Press Release

From October 4\textsuperscript{th} to Oct. 6\textsuperscript{th} the 2006 ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED) will be held at Rottach-Egern, Lake Tegernsee, close to Munich, Germany, to present and discuss the most recent advancements in design for power and energy efficient microelectronic systems.

Microelectronics has been the enabling technology for new applications in mobile computing and communication, ever increasing performance in networks and servers as well as autonomous add-hoc networks or assistant systems for drivers or in health care systems. All of these applications, which are available to the mass market at affordable cost, are very computation intensive and require millions of transistors switching at ever increasing frequencies up to several GHz. While semiconductor technologies offer the number of devices per mm\(^2\) and the GHz, physics beat back by consuming static and dynamic power with each operation of the device. The total operation cost of a server farm is to 25\% due to the power consumption and cooling. The power density per mm\(^2\) on a chip approached the power density of a nuclear power plant. On air times of 3G cellular phones were prohibitive for the first samples.

Hence, since several years the power consumption of electronic devices has increasingly become one of the key limiters in exploiting the ever increasing potential of semiconductor technologies. Its importance as differentiator for products has grown at the same pace as advancements in design technologies and tools have enabled the silicon utilization for new revolutionary products and services, in particular in mobile communication, information and entertainment applications.

The International Symposium on Low Power Electronics and Design since more than 10 years provides a platform for industrial designers, researchers and students to report on their most recent achievements in systems, circuit and design technologies in the domain of electronic design for low energy consuming systems.

ISLPED 2006 during three days offers two parallel tracks of technical presentations, keynotes, tutorials and opportunities for intensive discussions between design engineers and researchers. This strong and diverse technical program features two keynote talks from leaders in the field of low power electronics and design, a technical panel, four embedded tutorials, and three half-day tutorials, new for this year, scheduled for the last day of the symposium. Following the tradition of ISLPED, this year's event also includes exhibits featuring tools and methodologies from leading vendors of low power or power-aware design tools.

Dr. Christoph Kutter, Senior VP Products and Systems, Infineon Technologies, will give a keynote on design challenges for mobile communication devices. The second keynote will be given by Barry Dennington, VP Chief Technology Office, Philips Semiconductors, who will present an industrial view on the demands of a convergent communications, consumer and automotive market, the technology challenges a semiconductor company faces and the solutions that lead to actual products with a few examples. The Friday panel is titled “Flexibility and Low Power; a Contradiction in Terms?” Moderated by Peter Wintermeyer, Editor in Chief of Markt & Technik, Reiner Hartenstein, Univ. Kaiserslautern; Heinrich Meyr, RWTH Aachen University and Chief Scientific Officer CoWare; and Steve Leibson, Tensilica, will discuss whether configurable or re-configurable computing offers solutions.

New for this year, the program includes an industry session that will highlight contributions showcased by companies participating in the ISLPED exhibits. Winning entries to the annual Low Power Design Contest will also be featured in a separate technical session.

The four embedded tutorials during the first two days of the conference are organized around two major themes: (1) low power circuit design and technologies; and (2) low power systems and energy management. Two embedded tutorials on sub-threshold design and variability/low power design from experts from MIT, University of Michigan, and IBM Research are paired with two others on energy harvesting for battery limited systems and low power portable applications from researchers from NEC Labs and University of California. New for this year, ISLPED will offer three half-day tutorials on hot
topics such as leakage aware design, micropower analog design, and addressing fault-tolerance/variability and power issues from system to circuit levels. The tutorials feature presenters from OFFIS, Intel, University of North Carolina, Carnegie Mellon University, and IBM Research.

Out of 214 submissions received in early March, only 75 strong technical papers were accepted for presentation in paper or poster sessions, yielding an acceptance rate of 26% for regular and short papers (56 papers), or 35% including 19 posters. Topics range from low power analog and RF design, power aware circuit design and tools, and microarchitecture and architecture techniques for low power, to system and application level power management. The program is organized in twelve technical sessions featuring long (30 min) and short (20 min) paper presentations, as well as two interactive poster sessions that will provide an additional venue for authors and symposium attendees to interact in an informal setting.

ISLPED 2006 is sponsored technically by ACM SIGDA and the IEEE CASS. ISLPED also receives technical co-sponsorship from the IEEE Solid State Circuits and the IEEE Electron Devices Societies and is thankful for the generous financial support from Bosch, BullDAST s.r.l., Cadence, ChipVision, IBM, Infineon, Intel, Magma Design Automation, Nokia, OFFIS, Philips, ST Microelectronics, Synopsys, and Texas Instruments.

Further information and registration at: www.islped.org

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