

“Innovation in Electrical Machine Design for Variable Speed and Power Drives”

The Theme: the special section encompasses the design criteria and problems of the electrical machine in the context of modern demands of variable-speed and power drives, best utilization of the latest material advances, and high-efficiency compliance. All typologies of the electrical machine are covered from the most common forms to the more innovative ones. Design problems concerning special machines are welcome in order to grow the knowledge base in developing areas. The aim of the section is to provide designers and manufacturers of electrical machines a reference that covers the state-of-the-art in terms of the latest electrical machine and drive design, taking into account new possibilities generated by emerging technologies and new and innovative design and analysis techniques and packages. Particular attention will be given to the practical approach to motor design and the addressing the needs of the design office. The special section is not limited to the electromagnetic design but it is open to thermal and mechanical design and techniques that link different aspects of the drive design process.

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

- All types of conventional electrical machines
- Permanent magnet machines
- Synchronous reluctance and switched reluctance machines
- Special machines (axial flux, transversal flux, linear and tubular structures, etc.)
- Small and micro-machines
- Thermal design, heating and cooling
- Drive and power electronics matching and interfacing
- Mechanical aspects in electrical machine design (bearings, vibration, noise, etc.)
- Insulation aspects for electrical machines
- Use of advanced materials (conductor materials, permanent magnets, sheet materials, powder metallurgy)
- Design software (analytical, finite element methods electromagnetic, thermal, mechanical stress, etc.)

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: SS on Design of Electrical Machines.

Timetable

Deadline for manuscript submissions
Information about manuscript acceptance
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