

Call for Papers for the Special Session on

**APPLIED POWER ELECTRONICS FOR MODERN INDUSTRIAL SYSTEMS:
CONVERTER DESIGN, CONTROL AND PRACTICAL DEPLOYMENT**

Organized and co-chaired by

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Technical Outline of the Session and Topics

Modern industrial systems depend on power converters across drives, automation, electrified processes, charging infrastructure, and integrated energy systems. Many applications share common requirements such as efficient conversion, stable control, compact implementation, and acceptable power quality under real operating conditions. This special session welcomes applied work that connects converter design and control with practical industrial use cases. It welcomes contributions on converter topologies, control and modulation, integration of storage and electrified loads, and emerging application directions including fast charging and wireless power. It also includes practical design and validation work using wide-bandgap devices where they support higher efficiency or power density. Both experimental and system-level studies are encouraged.

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

1. Converter topologies for industrial power conversion and electrified loads
2. Control and modulation for converters and industrial drives
3. Integration of storage systems and hybrid industrial energy setups
4. Fast charging systems and bidirectional power conversion interfaces
5. Wireless power transfer converters and control (industrial/transport use cases)
6. Wide-bandgap (SiC/GaN) based converter design for industrial applications
7. High-frequency magnetics and high-power-density design enabled by WBG devices
8. dv/dt , insulation stress, and EMI/EMC challenges in high-speed WBG converters
9. Power quality, harmonics, and EMI/EMC in industrial converter systems
10. Thermal design, packaging, and reliability considerations for applied converters
11. Protection, fault handling, and safe operation in converter-based systems
12. Monitoring/coordination of multiple converters in practical deployments
13. Prototypes, experimental studies, benchmarking, HIL/PHIL validation

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.

