Special Session 22: **Advanced Optimization and Control for Renewable-dominated Power and Energy Systems**

Session Organizer：

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Brief Description of the Session Thematic:

Future power and energy systems are large-scale uncertain systems with a high penetration of renewable energy. The goal of this special session is to document high-quality research that lies at the advanced optimization and control methods for renewable-dominated power and energy systems.

This session aim is to gather leading researchers and practitioners, thus providing an authoritative survey of the state-of-the-art in this field. We welcome original research articles, review papers and case studies showing how advanced optimization and control methods can be used in renewable-dominated power and energy systems in new ways of applications which allow academic-professional-industry-policymaker relationships foster collaboration to share their experiences.

Topics and Keywords:

1. Modeling of power and integrated energy systems
2. Optimization and control methods
3. Smart grid technologies
4. AI-assisted decision-making methods

Keywords

Electrical power systems; Integrated energy systems; Artificial intelligence; Machine learning; Optimization; Control systems; Renewable energy integration; Smart grids; Data analytics; Energy efficiency; Sustainability; Intelligent systems; Grid modernization