

Call For Papers

Special Session: Applications of Artificial Intelligence in Power Systems

Conference: The 2022 International Conference on Cyber-physical Social Intelligence (ICCSI)

Date: October 21-24, 2022

Meeting mode: Hybrid

Location: Nanjing, China

Web site: <https://iccsi2022.agist.org>

The high penetration level of renewable energy is thought to be one of the basic characteristics of future power systems. However, the high penetration of renewable energy, large-scale interconnections of regional grids and complexities of power load pose new challenges to the planning, operation, control and analysis of power systems. New power systems present complex nonlinearities, strong uncertainties and coupling characteristics and it is difficult for traditional methods to handle these problems. With the development of data-driven methods and AI (artificial intelligence), some technologies such as data mining, machine learning, intelligence algorithms and expert systems, have shown prominent advantages on data resolution, learning ability and calculation efficiency. AI technologies provide new solution schemes and technology support and have been extensively applied in many aspects of power systems. Inspired by that, we host a special session to bring together the latest research accomplishments provided by researchers from academia and industry. We encourage prospective authors to submit related distinguished research papers on the subjects of both: theoretical approaches and practical case reviews.

Interested topics include the applications of AI in these aspects (but not limited to):

- AI in Power System Planning and Optimization
- AI in Power System Operation and Dispatching
- AI in Power System Stability and Analysis
- AI in Power System Identification, Monitoring and Protection
- AI in Power System User Side Analysis and Demand Response
- AI in Power System Energy Storage
- AI in Energy Efficiency and Low Carbon Technologies
- AI in Microgrid, Power Electronics and Electric Machinery
- Digital Power Grids and Digital Twin
- New Machine Learning and Data-Driven Methods and Their Applications

Important Dates:

July 1, 2022, Acceptance/Rejection notification

August 31, 2022, Final camera-ready papers due

Special Session Co-chairs:

Professor. Hao Quan (Nanjing University of Science and Technology, China), email: quanhao@njust.edu.cn

Associate Professor. Qinran Hu (Southeast University, China), email: qhu@seu.edu.cn

Assistant Professor. Tao Zhou (Nanjing University of Science and Technology, China), email: zhoutaonjust@njust.edu.cn

All inquiries about the session, including the letter of intent, should be sent to any of the co-chairs above