



BHUBANESWAR
ICPEE 2025

**IEEE International
Conference on Power
Electronics and
Energy (ICPEE 2025)**



Special Session 14 (SS 14)

SS 14: Intelligent Control of Distributed Energy Resources (DERs) and Grid Dynamics for Future Electric Power

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Call for Papers

Technical Outline of the Session:

The integration of Distributed Energy Resources (DERs) such as solar PV, wind turbines, electric vehicles, and energy storage systems has significantly transformed modern power system dynamics. This Special Session focuses on intelligent modeling, dynamic analysis, and adaptive control strategies for grid stability and reliability in the presence of high DER penetration. Topics include coordinated control, real-time monitoring, dynamic load management, and AI/ML-based forecasting techniques. The session aims to bring together researchers and practitioners to present innovative solutions that ensure secure, resilient, and efficient operation of future smart electric grids powered by DERs.

Topic of the Session includes, but are not limited to:

- ❖ Intelligent modeling and dynamic analysis of Distributed Energy Resources (DERs) in modern power systems.
- ❖ AI/ML-based control strategies for grid stability and flexibility under high DER penetration.
- ❖ Real-time coordination of electric vehicles, energy storage, and renewable generation.
- ❖ Adaptive load and generation forecasting for resilient smart grid operations.
- ❖ Intelligent fault detection and Power quality analysis in DER-integrated power networks.

Important Dates:

Special Session Paper Submission Due Date: 15.08.2025

Notification of Paper Acceptance Date: 31.08.2025

Camera Ready Paper Submission Due: 15.10.2025

Author guidelines areas per regular paper submission.

IEEE Template

Submission Portal

<https://icpee.kiit.ac.in/special-sessions/>

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