



# “OPTIMIZATION IN POWER CONVERTERS ELECTRICAL MACHINES, AND DRIVES”

**The Theme:** Optimization plays a crucial role in any engineering problem. Optimization can be based on deterministic or heuristic approaches or even on a mixture of them. Power converters, electrical Machines and drives have emerged as one of the most stimulating field for optimization due to the vast range of possibilities in terms of hardware and software design. In fact the proper choice of the power converter topology, of the coupling converter-electric drive, a suitable components design and control parameters tuning, an accurate modeling and energy consumption reduction, often challenge the engineer and may require a systematic procedure. This special section aim is to collect contributions that offer a systematic approach to the use of optimization in power converters, electrical machines and drives, to meet the challenge of modern applications requirements. The presented procedures should be used as a guideline for engineers both in academia and industry for solving complex problems that could present several solutions but only one optimal and often very difficult to identify with standard approaches. Topics of interest of this Special Section include, but are not limited to, optimization applied in:

- Design of power converters
- Modulation strategies
- Electrical Machines design
- Modeling and identification
- Voltage and Current control in power converters
- Design and Control of electrical drives
- Efficiency improvement and energy saving
- Electronics design

## 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 Optimizations**.

## Timetable

**Deadline for manuscript submissions**  
**Information about manuscript acceptance**  
**Estimated publication date**

**March 15, 2010**  
**July 2010**  
**December 2010**

## Guest Editors

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