



Fourth Call for Papers

2023 International Conference on Simulation of
Semiconductor Processes and Devices

SISPAD2023

September 27 – 29, 2023

Workshop, September 26

The Kobe Chamber of Commerce and Industry, JAPAN

(in-person conference)

Sponsored by The Japan Society of Applied Physics

Technical Co-sponsored by The IEEE Electron Devices Society



Organization:

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Conference Chair:

Satofumi Souma (Kobe Univ)

Program Chair:

Hideki Minari (Sony)

Program Vice-Chair:

Hajime Tanaka (Osaka Univ)

Local Arrangements:

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Shunsuke Koba (Kobe City Col Tech)

Publication:

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Andreas Schenk (ETH Zurich)

Satofumi Souma (Kobe Univ)

William Vandenberghe (UT Dallas)

Hui-Yung Wong (San Jose State Univ)

Jeff Wu (TSMC)

Scope:

This conference provides an opportunity for the presentation and discussion of the latest advances in modeling and simulation of semiconductor devices and processes.

Topics:

- Modeling and simulation of established semiconductor devices, including FinFETs, GAA FETs, ultra-thin SOI devices, TFTs, optoelectronic devices, memories, sensors, power electronic devices, and organic electronic devices
- Modeling and simulation of emerging devices including tunnel FETs, SETs, spintronic devices, straintronic devices, bio-electronic devices, cryogenic CMOS, emerging memories, neuromorphic devices, quantum computing devices, and new material-based devices for various applications
- Modeling and simulation of interconnects, including noise and parasitic effects
- Compact modeling for circuit simulation, including low-power, high-frequency, and power electronics applications
- Modeling and simulation of all sorts of semiconductor processes, including first principles material design and growth simulation of nano-scale fabrication
- Modeling and simulation of equipment, topography, and lithography
- Numerical methods and algorithms, including grid generation, user interface, and visualization
- Process/device/circuit co-simulation in context with system design and verification, including for emerging devices
- Fundamental aspects of device modeling and simulation, including quantum transport, thermal transport, fluctuation, noise, and reliability
- Combination of different simulation techniques, including multi-physics and multi-scale approaches
- Enhancement of simulation methods by artificial intelligence and quantum computing
- Benchmarking, calibration, and verification of simulators

Plenary Speakers:

- David Esseni (Univ of Udine): Modelling and applications for ferroelectric-based devices (tentative)
- James Victory (ON Semiconductor): Modeling and simulations for SiC power devices (tentative)
- Eisuke Abe (RIKEN): Superconducting route to quantum computing (tentative)

Abstract Submission:

Authors are invited to submit a two-page abstract including figures by April 23, 2023 at midnight, Anywhere on Earth (AoE, UTC-12).

Full submission information will be posted on the following website.

<https://www.sispad2023.jp>

Deadline for submission of abstract: April 23, 2023 (Extended)

Authors of accepted papers will be notified by May 31, 2023. Camera-ready copy of a four-page manuscript will be required from the authors for inclusion in the Conference Proceedings by June 30, 2023.

Any inquiries on submission should be sent to:

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