

CALL FOR PAPERS (version Jan. 27, 2012)

ISLPED 2012

INTERNATIONAL SYMPOSIUM ON LOW POWER ELECTRONICS AND DESIGN



<http://www.islped.org>
Redondo Beach, CA, USA
July 30 – August 1, 2012



Executive Committee and Symposium Officers

General Co-Chairs:

Massimo Poncino
Politecnico di Torino
massimo.poncino@polito.it
Naresh Shanbhag
Univ. of Illinois Urbana-Champaign
shanbhag@illinois.edu

Program Co-Chairs:

Pai H. Chou
UC Irvine / NTHU
phchou@uci.edu
Ajith Amerasekera
Texas Instruments
amerasekera@ti.com

Publicity Co-Chairs:

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Industry Liaison

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* Sponsors, technical support pending

Sponsored (pending) by **ACM SIGDA** and **IEEE Circuits and Systems Society** with technical support (pending) from the **IEEE Solid-State Circuits Society**, the **IEEE Electron Devices Society**, **IPJS Computer Science Society**, and the **IEICE Electronics Society**.

The International Symposium on Low Power Electronics and Design (ISLPED) is the premier forum for presentation of recent advances in all aspects of low power design and technologies, ranging from process and circuit technologies, simulation and synthesis tools, to system level design and optimization. Specific topics include, but are not limited to, the following two main areas, each with three sub-areas:

1. Architecture, Circuits, and Technology	2. Design Tools, System and Software Design
1.1. Technologies and Digital Circuits Emerging logic/memory technologies and applications; Low power device and interconnect design; Low power low leakage circuits; Memory circuits; Noise reduction; 3-D technologies; Cooling technologies; Battery technologies; Variation-tolerant design; Temperature-aware and reliable design.	2.1. CAD & Design Tools Energy optimization and estimation tools that operate at the physical, circuit/gate level, RT level, behavioral level, and algorithmic levels; Links to other metrics: variability, reliability, temperature.
1.2. Logic and Microarchitecture Design Processor core design; Cache and register file design; Logic and RTL design; Arithmetic and signal processing circuits; Encryption technologies; Asynchronous design.	2.2. System Design and Methodologies Microprocessor, DSP and embedded systems design; FPGA and ASIC designs; System-level power- and thermal-aware design; System-level reliability- and variability-aware design.
1.3. Analog, MEMS, Mixed Signal and Imaging Electronics RF circuits; Wireless; MEMS circuits; AD/DA Converters; I/O circuits; Mixed signal circuits; Imaging circuits; Analog noise; Circuits to support emerging technologies; DC-DC converters.	2.3. Software Design and Optimization Power- and thermal-aware software design, scheduling, and management; Application-level optimizations; Wireless and sensor networks; Emerging applications.

Submissions on new topics: emerging technologies, architectures/platforms, and applications are particularly encouraged.

TECHNICAL PAPER SUBMISSIONS DEADLINE: Abstract registration: **March 2, 2012**; Full paper: **March 9, 2012**.

Submissions should be full-length papers of up to 6 pages (double-column, ACM SIG Proceedings format, available at <http://www.acm.org/sigs/publications/proceedings-templates>), including all illustrations, tables, references and an abstract of no more than 100 words. Papers exceeding the six-page limit will not be reviewed. **Submission must be anonymous: papers identifying the authors will be automatically rejected.** Electronic submission in **pdf format** only via the web is required. More information on electronic submission to ISLPED'12 can be found at <http://www.islped.org>.

Submitted papers must describe original work that will not be announced or published prior to the Symposium and that is not being considered or under review by another conference at the same time. Accepted papers will be presented in one of two parallel tracks: one focusing on architectures, circuits and technologies, the other on design tools and systems and software design for low power. Notification of paper acceptance will be mailed by **April 20, 2012** and the camera-ready version of the paper will be due by **May 20, 2012**. Accepted papers will be published in the Symposium Proceedings and included in the ACM Digital Library. Authors of a few selected papers from the Symposium will also be given an opportunity to submit enhanced versions of their papers for publication in a special issue of a reputed journal. ISLPED'12 will present two Best Paper Awards based on the ratings of reviewers and an invited panel of judges.

INVITED TALK, PANEL, AND TUTORIAL PROPOSALS DEADLINE: Received by **March 12, 2012**.

There will be several invited talks by industry and academic leaders on key issues in low power electronics and design. All invited talks will be in plenary sessions. The Symposium also may include embedded tutorials to provide attendees with the necessary background to follow recent research results, as well as panel discussions on future directions and design/technology alternatives in low power electronics and design. Proposals for invited talks, embedded tutorials, and the panel should be sent to the Technical Program Chairs:

Pai H. Chou
University of California, Irvine
phchou@uci.edu

Ajith Amerasekera
Texas Instruments
amerasekera@ti.com

People from Industry or Academy interested in exhibiting at the Symposium should contact the Exhibits