Special Session 31: AI-Assisted Forecasting in New-Type Power Systems

Session Organizers:

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Brief Description of the Session Thematic:

In the new-type power system with renewable energy as the major source of power supply, forecasting issues based on artificial intelligence (AI) have been thoroughly researched and applied. The purpose of this special session is to present new advancements in AI-assisted forecasting when facing new challenges.

Topics and Keywords:

This session will consist of lots of topics such as

1 Pre-processing methods towards forecasting
2 Advanced AI models for forecasting
3 Forecasting of meteorology, renewable energy output, load, energy consumption, electric power equipment operation condition, electricity price, etc.

This session aims to gather leading researchers and practitioners, thus providing an authoritative overview of the state-of-the-art in this vibrant interdisciplinary field. We welcome original research articles, review papers and case studies showing how AI can be used to deal with the forecasting problems in new-type power systems, and encourage academic-professional-industry exchanges to share their experiences and to foster collaborations.

Keywords: Electrical power systems; Smart grids; Artificial intelligence; Machine learning; Deep learning; Signal processing; Data analysis; Forecasting; Prediction; Meteorological forecast; Renewable energy generation; Electric power equipment operation condition; Load; Electricity price; Energy management