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Semiconductor Experts Chart Chip Industry's Future Direction Beyond the "Moore's Law" Horizon

Program unveiled for 2016 Symposia on VLSI Technology & Circuits – includes short courses, focus sessions, and panel discussions on "Inflections for a Smart Society" theme

HONOLULU, HI (APRIL 20, 2016) – Reflecting the semiconductor industry's ongoing transition from a focus on geometric scaling to the integration of heterogeneous technologies that will enable the future "smart society," the annual Symposia on VLSI Technology & Circuits has announced its 2016 program around the theme **"Inflections for a Smart Society."** Uniquely positioned at the intersection of IC technology development and the evolving strategies for advanced circuit architecture, the Symposia program will explore the future direction of the microelectronics industry for chipmakers, foundries, and academic researchers.

Focus sessions

Focus sessions for both Symposia will explore different aspects of this theme. Technology focus sessions include "Systems & Embedded Memory" and "Interconnect & 3D Integration," addressing the challenges of advanced device design. The Circuits focus sessions are "Industrial & Power Circuit Directions for a Smart Society" and "Innovative Systems for a Smart Society," examining the development of sensors and power circuits for interconnected systems. Joint focus sessions shared by the Technology and Circuits program include "Smart Power," "Analog/RF Integration & Design-technology Co-Optimization in CMOS," "Embedded Memories," and "Design in Scaled Technologies," enabling participants from each of the Symposia to share ideas on the intersection of these critical technology areas.

Panel discussions

Panel discussions provide an opportunity for Symposia participants to interact with leading industry experts in examining critical issues surrounding major industry developments. The Technology panel, **"How Moore's Law, Industry Consolidation and System Trends Are Shaping the Memory Roadmap,**" will explore the technical and economic limits of DRAM and NAND Flash memories, along with the system requirements driving future memory technology.

Two Circuits panels approach the Symposia theme with topics focused on innovation and cooptimization at the circuit level, including **"Top Circuit Techniques: Life With & Without Them,"** which reviews high-impact circuit design techniques; while **"It's All A Common Platform – How Do I Build A Differentiated Product?"** which examines how software and hardware co-design, user interface, and other innovations continue to drive competitive products at the circuit level. A joint Technology & Circuits panel moderated by Professor Subramanian Iyer from UCLA debates the crucial question of how Moore's Law is being adapted by the IC industry to new business opportunities in the IoT era, in a session titled **"More Moore, More than Moore or Mo(o)re Slowly?"** with a high profile panel composed of industry executives and experts.

Short Courses

Full-day short courses by leading industry and academic experts precede each Symposia, enabling participants to more fully explore subjects related to the conference theme, including a Technology Short course, **"Inflections in VLSI Technologies – Cloud & Beyond,"** with sessions that cover high performance computing, silicon photonics, memory technologies, cloud computing and novel power devices.

Two Circuits short courses are offered, including "Advanced Wirelines Techniques," which covers 28 – 56Gb/s design standards, low power CMOS, analog NRZ and silicon photonic transceivers, and integrated electronic-photonic communications circuits. A second short course, "Circuit Design in FinFET, FDSOI & Advanced Memory Technologies," examines the impact of FinFETs in processor design, analog & mixed-signal CMOS and embedded memory designs; as well as UTBB FDSOI technology for SRAM and digital logic. (Short courses require a separate registration fee.)

This year, the annual Symposium on VLSI Technology and Circuits will be held at the Hilton Hawaiian Village, Honolulu, Hawaii from June 13-16, 2016 (Technology) and June 14-17, 2016 (Circuits). This year marks the 36th anniversary for the Symposium on VLSI Technology, and the 30th anniversary for the Symposium on VLSI Circuits. The two conferences have been held together since 1987, providing an opportunity for the world's top device technologists, circuit and system designers to exchange leading edge research on microelectronics technology, with alternating venues between Hawaii and Japan.

Sponsoring Organizations

The Symposium on VLSI Technology is sponsored by the IEEE Electron Devices Society and the Japan Society of Applied Physics, in cooperation with the IEEE Solid State Circuits Society.

The Symposium on VLSI Circuits is sponsored by the IEEE Solid State Circuits Society and the Japan Society of Applied Physics, in cooperation with the Institute of Electronics, Information and Communication Engineers.

Further Information, Registration and complete program

Visit: http://www.vlsisymposium.org.

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