

2018 SYMPOSIUM ON VLSI Technology

TECHNOLOGY, CIRCUITS AND SYSTEMS FOR SMART LIVING

Hilton Hawaiian Village, HONOLULU, Hawaii, USA

Monday – Friday, June 18-22, 2018

(June 18 Short Course,

June 19-21 Technical Sessions

June 22 Friday Forum)

Paper Submission Deadline: 23:59 PST Monday, January 29, 2018
For complete conference, author, and registration information, visit:

<http://www.vlsisymposium.org>

Symposium Scope Papers will be selected based on technical merit, advances relative to previously published work, credibility of claims, and quality of writing and illustrations. The scope includes:

- **IoT, AR/VR and AI Technologies** including CPU, GPU, ultra-low power technologies; in-memory computing, heterogeneous, 3D and 2.5D integration; wearable devices sensors, display, connectivity; power management; digital/analog, micro-controllers and application processors
- **Stand-Alone and Embedded Memories** technology and reliability for SRAM, DRAM, 3D NAND and NOR Flash, MRAM, PCRAM, ReRAM, FeRAM and other New Memories
- **CMOS Technology, Microprocessors and SoCs** including scaling, VLSI manufacturing concepts, and yield optimization
- **RF / Analog / Digital Technologies and Sensors** for mixed-signal SoC; RF front end; analog, mixed-signal, I/O, high-voltage, imaging, MEMS, integrated sensors
- **Process and Materials Technologies** including device process and architecture, modeling and reliability; high mobility channels; advanced lithography, high-density patterning; SOI and III-V technologies; processes for high-aspect ratio in 3D NAND and advanced BEOL integration
- **Packaging Technologies and System-in-Package (SiP)** including through-silicon-vias (TSVs) and 3D-system integration
- **Photonics Technology and Beyond CMOS Devices** for energy efficient electronics and new computation paradigms, 1D and 2D materials, spintronics and their integration on CMOS

Focus Sessions will be offered in these areas of interest:

- **BEOL integration for Power and Thermal Management**
- **Sensors and Related Technology Integration** (for IoT, smart living, healthcare)
- **New Devices and Systems for AI:** including in-memory and in-sensor computing (**Joint with Circuits**)
- **DTCO in Advanced CMOS Technology** (**Joint with Circuits**)

Information and Registration

The Symposia's website provides additional information, including registration and hotel reservations.

To obtain assistance with any aspect of the Symposium, please contact the appropriate Secretariat.

Secretariat for VLSI Symposia (America and Europe): Widerkehr & Associates, Montgomery Village, MD, USA

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Secretariat for VLSI Symposia (Asia and Japan): c/o JTB Communication Design, Inc., Tokyo, Japan

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Evening Panels: All attendees are invited to join discussions on:

- Is the CPU dying or dead? Is memory the panacea for hardware acceleration? (**Joint with Circuits**)
- Storage class memories: Who cares? Who needs them? DRAM is enough, NAND is great

Technology Short Course A full day Technology Short Course will offer unique learning opportunities on **Device and Integration Technologies for sub-5nm CMOS and Next Wave of Computing**.

Symposia Demo Session A demo session will be held during the Joint Circuits/Technology Reception on Monday. At the demo session the authors of the selected papers will employ posters to augment their demonstration.

Friday Forum will give broad perspectives on AI and Machine Learning. Half day session will include several presentations given by experts in the field.

Paper Submission Prospective authors must submit two-page extended abstracts using the website, www.vlsisymposium.org. Accepted papers will be published as submitted, with **no revisions permitted**. Authors must follow detailed instructions provided within the "Authors" section of the website, including the Authors' Guide and Pre-publication Policy. The technical content beyond the abstract of the accepted paper must not be announced, published, or in any way put in the public domain prior to the Symposium.

Best Student Paper Award selection will be based on content quality and presentation of the paper at the Symposium. The winning student will be presented a monetary award and a certificate at the 2019 Symposium opening session. The student must be enrolled as a full-time student at the time of submission, be the leading author and presenter of the paper, and indicate at submission that the paper should be considered for the award. Selected student authors will get a travel subsidy.



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