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Special Session on

“Power Electronics for the More Electric Aircraft”

Organized by

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Call for Papers

The trend of higher efficiency and low power electronic devices along with reducing maintenance has pushed designers towards increasing the electrical subsystems on-board of modern aircrafts. The More Electric and Hybrid Aircraft (MEA) framework takes the interest of academia and industry and has recently spiked also thanks to the introduction of new aircrafts featuring a massive integration of power electronics systems.

This session targets specifically the application of power electronics into the MEAs to give an insight of concrete and spotless solutions available including the design and development of power electronics converters and evolutionary configurations as well as advanced control techniques dedicated to power quality improvement of modern power grids. The new testing possibilities offered by Hardware-in-the-Loop (HIL) systems and the electrical generator control and design to match the onboard requirements are also of interest for this Special Session.

Topics of interest include, but are not limited to:

- Power electronics technologies for the More Electric and Hybrid Aircraft
- Real-time HIL simulation of MEA electrical systems
- Novel architectures for the MEA's Power Distribution System
- Multi-port power converters topologies
- Power quality measurement and advanced control techniques in power quality
- Harmonic compensation of distribution system and Active filtering applications
- Multi-objective optimization of the energy consumption
- Hybrid Storage System management and control