FIRST ANNOUNCEMENT AND CALL FOR PAPERS

2021 SYMPOSIUM ON VLSI TECHNOLOGY
~VLSI Systems for Lifestyle Transformation~

RIHGA Royal Hotel Kyoto, Japan
Monday – Thursday, June 14-17, 2021
Workshops
Short Courses
Technical Sessions
Forum

Depending on the situation of COVID-19, virtual platform will be prepared.

Paper Submission Deadline: 23:59 JST Monday, February 8, 2021
For detail, please visit: www.vlsisymposium.org

Symposium Scope

The VLSI Technology symposium calls for papers in the following areas:

• **Technologies for IOT** including ultra-low power technologies; wearable devices/sensors, display, connectivity, power management; micro-controllers and application processors.

• **Technologies for AI** including CPU, GPU, in-memory computing, neuromorphic devices, and stochastic computing.

• **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, MEMS, integrated sensors; power electronics.

• **Process and Material Technologies** including advanced transistor, modeling and reliability; high mobility channels; wide bandgap semiconductors and 2D devices; lithography; heterogeneous integration; interconnects scaling.

• **Packaging Technologies and System-in-Package (SiP)** including through-silicon-vias (TSVs) and 3D-system integration.

• **Photonics Technology and Imaging Technology**

• **Beyond CMOS Devices, including Quantum Computing and Cryo-CMOS Technology**

Papers will be selected based on technical innovation, advances relative to previously published work, credibility of claims, and quality of writing and illustrations

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 an award at the 2022 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 apply for the award when submitting the paper.

Secretariat for VLSI Symposia
(Asia and Japan) c/o JTB Communication Design, Inc., Tokyo, Japan
+81-3-5657-0777, vlsisymp@jtbcom.co.jp
(America and Europe) IEEE Meetings, Conferences & Events (MCE), Piscataway, NJ USA
+1 732 465 6620, vlsisymposium@ieee.org

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 special areas of joint interest that enable ubiquitous intelligence, smart mobility and other applications of VLSI, such as:

• **Heterogeneous Integration:** silicon and other materials

• **AI/Machine learning:** neuromorphic devices, circuits for ultra-low-power inference and training, in-memory computing

• **System/Design-Technology Co-Optimization (STCO/DTCO)**

• **New memory:** MRAM, PCRAM, ReRAM, FeRAM

• **5G/mm-wave:** technology and system for 5G and beyond, automotive radar

• **Si-photonics:** high-speed optical interconnection, optical computing, integrated optical sensors

• **Sensor:** IoT, security, biometrics, navigation and localization, advanced imaging and LiDAR

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, 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.

Symposium Chair:
Shinya Yamakawa
Sony Semiconductor Solutions
Shinya.Yamakawa@sony.com

Symposium Co-Chair:
Tomás Palacios
MIT
tpalacios@mit.edu

Program Chair:
Katsura Miyashita
Toshiba Electronic Devices & Storage Co.
katsura.miyashita@toshiba.co.jp

Program Co-Chair:
Gosia Jurczak
LAM Research
Gosia.Jurczak@lamresearch.com

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