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Call for Papers for the Special Session on

High Gain Multilevel Converters for Medium/High Voltage Applications

Organized and co-chaired by

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Technical Outline of the Session and Topics

With the rapid growth of renewable energy systems, electric vehicles, and smart grids, there is a growing need for power converters that are compact, efficient, and capable of providing high voltage gain. Boost multilevel inverters, particularly switched-capacitor-based designs, have attracted strong interest because they can achieve higher output voltages without transformers while delivering good power quality and efficiency. However, issues such as capacitor voltage balancing, reliability, modularity, and reducing the number of components still need to be addressed. This session aims to provide a comprehensive forum for presenting and discussing recent advancements, innovative topologies, analytical modeling, experimental validation, and practical implementations of switched capacitor and other boost multilevel inverter configurations. By bringing together researchers, academicians, and industry professionals, this session seeks to foster knowledge exchange, stimulate new ideas, and promote future research collaborations in the rapidly evolving field of boost multilevel inverter technologies.

Topics of the session include, but are not limited to:

- Novel and emerging switched capacitor multilevel converter (SCMLC) topologies
- Modulation and control techniques applied to the SCMLC converter topologies
- Emerging applications for SCMLCs
- Recent advances on SCMLC for renewable energies integration
- Z source and qZ source boost multilevel inverters
- Fault-tolerant inverter topologies

Timeline for Authors

All the instructions for paper submission are available on the conference website. Please visit www.iecon2026.org or scan the QR code for the timeline.