



“The More Electric Aircraft: Power Electronics, Machine and Drives”

The Theme: this special section encompasses the modeling, design and testing of the power electronic converters, electrical machines and motor drives in the context of the demanding applications presented by the more electric aircraft. Significant investment in these technologies is continuing in Europe and USA to address the challenges involved in this application, including functionality, reliability, affordability, performance, weight and size/volume.

This special section aims to be an answer to the growing demand for the upgrading of the technical and scientific knowledge of the electric aspects involved in the more electrical aircraft. The special section will provide designers and manufacturers with references that cover the state-of-the-art and research trends in power electronic converters, electrical machines and motor drives for aircraft applications, taking into account the exciting possibilities generated by emerging technologies, new materials, innovative design and analysis techniques. The special section is also open to systems issues such as the energy distribution and management as well as electromagnetic compatibility issues.

Topics of interest of this Special Section include, but are not limited to:

- Power electronic converters, electrical machines and motor drives for:
 - primary and secondary flight actuation surfaces
 - embedded electric starter/generators
 - fan controllers
 - electric brakes
 - cabin air compressors
 - electric driven hydraulic pumps
- Electrical energy distribution for aircraft
- Fault tolerance, prognostics and diagnosis techniques for power converters, electrical machines and motor drives in aircraft applications
- Electromagnetic compatibility in aircraft applications
- Applicable technologies, materials, state of the art and future trends
- Motor and generator operation in challenging aerospace applications
- Cooling systems, thermal modeling methods and validation

Manuscript Preparation and Submission

Follow the guidelines in “Information for Authors” in the IEEE Transaction on Industrial Electronics <http://tie.ieee-ies.org/tie/>
Please submit your manuscript in electronic form through Manuscript Central web site: <http://mc.manuscriptcentral.com/tie-ieee>. On the submitting page #1 in popup menu of manuscript type, select: “**The more electric/all electric aircraft perspective: power converter, electric machine and drives**”.

Please note that a minimum of six pages is requested for the submitted papers.

Timetable

Deadline for manuscript submissions
Information about manuscript acceptance
Estimated publication date

July 31, 2010
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April 2011

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