



IEI² 2023 Special Session 10

Coordinated Operation, Control and Cyber-physical Security of Smart Grid Considering Supply- and Demand-Side Resources

Introduction and topics

Smart energy system is regarded as a promising solution to the challenge of increasing demand and environmental concerns by realizing the efficient utilization of coupled energy components such as combined heat and power units and power-to-gas facilities, and a range of market incentive mechanisms. However, despite the high efficiency and sustainability of smart energy systems, the interplay between suppliers and consumers can bring about diverse emerging control and operation issues. Besides, the deep involvement of cyber system also makes smart energy systems vulnerable to cyber-physical security risks, such as time delay, cyber failures, malicious attacks, etc. Therefore, how to achieve the coordinated control and robust optimization of smart energy system considering supply- and demand-side resources and how to enhance its cyber-physical security are of great importance. This Special Session will gather papers with the topics of interest including, but not limited to:

Topics of interests(including but not limited to):

- ∞ Optimal operation and control strategy of flexible resources (distributed generators, energy storage and demand response, etc.) in smart energy system
- ∞ Cooperative control of smart energy system for resilience enhancement
- ∞ Analysis and awareness of cyber-physical security risk of smart energy system
- ∞ Attack-resilient control strategy of smart energy system

Special Session Chairs



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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. 31st, 2023

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