

2017 SYMPOSIUM ON VLSI TECHNOLOGY

Semiconductor industry's premier event VLSI technology & circuits
RIHGA Royal Hotel Kyoto, Japan

**Monday – Thursday,
June 5-8, 2017**

June 5 Short Courses
June 6-8 Technical Sessions

The 2017 Symposium on VLSI Technology welcomes the submission of original papers on all aspects of IC and IoT technology. The VLSI Circuits Symposium (reverse side) will be held at the same location with "full (3 days) overlap". A single registration allows participants to attend both Symposia, to synergize on topics of joint interest and to gain an excellent overview of the interactive technology-circuits fields.

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:

- **Innovative Technology Directions**, see inset in the right column
- **IoT Systems and Technologies** including ultra-low power technologies; heterogeneous integration; wearable devices, sensors, display, connectivity; power management; digital / analog, microcontrollers and application processors.
- **Stand-Alone and Embedded Memories** including technology and reliability for DRAM, SRAM, (3D-)NAND, MRAM, PCRAM, ReRAM and other memories.
- **CMOS Technology, Microprocessors and SoCs** including scaling, VLSI manufacturing concepts, and yield optimization.
- **RF / Analog / Digital Technologies** 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; alternate channel; advanced lithography, high-density patterning; SOI and III-V technologies; photonics; local interconnects and Cu / optical interconnects scaling.
- **Packaging Technologies and System-in-Package (SiP)** including through-silicon-vias (TSVs), power and thermal management, inter-chip communication, 3D-system integration, and yield & test issues.
- **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 2018 Symposium opening session. The student must be enrolled as a fulltime student at the time of submission, be the leading author and presenter of the paper. He / She should indicate when submitting the paper that the paper should be considered for the award.

Information and Registration

The Symposia's website provides the 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 (Asia and Japan)

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Joint Technology and Circuits Focus Sessions

Joint technology and circuits focus sessions will be offered in the following special topics of joint interest:

- **IoT / ULP (Internet of Things / Ultra Low Power Devices):** Advanced CMOS processes for ULP. Design Enablement, Design for Manufacturing, On-die monitoring of characteristic variability and reliability
- **New Computing:** Artificial Intelligence, Beyond von Neumann Computing, Machine Learning, Neuromorphic and In-memory / In-sensor computing
- **2D MOSFETs / New Concepts for Channel & Gate materials:** Graphene, MoS₂, α -Si / poly-Si or flexible organic materials for More than Moore devices.
- **Emerging Memory Technology and Design:** Advanced SRAM, DRAM, Flash, PCRAM, ReRAM, MRAM, Memristor, 3D Xpoint memory, etc.

Innovative Technology Directions

In this year, the theme for 2017 Symposia on VLSI Technology and Circuits is set to "**Harmonious Integration toward Next Dimensions**". Authors are encouraged to submit papers on "**Harmonious Integration**" with co-optimization of device technology and circuit & system design. These include the focus areas of the device technology for **Industrial Electronics, Big data management, Artificial Intelligence (AI), Virtual Reality (VR), Augmented Reality (AR), Robotics and Smart cars.**

Symposia Demo Session

The Symposia Demo session will be held during the Joint Technology and Circuits Reception on Monday. At the demo session, the authors of selected papers will employ posters to augment their demonstration. Prospective authors who are interested in demonstrating devices / systems of their papers, please refer the detail information on the reverse side.

Paper Submission

Prospective authors must submit two-page camera-ready papers and abstracts through 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.

For complete conference, author, and registration information, visit:

<http://www.vlsisymposium.org/>

**Paper Submission
Deadline:
January 23 (Mon.) 2017
23:59 JST**



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