

2018 SYMPOSIUM ON VLSI Technology

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 innovation, advances relative to previously published work, credibility of claims, and quality of writing and illustrations. The scope includes:

- **IoT, AR/VR and AI Systems and 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 Material Technologies** including advanced transistor process and architecture, modeling and reliability; high mobility channels; advanced lithography, high-density patterning; SOI and III-V technologies; process for high-aspect ratio 3D NAND, photonics; local interconnects and Cu/optical interconnects scaling.
- **Packaging Technologies and System-in-Package (SiP)** including through-silicon-vias (TSVs) and 3D-system integration.
- **Photonics Technology and Beyond CMOS Devices**

Best Student Paper Award

Best Student Paper Award selection will be based on 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 when submitting the paper that the paper should be considered for the award.

Information and Registration

The Symposia's website provides additional information, including information regarding Symposium 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

+1-301-527-0900 ext.2, vlsi@vlsisymposium.org

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

+81-3-5657-0777, vlsisymp@jtbcom.co.jp

Joint Technology and Circuits Focus Sessions

VLSI Symposium on Circuits will be held in parallel to Technology sessions. To synergize on topics of common interest Joint Technology and Circuits focus sessions will be offered in the following special areas of joint interest:

- **Design in scaled technologies:** scaling of digital, memory, analog and mixed-signal circuits in advanced CMOS processes
- **Design enablement:** design for manufacturing, process-design co-optimization, on-die monitoring of variability and reliability
- **Embedded memory technology and design:** SRAM, DRAM, NOR Flash, PCRAM, ReRAM, MRAM, FeRAM.
- **3D and heterogeneous integration:** power and thermal management, inter-chip communication, SiP architectures and applications

Innovative System Directions

Authors are encouraged to submit papers on "big integration" that showcase innovations that extend beyond a single IC and into the module level. These include focus areas of **IoT, Industrial Electronics, Big data management, Biomedical Applications, VR (virtual reality), AR (augmented reality), and Robotics and Smart cars**. New focus sessions comprising invited and contributed papers will be offered.

Paper Submission

Prospective authors must submit two-page papers and abstracts using the Symposia's 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.



Symposium Chair:
Mukesh Khare
IBM
kmukesh@us.ibm.com

Symposium Co-Chair:
Meishoku Masahara
AIST
m.masahara@aist.go.jp

Program Chair:
Chong Ping Chang
Applied Materials
Chong-Ping_Chang@amat.com

Program Co-Chair:
Shinya Yamakawa
Sony Semiconductor Solutions
Shinya.Yamakawa@sony.com



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Technology & Circuits

