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Final Call for Papers – deadline extended

The SISC is a workshop-style conference that provides a forum for device engineers, solid state physicists, and material scientists to discuss topics of common interest, formally through invited and contributed presentations, and informally during poster and rump sessions. SISC is sponsored by the IEEE Electron Devices Society and is held right after IEDM.

This year, SISC will be held as a fully in-person event.



The program includes talks and poster presentations (*theory and experiment*) on the role of materials and their interfaces on performance and reliability of:

- **Logic Devices** for future technology nodes (Nanosheet, CFET, VFET, etc.),
- Insulators on **High-Mobility** substrates (SiGe, Ge, etc.),
- Non-Volatile Memory for **AI / In-Memory / Neuromorphic Compute** (ReRAM, PCM, ECRAM, etc.),
- **Wide Bandgap** semiconductor power devices (SiC, GaN, β -Ga₂O₃, etc.),
- **Ferroelectric** devices (FET, memory, etc.),
- **Steep Sub-Threshold** slope logic devices (Tunnel FETs, etc.),
- **2D** materials and devices,
- **Monolithic and/or Heterogeneous** ICs (BEOL oxide transistors, interconnects, packaging, etc.),

including machine learning / materials discovery techniques developed and used for their study.

Confirmed Invited speakers

- **Prof. Masaharu Kobayashi**, U. Tokyo, Japan
Oxide Semiconductor Transistors for LSI Application
- **Dr. Anabela Veloso**, imec, Belgium
Entering a New Era of Nanosheet-based FET Device Architectures with Increased FEOL-BEOL Synergies
- **Prof. Sarit Dhar**, Auburn University, USA
Interface Trapping and Scattering in 4H-SiC MOSFETs
- **Prof. Daniel Gall**, RPI, USA
Interconnects: New Materials for High Conductivity
- **Prof. Hyunsang Hwang**, POSTECH, Korea
Ovonic Threshold Switching (OTS) Device for Selector Applications
- **Dr. Ashish Penumatcha**, Intel, USA
Enabling Gate-Pitch Scaling in the Angstrom Era
- **Prof. Bilge Yildiz**, MIT, USA
Protonic Electrochemical Synapses for Analog Deep Learning and Beyond
- **Prof. Enxia Zhang**, Vanderbilt University, USA
Radiation Effects and Reliability of 3D ICs

Wednesday evening Tutorial

- **Dr. Dale McHerron**, IBM, USA
From Interconnects to Chiplets: Materials and Interfaces for Advanced Packaging

A **Best Student Presentation Award** will be given in memory of E. H. Nicollian.

A **Best Poster Award** will be given in memory of T. P. Ma.

Abstract submission deadline extended until August 18, 2023

Abstract submission, previous technical programs, contact information, etc.: <https://www.ieeesisc.org>

