（北冰洋厅）Sub-forum 6:DC system planning and design (Arctic Room)	
10月20日	09:00-10:40			特邀专题报告 Invited Special Topic Report	特邀专题报告 Invited Special Topic Report	特邀专题报告 Invited Special Topic Report	特邀专题报告 Invited Special Topic Report	特邀专题报告 Invited Special Topic Report	特邀专题报告 Invited Special Topic Report	会议论文海报展示 Conference Paper Poster Session
	10:40-10:55	茶歇/Tea Break								
	10:55-12:00			特邀专题报告及论文宣读 Invited Special Topic Report and Paper Presentation	特邀专题报告及论文宣读 Invited Special Topic Report and Paper Presentation	特邀专题报告及论文宣读 Invited Special Topic Report and Paper Presentation	特邀专题报告及论文宣读 Invited Special Topic Report and Paper Presentation	特邀专题报告及论文宣读 Invited Special Topic Report and Paper Presentation	特邀专题报告及论文宣读 Invited Special Topic Report and Paper Presentation	
	12:00-13:30	3层塞维雅 午餐（自助餐）/Lunch（Buffet）								
	13:30-17:00	现场观摩交流（格力电器&唐家湾多端柔直配网示范项目二选一） On-site Observation (Gree Electric & Tangjiawan Multi-Terminal Flexible Direct Current Distribution Network Demonstration Project, choose one)								

会议报到/Meeting Registration

2024年10月18日星期五/Friday

海泉湾维景国际大酒店 · 天王星 大堂（酒店三层）

OCEAN SPRING GRAND METROPARK HOTEL SPRING PLAZA Lobby（3rd floor）

日期 Date	时段 Time	内容 Content	主持人 Host
10月18日	14:00-22:00	代表报到、领取资料 Representatives register and get information	/

主论坛/Main Forum

2024年10月19日星期六/Saturday

海泉湾维景酒店·天王星 会议中心主会场（凯旋宫宴会厅）

Main Venue of GRAND METROPARK HOTEL SPRING PLAZA Conference Center

日期 Date	时段 Time	内容 Content	主持人 Host
10月19日 上午 morning	09:00-09:30	主持人开场，嘉宾介绍 Host opening, guest introduction	IEEE PES直流电力系统技术委员会（中国）秘书处单位南网超高压公司党委书记 李庆江
		南方电网公司总工程师汪际峰致辞 Jifeng Wang, Chief Engineer of China Southern Power Grid, welcome speech	
		华南理工大学领导致辞 Vice President of South China University of Technology, welcome speech	
		IEEE PES主席Shay Bahramirad、钟志勇致辞 IEEE PES President Shay Bahramirad and President-elect Zhiyong Zhong , welcome speeches	
		中国科学院院士周孝信致辞 Academicians Xiaoxin Zhou of the Chinese Academy of Sciences, welcome speech	
	09:30-09:40	表彰2024年IEEE直流技术与系统国际会议论文奖 Recognizing the 2024 IEEE International Conference on DC Technology and Systems Paper Award	
	09:40-10:10	**主旨报告：直流输电发展和技术思考** Development and Technical Thoughts of HVDC Transmission **报 告 人：**中国工程院院士 李立涅	IEEE PES直流电力系统技术委员会（中国）主席 刘相枪
	10:10-10:40	**主旨报告：我国电力转型与分频输电** China's Power Transformation and the Fractional Frequency	

		Transmission System **报 告 人：**中国科学院院士 王锡凡	
	10:40-11:10	**主旨报告：高压直流输电发展的欧洲视角** HVDC Developments at Cross Road: Europe's Perspectives **报 告 人：**英国伯明翰大学教授 张小平	
	11:10-11:40	**主旨报告：中低压直流配用电技术发展趋势及思考** Development trend and thinking of medium and low voltage DC power distribution technology **报 告 人：**山东大学特聘教授 马钊	
	11:40-12:10	**主旨报告：大容量SVG支撑新型电力系统构建展望** The Prospect for Using Large-capacity SVG to Support the Construction of Renewable-energy-dominated Power System **报 告 人：**国网经研院副总经理 马为民	
	12:30-13:30	**午餐（自助餐）**	/
10月19日 下午	14:00-14:30	**主旨报告：面向双高电力系统发展需求的柔性直流输电技术** VSC-HVDC Technology for Development Needs of Power Systems With High Shares of Renewables and Power Electronics 报 告 人：南网科研院副院长 李岩	华南理工大学院长 唐文虎
	14:30-15:00	**主旨报告：新能源电力系统仿真技术及应用** The Simulation Technology and Application of New Energy Power Systems **报 告 人：**南网科研院副院长 郭琦	
	15:00-15:30	**主旨报告：高压直流海底电缆状态感知技术** Condition Perception Technology for High-voltage Direct Current Submarine Cables **报 告 人：**华南理工大学教授 郝艳捧	
	15:30-16:00	**主旨报告：柔性直流输电系统宽频振荡分析与控制** Broadband oscillation analysis and control for MMC-HVDC System **报 告 人：**华北电力大学教授 刘崇茹	
	16:00-16:30	**主旨报告：特高压直流系统用开关装备关键技术研发与实践** Key Technology Research and Development and Practice of Switching Equipment for UHVDC Systems **报 告 人：**南网超高压公司创新部副总经理 吕金壮	
	16:30-17:00	**主旨报告：支撑新型配电系统构建的中低压直流双级环网技术、装备与应用** Technology, equipment and application of medium and low voltage DC two-stage ring network supporting the construction of new distribution system **报 告 人：**国网山东电科院配电技术中心主任 李立生	

	17:00-17:30	**主旨报告：南方电网直流配用电技术的探索与实践** Exploration and Practice of DC Distribution Technology in China Southern Power Grid **报 告 人：**广东电网珠海供电局党委书记 高志华	
	18:00-19:30	**晚餐**	/

IEEE PES直流电力系统技术委员会及分委会内部会议
Internal Meeting of IEEE PES DC Power System Technical Committee and Subcommittee

2024年10月19日星期六晚上/Saturday Night

海泉湾维景酒店·天王星 会议中心分会场

Sub-venue of GRAND METROPARK HOTEL SPRING PLAZA Conference Center

日期 Date	时段 Time	内容 Content	主持人 Host
10月19日晚上 night	19:30-20:00	IEEE PES直流电力系统技术委员会（中国）（IEEE PES China Satellite Technical Committee - DC Power System）年度工作会议（内部会议） 地点：太平洋演播厅（Pacific Lecture Theater）	张怿宁（南网超高压公司）
	20:00-22:00	直流输变电设备技术分委会（DC Transmission and Transformation Equipment Subcommittee）（内部会议） 地点：太平洋演播厅（Pacific Lecture Theater）	邵震（南网超高压公司）
		直流输电控制保护技术分委会（DC Transmission Control & Protection Subcommittee）（内部会议） 地点：马德里厅（Madrid Room）	陈潜（南网超高压公司）
		直流配电网技术分委会（DC Distribution Network Subcommittee）（内部会议） 地点：米兰厅（Milan Room）	姜睿智（许继电气）
		直流输配电系统仿真技术分委会（DC Transmission and Distribution System Simulation Subcommittee）（内部会议） 地点：突尼斯厅（Tunisia Room）	李书勇（南网科研院）
		低压直流技术分委会(Low Voltage DC Technical Subcommittee)会议（内部会议） 地点：安卡拉厅（Ankara Room）	孙媛媛（山东大学）
		直流系统规划与设计分委会会议(DC System Planning & Design Subcommittee）（内部会议） 地点：北冰洋厅（Arctic Room）	辛清明（南网科研院）

专题研讨分论坛/Special Topic Discussion Forum

2024年10月20日星期日上午/Sunday Morning

海泉湾维景酒店·天王星 会议中心分会场

Sub-venue of GRAND METROPARK HOTEL SPRING PLAZA Conference Center

日期 Date	时段 Time	内容 Content	主持人 Host
分论坛一:直流输变电装备技术 Sub-forum 1: DC Power Transmission and Transformation Equipment Technology 地点：大西洋厅（Atlantic Room）			
10月20日 上午 morning	09:00-09:20	**主题报告：**大型变压器内部短路故障分析与溯源方法 Analysis and traceability method of internal short-circuit fault of large transformers **报 告 人：**重庆大学 杨鸣	陈禾（南网超高压公司）/ 韩永霞（华南理工大学）
	09:20-09:40	**主题报告：**支撑新能源接入的新型直流关键技术 Novel DC technology supporting the integration of new energy **报 告 人：**清华大学 余占清	
	09:40-10:00	**主题报告：**超高压机械直流断路器的关键技术及应用 Key Technologies and Applications of Ultra-high Voltage Mechanical DC Circuit Breakers **报 告 人：**华中科技大学 陈立学	
	10:00-10:20	**主题报告：**柔性直流输电系统全场景宽频振荡抑制关键技术 Key Technology of Broadband Oscillation Suppression for MMC-HVDC Transmission System **报 告 人：**华北电力大学 季柯	
	10:20-10:40	**主题报告：**高海拔宇宙射线对硅橡胶材料性能的影响 Effect of high altitude cosmic rays on properties of silicone rubber materials **报 告 人：**华南理工大学 阳林	
	10:40-10:55	**茶 歇 / Tea Break**	
	10:55-11:15	**主题报告：**接枝改性聚丙烯直流海缆绝缘关键技术及应用 Key technology and application of grafting-modified polypropylene insulation for HVDC submarine cable **报 告 人：**天津大学 李忠磊	
	11:15-11:35	**主题报告：**多端直流用直流高速开关 DC high-speed switch for ultra-high voltage multi terminal DC transmission system **报 告 人：**南网超高压公司电力科研院 张长虹	
	11:35-11:55	**主题报告：**高压直流电气设备防火关键技术及应用	

		Key Technologies and Applications for Fire Prevention of High Voltage DC Electrical Equipment **报 告 人：**南网超高压公司电力科研院 周海滨	
	11:55-12:03	**论文宣读：**10kV SiC MOSFET Module for Traction Converter Application **报 告 人：**西安交通大学 朱隽捷	
	12:03-12:11	**论文宣读：**Research on Prediction of Inlet Valve Water Temperature in Flexible DC Valve Cooling System Based on VMD-DF **报 告 人：**南京南瑞继保电气有限公司 刘东川	
	12:11-12:19	**论文宣读：**Flashover Characteristics of 500kV Insulators under Positive Short-tail Wave Impulse **报 告 人：**华南理工大学 何少敏	
	12:19-12:27	**论文宣读：**A digital converter station monitoring data fusion method for full-stop fault discrimination **报 告 人：**南网超高压公司 靳晓琪	

分论坛二:直流输电控制保护技术 Sub-forum 2: DC Transmission Control and Protection Technology 地点：马德里厅（Madrid Room）			
10月20日 上午 morning	09:00-09:20	**主题报告：**柔性直流电网保护与故障限流技术研究及装置研发 Research on Protection and Fault Current Limiting Technologies in Flexible DC Grids and Device Development **报 告 人：**天津大学 何佳伟	陈潜（南网超高压公司）/ 李海锋（华南理工大学）
	09:20-09:40	**主题报告：**基于故障暂态量的直流输电线路保护原理研究 Research on Protection Principles of DC Transmission Lines Based on Fault Transient **报 告 人：**上海交通大学 郑晓冬	
	09:40-10:00	**主题报告：**直流电网故障分析与保控协同研究 Research on Fault Analysis and Protection Control Cooperation for DC Grids **报 告 人：**北京交通大学 李猛	
	10:00-10:20	**主题报告：**柔性直流电网线路精确建模与继电保护原理探讨 Accurate Modeling and Protective Relaying Principles for Transmission Lines in MMC-HVDC Grids **报 告 人：**上海科技大学 刘宇	
	10:20-10:40	**主题报告：**高压直流输电系统直流滤波器保护方法研究 Research on Protection Methods for DC Filter of HVDC Transmission System **报 告 人：**西南交通大学 林圣	
	10:40-10:55	**茶 歇 / Tea Break**	
	10:55-11:15	**主题报告：**柔性直流输电系统特性优化提升技术 Optimization And improvement Technology Of Flexible DC Power Transmission System Characteristics **报 告 人：**中国电力科学研究院 王姗姗	
	11:15-11:35	**主题报告：**构网型新能源发电送出系统的同步稳定性分析与控制 Synchronization Stability Of Sending-end Power System Composed By Grid-forming Based Generators **报 告 人：**西安交通大学 李佳朋	
	11:35-11:43	**论文宣读：**Fault Identification Method For Flexible HVDC Line Based On Euclidean Similarity Calculation **报 告 人：**华南理工大学 刘海南	
	11:43-11:51	**论文宣读：**LCC-MMC HVDC Line Pilot Protection Based on U-Q Characteristic Curve **报 告 人：**南网超高压公司 王少楠	

	11:51-11:59	**论文宣读：**Analysis on Current Control Strategy of Yunnan-Guizhou Interconnection Project **报 告 人：**南网超高压公司 张子聪	
	11:59-12:07	**论文宣读：**An MMC optimal balancing control strategy based on SMs' Capacitor Voltage Characteristics **报 告 人：**华南理工大学 金浩天	
	12:07-12:15	**论文宣读：**Principle Analysis and Optimization Strategy for Tripping Self-holding Circuit in the Last Breaker Protection of AC Filters **报 告 人：**南网超高压公司 朱磊	

分论坛三:直流配电网技术(含低频输电技术) Sub-forum 3: DC Distribution Network Technology (Including Low-requency Transmission Technology) 地点：米兰厅（Milan Room）			
10月20日 上午 morning	09:00-09:20	**主题报告：**考虑交流侧三相不平衡的直流配电系统小信号稳定分析方法 Small-signal stability analysis of grid-connected DC active distribution networks under unbalanced grid conditions **报 告 人：**西安交通大学 焦在滨	姜睿智（许继电气）/刘沈全（华南理工大学）
	09:20-09:40	**主题报告：**中低压配电网柔性互联解决方案与应用 Flexible interconnection device technology of medium voltage distribution network **报 告 人：**许继电气西安许继 杨美娟	
	09:40-10:00	**主题报告：**分频扩容输电系统的可行性及其运行控制技术 Feasibility, Operation and Control of Transmission Line Upgrade via Fractional Frequency Transmission System **报 告 人：**西安交通大学 赵勃扬	
	10:00-10:20	**主题报告：**新型电力系统背景下可再生能源海岛微电网技术实践及展望 Practice and Prospect of Renewable Energy Island Microgrid Technology in the Context of New Power System **报 告 人：**南方电网电力科技股份有限公司 王红星	
	10:20-10:35	**茶 歇 / Tea Break**	
	10:35-10:55	**主题报告：**新型配电网仿真技术研究及应用 Research and Application of Simulation Technologies for New-type Distribution Networks **报 告 人：**许继集团河南源网荷储电气研究院 朱军红	
	10:55-11:05	**论文宣读：**A Zero Crossing Protection Method For DC Distribution Network **报 告 人：**东南大学 兰竣杰	
	11:05-11:15	**论文宣读：**Key Parameters Affecting the Transient Characteristics of Active Distribution Networks Under Large Disturbances **报 告 人：**中国电力科学研究院 胡善华	
	11:15-11:25	**论文宣读：**Multi-Objective Optimal Design of High Power, High Frequency, High Voltage Transformer Considering Insulation for DC distribution Grid **报 告 人：**东南大学 樊盈浩	
	11:25-11:35	**论文宣读：**Hydrogen Energy Storage-based DC Energy Hub for Regenerative Braking Energy Utilization in Electrified Railways **报 告 人：**The Hong Kong Polytechnic University Junyu Chen	

	11:35-11:45	**论文宣读：**LoRa Terminal Network Access Authentication Technology Based on Radio Frequency Fingerprint **报 告 人：**南网超高压公司昆明局 孙豪	

分论坛四:直流输配电系统仿真技术 Sub-forum 4: DC Transmission and Distribution System Simulation Technology 地点：突尼斯厅（Tunisia Room）			
10月20日 上午 morning	09:00-09:20	**主题报告：**构网型装备多层级评价、选址与配置及其在疆实践 Grid-forming Converter: Assessment, Siting, configuration and its implementation in Xinjiang **报 告 人：**新疆大学 陈俊儒	李书勇（南网科研院）/ 向往（华中科技大学）
	09:20-09:40	**主题报告：**构网型稳定控制技术在柔直系统中的拓展应用 The Extension of Grid-Forming Control in HVDC Applications **报 告 人：**西安交通大学 李奕曈	
	09:40-10:00	**主题报告：**新疆电网快速频率支撑能力评估体系及其常态化监测方法 Evaluation System for Fast Frequency Support Capability of the Xinjiang Power Grid and Its Normalized Monitoring Methods **报 告 人：**新疆大学 刘牧阳	
	10:00-10:20	**主题报告：**新能源构网控制性能评估与提升 Performance Evaluation and Enhancement for Renewable Grid-forming Control **报 告 人：**天津大学 朱介北	
	10:20-10:35	**茶 歇 / Tea Break**	
	10:35-10:55	**主题报告：**大规模海上风电直流外送拓扑与控制技术 Topology and Control for Large-Scale Offshore Wind Power Integration using HVDC **报 告 人：**华中科技大学 向往	
	10:55-11:15	**主题报告：**海上风电柔性直流送出关键仿真技术与工程应用 Key Technologies and Engineering Applications of Real Time Simulation Test for MMC-HVDC Control and Protection System Connected with Offshore Wind Farm **报 告 人：**南方电网科学研究院 陈钦磊	
	11:15-11:35	**主题报告：**模块化级联式柔性直流换流器拓扑及其仿真与协调控制技术研究 Research on the Topology, Simulation and Coordinated Control Techniques of Novel Modular Cascaded Flexible LCC Converter **报 告 人：**华北电力大学 郭春义	
	11:35-11:43	**论文宣读：**An Adaptive Inertia and Damping Control of VSG with Four-leg inverter for Photovoltaics-Storage Grid Connected System **报 告 人：**国网山东省电力公司电力科学研究院 刘洋	
	11:43-11:51	**论文宣读：**Research On Carbon Reduction Scheme Of Green Building Based On DC Power Supply Technology **报 告 人：**华南理工大学 冯图	

	11:51-11:59	**论文宣读：**DC Terminal Impedance Modeling and Stability Analysis for VSG-Controlled Grid-Connected Inverter **报 告 人：**The Hong Kong Polytechnic University Xinyang Su	
	11:59-12:07	**论文宣读：**Study of key operation and maintenance parameters of optical measurement system based on purely optical current transformer **报 告 人：**南网超高压公司贵阳局 余宁	

分论坛五:低压直流技术 Sub-forum 5: Low Voltage DC Technology 地点：安卡拉厅（Ankara Room）			
10月20日 上午 morning	09:00-09:20	**主题报告：**公共建筑空调负荷柔性调节关键技术研究与展望 Research and Prospect on Key Technologies for Flexible Adjustment of Air Conditioning Load in Public Buildings **报 告 人：**深圳供电局 赵宇明	孙媛媛（山东大学）/赵志刚（格力电器）/孙凯祺（山东大学）
	09:20-09:40	**主题报告：**多场景高效灵活交直流配用电关键技术及应用 Key Technologies and Applications for Efficient and Flexible AC/DC Power Distribution **报 告 人：**国网江苏省电力有限公司电力科学研究院 周琦	
	09:40-10:00	**主题报告：**大规模海上风电柔直送出涉网能力提升关键技术探讨 Discussions on Key Technologies for Enhancing the Grid Integration Capacity of Large-Scale Offshore Wind Power Flexible Direct Transmission **报 告 人：**上海电力大学 赵晋斌	
	10:00-10:20	**主题报告：**民用建筑直流配电系统设计标准解读与案例分析 Interpretation and Case Analysis of Design Standard for DC Distribution System in Civil Buildings **报 告 人：**深圳市建筑科学研究院 李雨桐	
	10:20-10:40	**主题报告：**光储直柔能源站系统解决方案 PEDF Power Station System Solution **报 告 人：**国创能源互联网创新中心（广东）有限公司 袁金荣	
	10:40-10:55	**茶 歇 / Tea Break**	
	10:55-11:15	**主题报告：**“输电-配电-用电”系统中直流技术的研究与应用 Application of DC Technology in Power Transmission Distribution & Utilization **报 告 人：**山东大学 李可军	
	11:15-11:25	**论文宣读：**An AC/DC loss allocation method considering three-terminal flexible direct current under power market environment **报 告 人：**南网超高压公司电力科研院 和森	
	11:25-11:35	**论文宣读：**Research on the abnormal discharge law of HVDC transmission converter valve and its improvement measures **报 告 人：**南网超高压公司 张博	
	11:35-11:45	**论文宣读：**Small-Signal Stability Analysis of Grid-Tied GFL/GFM VSCs System **报 告 人：**山东大学 孟怡飞	

	11:45-11:55	**论文宣读：**Short Circuit Currents Constrained Switching Optimization Enhancing Flexibility of Urban Power Grid with Energy Storage System **报 告 人：**南网超高压公司南宁局 曾宇	
	11:55-12:05	**论文宣读：**Switching Strategy And Fault Analysis Of Earth Metal Loop For Hybrid Three-terminal HVDC Transmission **报 告 人：**南网超高压公司 张函	
	12:05-12:15	**论文宣读：**Advanced Wideband-frequency Grid Impedance Measurement Utilizing MMC-HVDC Integration **报 告 人：**北京怀柔实验室 孔明	

分论坛六:直流系统规划与设计 Sub-forum 6: DC System Planning and Design 地点：北冰洋厅（Arctic Room）			
10月20日 上午 morning	09:00-09:20	**主题报告：**构网控制及其在柔直输电技术的应用 Grid-Forming Control and Its Application in VSC-HVDC Systems **报 告 人：**南方电网科学研究院 张利东	辛清明（南网科研院）/肖晃庆（华南理工大学）
	09:20-09:40	**主题报告：**彻底抵御换相失败的模块化级联式柔性传统直流换流器拓扑及控制方法 Topology and Control of Flexible LCC Converter With Commutation Failure Elimination Capability **报 告 人：**华北电力大学 郭春义	
	09:40-10:00	**主题报告：**中低压工业直流配电系统关键技术及应用 Key Technology and Application of Medium and Low Voltage Industrial DC Power Distribution System **报 告 人：**西安交通大学 亓丽	
	10:00-10:20	**主题报告：**高水电占比送端电网频率振荡机理分析及抑制 Mechanism Analysis and Suppression of Frequency Oscillation In Sending Power Grid With High Hydropower Penetration **报 告 人：**西南交通大学 廖凯	
	10:20-10:40	**主题报告：**实现直流故障阻断和高功率密度的MMC拓扑研究 Research on Topologies of MMCs: to Achieve DC Fault Blocking with Higher Power Density **报 告 人：**四川大学 王顺亮	
	10:40-10:55	**茶 歇 / Tea Break**	
	10:55-11:15	**主题报告：**新能源与直流高占比受端电网的动态能量优化控制 Dynamic Energy Optimization Control for Receiving-End Power Grids with High Penetration of Renewable Energy and HVDC power **报 告 人：**浙江大学 王国腾	
	11:15-11:35	**主题报告：**高压直流输电地线不停电融冰技术 Non-stop ice melting technology for HVDC ground wire **报 告 人：**南网超高压公司电力科研院 王立平	
	11:35-11:43	**论文宣读：**Design of flexible HVDC control system based on MMC **报 告 人：**中国南方电网公司 凌艺榕	
	11:43-11:51	**论文宣读：**Risk Analysis and Upgradation of Protections for HVDC Project with Common Grounding Electrode **报 告 人：**南网超高压公司电力科研院 张沛然	
	11:51-11:59	**论文宣读：**Diagnostic study of insulation defects in zero-carbon DC system based on GRU-ATT	

		报 告 人：广东电网有限责任公司 刘尧	
	11:59-12:07	**论文宣读：**A Coordinated Strategy to Mitigate DC Voltage Rise in MMC-HVDC Systems with Offshore Wind Integration **报 告 人：**University of Birmingham Yi Liu	
	12:07-12:15	**论文宣读：**Active Power Limitation of Windfarm Generation Transmitted Through MMC-HVDC Systems **报 告 人：**中国南方电网公司 冯俊杰	

现场观摩交流/On-site Observation and Exchange

2024年10月20日星期日下午/Sunday Afternoon

日期 Date	时段 Time	内容 Content	主持人 Host
10月20日 下午 afternoon	13:30-17:00	**格力电器&唐家湾多端柔直配网示范项目** （二选一参观，数量控制，先报先得） **Gree Electric & Tangjiawan Multi-Terminal Flexible Direct Current Distribution Network Demonstration Project** **(**Choose one to visit**)**	/
返程/Return			

二、大会组织架构

（一）大会荣誉主席

汪际峰 南方电网公司总工程师

李立涅 中国工程院院士

饶 宏 中国工程院院士

（二）大会主席

李庆江 南方电网公司重大项目总监，南网超高压公司党委书记

（三）大会联合主席

王国利 南网超高压公司副总经理

刘相枪 IEEE PES 直流电力系统技术委员会（中国）主席

唐文虎 华南理工大学电气学院院长

蒋 琨 南方电网公司专家委专职委员

（四）会议顾问

周孝信 中国科学院院士

王锡凡 中国科学院院士

钟志勇 香港理工大学教授

曾 嵘 清华大学副校长

许 勇 华南理工大学副校长

（五）会议委员会主席

许 昭 香港理工大学

夏谷林 南网超高压公司

邵 震 南网超高压公司电力科研院

李海锋 华南理工大学

刘肇熙 华南理工大学

（六）组织委员会主席

张怿宁　南网超高压公司

黄志雄　南网超高压公司

雪　映　华南理工大学

（七）技术委员会主席

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张小平　英国伯明翰大学

马　钊　山东大学

吴建中　英国卡迪夫大学

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徐　政　浙江大学

司马文霞　重庆大学

和敬涵　暨南大学

余占清　清华大学

吕金壮　南网超高压公司

张勇军　华南理工大学

何俊佳　华中科技大学

（九）论文集编委员会主席

雪　映　华南理工大学

汪娟娟　华南理工大学

三、主旨报告专家

李立涅，男，江苏省建湖县人，电力系统专家，直流输电专家；中国工程院院士，中国南方电网公司专家委员会名誉主任委员，华南理工大学电力学院名誉院长。以第一完成人获得2017年国家科学技术进步奖特等奖，获得国家科学技术进步奖一等奖、二等奖，获得光华工程科技奖、何梁何利基金奖、广东省科学技术突出贡献奖，是第五届全国优秀科技工作者。二〇二四年一月获得第一届国家卓越工程师团队奖，是获奖团队“特高压柔性直流输电技术研发团队”的负责人。

李立涅院士长期从事电力工程建设，在电力系统、直流输电和交直流并联电网运行技术领域作出重要贡献，为我国特高压直流输电、特高压多端柔性直流输电技术发展做出领先世界的成绩。提出透明电网技术理论并致力实践，将数字化、智能化等融入新型电力系统，努力实现电力系统可见可知可控。

Prof. Li Licheng, Academician of CAE, specializes in power technology. He is now honorary chairman of expert committee of CSG, honorary dean of School of Electric Power Engineering of SCUT, and chairman of CSEE Study Committee of HVDC and Power Electronics. He participated in and organized the construction of the first 330kV AC transmission project, the first 500kV AC transmission project, the first 500kV DC transmission project in China. Moreover, He presided over the theoretical research, key technology development and engineering construction of the world’s first ± 800kV UHVDC transmission project. Li Licheng advocated VSC-HVDC transmission technology, presided over the theoretical research of VSC-HVDC and ultra high voltage multi terminal VSC-HVDC. In addition, he proposes the concept and technical theoretical system of transparent electric network, and integrate modern sensing technology, information technology, digital technology and intelligent technology into the power system.

Li Licheng won the Special Prize of State Science and Technology Progress Award as the first complete person. As the team leader, his research and development team for ultra-high voltage

flexible DC transmission technology won the first National Outstanding Engineering Team Award. He has won the First Prize and Second Prize of the National Science and Technology Progress Award, Guanghua Engineering Science and Technology Prize, Ho Leung Ho Lee Foundation Scientific and Technological Progress Award, and Guangdong Province Science and Technology Outstanding Contribution Award. In addition, he was awarded the title of National Outstanding Science and Technology Research Worker.

王锡凡，中国科学院院士，IEEE Life Fellow，西安交通大学大学教授，博士生导师。长期从事电力系统分析、规划及新型输电技术的基础理论和关键技术研究，在我国电力系统分析计算、电力源网规划与可靠性评估、电力市场机制设计等领域做出开拓性、引领性贡献，推动实现了我国电力系统计算机分析理论的追赶超越，引领了世界范围内风电等新能源电力可靠性的研究，奠定了电力系统规划、电力市场等学科分支的发展基础，提出并发展的分频（低频）输电技术是我国在世界电气工程领域的“原始创新”。

王锡凡院士成果丰富，共出版著作18部，其中1978年主编我国电力系统计算机分析方法首部学术专著，2022年获全国首届教材建设奖（电气工程领域唯一获奖研究生教材），获得近二十项省部级以上科研奖励，包括1999年国家自然科学四等奖、2023年国家自然科学二等奖。

Xifan Wang, Academician of the Chinese Academy of Sciences, IEEE Life Fellow, Professor /Doctoral Supervisor at Xi'an Jiaotong University. His research focuses on the basic theories and key technologies of power system analysis, planning, and novel power transmission technologies. He has made pioneering and leading contributions in the fields of power system analysis and calculation, power source network planning and reliability assessment, and power market mechanism design in China. He has promoted the catch-up and surpassing of China's power system computer analysis theory, led the research on the reliability of wind power and other new energy power sources worldwide. and laid the foundation for the development of power system planning and power market disciplines. He proposed and developed the fractional frequency transmission technology, also known

as the low-frequency ac power transmission, which is China's "original innovation" in global electrical engineering.

Academician Xifan Wang has rich achievements, with a total of 18 books published, including the first academic monograph on computer analysis methods of power systems in China in 1978. In 2022, he won the first National Textbook Construction Award (the only award-winning graduate textbook in the field of power electrical engineering), and has received nearly twenty scientific research awards at the provincial and ministerial level and above, including the Fourth Prize of the National Natural Science Award in 1999 and the Second Prize of the National Natural Science Award in 2023.

Xiao-Ping Zhang，IEEE 会士、IET 会士、中国电机工程学会会士，英国伯明翰大学能源研究所电力系统教授、智能电网主任、英国伯明翰大学储能中心联合主任、IEEE经济分析测试系统工作组主席，IFAC电力和能源系统控制技术委员会秘书，IEEE PES英国以及爱尔兰分会顾问。

Professor Zhang is currently Chair in Electrical Power Systems, Director of Smart Grid, Birmingham Energy Institute and Co-Director of Birmingham Centre for Energy Storage at the University of Birmingham, UK. He co-authored books including the monograph “Flexible AC Transmission Systems: Modelling and Control” by Springer and “Restructured Electric Power Systems: Analysis of Electricity Markets with Equilibrium Models” by IEEE Press/Wiley. Prof Zhang is an IEEE PES Distinguished Lecturer on HVDC, FACTS and Renewable Energy Generation. Professor Zhang has been made an IEEE Fellow for his contributions to “modeling and control of high-voltage DC and AC transmission systems.” He is also a Fellow of IET and Chartered Engineer and a Fellow of CSEE. Professor Zhang has been appointed to the Expert Advisory Group of UK Government’s Offshore Transmission Network Review since 2020. He has been appointed to Senior Editor of IEEE Open Access Journal of Power and Energy since 2023 and Deputy Editor-in-Chief of Energy Internet since 2024.

马钊，英国皇家特许工程师（CEng），IET Fellow，中国电机工程学会外籍会士，国家特聘专家，国际知名智能配电和电力设备专家。IEEE PES直流电力系统技术委员会（中国）顾问委员会主任，山东大学特聘教授，中国科学院电工所客座研究员。

PhD, Royal Chartered Engineer (CEng), Fellow of the Institution of Engineering and Technology (FIET), Foreign Fellow of the Chinese Society of Electrical Engineering (FCSEE), National Distinguished Expert. He is currently a distinguished professor of Institute of Henan Mechanical and Electrical Engineering, chief scientist of Zhongyuan Electric Laboratory, and guest researcher of Institute of Electrical Engineering of Chinese Academy of Sciences. With over 40 years of work experience in research, manufacturing, design, consulting, and education in the power industry. My main research areas include advanced distribution systems and distributed energy systems (ADS&DES), design/research and development of intelligent electrical equipment and technical consulting, new energy LowVoltage DC distribution technology, integrated energy systems, application of artificial intelligence in power energy systems, and full life cycle management of power asset management. Main achievements and contributions: Led and participated in several research and development projects for transmission and distribution equipment, as well as low-carbon intelligent distribution demonstration projects; Provide technical consulting to the European Union and several internationally renowned companies. Over the past 10 years since returning to China, I have explored and led three new research directions: the theory and application of distribution network health index, the new generation of medium and low voltage DC distribution, and the application of artificial intelligence in distribution network health evaluation; Advocate and carry out research on two major systems (active distribution systems and integrated energy system); Two equipment development plans were proposed (highvoltage DC circuit breaker/superconducting current limiting circuit breaker and isolation circuit breaker); I have held various positions in the four major international academic organizations CIGRE, IEC, IRED, and IEEE, initiated several sub-committees and working groups, which have been recognized and supported by peers both domestically and internationally.

马为民，教授级高级工程师，从事直流输电的技术研究和管理工作，现任国网经济技术研究院有限公司副总经理。享受国务院政府特殊津贴专家，国家百千万人才，国家电网公司第一批十大科技领军人才，公司科技攻关团队带头人，国内电力电子及直流输电多个标准化技术委员会委员，IEC多个技术委员会工作组召集人。自1996年至今，参与了国家电网公司全部直流工程的建设，是多项重大直流工程系统设计的技术总负责人。

Weimin Ma, Professor level senior engineer. Engaged in HVDC transmission technology research and management. Weimin Ma is currently the vice general manager of State Grid Economics and Technology Research Institute Co. He is an expert enjoying the State Council's special government subsidy, a national talent of one million talents, one of the first ten scientific and technological leaders of State Grid Corporation, and the leader of the company's scientific and technological research team. He is also a member of several standardization technical committees of power electronics and DC transmission in China, and the convenor of several technical committee working groups of IEC. Since 1996, he has participated in the construction of all DC projects of the State Grid Corporation, and is the technical chief of system design of many major DC projects.

李岩，工学博士、教授级高工，南方电网公司直流首席专业技术专家，南方电网科学研究院副院长，直流输电技术全国重点实验室副主任。主要从事电力系统控制保护和直流工程技术研究、设计和调试工作。担任中国电机工程学会直流输电专委会秘书长、变电专委会副主任委员等。作为控制保护主要研发人员，参加我国首个±500kV高压直流自主化工程、世界首个特高压直流、多端柔性直流工程、特高压混合直流工程等重大项目攻关。入选国家高层次人才计划、获国务院特殊津贴、“第十三届中国青年科技奖”等。

Yan Li, Doctor of Engineering, professor level senior engineer, China Southern Power Grid Corporation DC chief professional and technical expert, Vice President of China Southern Power Grid Research Institute, deputy director of the National Key Laboratory of HVDC. Mainly engaged in power system control protection and DC engineering technology research, design and commissioning

work. He served as the secretary general of the DC power transmission Committee of the Chinese Society of Electrical Engineering and the deputy chairman of the substation committee. As the main R&D personnel of control protection, participated in China's first ±500kV HVDC autonomous project, the world's first UHVDC, multi-terminal VSC-HVDC project, UHV hybrid DC project and other major projects. He was selected for the National high-level talent Program, won the special allowance of The State Council, and the 13th China Youth Science and Technology Award.

郭琦，博士，IEEE Senior Member, IET Fellow。南方电网科学研究院副院长，南方电网公司特级专业技术专家，直流输电技术全国重点实验室副主任，广东省新能源电力系统智能运行与控制重点实验室主任。曾担任IEEE P2832、CIGRE B4.74和B4.96研究工作组长，IEC SC 8C专家。

Qi Guo, Ph.D., IEEE Senior Member, IET Fellow. He is currently the vice president of Electric Power Research Institute of CSG, a specialist of CSG, the deputy director of the National Key Laboratory of HVDC Technology, and the director of the Guangdong Key Laboratory of Intelligent Operation and Control of New Energy Power System. He served as the convenor of IEEE P2832, CIGRE working group B4.74 and B4.96 and an expert of IEC SC 8C.

郝艳捧，教授，博导。ICEMPE2019国际会议执行主席、教育部新世纪优秀人才、全国百篇优秀博士学位论文获得者。研究领域包括输电设备状态感知、输电设备极端环境适应性、绝缘状态评估与剩余寿命预测、气体放电等。主持国家级项目6项，包括国家自然科学基金智能电网联合基金重点项目、国家高技术研究发展计划（863计划）课题任务等，发表SCI论文100多篇，授权发明专利30多项，获省部级科技奖励4项。

Yanpeng Hao, Professor, Doctoral Supervisor. Executive Chair of the 2019 International Conference on Electrical Materials and Power Equipment (ICEMPE2019), recipient of the Ministry of Education’s New Century Excellent Talents Award, and winner of the National Award for 100 Outstanding Doctoral Dissertations. Her research expertise encompasses condition monitoring of power transmission equipment and its adaptability to extreme environments, insulation condition

diagnostics and residual life prediction, and gas discharge phenomena. She has led six national-level projects, including key initiatives under the National Natural Science Foundation of China (NSFC) Joint Fund for Smart Grids and major tasks within the National High-Tech Research and Development Program (863 Program). With over 100 published SCI-indexed papers and more than 30 granted invention patents, she has been recognized with four provincial and ministerial-level scientific and technological awards.

刘崇茹，IET Fellow，华北电力大学电气与电子工程学院教授，教务处处长，教育部长江学者特聘教授。担任中国电机工程学会国际合作工作委员会委员、中国电机工程学会电力系统自动化专业委员会委员、《Energy Internet》 和《发电技术》编委、CSEE Journal of Power and Energy Systems副编辑。

Chongru Liu, IET Fellow, professor at the School of Electrical and Electronic Engineering, North China Electric Power University, director of the Academic Affairs Office, a distinguished professor of Changjiang Scholars of the Ministry of Education. She serves the member of the International Cooperation Working Committee of the Chinese Society of Electrical Engineering, the director of the China Electrotechnical Society, the member of the Power System Automation Professional Committee of the Chinese Society of Electrical Engineering, Editor member of the Journal “Energy Internet” and “Power Generation Technology”, the associate editor of CSEE Journal of Power and Energy Systems.

吕金壮，博士，教授级高工，国家科技进步特等奖获得者，现任南方电网超高压输电公司创新部副总经理。长期从事高压及特高压直流设备自主化研发及先进智能技术在电网领域的开发应用。完成及重点参与国家重点工程和重点课题多项。担任 IEEE PES 直流电力系统技术委员会直流输变电设备分委会副主席，全国高压直流输电设备标准化技术委员会委员、中国电机工程学会直流输电与电力电子专委会委员等学术职务。

Jinzhuang Lyu , Ph.D., Professor-level Senior Engineer, recipient of the National Science and Technology Progress Special Award.He is currently the Deputy General Manager of the Innovation Department of the EHV Company of China Southern Power Grid Co., Ltd. He has

been engaged in the R&D of UHVDC equipment, as well as the development and application of advanced technologies in the power grid field. He has completed and participated in key national projects and subjects.

He serves as the Vice Chairman of the DC Transmission and Transformation Equipment Subcommittee of the IEEE PES DC Power System Technical Committee, a member of the National Technical Committee for Standardization of HVDC Equipment, among other academic positions.

李立生，国网山东电科院配电技术中心主任，正高级工程师，产业教授，研究生导师，山东省有突出贡献中青年专家。国家电网公司十四五科技规划编写组专家、国家电网公司科技项目指南编写组专家、国家电网公司技术标准（TC04）专业工作组专家。担任IEEE PES直流电力系统技术委员会直流配电网分委会常务理事、全国电力系统管理及其信息交换标准化技术委员会配电网工作组副组长等学术职务。长期从事配电网及分布式电源领域研究，承担国家级项目3项、国网公司科技项目二十余项，获省部级科技奖励一等奖4项（1项排名1），授权发明专利47项，发表高水平论文15篇，担任国网公司“双高有源配电网态势感知与状态管控技术实验室（培育）”负责人。

Lisheng Li is the Director of the Distribution Technology Center at the State Grid Shandong Electric Power Research Institute, a Senior Engineer, Industrial Professor, and Graduate Supervisor. He has been recognized as an Outstanding Young and Middle-Aged Expert with significant contributions in Shandong Province. Li is also an expert for the 14th Five-Year Science and Technology Planning Group of the State Grid Corporation of China (SGCC) and a member of several SGCC technology guideline and standard committees.

He holds key academic positions, including Executive Director of the IEEE PES DC Power Systems Technology Committee's Subcommittee on DC Distribution Networks and Deputy Leader of the Distribution Network Working Group under the National Standardization Technical Committee on Power System Management and Information Exchange.

Li has long been engaged in research on distribution networks and distributed energy resources. He has led three national-level projects and over twenty SGCC science and technology projects, winning four provincial and ministerial-level first prizes (one as the first contributor). He holds

47 authorized invention patents, has published 15 high-level academic papers, and is the Director of SGCC's "Double High Active Distribution Network Situation Awareness and State Control Technology Laboratory (Incubation)."

高志华，男，工学博士，正高级工程师，现任广东电网有限责任公司珠海供电局党委书记。

Zhihua Gao, male, has PhD degree and is Senior engineer. He is currently the Secretary of the Party Committee and Deputy General Manager of Zhuhai Power Supply Bureau of Guangdong Grid Co., Ltd.

四、专题报告专家

分论坛一

余占清，IEEE Member、IET Member，清华大学电机系副系主任、长聘副教授，博士生导师，国家优秀青年基金获得者。北京电机工程学会高压专委会秘书、中国电源学会电磁兼容专委会委员。

Zhanqing Yu, IEEE Member, IET Member, associate professor of the Department of Electrical Engineering, Tsinghua University, doctoral supervisor, recipient of the national outstanding youth fundation. Secretary of high voltage Special Committee of Beijing Society of Electrical Engineering, member of Electromagnetic compatibility Special Committee of Chinese Power Supply Society.

陈立学，华中科技大学电气与电子工程学院教授，博士生导师。承担国家自然科学基金、973专题、预先研究项目等国家级项目6项，获2020年度部委级科学技术进步奖一等奖。

Lixue Chen, professor and doctoral supervisor of the School of Electrical and Electronic Engineering, Huazhong University of Science and Technology. Project leader of 6 national projects such as the National Natural Science Foundation of China, 973 special projects and pre-research projects, and the winner of the first prize of ministerial Science and Technology Progress Award in 2020.

杨鸣，IEEE Senior Member，重庆大学教授，博士生导师，国家级青年人才，获中国电机工程学会电力科学技术进步奖二等奖（排名2）。IEEE P2426工作组成员、电工技术学会第九届理事会青年工作委员会委员、中国电力科学研究院有限公司期刊中心青年专家团团员。

Ming Yang, IEEE Senior Member, professor and doctoral supervisor at Chongqing University, national young talent, the winner of the second prize of Electric Power

Science and Technology Progress Award of Chinese Society of Electrical Engineering. Member of the IEEE P2426 working group, member of the Youth Working Committee of the ninth Council of the Electrotechnical Society, and member of the Youth Expert Group of the Journal Center of China Electric Power Research Institute Co., LTD.

季柯，IEEE Member，华北电力大学硕士生导师，荣获国家电网智能电网研究所一等奖、二等奖等多个奖项，Chinese Journal of Electrical Engineering (CJEE)副主编。

Ke Ji, IEEE Member, master tutor of North China Electric Power University, the winner of the first prize and second prize of state Grid Smart Grid Research Institute and other awards, subeditor of Chinese Journal of Electrical Engineering (CJEE).

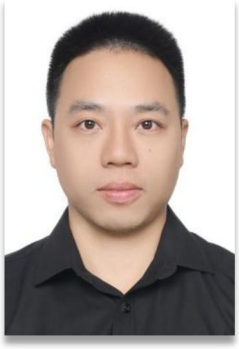
阳林，华南理工大学电力学院副教授/院长助理，博士生导师。主要从事电气设备外绝缘、状态监测与故障诊断研究工作。主持国家自然科学基金项目2项、广东省自然科学基金项目2项、国家级重点实验室开放基金重点项目3项。发表SCI/EI期刊论文70篇，授权发明专利15项。获广东省科技进步二等奖、中国产学研合作创新成果奖二等奖、中国电力科学技术奖三等奖、《中国电机工程学报》和《高电压技术》优秀论文奖、Wiley威立中国开放科学高贡献作者和2022年度作者奖。任2019 ICEMPE国际会议大会秘书长、中国电机工程学会高电压专业委员会青年学组成员等。

Lin Yang, Associate Professor/ Assistant to the Dean, PhD supervisor. He is currently working in School of Electric Power, South China University of Technology. He mainly engaged in electrical equipment external insulation, condition monitoring and fault diagnosis research work. He has presided over 2 projects of the National Natural Science Foundation, 2 projects of the Natural Science Foundation of Guangdong Province and 3 key projects of the National Key

Laboratory Open Fund. He has published 70 SCI/EI journal papers and granted 15 invention patents. He won the second Prize of Guangdong Province Science and Technology Progress Award, the second prize of China Industry-University-Research Cooperation Innovation Achievement Award, the third prize of China Electric Power Science and Technology Award, the Excellent Paper Award of China Electrical Engineering Journal and High Voltage Technology, the Wiley High Contribution Author of China Open Science and the Author Award of 2022. He was the Secretary-General of the 2019 ICEMPE International Conference and a member of the Youth Group of the High Voltage Professional Committee of the Chinese Society of Electrical Engineering.

李忠磊，副教授，主要从事（超）高压交、直流电缆绝缘劣化机理与绝缘性能强化理论及关键技术研究，主持国家自然科学基金项目3项，发表SCI论文80余篇，出版中、英文专著2部，授权发明专利10余项。入选全球前2%顶尖科学家、中国科协青年人才托举工程、天津市第一批青年科技人才第二层次等，兼任IEEE PES直流电力系统技术委员会理事、中国电机工程学会输变电材料专委会委员等。

Zhonglei Li, associate professor in Tianjin University. He is mainly engaged in the research of insulation degradation mechanism and insulation performance enhancement technologies for HVAC and HVDC cables. He has led research projects of 3 National Natural Science Foundation of China. Until now, he has authorized more than 80 SCI papers, 2 monographs, and more than 10 invention patents. He was selected into the Young Elite Scientists Sponsorship Program by CAST, the World's Top 2% Scientists published by Elsevier & Stanford University, and the technology leading talent plan of Tianjin. He also serves as a director of the IEEE PES DC Power System Technical Committee, a member of the Transmission and Transformation Materials Special Committee of the Chinese Society of Electrical Engineering, and so on.



张长虹，教授级高工。主要从事高压直流开关的试验、新技术研发等工作。获国家专利优秀奖1项，发表论文50余篇，授权发明专利60余项，国际专利12项；牵头起草国际标准10项，行业标准2项，参编IEC标准6项。担任IEC TC17、IEC TC1、CIGRE SC A3等工作组专家。

Changhong Zhang, Professor level senior engineer.Mainly engaged in the testing of high-voltage direct current switches, research and development of new technologies, and other related work. Received 1 National Patent Excellence Award, published over 50 papers, authorized over 60 invention patents, and 12 international patents; Led the drafting of 10 international standards, 2 industry standards, and participated in the compilation of 6 IEC standards. Served as an expert in working groups such as IEC TC17, IEC TC1, CIGRE SC A3, etc.

周海滨，教授级高级工程师。长期从事高压直流工程建设、电力设备检测预警技术研究，获省部级及以上科技奖励16次。牵头和参与制定国际标准4项、国家和行业标准16项，发表论文30余篇，申请发明专利20余件，主编电力领域专著两部，担任IEEE PES、CIGRE等技术工作组成员。

Professor level senior engineer. Engaged in long-term research on high-voltage direct current engineering construction and power equipment detection and warning technology, and has won 16 provincial and ministerial level scientific and technological awards. Led and participated in the development of 4 international standards, 16 national and industry standards, published over 30 papers, applied for over 20 invention patents, edited two monographs in the field of power, and served as a member of technical working groups such as IEEE PES and CIGRE.

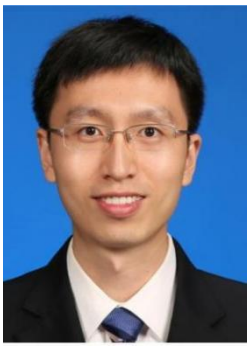
分论坛二

何佳伟，天津大学副研究员、博士生导师。天津市电力系统仿真控制重点实验室副主任，入选中国科协青年人才托举工程、首届中国电工技术学会优博论文。获天津市技术发明特等奖（3/12）、河南省科技进步一等奖（4/15）。

Jiawei He, associate researcher and doctoral supervisor at Tianjin University. Deputy director of Tianjin Power System Simulation and Control Key Laboratory. He was selected for the Young Elite Scientist Sponsorship Program by CAST in 2022, and obtained the Excellent Doctoral Dissertation Award of China Electrotechnical Society in 2021. In addition, in 2021 and 2023, he respectively obtained the Special Prize of Technological Inventions of Tianjin Municipal, and First Prize of Science and Technology Progress of Henan Province.

郑晓冬，IEEE Senior member，IEEE PES Senior member、中国电机工程学会高级会员，上海交通大学电气工程系研究员（教授），IEEE PES电力系统保护控制技术委员会秘书长。

Xiaodong Zheng, IEEE Senior member, IEEE PES Senior member, senior member of the Chinese Institute of Electrical Engineering, professor of the Department of Electrical Engineering, Shanghai Jiao Tong University, secretary general of the IEEE PES Power System Protection and Control Technical Committee.



李猛，北京交通大学副教授、硕士生导师。获教育部二等奖、中国电工技术学会一等奖、北京市青教赛二等奖。担任IEEE PES未来电网形态与保护控制技术分委会常务理事、IEEE PES直流输电控制与保护分技术委员会秘书、《电力系统保护与控制》青年编委等。

Meng Li, associate professor and master supervisor at Beijing Jiaotong University. He has won the second prize of Outstanding Achievement

Award in Scientific Research in Colleges and Universities that is awarded by the Ministry of Education, etc. He serves as the executive director of the IEEE PES Future Grid Form and Protection and Control Technology Subcommittee, the secretary of the IEEE PES DC Transmission Control and Protection Subcommittee, and the young editor of the journal 'Power System Protection and Control'.

刘宇，上海科技大学研究员、博士生导师，信息学院智慧电气科学中心主任。主要研究方为电力系统继电保护、故障定位、状态/参数估计。发表SCI/EI论文120余篇。入选上海市东方学者特聘教授，上海市浦江人才计划。上海高校一流本科课程、市级重点课程《电路基础》负责人。主持国家自然科学基金面上、青年项目。

Yu Liu is a Tenured Associate Professor and the Director of Center for Intelligent Power and Energy Systems (CiPES) of School of Information Science and Technology (SIST), ShanghaiTech University. His research interest lies in power system protection, fault location and state estimation. He has published over 120 SCI/EI indexed journal and conference papers. He is awarded Shanghai Eastern Scholar Professorship and Shanghai Pujiang Scholar. He is the course director of Shanghai Municipal "First-Class" undergraduate course "Electric Circuits". He is the PI of NSFC general project and youth project.

林圣，IET Fellow、IEEE Senior Member、西南交通大学教授、博士生导师，入选国家级青年人才计划、四川省杰青；现任IEEE PES（中国）保护控制技术委员会副秘书长。

Sheng Lin, IET Fellow, IEEE Senior Member, professor and doctoral supervisor at Southwest Jiaotong University, selected into the National Youth Talent Program and Sichuan Province Outstanding Youth, currently serving as deputy secretary-general of the IEEE PES (China) Protection and Control Technical Committee.

王姗姗，中国电力科学研究院教授级高工、博士生导师，主研柔性直流输电及其组网技术、电力电子化电力系统短路电流基础理论及新能源汇集组网技术。

Shanshan Wang, professor-level senior engineer and doctoral supervisor at China Electric Power Research Institute, focusing on flexible DC transmission and its networking technology, basic theory of short-circuit current in power electronic power systems, and new energy collection and networking technology.

李佳朋，现任西安交通大学电气工程学院助理教授，长期致力于交直流电力系统建模、分析、控制和保护的研究。他于2017年获得西安交通交通大学学士学位，于2023年获得西安交通大学博士学位和香港理工大学博士学位。目前已发表SCI/EI检索论文30余篇。曾获2024年度国家资助博士后研究人员计划、Wiley中国开放科学2022年度作者等奖励。

Prof. Jiapeng Li is currently an Assistant Professor with the School of Electrical Engineering, Xi’an Jiaotong University. His research interests mainly include power system control and protection. He received B.Eng. degree from Xi’an Jiaotong University in 2017, and dual Ph.D. degree from Hong Kong Polytechnic University and Xi’an Jiaotong University in 2023. He has published more than 30 SCI/EI-indexed papers. He won the Postdoctoral Fellowship Program (Grade B) of China Postdoctoral Science Foundation in 2024, the Outstanding Open Science Author of the Year 2022 by Wiley, etc.

分论坛三

焦在滨，西安交通大学教授，博士生导师，IEEE Senior Member，中国电机工程学会高级会员，Cigre会员，现任IEEE PES西安分会主席，中国电机工程学会电力系统自动化专委会委员。

Zaibin Jiao, professor and doctoral supervisor of Xi 'an Jiaotong University, IEEE Senior Member, senior member of Chinese Society of Electrical Engineering, member of Cicre. The chairman of IEEE PES Xi' an Branch and member of power System Automation Committee of Chinese Society of Electrical Engineering.

赵勃扬，西安交通大学电气工程学院助理教授，《智慧电力与能源安全（英文）》编辑部执行主任。主持或参与国网公司科技项目7项，参与国家重点研发计划、国家自然科学基金等课题3项。发表SCI/EI检索论文13篇，授权发明专利2项。获中国电工技术学会科技进步一等奖1项。

Boyang Zhao is an assistant professor at the School of Electrical Engineering at Xi'an Jiaotong University. He is the executive director of the editorial office for Smart Power and Energy Security. He has hosted or participated in seven projects for the State Grid Corporation Company and three projects related to National Key R&D Research Program and the National Natural Science Foundation of China. He has published 13 SCI/EI indexed papers, holds two authorized invention patents, and has received Scientific and Technological Progress Award of China Electrotechnical Society in 2023.

杨美娟，西安许继电力电子技术有限公司总工，许继电气股份有限公司二级技术专家。主要从事柔性直流输电业务领域工作，开展柔性直流输配电系统分析和方案设计、运行控制保护策略和仿真试验工作，累计发表论文20余篇，受理或授权发明专利100余项。

Meijuan Yang，Xi 'an Xuji Power Electronic Technology Co., LTD. Chief engineer，Xuji Electric Co., LTD secondary technical expert.Mainly engaged in the field of flexible DC transmission business, carried out flexible DC transmission and distribution system analysis and scheme design, operation control protection strategy and simulation test work, published more than 20 papers, accepted or authorized more than 100 invention patents.

朱军红，女，高级工程师，许继集团河南源网荷储电气研究院有限公司技术专家，国网工匠、全国五一劳动奖章获得者。主要从事电力系统仿真、电力系统控制与保护新产品研发测试技术研究等工作。负责完成三峡工程、皖电东送特高压交流输电工程、如东海上风电柔直送出工程等国家重点工程相关产品研发测试，创新改进测试方法三十余项，编写测试规范二十余套，取得专利授权11项，发表论文9篇。

Junhong Zhu, female, senior engineer, technical expert at Yuanwangheduo Electrical Research Institute Co., Ltd. of Xuji Group, a National Grid Craftsman and winner of the National Five-One Labor Award. She mainly engages in research on power system simulation, new product development and testing technologies for power system control and protection. She has completed the research and development and testing of related products for national key projects such as the Three Gorges Project, the Yue Dian Dong Song High-Voltage Direct Current Transmission Project, and the Rudong Offshore Wind Power Direct Current Transmission Project. She has innovatively improved testing methods over 30 times, written more than 20 sets of testing specifications, obtained 11 patent authorizations, and published 9 papers.

王红星，南方电网公司二级领军技术专家，教授级高级工程师，南方电网电力科技股份有限公司资深工程师。2011年在哈尔滨工业大学获得电力系统及其自动化专业博士学位。长期从事智能电网及新能源领域的科研与技术支持工作。

担任中国电机工程学会高级会员、中电建协电力工程调试专委会电网调试培训专家组成员，中电联电力培训标准化技术委员会新能源领域专家组成员，2024-2025年亚太电协技术委员会WG2可持续发电工作组成员，IEEE PES直流电力系统技术委员会（中国）常务理事、IEEE PES可再生能源系统集成技术委员会（中国）海上风电装备分委会秘书长。获得发明专利授权48件，主持或参与编制电力技术标准40项，累计发表学术论文50余篇，为中电建协调试专委会调总/调试工程师培训班等培训学员3000余人次；获得省部级科技奖励10项。

Hongxing Wang, a second-level leading technical expert of China Southern Power Grid Corporation (SGCC), a professor-level Senior Engineer, and a Principal Engineer of China Southern Power Grid Power Technology Co., Ltd. Received PhD in power systems and automation from Harbin Institute of Technology (HIT) in 2011. Has long been engaged in scientific research and technical support work in the fields of smart grid and new energy.

Served as a senior member of the Chinese Society for electrical engineering, a member of the grid commissioning training expert group of the China Electric Power Construction Association's Electric Power Engineering Commissioning Committee, a member of the new energy field expert group of the China Electricity Council Power Training Standardization Technical Committee, and the 2024-2025 Asia-Pacific Electric Power Association Technical Committee WG2 Member of the Sustainable Power Generation Working Group, executive director of the IEEE PES DC Power System Technical Committee (China), and secretary-general of the Offshore Wind Power Equipment Subcommittee of the IEEE PES Renewable Energy System Integration Technical Committee (China). Obtained 48 invention patent authorizations, presided over or participated in the preparation of 40 electric power technical standards, published more than 50 academic papers, and trained more than 3,000 trainees for the commissioning/commissioning engineer training class of the China Power Construction Coordination Test Committee; won 10 scientific and technological awards at provincial and ministerial levels.

分论坛四

李奕曈，西安交通大学教授，国家级青年人才计划入选者，西安交通大学青年拔尖人才，西安交通大学思源学者。

Yitong Li is currently a professor at School of Electrical Engineering, Xi'an Jiaotong University, China. Yitong Li received the B.Eng degrees from Huazhong University of Science and Technology, China, and the University of Birmingham, UK, in 2015. He received the M.Sc degree and the Ph.D. degree from Imperial College London, UK, in 2016 and 2021 respectively. His current research includes control of power electronic converters and stability analysis of power system.

向往，华中科技大学教授、博士生导师，国家级青年人才计划入选者，国家重点研发计划项目（青年科学家）首席科学家。

主要从事新能源并网、柔性直流输电技术研究。在本领域发表SCI/EI论文100余篇，其中第一/通讯作者SCI论文40篇，授权中国发明专利30件。发明了自阻型柔性直流换流器，柔性直流输电三维度、四维度控制和多域故障保护技术，开发了柔性直流系统分析设计软件，成果应用于世界首个±800kV特高压多端直流输电工程（昆柳龙）。先后获得2019年湖北省科学技术进步一等奖、2021年中国发明协会发明创业奖创新奖一等奖。

Wang Xiang, Professor at Huazhong University of Science and Technology, and Chief Scientist of the National Key R&D Program (Young Scientist program). His research mainly focuses on renewable energy integration and HVDC technologies. He has published over 100 papers in SCI/EI journals, including 43 SCI papers as the first or corresponding author, and holds 31 Chinese invention patents. He proposed the self-blocking MMC, the three-degree and four-degree control, as well as the multi-domain fault protection technologies for MMC- HVDC system. Parts of the research achievements have been applied to the world's first ±800kV ultra high MMC-HVDC transmission project (Kunliulong project). He received the First Prize of the Hubei Provincial Science and Technology Progress Award in 2019 and the First Prize of the Innovation Award of the China Invention Association's Invention and Entrepreneurship Award in 2021.

朱介北(1987)，天津大学教授、博士生导师，主要研究方向为电力电子化电力系统、新能源构网控制等，是国家特聘青年专家、IET Fellow、天津市领军人才，曾任英国国家电网总部科技项目经理、高级电力系统工程师。先后发表 SCI/EI期刊80余篇、专利20余项、制定国际标准2项、团体标准4项。主持国家重点研发计划“变革性课题”1项、国家自然科学基金委“联合基金”1项、面上项目1项和若干横向课题。作为第一完成人获天津市政府科学技术进步奖、中国电工技术学会科学技术奖等省部级奖项5项及日内瓦国际发明奖金奖3项。担任IEEE Transactions on Power Systems、IEEE Power Engineering Letters、IET Energy Systems Integration、全球能源互联网、电力系统保护与控制等期刊的编委。担任2023年第八届电力与电气工程亚洲会议的技术委员会主席。

Jiebei Zhu(1987), professor and doctoral supervisor at Tianjin University. His main research directions are power electronic power systems and new energy grid control. He is a national young expert, IET Fellow, and Tianjin leading talent. He has served as a scientific and technological project manager and senior power system engineer at the National Grid Headquarters of the United Kingdom. He has published more than 80 SCI/EI journals, more than 20 patents, and formulated 2 international standards and 4 group standards. He presided over one "transformative project" of the National Key R&D Program, one "joint fund" of the National Natural Science Foundation of China, one general project and several horizontal projects. As the first finisher, he won 5 provincial and ministerial awards including the Tianjin Municipal Government Science and Technology Progress Award and the China Electrotechnical Society Science and Technology Award, as well as 3 Geneva International Invention Awards. He serves as an editorial board member of journals such as IEEE Transactions on Power Systems, IEEE Power Engineering Letters, IET Energy Systems Integration, Global Energy Internet, and Power System Protection and Control. He serves as the chairman of the technical committee of the 8th Asian Conference on Power and Electrical Engineering in 2023.

陈俊儒，男，中国共产党党员，博士，国家高层次青年人才，新疆大学工程师学院副院长、副教授，博士研究生导师。于2019年12月获爱尔兰国立都柏林大学博士学位，2016年5月获爱尔兰国立都柏林大学硕士学位，分别于2020、2019和2018在丹麦奥尔堡大学，爱沙尼亚塔林理工大学和德国基尔大学放学。主持项目17项，其中国家级3项，自治区3项（自治区重大专项1项）；以第一/通讯作者身份发表论文50余篇，其中SCI收录20余篇，《Converter-Based Dynamics and Control of Modern Power Systems》章节作者，获批2021年国家高层次海外优秀青年项目，获“2019年国家优秀自费留学生”由国家留学基金管理委员会颁发，获2019年欧盟优秀博士后资助计划。

Junru Chen,member of the Communist Party of China, PhD, national high-level young talent, vice dean, associate professor, and doctoral supervisor of the School of Engineering, Xinjiang University. He received his PhD from the National University of Ireland, Dublin, in December 2019, and his master's degree from the National University of Ireland, Dublin, in May 2016. He studied at Aalborg University in Denmark, Tallinn University of Technology in Estonia, and Kiel University in Germany in 2020, 2019, and 2018, respectively. He has presided over 17 projects, including 3 national projects and 3 autonomous region projects (1 major project of the autonomous region); he has published more than 50 papers as the first/corresponding author, including more than 20 papers included in SCI, and is the author of the chapter "Converter-Based Dynamics and Control of Modern Power Systems". He was approved for the 2021 National High-level Overseas Outstanding Youth Project, and was awarded the "2019 National Outstanding Self-funded Student" by the China Scholarship Council, and was awarded the 2019 EU Outstanding Postdoctoral Funding Program.

刘牧阳，新疆大学电气工程学院副教授，博士生导师，入选国家海外高层次人才计划。主要研究方向为：电力系统多时间尺度建模与仿真技术、电力统关键参数识别、新型电力系统控制与运行机理。2016-2019年于爱尔兰国立都柏林大学攻读博士学位。2019年12月-2020年12月任爱尔兰国立都柏林大学电力系统高级研究员，参与欧盟重大科技研发计划2项，主管爱尔兰自然科学基金重点研究计划1项。曾获IEEE PES GM 2019年最佳论文奖，入选21校联盟电力系统未来科学家论坛。已发表SCI/EI收录的论文40余篇，其中包含ESI热点论文2篇，被同行引用1000余次。曾任专业顶级会议IEEE PES GM 2020年最佳论文分论坛主席兼评审。

Muyang Liu, associate professor and doctoral supervisor of the School of Electrical Engineering, Xinjiang University, selected into the National Overseas High-level Talent Program. His main research directions are: multi-time scale modeling and simulation technology of power system, identification of key parameters of power system, and control and operation mechanism of new power system. He studied for a doctorate degree at University College Dublin, Ireland from 2016 to 2019. From December 2019 to December 2020, he served as a senior researcher in power systems at University College Dublin, Ireland, participated in two major EU scientific and technological research and development programs, and was in charge of one key research program of the Irish Natural Science Foundation. He won the IEEE PES GM 2019 Best Paper Award and was selected into the Future Scientist Forum of Power Systems of the 21-school Alliance. He has published more than 40 papers included in SCI/EI, including 2 ESI hot papers, which have been cited more than 1,000 times by peers. He served as the chairman and reviewer of the 2020 Best Paper Forum of the top professional conference IEEE PES GM.

陈钦磊，南方电网科学研究院三家拔尖技术专家，长期从事高压直流输电、柔性直流输电实时仿真建模及控制保护策略研究，作为项目骨干参与昆柳龙直流工程、鲁西背靠背直流工程、广东背靠背直流工程、阳江青洲海风柔直送出工程等多项直流工程的实时仿真研究、现场调试与事故反措。获中国电力科技奖一等奖、中国电力创新奖创新大奖等多项省部级、行业级奖项。

Qinlei Chen is one of the technical experts at the Southern Power Grid Science Research Institute(CSG ,SPERI). He has been engaged in real-time simulation modeling as well as control and protection strategy research for LCC-HVDC and MMC-HVDC for a long time. As a project backbone, he participated in real-time simulation test, on-site commissioning, and accident countermeasures research for multiple HVDC projects such as Kunliulong multi-terminal hybrid UHVDC Project, Luxi Back to Back HVDC Project, Guangdong Back to Back HVDC Project, and Qingzhou offshore wind farm MMC-HVDC Project. He Won multiple provincial and industry level awards, including the first prize of China Electric Power Science and Technology Award and grand prize of China Electric Power Innovation Award.

分论坛五

赵宇明，男，教授级高工，深圳市供电局电力科学研究院总工程师，南网一级领军技术专家，长期从事直流配用电、用户侧多元互动关键技术研究工作。近年来，针对新型电力系统建设需求和深圳电网特点，牵头实施了规模化车网互动、零碳建筑等多项南网公司重点科技项目，以及深圳市“近零碳建筑”示范项目。先后发表论文50余篇，授权专利30余项，获得省部级奖励十余项。

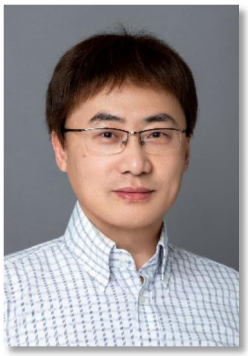
Yuming Zhao, male, is a professor-level senior engineer and Chief Engineer at the Electric Power Science Research Institute of the Shenzhen Power Supply Bureau. He is also a first-tier leading technical expert at China Southern Power Grid. Zhao has long been engaged in the research of key technologies for DC power distribution and multi-dimensional interaction on the user side.

In recent years, addressing the needs of new power system construction and the characteristics of the Shenzhen power grid, he has led several key technological projects for China Southern Power Grid, including large-scale vehicle-to-grid interaction and zero-carbon buildings, as well as the Shenzhen "Near Zero Carbon Building" demonstration project. Zhao has published more than 50 papers, holds over 30 authorized patents, and has received more than ten provincial and ministerial-level awards.

李雨桐博士/正高级工程师，暖本98级毕业生，现担任深圳市建筑科学研究院直流实验室副主任，中国建筑节能协会光储直柔专委会副主任委员，绿色大学工委会常务委员。主要从事区域建筑能源规划、建筑可再生能源利用和建筑直流配电等方面研究和项目管理工作。作为项目负责人和主要执笔人承担多 项“十三五”、“十四五”国家重点研发计划，获得全国绿色建筑创新奖一等奖、华夏建设科技奖二等奖、电力科学技术进步奖二等奖以及深圳市科学技术进步奖一等奖等。

Dr. Yutong Li, a senior engineer, graduated from the 1998 cohort of the Department of Heating, Ventilation, and Air Conditioning (HVAC). She currently serves as the Deputy Director of the DC Lab at the Shenzhen Institute of Building Research, the Deputy Director of the Photovoltaic Storage and Direct-Flexible Technology Subcommittee of the China Association of Building Energy Efficiency, and an Executive Member of the Green University Committee.

Her research and project management focus on regional building energy planning, the utilization of renewable energy in buildings, and DC distribution in buildings. As a project leader and principal writer, she has undertaken several key national R&D projects under China's 13th and 14th Five-Year Plans. Dr. Li has received numerous awards, including the National Green Building Innovation Award (First Prize), the Huaxia Construction Science and Technology Award (Second Prize), the Power Science and Technology Progress Award (Second Prize), and the Shenzhen Science and Technology Progress Award (First Prize).



赵晋斌，教授（二级）、博导，上海市东方学者特聘教授，浦江计划学者。现任中国电工技术学会理事，IEEE PES 直流电力系统技术委员会（中国）低压直流技术分委会常务理事，中国电工技术学会电动汽车充换电系统与试验专业委员会委员，中国电源学会新能源电能变换技术专业委员会委员和直流电源专业委员会副主任委员，上海市电源学会理事，《电力系统保护与控制》及《智慧电力》期刊编委。主要从事电力电子装置拓朴和控制，无线电能传输，新能源并网及其稳定性等方向研究工作。

迄今为止，在IEEE TPE、IEEE TII等SCI期刊，中国电机工程学报等EI期刊和IEEE ECCE等期刊和会议上发表高水平学术论文200余篇（SCI收录30多篇、EI收录100余篇）。主持国家自然科学基金面上项目三项、上海重点科技攻关项目，上海自然科学基金和国网总部等二十多项。获得2015年度上海市技术发明奖二等奖（第1）、2019年度上海市技术发明奖三等奖（第2）和2020年度上海市科学技术进步奖二等奖（第6）。取得3项美国授权发明专利、12项日本授权发明专利和50多项中国授权发明专利。

Jinbin Zhao is a Professor (Second Level) and Ph.D. Supervisor, appointed as an Oriental Scholar by Shanghai and a Pujiang Scholar. He currently serves as a board member of the China Electrotechnical Society, an Executive Director of the IEEE PES DC Power Systems Technology Committee (China) Low Voltage DC Technology Subcommittee, a member of the Electric Vehicle Charging and Testing Systems Committee of the China Electrotechnical Society, a member of the New Energy Power Conversion Technology Committee of the China Power Supply Society, and Vice Chairman of the DC Power Supply Subcommittee. Additionally, he is a board member of the Shanghai Power Supply Society and serves on the editorial boards of the journals Power System Protection and Control and Smart Power.

His research focuses on power electronics topology and control, wireless power transfer, and renewable energy grid integration and stability. To date, Professor Zhao has published over 200 high-quality academic papers in journals such as IEEE Transactions on Power Electronics and IEEE Transactions on Industrial Informatics, with more than 30 indexed by SCI and over 100 indexed by EI. He has led three National Natural Science Foundation of China projects, several key Shanghai science and technology projects, and over 20 other projects funded by the Shanghai Natural Science Foundation and the State Grid Corporation of China.

Professor Zhao has received several prestigious awards, including the Second Prize of the Shanghai Technology Invention Award in 2015 (as the first contributor), the Third Prize in 2019 (as the second contributor), and the Second Prize of the Shanghai Science and Technology Progress Award in 2020 (as the sixth contributor). He holds three U.S. authorized invention patents, 12 Japanese authorized invention patents, and over 50 Chinese authorized invention patents.

袁金荣，国创能源互联网创新中心（广东）有限公司总经理助理，高级工程师，IEEE PES直流电力系统技术委员会（中国）低压直流技术分委会常务理事，SAC/TC212 WG11直流控制器工作组副组长，致力于近用户侧能源互联网源网荷储规划技术、机电设备直流化技术等研究及工程应用工作。发表论文8篇，授权发明专利30项，主要参与国家、省部级项目4项，曾入选学术精要高PCSI论文，获中国专利优秀奖、江西省专利奖，“国际领先”项目鉴定等

Assistant General Manager of the National Innovation Center for Energy Internet (Guangdong) Co., Ltd., Senior Engineer, and Executive Director of the Low Voltage DC Technology Subcommittee of the IEEE PES DC Power Systems Technology Committee (China). He also serves as the Deputy Leader of the DC Controller Working Group under SAC/TC212 WG11. His work focuses on research and engineering applications related to user-side energy internet planning for sources, grids, loads, and storage, as well as DC technology for electromechanical equipment.

He has published eight papers and holds 30 authorized invention patents. He has participated in four national and provincial-level projects and was selected for a high-PSCI academic paper. He has also received the China Patent Excellence Award, the Jiangxi Patent Award, and project evaluations at the "international leading" level.

李可军，教授，博士生导师，IEEE Senior Member，中国电工技术学会理事，山东省电工技术学会理事长，山东大学可再生能源与智能电网研究所主任。从事多端直流输电技术、直流换流站运行分析与先进控制技术、新能源并网控制策略等领域研究，发表SCI/EI收录学术论文200余篇，授权发明专利36项，主持防御多馈入直流换相失败的换流站级控制方法、城市核心区供电的直流网络运行模式与控制策略研究等国家自然科学基金、国家重点研发计划子课题、山东省重点研发计划、山东省自然科学基金等纵向课题13项，国家电网公司

总部科技项目、山东电力科技项目等横向课题30余项，获得中国电工技术学会科学技术奖、山东省科学技术奖等省部级科技进步奖4项。

Kejun Li is a Professor and Ph.D. Supervisor, as well as an IEEE Senior Member. He serves as a board member of the China Electrotechnical Society and is the Chairman of the Shandong Electrotechnical Society. Additionally, he is the Director of the Renewable Energy and Smart Grid Research Institute at Shandong University.

His research focuses on multi-terminal DC transmission technology, operation analysis and advanced control of DC converter stations, and control strategies for renewable energy grid integration. Professor Li has published over 200 academic papers indexed by SCI and EI and holds 36 authorized invention patents. He has led 13 major projects, including those under the National Natural Science Foundation, the National Key R&D Program, and key projects funded by the Shandong Provincial R&D Program and Natural Science Foundation. These include studies on control methods for preventing commutation failures in multi-infeed DC converter stations and research on the operation modes and control strategies of DC networks for power supply in urban core areas.

In addition to overseeing more than 30 horizontal projects funded by the State Grid Corporation and Shandong Electric Power, he has received four provincial and ministerial-level Science and Technology Progress Awards, including awards from the China Electrotechnical Society and Shandong Province.

周琦，高级工程师，国网江苏省电力公司电力科学研究院配电网技术中心直流配用电专职，主要从事直流配电网、直流控制保护及电力电子硬件研发等方面的研究与试验工作。作为骨干成员参与国家重点研发计划“配电网高功率密度柔性互联技术和装备”、“百兆瓦级动态可重构电池储能技术”等国家级科技项目，主持及参与江苏省电力公司科技项目10余项，发表论文10篇，申请专利15项，参与编制国际标准、行业标准、团体标准等3项，获中国电力奖一等奖1项，国网公司专利三等奖1项，江苏省电力奖二等奖1项，参与中文专著2部。

Qi Zhou, Senior Engineer, working at Electric Power Research Institute of State Grid Jiangsu Electric Power Co., Ltd. His research primarily focuses on DC distribution networks, DC control and protection, and power electronics hardware research and development. As a key member, he has participated in several national-level scientific projects, including the National Key R&D Program “High Power Density Flexible Interconnection Technology and Equipment for Distribution Networks” and the “ MW-level Dynamic Re-configurable Battery Energy Storage Technology”.He has led or participated in over 10 technological projects for the Jiangsu Electric Power Company, published 10 papers, applied for 15 patents, and contributed to the drafting of 3 international, industry, and group standards. He has received the first prize of the China Electric Power Award, the third prize for patents from the State Grid Corporation, and the second prize of the Jiangsu Electric Power Award. Additionally, he has contributed to 2 monographs.

分论坛六

张利东，南方电网科学研究院战略级专家，国家级海外高层次引进人才。

Lidong Zhang, the Strategic-Level Expert in Electric Power Research Institute，China Southern Grid, and the Overseas Top-notch Talents.

亓丽，西安交通大学教授、博士生导师，国家级人才，IEEE Fellow（2024年因对直流配电保护和直流船用电力系统架构的贡献当选）。

Li “Lisa” Qi, professor and doctoral supervisor of Xi'an Jiaotong University, IEEE Fellow (for the contributions to DC distribution protection and architectures of DC shipboard power systems).

廖凯，西南交通大学教授、博士生导师，入选中国科协“青年人才托举工程”、四川省“千人计划”、成都市“蓉漂计划”、西南交通大学“雏鹰学者”。

Kai Liao, professor and doctoral supervisor of Southwest Jiaotong University, the candidate of the "Young Talent Support Project" of China Association for Science and Technology, "Top-notch Talents Plan" of Sichuan Province, "Rongpiao Plan" of Chengdu City and "Chuying Scholar" of Southwest Jiaotong University.

郭春义，华北电力大学教授。兼任中国电源学会电力电子化电力系统及装备专业委员会副主任委员，IEC SC8A JWG5和IEC SC8A WG6工作组委员，CIGRE B4.64、CIGRE B4.79和CIGRE B4.101工作组委员，CIGRE SC B4中国专委会委员。

Chunyi Guo, professor of North China Electric Power University. The vice chairman of electric Power System and Equipment Committee of China Power Supply Society, member of IEC SC8A JWG5 and IEC SC8A WG6, member of working groups of CIGRE B4.64, CIGRE B4.79 and CIGRE B4.101, and member of CIGRE SC B4 China Special Committee.

王顺亮，四川大学副教授、博导。担任中国电源学会青工委常务委员兼副秘书长、IEEE PELS China会议分委会副主任委员、IEEE PES直流电力常务理事等学术职务。

Shunliang Wang, Associate professor, doctoral supervisor. He served as the standing member and Deputy Secretary General of the Youth Work Committee of China Power Supply Society, the deputy chairman of the IEEE PELS China Conference sub-committee, and the standing director of IEEE PES DC Power System Satellite Committee-China.

王国腾，浙江大学助理研究员，长期从事交直流电力系统稳定性分析与控制相关研究工作，主持国家自然科学基金项目1项，作为课题骨干参与国家重点研发计划项目1项，入选2023年国家资助博士后研究人员计划，担任直流输电领域标准ISO/IEC国内专家组成员，担任国际期刊《Clean Energy Science and Technology(CEST)》青年编委，近5年来发表高水平学术期刊论文20余篇，其中以第一作者在IEEE TPWRS、IEEE TSG 、IEEE TSTE等国际顶级期刊发表/录用SCI期刊论文10余篇。

Guoteng Wang is an assistant researcher at Zhejiang University, focusing on the stability analysis and control of AC/DC power systems. He has led one project funded by the National Natural Science Foundation of China and has been a key participant in a national key R&D program. He was selected for the 2023 National Postdoctoral Research Program and serves as a domestic expert in the ISO/IEC standardization committee for HVDC transmission. Additionally, he is a youth editorial board member for the international journal "Clean Energy Science and Technology (CEST)." In the past five years, he has published over 20 high-level academic journal papers, including more than ten SCI papers as the first author in top international journals such as IEEE TPWRS, IEEE TSG, and IEEE TSTE.

王立平，高级工程师，注册电气工程师、咨询工程师、一级造价工程师，南方电网超高压输电公司电科院技术专家，主要从事高压直流输电规划工作。

Liping Wang， senior engineer， Registered Electrical Engineer， Registered Consulting Engineer，Class1 Cost Engineer, technical expert at Electric Power Research Institute of China Southern Power Grid EHV Transmission Company。He mainly engages in research on HVDC Planning

五、现场观摩交流地点介绍

唐家湾多端柔性直流配电网示范项目简介

唐家湾多端柔性直流配电网示范项目是国家能源局能源互联网重大示范工程的核心内容。项目研究建立了多端柔性直流配电网系统技术体系，研发应用了核心功率器件和关键直流装备，建成了世界首个、总容量规模最大的±10kV、±375V、±110V三电压等级多端柔直配网示范工程。创新点如下：

（1）攻克了柔直配网系统分析与成套设计关键技术，研究提出系统功能和层级架构；首次建立关键设备宽频仿真模型和全时域分析方法；系统解决了交直流配网复杂特性分析、主回路、设备规范和控保策略等成套设计关键难题。

（2）自主定制研发高性能参数IGCT器件，研发了具有故障电流自清除能力的交叉钳位结构换流阀模块、复用电力电子转移支路的三端口断路器、基于SiC器件的2MW三端口变压器。

（3）研发了多端柔直配网的控制保护和运行关键技术，提出主从、自适应电压协调控制策略；提出交流、直流与微电网的协同运营策略，实现潮流灵活可控、源网荷储高效互动。

周孝信院士给予项目“在柔直技术上取得重大突破与创新，走在世界前列”的高度评价。经中国电机工程学会的成果鉴定，整体达到国际领先水平。

项目系统解决了柔直配网技术应用的技术难题。成果广泛应用于交流配网改造、综合能源项目建设，实现了交直流协同、源网荷储灵活互动，提升电网资源运营效率20%，带动功率器件自主研发及柔直装备产业发展，增加产值10亿元以

上。关键技术与装备已推广至东莞、苏州等多个工程应用，为支持海量分布式能源开发与消纳、能源互联网建设提供了重要技术平台。

六、赞助及媒体支持单位（排名不分先后）

中国电气装备
China Electrical Equipment
许继电气股份有限公司
XJ ELECTRIC CORPORATION

奔流电力

MPC 国际电工 广州麦科凌电力装备有限公司
GUANGZHOU MPC POWER INTERNATIONAL CO., LTD

南方电网技术
SOUTHERN POWER SYSTEM TECHNOLOGY

电力系统保护与控制
Power System Protection and Control

广东电力
GUANGDONG ELECTRIC POWER

HIGH VOLTAGE ENGINEERING
高电压技术

电力电容器与无功补偿

电力工程技术
ELECTRIC POWER ENGINEERING TECHNOLOGY

北极星电力网
WWW.BJX.COM.CN

电力自动化设备
Electric Power Automation Equipment

电力电子技术
Dianli Dianzi Jishu

七、会议须知

■ 参会安排

请参会人员提前15分钟进入会场。开会时遵守并保持会场秩序，手机请调至静音或关闭。

■ 时间及地点

报到时间：10月18日 14:00-22:00

报到地点：海泉湾维景国际大酒店·天王星 大堂（酒店三层）

会议时间：10月19日-10月20日

会议地址：广东省珠海市金湾区平沙镇海泉湾，519055号

■ 交通方式

1. 珠海金湾机场到海泉湾维景国际大酒店 · 天王星 大堂（酒店三层）

距离约44公里

A. 打车：约50分钟，大约130元

B. 公交：珠海机场公交站乘机场大巴拱北线（不经拱北）-->湖心路口公交站换乘826-2路-->海泉湾路北公交站后走路-->酒店大堂，约2小时40分，约30元

2. 高铁珠海站到海泉湾维景国际大酒店 · 天王星 大堂（酒店三层）

距离约62公里

A. 打车，约60分钟，大约140元

B. 公交，从珠海站走路到拱北口岸公交站乘826-2路-->海泉湾路北公交站后走路-->酒店大堂，约2小时20分，约2元

C. 乘酒店bus：登录微信小程序“中旅巴士”选择购买，约70分钟，大约25元

乘坐时间：下午13：25

■ **会议用餐**

日期		地点	时间	备注
10月18日	晚餐	3楼赛维雅	18:00-20:00	自助餐
10月19日	午餐	3楼塞维雅/1楼四海轩	12:15-14:00	自助餐
	晚餐		17:30-19:30	自助餐
10月20日	午餐	3楼赛维雅	12:15-14:00	自助餐
	晚餐	根据人数安排	18:00-20:00	--

■ **联系方式**

1.参会咨询

IEEE PES 直流电力系统技术委员会（中国）秘书处

魏向阳 134 2408 9310

华南理工大学

雪 映 180 2727 6219

2.缴费及发票咨询

北京掘视科技有限公司：高老师18600134976（微信同号）

3.酒店住宿咨询

海泉湾维景国际大酒店：高老师18600134976（微信同号）

【温馨提示】

1.会议结束后请参会代表听从工作人员的指引有序退场。

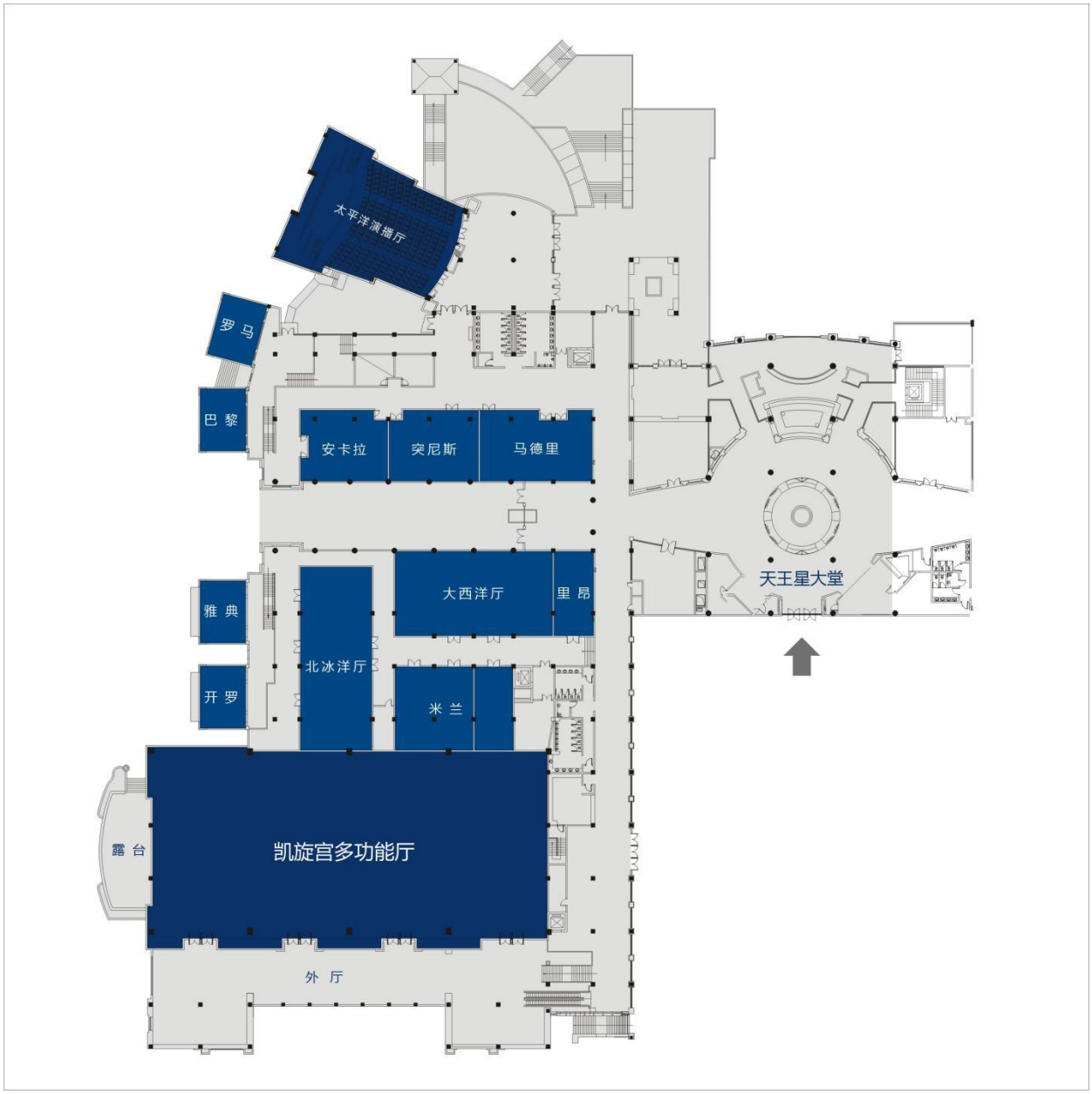
2.酒店至珠海金湾机场或高铁珠海站，车程约70分钟。

3.会议期间珠海市天气情况：

周五（10月18日）	晴朗	30℃/26℃
周六（10月19日）	晴朗	32℃/26℃
周日（10月20日）	晴朗	28℃/25℃

■ 珠海海泉湾概览图

■ 会场平面图


太平洋演播厅
罗马
巴黎
安卡拉
突尼斯
马德里
雅典
开罗
北冰洋厅
大西洋厅
里昂
米兰
天王星大堂
露台
凯旋宫多功能厅
外厅

中国电气装备
China Electrical Equipment
许继电气股份有限公司
XJ ELECTRIC CORPORATION

股票代码:000400 Stock code: 000400

许继电气股份有限公司隶属于中国电气装备集团有限公司，是专注于电力、自动化和智能制造的高科技现代产业集团。作为能源电力装备制造业的领先企业，许继致力于为国民经济和社会发展提供高端能源和电力技术装备，为“双碳”目标下清洁能源生产、传输、配送及高效使用提供全面的技术和服务支撑。

XJ Electric Corporation is a subsidiary of China Electrical Equipment Group Co., Ltd., serving as a high-tech modern industrial group specializing in power, automation, and intelligent manufacturing. As a leading enterprise in the energy and electrical equipment manufacturing industry, XJ is committed to providing advanced energy and power technology equipment for the national economy and social development, offering comprehensive technical and service support for the production, transmission, distribution, and efficient utilization of clean energy under the dual carbon emission reduction targets.

XJ ELECTRIC CORPATION
CHINA ELECTRICAL EQUIPMENT

主要业务 Main business

01 特高压/高压直流输电换流阀 UHV/HV DC transmission converter valve

常规直流输电换流阀以大功率品闸管为核心器件，采用相位控制原理实现大功率电能的处理和转换;采用空气绝缘、去离子水冷却、户内悬吊式安装；适用于±1100KV，6250A及以下等级的直流系统，完全满足特高压/高压直流输电工程和背靠背联网工程的要求。

The LCC-HVDC transmission converter valve is designed with the high-power thyristor as its central component. It operates on the phase control principle to realize the processing and conversion of high-power electric energy. It features air insulation, deionized water cooling, and indoor suspended installation. It is suitable for DC systems of ±1100KV, 6250A and below, and fully meets the requirements for UHV/HVDC transmission projects and back-to-back networking works.

02 柔性直流输电换流阀 VSC-HVDC transmission converter valve

柔性直流换流阀采用全控型大功率IGBT器件组成电压源型换流器，采用模块化多电平拓扑（MMC），能够实现有功功率、无功功率独立控制，可向系统输出无功功率；通常采用空气绝缘、去离子水冷却、双列支撑式结构；适用于800kV、5000A以下等级的换流站，满足高压远距离直流输电、新能源并网、交流电网异步互联、海上风电等场景需求。

The VSC-HVDC transmission converter valveincorporates fully controlled high-power IGBT devices to form a voltage source converter, and modular multilevel topology (MMC) to realize independent control of active power and reactive power, so that reactive power can be output to the system. Generally, it features air insulation, deionized water cooling and double-row support structure. It is suitable for converter stations below 800kV and 5000A, and meets the needs of HV long-distance DC transmission, new energy grid connection, AC power grid asynchronous interconnection, offshore wind power and other scenarios.

03 直流控制保护 DC control and protection

许继直流输电技术历经40余年，目前拥有完全自主知识产权的DPS-3000和DPS-5000系列直流控制保护成套设备，可满足±1100kV及以下特高压直流输电、高压直流输电、柔性直流输电工程需求；形成了包括系统仿真研究、系统成套设计、核心设备研发、生产试验、安装调试，运维保障、项目管理、质量管理的整套解决方案服务能力。

With over 40 years of experience in DC power transmission technology, at present, XJ has developed the DPS-3000 and DPS-5000 series DC control and protection equipment with fully independent intellectual property rights. These series are capable of meeting the requirements of ±1100kV and below UHVDC transmission, HVDC transmission, and VSC-HVDC transmission projects. It has the ability to provide a complete set of solution services for system simulation research, complete system design, core equipment R&D, production test, installation and commissioning, operation and maintenance support, project management and quality management.

04 直流场测量设备 DC field measuring equipment

主要应用于特高压直流领域对电流、电压等电气量的高速采集。产品具有精度高、抗电磁干扰能力强、动态范围大、频带宽、安装方便等特点。可满足直流输电系统中保护、阀控及故障录波等装置对直流一次数据的需求。

It is primarily applied to the UHVDC field for high-speed acquisition of electrical quantities such as current and voltage. The product features high precision, strong resistance to electromagnetic interference, large dynamic range, wide bandwidth, and convenient installation. It meets the demands of DC primary data required by protective relays, valve control systems, and fault recorders within DC transmission systems.

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Address: No. 1298, Xuji Avenue, Xuchang City, Henan Province Postal code: 461000 Website: http://www.xjec.com Service hotline: 400-01-95598