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Special Session on

Control and Operation Techniques of Modular Power Electronic Converters for Enhancing Reliability and Maintenance Operations

Organized and co-chaired by:

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Call for Papers

Technical Outline of the Session and Topics:

Power electronics serves as the backbone of modern society, facilitating efficient energy conversion, distribution, and utilization across a diverse range of applications such as the integration of renewable energy sources, energy storage systems and electromobility. Modular power converters offer a versatile solution for these industrial applications because of several advantages such as enhanced quality of the output voltages and currents and an inherent fault-tolerant capability. In particular, modular power converters through interleaved connection of modules is key to increase the power rating and is therefore extensively used in many applications such as EV chargers, wind turbines, PV inverters, etc. Furthermore, in aerospace applications, modular converters offer lightweight and reliable solutions for power management, contributing to the advancement of electric propulsion systems. Modular converters also enable to increase voltage such as the CHB and MMC which are attractive for medium and high voltage applications such as electric traction systems, HVDC transmission, high power drives, etc

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

- Modular converter topologies including control and operation techniques.
- Reliability and fault tolerance operation in multi-stage and modular power electronics.
- Thermal management of modular power electronics converters.
- Integration of energy storage systems with modular converters for grid stabilization, grid code fulfilling and/or ancillary services.
- Modular converters for electric vehicle integration.



Author's schedule:

Deadline for submission of special session papers	April 15, 2024
Notification of acceptance	June 10, 2024
Deadline for submission of final manuscript	July 01, 2024
Early submission is highly encouraged for early decision notifications!	



All the instructions for paper submission are included in the conference website:

www.iecon-2024.org