



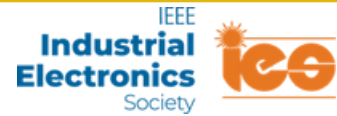
2025 IEEE 4th International Conference

on

Smart Technologies for Power, Energy and Control (STPEC 2025)

December 10-13, 2025

Department of Electrical and Electronics Engineering,
National Institute of Technology Goa, Goa, India



Special Session 03 (SS03)

Advancement in Modelling, Operation and Control of Smart Microgrids

Organized and co-chaired by:

- Dr. Dipanshu Naware, NIT Tiruchirappalli, Tamil Nadu, India
- Dr. Suman M., NIT Tiruchirappalli, Tamil Nadu, India
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Call for Papers

• Technical Outline of the Session:

This special session aims to bring together researchers, academicians, and industry professionals to explore recent advancements in smart microgrids. It will focus on innovative methodologies, emerging technologies, and practical implementations that enhance the efficiency, resilience, and sustainability of microgrid systems. The session will provide a platform for knowledge exchange, fostering discussions on challenges, breakthroughs, and future research directions. By facilitating collaboration among experts, this session seeks to contribute to the development of intelligent, adaptive, and secure microgrid solutions for modern power systems.

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

- Modelling of Power Converter Topologies
- Hybrid AC/DC Microgrid Modelling and Control
- Emerging Trends in Energy Storage Systems
- Primary, Secondary and Tertiary Control of Converters
- Control Techniques for Grid Connected and Islanded Modes
- Grid Forming and Grid Following Converters
- Design and Performance Analysis of Hybrid Energy Systems
- Intrusion Detection in Microgrids
- Power Quality Issues in Microgrids
- Resynchronization of Microgrids
- Active Distribution Systems
- Energy Management Systems
- Renewable Energy Integration
- EVCS Integration in Smart Microgrids

• Important Dates:

- Special Session Paper Submission Due : June 15, 2025
- Notification of Paper Acceptance : July 31, 2025
- Camera Ready Paper Submission Due : August 31, 2025
- Regular Registration Due : October 30, 2025



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