Extended Call For Papers
ISLPED 2010

INTERNATIONAL SYMPOSIUM ON LOW POWER ELECTRONICS AND DESIGN

Austin, Texas, August 18-20, 2010 (http://www.islped.org)

Sponsored by **ACM SIGDA** and **IEEE Circuits and Systems Society** with technical support from the **IEEE Solid-State Circuits Society** and the **IEEE Electron Devices 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. Design Tools** Energy simulation and estimation tools that operate at the circuit/gate level, RT level, behavioral level, and algorithmic level; Variation-aware design; Physical design and interconnects
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: stochastic & probabilistic computing, error-resilient architectures, robust circuits, biomedical, energy applications and emerging technologies are particularly encouraged.

TECHNICAL PAPER SUBMISSIONS:

Submissions should be full-length papers of up to 6 pages (double-column format, font size 9pt to 10pt), including all illustrations, tables, references and an abstract of no more than 100 words. Papers exceeding the six-page limit and/or 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'**10** 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. 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'**10** will present two Best Paper Awards based on the ratings of reviewers and an invited panel of judges.

IMPORTANT DATES:

- ✓**Technical paper submission deadline: March 12, 2010**
- ✓Invited talks, panels and tutorial proposals deadline: April 2, 2010
- ✓Notification of paper acceptance: April 30, 2010
- ✓**Camera-ready version due: May 28, 2010**
- ✓Exhibition proposal deadline: May 28, 2010
- ✓Low-power design contest submission deadline: June 4, 2010

INVITED TALKS, PANELS, AND TUTORIAL PROPOSALS:

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 Technical Program Co-Chairs.

LOW-POWER DESIGN CONTEST:

Low Power Design Contest to provide a forum for universities and research organizations to showcase original **power-aware** designs and to highlight the innovations and design choices targeted at low power. The goal is to encourage and highlight design-oriented approaches to power reduction. Entries identifying the authors will be automatically rejected. Entries should be submitted electronically in **PDF format** only to the Design Contest Chairs.

EXHIBITION APPLICATIONS:

Companies interested in exhibiting at the Symposium should contact the Exhibits Co-Chairs.

Executive Committee & Symposium Officers

General Co-Chairs:

Vojin Oklobdzija
University of Texas, Dallas
vojin@utdallas.edu

Barry Pangrle
Mentor Graphics Corp.
barry_pangrle@mentor.com

General Vice-Chair:

Naehyuck Chang
Seoul National University
naehyuck@snu.ac.kr

Program Co-Chairs:

Chris Kim
University of Minnesota
chriskim@umn.edu

Naresh Shanbhag
University of Illinois
shanbhag@illinois.edu

Local Arrang'mnts Chair:

Juan Rubio
IBM
rubioj@us.ibm.com

Treasurer:

Yuan Xie
Penn State University
yuanxie@cse.psu.edu

Publicity Co-Chairs:

John Donovan
Low-Power Design
john@low-powerdesign.com

Vijay Raghunathan
Purdue University
vr@ecn.purdue.edu

Exhibits Chair:

David Pan
University of Texas
dpan@ece.utexas.edu

Web Chair:

Pai Chou
U of California, Irvine
phchou@uci.edu