

IEEE COMPUTER SOCIETY ANNUAL SYMPOSIUM ON VLSI

Call for Papers

www.isvlsi.org



July 15-17, 2019
Miami, Florida



The IEEE Symposium on VLSI (ISVLSI) 2019 explores emerging trends, novel ideas and basic concepts covering a broad range of VLSI-related topics: from VLSI systems, tools and design methods at different abstraction levels, to bringing VLSI design and methods into new technologies such as nano and molecular devices and burgeoning application areas, such as hardware security, and artificial intelligence. Future design methodologies are also one of the key topics at the symposium, as well as new EDA tools to support them. Over three decades ISVLSI has been a unique forum promoting multidisciplinary research and new visionary approaches in the area of VLSI, bringing together leading scientists and researchers from academia and industry. The ISVLSI proceedings will be published by IEEE Computer Society Press. Selected papers from past editions have been subsequently published in special issues of top archival journals. ISVLSI has a good reputation of bringing together well-known international scientists as invited speakers. ISVLSI 2019 will continue the momentum and carry forward these well-established trends for further growth of the symposium.

Contributions are sought in, but not limited to, the following areas:

- 1) Circuits, Reliability, and Fault-Tolerance (CRT): Analog/mixed-signal circuits design and testing, RF and communication circuits, design for testability and reliability, adaptive circuits, interconnects, static and dynamic defect-and fault-recoverability, and variation-aware design.
- 2) Computer-Aided Design and Verification (CAD): Hardware/software co-design, logic and behavioral synthesis, simulation and formal verification, physical design, signal integrity, power and thermal analysis, statistical approaches.
- 3) Digital Circuits and FPGA based Designs (DCF): Digital circuits, chaos/neural/fuzzy-logic circuits, high-speed/low-power circuits, energy efficient circuits, near and sub-threshold circuits, memories, FPGA designs, FPGA based systems.
- 4) Emerging and Post-CMOS Technologies (EPT): Nanotechnology, molecular electronics, quantum devices, optical computing, spin-based computing, biologically-inspired computing, CNT, SET, RTD, QCA, reversible logic, and CAD tools for emerging technology devices and circuits.
- 5) System Design and Security (SDS): Structured and Custom Design methodologies, microprocessors/micro-architectures for performance and low power, embedded processors, analog/digital/mixed-signal systems, NoC, power and temperature aware designs, Hardware security, Cryptography, watermarking, and IP protection, TRNG and security oriented circuits, PUF circuits.
- 6) VLSI for Applied and Future Computing (AFC): Neuromorphic and brain-inspired computing, quantum computing, circuits and architectures for machine learning and artificial intelligence, methodologies for on-chip learning, deep learning acceleration techniques, applications for and use-cases of learning systems, sensor and sensor network, electronics for Internet of Things and smart medical devices.

ISVLSI program will include technical sessions by researchers and invited speakers, as well as a poster session. The keynotes, panels, special sessions and Student Research Forum are planned as well. Authors are invited to submit PDF files of full-length, original, unpublished manuscripts in IEEE proceedings format (no more than 6 pages) without author information through the on-line submission system: <https://easychair.org/conferences/?conf=isvlsi2019>.

Paper submission deadlines

Paper Submission Deadline: ~~February 17, 2019~~ **March 3, 2019**
Acceptance Notification: April 21, 2019
Submission of Final Version: May 12, 2019

Authors of selected top quality papers from ISVLSI 2019 will be invited to submit extended versions of these papers to a IEEE journal special issue. The selection process is based on reviewer feedback and quality of conference presentation.



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