

Special Session II

Special Session Basic Information:

专栏题目 Session Title	中文：面向新型电力系统的源网荷储协同运行与规划关键技术 英文：Key Technologies for Collaborative Operation and Planning of Source-network-load-storage in New-Type Power Systems
专栏介绍和征稿主题 Introduction and topics	
中文： 新型电力系统的转型推动了可再生能源技术的显著进步，加速了包括储能、电动汽车、氢能在内的多种新型主体在电力系统中的深度融合。这一变革迫切需要重新审视源-网-荷-储各类资源的协同运行与一体化规划方式。分布式能源资源、虚拟电厂以及创新型储能解决方案的兴起，给电网的运行与规划带来了新的挑战。为应对这些挑战，需要发展先进的建模技术，提出高效的运行和规划策略，以释放系统灵活性，增强系统韧性，促进可再生能源在新型电力系统中的大规模接入。因此，本专题旨在为该领域的最新研究成果提供一个交流与展示的平台，特别关注人工智能与运筹优化在源-网-荷-储协同运行与规划中的融合应用，以及电动汽车和氢能等新型要素的集成与管理。 英文： The transition towards a new-type power system has driven significant advancements in renewable energy technologies and the integration of various new entities into power systems, including energy storage, and advanced load management. This shift calls for a reimagining of how to collaboratively operate and plan those source-network-load-storage resources. The rise of distributed energy resources, virtual power plants, and innovative storage solutions presents unique challenges in coordination, reliability, and optimization. Addressing these challenges requires the development of advanced modeling techniques, and operational and planning strategies to unlock system-wide flexibility, enhance resilience, and facilitate the large-scale adoption of renewable energy in new-type power systems. For this reason, this topic intends to provide a platform to share the latest findings on this subject (either research or review articles).	

Special Session Chair(s):

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Organizer's Brief Biography

中文：蔺晨晖，清华大学电机系助理研究员，入选中国科协青年人才托举工程，获 2023 年北京市科技进步一等奖（2/15）、中电联特等奖（3/15）、日内瓦发明展金奖（2 次），国家科技重大专项课题负责人。担任 IEEE 能源互联网协调委员会技术程序主席、IEEE P2048.501 工作组秘书、中国电工技术学会主动配电网及分布式电源专委会委员，SCI 期刊《IET Renewable Power Generation》等 5 本期刊编委，多个国际会议分会主席与召集人。发表学术论文 50 篇，申请发明专利 70 余项，获中国科协优秀科技论文、领跑者 F5000 论文等多个论文奖。

英文：Chenhui Lin is a Research Assistant Professor with the Department of Electrical Engineering at Tsinghua University. His research focuses on the renewable power system operation and the application of machine learning in power systems. He is a recipient of the Young Elite Scientists Sponsorship Program by China Association for Science and Technology. He is an associate editor of IET Renewable Power Generation, and a young editorial board member of Protection and Control of Modern Power Systems. He serves as the Program Chair of the IEEE PES Energy Internet Coordinating Committee

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Organizer’s Brief Biography

中文：周亦洲，河海大学副教授，入选江苏省青年科技人才托举工程，河海大学大禹学者，担任江苏省电工技术学会综合能源系统专业委员会副主任。以第一完成人牵头获得电力建设科学技术进步奖（省部级）、中国电工技术学会优秀博士学位论文提名奖。主持国家自然科学基金，江苏省自然科学基金等科研项目 10 余项。以第一/通信作者发表高质量 SCI、EI 期刊论文 30 余篇，以第一发明人授权国家发明专利 15 项。担任中科院一区期刊 PCMP 和中文核心期刊《中国电力》、《广东电力》、青年编委等。

英文：Yizhou Zhou is an associate professor at Hohai University. He was selected for the Jiangsu Province Youth Science and Technology Talent Support Project and Hohai University Dayu Scholar. He is also the deputy director of the Integrated Energy System Professional Committee of Jiangsu Electrotechnical Society. He has been awarded the Electric Power Construction Science and Technology Progress Award (ranked 1st), and the nomination award for the Excellent Doctoral Thesis of China Electrotechnical Society. He has been approved for a series of research projects, including the National Natural Science Foundation of China and the Natural Science Foundation Project of Jiangsu Province. He has published over 30 papers in SCI and EI journals as the first or corresponding author and authorized 15 national invention patents as the first inventor. He serves as young editorial board members of the journal PCMP, China Electric Power, Guangdong Electric Power, and so on.