

# **34<sup>th</sup> IEEE International Symposium on Industrial Electronics (ISIE 2025)**

## **Special Session on**

## **“Resilience-Oriented Operation, Energy Management and Control of Microgrids”**

### **Organized by**

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## **Call for Papers**

Theme: (Short description of approximately 100 words)

The aging of the power infrastructure and the increasing frequency of extreme events result in more catastrophic power outages. One promising solution to enhance the resiliency of power systems is to deploy microgrids. A microgrid can operate in either a grid-connected mode during normal operating conditions or an islanded mode (isolated mode) in the event of faults or outages in the main grid. During and after natural disasters, microgrids act in islanded mode to support critical demands of hospital communities and campuses that are equipped with local DGs and DESs. While most of the existing work have focused on operation and management of microgrids under normal operations, the resilience-oriented approaches are imperative to enhance the system preparedness before extreme events and fasten system recovery after extreme events. This special session solicits state-of-art research work related to the latest challenges, technologies, solutions, methods, and fundamentals in the field of reliance-oriented operation, energy management, and control for enhancing the resilience of microgrids under extreme events, such as flooding, storms, typhoons, and cyberattacks.

Topics of interest include, but are not limited to: (Provide a list of 5-10 special areas)

1	Resilience-oriented frequency and voltage control of microgrids
2	Resilience-oriented operation of mobile generations/energy storages in microgrids
3	Resilience-oriented energy management of microgrids
4	Vulnerability assessments of microgrids under extreme events
5	Dynamic network reconfiguration of networked microgrids
6	Energy sharing mechanisms for community microgrids
7	Cyberattack detection and mitigation in management and control of microgrids
8	Emergence Communication Networking for microgrids under extreme events

Reviewers (Provide 10-20 names with email and affiliation address)

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### Submission Procedure:

All the instructions for paper submission are included in the conference website: <https://ieee-isie-2025.org/>

### Deadlines:

Full paper submission: March 31, 2025  
 Paper acceptance notification: April 15, 2025  
 Camera-ready paper submission: May 14, 2025

The special session is supported by the TC on Resilience and Security for Industrial Applications.

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