


Special Session XI

Special Session Basic Information:

专栏题目 Session Title	中文：人工智能赋能的信息物理能源系统安全运行 英文：AI Empowered Secure Operation of Cyber-Physical Energy Systems
专栏介绍和征稿主题 Introduction and topics	<p>中文： 可再生能源的深度融合以及电力和信息系统的融合使信息物理能源系统（CPES）变得越来越复杂，容易受到前所未有的安全威胁。传统的基于模型的安全分析和控制方法正在努力解决高维不确定性和新型攻击问题。本次会议旨在探讨人工智能（AI）技术如何为 CPES 的安全、可靠和有弹性的运营提供解决方法。</p> <p>英文： The deep integration of renewable energy and the convergence of power and information systems are rendering Cyber-Physical Energy Systems (CPES) increasingly complex and vulnerable to unprecedented security threats. Conventional model-based security analysis and control methods are struggling to address high-dimensional uncertainties and novel cyber-physical attacks. This session aims to explore how Artificial Intelligence (AI) technologies can provide transformative solutions for the secure, reliable, and resilient operation of CPES.</p> <ol style="list-style-type: none">1. AI-Driven Discovery and Counteraction of Hidden Cyber-Attacks;2. Maintaining Collaborative System Resilience During Combined Cyber-Physical Attacks;3. Cross-Domain Vulnerability Assessment and Attack Propagation Modeling;4. Resilience-Oriented Power System Planning and Restoration.

Special Session Chair(s):

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Organizer's Brief Biography

中文： 他于 2022 年获得上海交通大学博士学位。他曾任香港理工大学博士后研究员。他的研究兴趣包括信息物理系统、人工智能在电网中的应用。

英文： He has obtained the Ph.D. degree in Shanghai Jiao Tong University in 2022. He was a Postdoctoral Fellow in Hong Kong Polytechnic University. His research interests include cyber-physical system, application of artificial intelligence into power grids.



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Organizer's Brief Biography

中文：她于 2017 年获得中国农业大学学士学位，2022 年获得清华大学博士学位。她的研究方向主要包括新型电力系统稳定性分析与控制、人工智能在电网中的应用。

英文：She has obtained the B.S. degree in China Agricultural University in 2017 and the Ph.D. degree in Tsinghua University in 2022. Her research interests include power system stability analysis and control, application of artificial intelligence into power grids.



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Organizer's Brief Biography

廖文龙（玛丽居里学者、日本 JSPS 学者、德国 DAAD 人工智能学者），分别于在中国农业大学、天津大学和奥尔堡大学取得学士、硕士和博士学位。他曾经在瑞士洛桑联邦理工学院担任博士后研究员。从 2025 年 4 月到 2026 年 2 月，他在英国莱斯特大学任助理教授。他曾是香港大学、日本东京工业大学、德国多特蒙德工业大学的访问学者。目前，他在东南大学担任正教授。他的研究方向主要包括智能电网、机器学习与可再生能源等领域。

Wenlong Liao (Fellows of MSCA, JSPS, DAAD AI-net) received his Bachelor's, Master's, and PhD degrees from China Agricultural University, Tianjin University, and Aalborg University, respectively.

From Aug. 2023 to Mar. 2025, he was a postdoc with the Ecole Polytechnique Federale de Lausanne (EPFL). He worked as an Assistant Professor at University of Leicester from Apr. 2025 to Feb. 2026. He was a visiting researcher at the University of Hong Kong, Tokyo Institute of Technology in Japan, and TU Dortmund University in Germany. He is currently a full Professor at Southeast University. His current research interests include smart grids, machine learning, and renewable energy.



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Organizer's Brief Biography

中文：他于 2017 年获得中国农业大学学士学位，2022 年获得哈尔滨工业大学（与南方科技大学联合培养）博士学位。他曾经在香港科技大学担任博士后研究员。他的研究方向主要包括电动汽车与电网的协同技术、智能算法在能源系统中的应用以及能源系统安全与架构优化。

英文：He obtained his Bachelor's degree from China Agricultural University in 2017 and his PhD degree from Harbin Institute of Technology (jointly trained with Southern University of Science and Technology) in 2022. He previously served as a Postdoctoral Researcher at the Hong Kong University of Science and Technology. His research interests mainly include the coordination technology between electric vehicles and power grids, the application of artificial intelligence in energy systems, and the security and architecture optimization of energy systems.