



EI² 2023 Special Session **05**

Applications of Artificial Intelligence and Big Data Technologies in Smart Grids

Introduction and topics

With the development of the modern smart grid, an increasing number of components such as smart meters, smart appliances, distributed renewable energy resources, multi-energy systems, and electric vehicles have been deeply integrated into the power system. Furthermore, the advanced capabilities of data awareness, collection, and storage have endowed the modern smart grid with abundant data reserves. This data wealth offers researchers the opportunity to leverage Artificial Intelligence (AI) and Big Data Technologies, allowing them to tackle challenges that traditional modeling, optimization, and control approaches might struggle to address. This special session aims to gather high-quality research papers for various aspects of smart grid applications based on Artificial Intelligence and Big Data Technologies. The goal is to advance the state-of-the-art in smart grid technology and enable more efficient, reliable, and sustainable power systems.

Topics of interests(including but not limited to):

- ∞ Optimization techniques for smart grid planning, dispatch, operation, and control
- ∞ Advanced load forecasting, demand response and energy scheduling
- ∞ High-efficient EV management and charging dispatch methods
- ∞ Big data analytics and data mining techniques for smart grid application
- ∞ Integration of knowledge and data in machine learning, enhancing the landscape of smart grid applications
- ∞ IoT for Smart Grid
- ∞ Digital twin technology for Smart Grid

Authors are encouraged to submit original research articles, reviews, or case studies that make significant contributions to the field.

Special Session Chairs

**Chaojie Li**The University of New
South Wales**Xiangyu Li**The University of New
South Wales**Bo Wang**

Hohai University

Publication



Website

The conference papers will be published by the IEEEExplore website and indexed by EI, and high-quality papers will be recommended to Energy Conversion and Economics, Energy Internet, Journal of Modern Power Systems and Clean Energy (MPCE), CSEE Journal of Power and Energy Systems (CSEE JPES), Applied Energy, and others.

Submission Link: <https://easychair.org/conferences/?conf=ei22023>

Full Paper Submission Deadline: Oct. 31th, 2023

SPONSORS

中国电机工程学会
CHINESE SOCIETY FOR ELECTRICAL ENGINEERING浙江大学
ZHEJIANG UNIVERSITY海南研究院
Hainan Institute, China清华大学
Department of Electrical Engineering
Tsinghua University太原理工大学
TAIYUAN UNIVERSITY OF TECHNOLOGY清华大学
能源互联网创新研究院
Energy Internet Research Institute
Tsinghua University深圳国际研究生院
Shenzhen International
Graduate School

ORGANIZERS

浙江大学
ZHEJIANG UNIVERSITY三亚纵横能源研究院
Sanya Global Energy Research Institute浙江大学电气工程学院
College of Electrical Engineering, Zhejiang University

CO-ORGANIZERS

郑州轻工业大学
ZHENGZHOU UNIVERSITY OF LIGHT INDUSTRYInternational Copper
Association Asia
Copper Alliance

Conference Secretary: Ms. Joyce Zhong

Email: ei2@youngac.cn

Telephone: +86 18628263876