

Call for Papers for the Special Session (SS30) on

“NEXT-GENERATION POWER CONVERTERS AND ELECTRIC DRIVES FOR SUSTAINABLE ENERGY AND ELECTRIC MOBILITY”

Organized and co-chaired by

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Technical Outline of the Session and Topics

“Next-Generation Power Converters and Electric Drives for Sustainable Energy and Electric Mobility” highlights recent advances in power electronics for clean energy and electric transportation. Modern Power Converters for Confirm Clean Energy and Electric Mobility focus on the critical role of power electronics in enabling sustainable energy generation and transportation systems. With the increasing penetration of renewable energy sources and the rapid adoption of electric vehicles, efficient, reliable, and high-power-density converters have become indispensable. Power converters act as the interface between energy sources, storage systems, grids, and electric drives, ensuring proper voltage, current, frequency regulation, and high-quality power delivery. This session invites contributions on innovative converter topologies, electric drives, and control strategies. Emphasis is placed on renewable energy systems, electric vehicle propulsion, and charging infrastructure.

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

- Wide Bandgap Devices and Advanced Control Techniques.
- Soft-Switching Techniques for High-Frequency Power Converters
- EV Charging and Fast Charging Converter Technologies
- Multilevel converters for high-power renewable and traction systems
- Multi-Port Power Converters for Electric Mobility and Renewable Energy
- Design, control and modulation of multi-phase drives.
- Digital Twin-Based Control and Monitoring of Electric Drive Systems
- Fault tolerant/detection/ localization and post-fault restoration schemes for improved reliability.

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.

