



EI² 2023 Special Session 08

Low-carbon Smart Grid Transformation and Its Cyber-physical Security

Introduction and topics

The transition to a sustainable energy future is one of the most pressing challenges facing the world today. As we move away from fossil fuel-based energy systems, the integration of renewable energy sources into the grid becomes increasingly important. However, this shift is not without its complexities. The session on "Low-carbon Smart Grid Transformation and Its Cyber-physical Security" aims to delve into the intricacies of modernizing our energy infrastructure to be both low-carbon and secure. This transformation involves not just the physical components of the energy system, but also the cyber elements that control and manage it. As smart grids become more prevalent, ensuring their security against cyber threats is paramount. This session will bring together experts, policymakers, and industry leaders to discuss the challenges and opportunities in creating a low-carbon, secure, and resilient smart grid.

Topics of interests(including but not limited to):

- \\ Renewable energy sources and integrations
- \\ Decarbonization with smart grids
- \\ Low-carbon economics and operations
- \\ Data-driven solutions for low-carbon future
- \\ Resilience and security challenges in next-generation cyber-physical systems
- \\ Threat modeling and risk assessment of cyber-physical systems
- \\ AI-based techniques for cyber-physical security and resilience

Special Session Chairs

**Gaoqi Liang**Harbin Institute of Technology,
Shenzhen**Jiaqi Ruan**The Hong Kong Polytechnic
University**Huan Zhao**Nanyang Technological
University

Publication



Website

The conference papers will be published by the IEEEExplore website and indexed by EI, and high-quality papers will be recommended to Energy Conversion and Economics, Energy Internet, Journal of Modern Power Systems and Clean Energy (MPCE), CSEE Journal of Power and Energy Systems (CSEE JPES), Applied Energy, and others.

Submission Link: <https://easychair.org/conferences/?conf=ei22023>

Full Paper Submission Deadline: Oct. 31th, 2023

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