Special Session 20: **Next-Generation Electrical Power Systems: AI and Design Advances**

Session Organizer：

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Brief Description of the Session Thematic:

The goal of this special session is to document university-quality research that lies at the emerging nexus of Next-generation electrical power system design and artificial intelligence (AI). At a time when efficient, reliable and environmentally conscious power systems are more in demand, AI technologies will only increase their relevancy to this future solution.

Topics and Keywords:

This session will consist of lots of topics such as -
1. Optimization and control driven by the AI
2. Predictive maintenance and fault detection with machine learning applications
3. Integration of renewable energy with AI
4. Smart grid technologies
5. Power system real time data analysis

This session aims is to gather leading researchers and practitioners, thus providing an authoritative survey 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 in the electrical power systems in new ways of applications which allow academic-professional-industry-policymaker relationships foster collaboration to share their experiences.

Keywords
1. Electrical power systems
2. Artificial intelligence
3. Machine learning
4. Optimization
5. Control systems
6. Predictive maintenance
7. Fault detection
8. Renewable energy integration
9. Smart grids
10. Data analytics
11. Energy efficiency
12. Sustainability
13. Power system reliability
14. Intelligent systems
15. Grid modernization