IEEE I&CPS
— ASIA 2026 —

2026 IEEE IAS Industrial and Commercial Power System Asia

July 11-14, 2026 | Kunming, China

Special Session 17

Intelligent Control and Resilience of Integrated Maritime Energy Systems

Introduction and Topics

The transition toward carbon neutrality is accelerating the electrification and digitalization of maritime systems, leading to the deep integration of ports, vessels, and transportation infrastructures into interconnected maritime energy systems. These systems incorporate multiple energy carriers, including electricity, hydrogen, and alternative fuels, and play a critical role in enabling sustainable shipping and logistics. However, the high penetration of renewable energy, strong coupling between energy and logistics flows, and increasing exposure to extreme weather and cyber-physical threats introduce significant challenges in system operation, stability, and resilience.

Ensuring the reliable and efficient operation of such complex systems requires advanced control, coordinated energy management, and resilience-oriented methodologies. In particular, bridging multi-timescale dynamics, integrating heterogeneous energy subsystems, and enhancing system adaptability under uncertainty remain open research challenges.

This Special Session aims to provide a platform for researchers and practitioners to present recent advances in intelligent control, optimization, and resilience enhancement of integrated maritime energy systems. Contributions addressing both theoretical developments and real-world applications in smart ports and green shipping are highly encouraged.

Topics of interest include, but are not limited to:

- Modeling and operation of integrated maritime energy systems
- Intelligent control and optimization of multi-energy systems
- Energy management for electric and hybrid vessels
- Coordination between port and ship energy systems (e.g., shore power)
- Resilience under extreme weather and operational uncertainties
- Cyber-physical security, including attack detection and defense
- Energy–logistics coupling and electrified transportation systems

Special Session Chairs

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Paper Submission

Submission Method

* View paper submission instruction on website
https://www.ieee-icps.com/sub.html

* Submit your paper through the website or QR code
https://easychair.org/conferences/?conf=ieeeicpsasia2026

Important Dates

Submission Deadline	April 30, 2026
Notification Deadline	May 31, 2026
Early-bird Registration Deadline	June 15, 2026
Author Registration Due	June 15, 2026

Publication

Submissions to IEEE I&CPS 2026 will be peer reviewed on the basis of technical quality, relevance to conference topics, originality, significance, clarity, etc. Accepted papers will be submitted for inclusion into IEEE Xplore subject to meeting IEEE Xplore's scope and quality requirements.

Excellent papers will be recommended for review by **IEEE Trans on Industry Applications** (proportion can reach up to 50%), **Global Energy Interconnection** and **DeCarbon**.

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