

## 2026 11th International Conference on Power Electronics Systems and Applications



### Important Dates

<b>Submission Deadline</b>	<b>June 25, 2026</b>
Notification Deadline	July 25, 2026
Registration Deadline	August 30, 2026

## Tutorial 1: Control and Protection of Power Electronics-Dominated Power System

The rapid transition toward carbon neutrality has led to a paradigm shift in power systems, moving from traditional synchronous machine-based architectures to power electronics-dominated power systems. With the high penetration of inverter-based resources, the system exhibits complex dynamics that differ significantly from conventional systems. Traditional control and protection schemes are facing unprecedented challenges, such as resonance instability, fault current limiting, and protection maloperation.

This tutorial aims to introduce advances in modeling, control, and protection for power electronics-dominated power systems. The primary objectives include:

1. Providing a comprehensive understanding of dynamic behaviors of grid-following and grid-forming converters under complex grid conditions.
2. Analyzing the fundamental conflicts and coordinated control between protection relays and inverter-based resources.

### Novelty and Technical Innovations

This tutorial introduces the connection and the challenge between converter-level control dynamics and system-level protection. The novelty lies in two aspects: (1) revealing control dynamics of grid-following converters and grid-forming converters under complex grid conditions; (2) introducing coordinated methodologies that synchronize damping controllers with protection relays.

### Tutorial content:

Part 1: Stability analysis and damping design of grid-following converters

Part 2: Stability analysis and damping design of grid-forming converters

Part 3: Coordinated control and protection strategies for inverter-based resources

This tutorial provides a comprehensive analysis of grid-following and grid-forming control architectures within power electronics-dominated power systems. It begins by exploring the fundamental dynamics and grid-support functionalities of converters, followed by a detailed assessment of their impact on conventional protection schemes. By integrating converter control theory with protection engineering, this tutorial offers practical insights into ensuring the stability and security of future inverter-dominated



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## Publication

**IEEE** The accepted and presented papers will be published in the **PESA Conference Proceedings**. Conference content will be submitted for inclusion into **IEEE Xplore** and indexed by **Ei Compindex** and **Scopus**, etc.

- + PESA 2026 has been included in IEEE event list! ([Read More](#))
- + All past PESA proceedings are archived in IEEE Xplore and indexed by Ei Compindex and Scopus.



### SCI Journal

Up to 20% of the outstanding PESA 2026 papers will be selected and recommended for review and potential publication in IAS Transactions and IAS Magazines (JCR-Q2).

## Publication History

Accepted and presented papers of **10-year PESA** have been successfully published and indexed by **Ei Compindex & Scopus**.

**PESA 2024:** Hong Kong, China - ISBN: 979-8-3503-6580-1

**PESA 2022:** Hong Kong, China - ISBN: 978-1-6654-8668-2

**PESA 2020:** Hong Kong, China - ISBN: 978-1-7281-8890-4

**PESA 2017:** Hong Kong, China - ISBN: 978-1-5386-1387-0

**PESA 2015:** Hong Kong, China - ISBN: 978-1-5090-0063-0

**PESA 2013:** Hong Kong, China - ISBN: 978-1-4799-3491-1

More info, please visit: <https://www.icpesa.net/history.html>

## Submission Guidelines

**Submission Link:** <https://www.easychair.org/my/conference?conf=pesa2026>

Please select **Tutorial 1** after accessing the submission system.

[Full Paper Template](#)

[Abstract Template](#)

### Note:

- ~ Full Paper (**No less than 4 pages normally, 10 pages maximum. 5-6 pages are recommended**, including all figures, tables, and references)
- ~ Abstract (Within 300 words)
- ~ Official language is **English** in paper/abstract writing and presenting
- ~ Download the Full Paper/Abstract Template for proceedings and read **guidelines**.

## Contact US

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Special Session Page: <https://www.icpesa.net/tutorial-1.html>

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