

## CALL FOR PAPERS

IEEE Transactions on Industrial Informatics

Special Section on:

“Power-Aware Design for Embedded Systems”



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Power consumption is the primary constraint in the design of electronics systems. Such systems, if powered by batteries or other limited energy sources, require low-power design to ensure adequate battery lifetime and/or reduce energy cost. Furthermore, lowering power consumption can greatly improve the reliability of such systems through the reduction of temperature related malfunctions. Power-aware design is particularly challenging for embedded systems since such systems must satisfy stringent requirements imposed by the physical systems where the embedded systems are deployed. Such requirements may also include hard/firm/soft real-time properties as well as other Quality-of-Service metrics. Therefore, in the various design phases from hardware to software, embedded system designers must take power, energy, reliability, and performance into consideration.

The Special Issue on “Power-Aware Design for Embedded Systems” aims at presenting the current state-of-the-art in power-aware design for embedded systems. Topics include, but are not limited to, **power-aware**

- design with respect to reliability, dependability, energy efficiency, and thermal issues,
- design at the software, compiler, middleware, and operating system levels,
- architecture design for embedded systems,
- design considering hard, firm, and soft real-time requirements
- design for cyber physical systems,
- management for systems with renewable energy, and battery management.

Submissions to this Special Issue must represent original material that has neither been submitted to nor published in any other journal. **Extended** versions of papers previously published in conference proceedings, digests or preprints is eligible for consideration, if the authors submit the previously published paper and the list of the extensions along with the submitted version. All contributions must focus on power-aware design for embedded systems.

**Manuscript preparation and submission:** Follow the guidelines in “Information for Authors” in <http://iee-ies.org/tii/>

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**Paper submission deadline: Oct. 31, 2010**

**Expected publication date: Nov., 2011**

Note: The recommended papers for the section are subject to final approval by the Editor in Chief. Some papers may be published outside the special section, at his/her discretion.