

Special Session X

Special Session Basic Information:

专栏题目 Session Title	中文：极端灾害下考虑多类型应急资源的电力系统弹性提升 英文：Enhancing Power System Resilience with Multiple Emergency Resources under Extreme Disasters
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专栏介绍和征稿主题

Introduction and topics

中文：随着全球气候变化，极端灾害变得越来越频繁，给电力系统的运行带来了重大威胁。因此，提高系统韧性已成为新型电力系统发展的关键要求，旨在确保电力系统的稳定性和供电安全。为了提升电力系统在极端灾害中的响应能力，需通过整合和利用多种应急资源来增强电网韧性。利用多种应急资源，如移动电源车、储能系统、孤岛微电网等，能够促进电力恢复，并在灾难性事件中保持运行稳定性。各种应急资源的参与为电力系统的韧性运行带来了新的挑战，这就要求在极端灾害条件下，探索和分析协调这些资源的潜在运行模型。

英文：With global climate change, extreme disasters are becoming more frequent and pose significant threats to the operation of power systems. Enhancing system resilience has therefore become a critical requirement for the development of new power systems, ensuring both stability and security of supply. To improve the power system's response capabilities during extreme disasters, it is essential to strengthen grid resilience through the strategic integration and utilization of multiple emergency resources. A diverse array of emergency assets, such as mobile generation units, energy storage systems, islanded microgrids, and more, is leveraged to facilitate power restoration and maintain operational stability during catastrophic events. The involvement of various types of emergency resources introduces new challenges to resilient power system operations, necessitating the exploration and analysis of potential operational models for coordinating these resources under extreme disaster conditions.

Special Session Chair(s):

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	单位 Organization	南京理工大学
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Organizer's Brief Biography

中文：谢云云，男，南京理工大学自动化学院副教授，长期从事极端条件下电力系统运行与控制技术研究。发表了第一（通讯）作者 SCI 检索论文 24 篇，授权发明专利 26 项；作为负责人承担了国家自然科学基金面上项目等纵向科研项目，以及十余项企业合作横向项目；获得省部级科技进步二等奖 1 项。

英文：Xie Yunyun is an associate professor at the School of Automation, Nanjing University of Science and Technology. He has long been engaged in research on the operation and control technologies of power systems under extreme conditions. He has published 24 SCI-indexed papers as the first (corresponding) author and has been granted 26 invention patents. He has undertaken several vertical scientific research projects, including a National Natural Science Foundation of China General Program, as well as more than ten horizontal projects in cooperation with enterprises. He has also received one second prize for scientific and technological progress at the provincial or ministerial level.

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Organizer's Brief Biography

中文：侯恺，男，天津大学电气自动化与信息工程学院副教授、天津市电源学会副理事长，长期从事电力系统、综合能源系统的可靠性评估及韧性评估研究。发表了第一（通讯）作者 SCI 检索论文 32 篇，授权发明专利 21 项；作为负责人承担了国家自然科学基金面上项目等纵向科研项目，以及十余项企业合作横向项目；获得省部级科技进步二等奖 1 项，入选中国电机工程学会青年人才托举工程。

英文：Hou Kai is an Associate Professor at the School of Electrical Automation and Information Engineering, Tianjin University, and Vice Chairman of the Tianjin Power Supply Society. He has long been engaged in research on the reliability and resilience assessment of power systems and integrated energy systems. He has published 33 SCI-indexed papers as the first (corresponding) author. He holds 21 invention patent applications. As the principal investigator, he has led more than 10 research projects, including general and youth projects funded by the National Natural Science. He has won 1 provincial and ministerial-level Science and Technology Progress Awards (Second Class), and was selected for the Chinese Electrotechnical Society's Youth Talent Program.