Special Session 21: Application of Artificial Intelligence in Electrical Power System Operation and Control

Session Organizer:

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Brief Description of the Session Thematic:

Dispatching and decision-making are core aspects of ensuring the safe and economical operation of the power grid. With the development of new power systems and the extensive integration of large amounts of new energy sources, the structure and characteristics of the power system have undergone significant changes, posing severe challenges to system analysis and decision-making. In recent years, the application of artificial intelligence (AI) technology in power system operation and control has become increasingly widespread and crucial. The usage of AI technology provides innovative solutions for the efficient, safe, and reliable operation of power systems. On the other hand, dispatch centers at various levels have accumulated a large amount of operational data, leading to a rapid growth and substantial scale of power data resources. Therefore, the rapidly accumulating power data and the new generation of AI technology offer unprecedented opportunities for power system security and stability analysis. This special conference aims to provide a platform for scholars engaged in related research to exchange and share their findings. We sincerely welcome your attention and participation in this special session to contribute to the deep integration of data, artificial intelligence and power system operation, and to the advancement of digitalization and intelligence in power system technology.

Topics and Keywords:

1. Privacy-Preserving Data Analysis of Power Systems based on AI.
2. Research on Power System Operation and Regulation Methods and Technologies based on AI
3. Research on Power System Security Defense Methods and Technologies based on AI
4. Research on Modeling and Optimizing Operation Technology of Distribution Networks with High Penetration PVs based on AI
5. Research on Transient Stability Assessment Technology of Power Systems based on AI