



# Call for Papers ASP-DAC 2023

<http://www.aspdac.com/>

January 16-19, 2023

Miraikan (The National Museum of Emerging  
Science and Innovation), Tokyo, Japan

## Aims of the Conference:

ASP-DAC 2023 is the 28th annual international conference on VLSI design automation in Asia and South Pacific regions, one of the most active regions of design, CAD and fabrication of silicon chips in the world. The conference aims at providing the Asian and South Pacific CAD/DA and Design community with opportunities of presenting recent advances and with forums for future directions in technologies related to design and Electronic Design Automation (EDA). The format of the meeting intends to cultivate and promote an instructive and productive interchange of ideas among EDA researchers/developers and system/circuit/device designers. All scientists, engineers, and students who are interested in theoretical and practical aspects of VLSI design and design automation are welcomed to ASP-DAC.

## Areas of Interest:

Original papers in, but not limited to, the following areas are invited.

### [1] System-Level Modeling and Design Methodology:

- 1.1. HW/SW co-design, co-simulation and co-verification
- 1.2. System-level design exploration, synthesis, and optimization
- 1.3. System-level formal verification
- 1.4. System-level modeling, simulation and validation
- 1.5. Networks-on-chip and NoC-based system design

### [2] Embedded, Cyberphysical (CSP) and IoT Systems:

- 2.1. Many- and multi-core SoC architecture
- 2.2. IP/platform-based SoC design
- 2.3. Domain-specific architecture
- 2.4. Dependable architecture
- 2.5. Cyber physical system
- 2.6. Internet of things

### [3] Embedded Systems Software:

- 3.1. Kernel, middleware, and virtual machine
- 3.2. Compiler and toolchain
- 3.3. Real-time system
- 3.4. Resource allocation for heterogeneous computing platform
- 3.5. Storage software and application
- 3.6. Human-computer interface

### [4] Memory Architecture and Near/In Memory Computing:

- 4.1. Storage system and memory architecture
- 4.2. On-chip memory architectures and management: Scratchpads, compiler, controlled memories, etc.
- 4.3. Memory/storage hierarchies with emerging memory technologies
- 4.4. Near-memory and in-memory computing
- 4.5. Memory architecture and management for emerging memory technologies

### [5] AI/Machine Learning Circuits, Architecture, System Designs and Applications:

- 5.1. Hardware and devices for deep neural networks
- 5.2. Design method for learning on a chip
- 5.3. Systems and design methods for deep neural computing
- 5.4. Neural network acceleration co-design techniques
- 5.5. Design techniques for AI of Things
- 5.6. Novel reconfigurable architectures including FPGAs for AI/MLs
- 5.7. Efficient ML training and inference

### [6] Photonic/RF/Analog-Mixed Signal Design:

- 6.1. Analog/mixed-signal/RF synthesis
- 6.2. Analog layout, verification, and simulation techniques
- 6.3. High-frequency electromagnetic simulation of circuit
- 6.4. Mixed-signal design consideration
- 6.5. Communication and computing using photonics

### [7] Approximate, Bio-Inspired and Neuromorphic Computing:

- 7.1. Circuit and system techniques for approximate and stochastic computing
- 7.2. Neuromorphic computing
- 7.3. CAD for approximate and stochastic systems

ASP-DAC does not allow double and/or parallel submissions of similar work to any other conferences, symposia, and journals. The submission must not include information that serves to identify the authors of the manuscript, such as name(s) or affiliation(s) of the author(s), anywhere in the manuscript, abstract, references and bibliographic citations. While research papers with open-source software are highly encouraged where the software will be made publicly available (via GitHub or similar), the authors' identities need to be anonymized in the submitted paper for the double-blind review process. Issuing the paper as a technical report, posting the paper on a website, or presenting the paper at a workshop that does not publish formally reviewed proceedings, does not disqualify it from appearing in the proceedings. Note that each paper shall be accompanied by at least one different conference registration at the speaker's registration rate (e.g., two speaker registrations are needed for presenting two accepted papers). But any registered co-author can present the work at the conference. ACM and IEEE reserve the right to exclude a paper from distribution after the conference (e.g., removal from ACM Digital Library and IEEE Xplore) if the paper is not presented at the conference by any author.

## Submission of Papers:

Deadline for abstract submission:

Deadline for PDF uploading:

Notification of acceptance:

Deadline for final version:

5 PM AOE (Anywhere on earth) July 24 (Sun), 2022

5 PM AOE (Anywhere on earth) July 29 (Fri), 2022

Sept. 10 (Sat), 2022

5 PM AOE (Anywhere on earth) Nov. 4 (Fri), 2022

For detailed instructions for submission, please refer to the "Authors' Guide" at:

<http://www.aspdac.com/>

## ASP-DAC 2023 Chairs

General Chair:

Technical Program Chair:

Technical Program Vice Chairs:

Atsushi Takahashi (Tokyo Institute of Technology)

Gi-Joon Nam (IBM Research)

Iris Hui-Ru Jiang (National Taiwan University)

Masanori Hashimoto (Kyoto University, Japan)

**Special Sessions:** Suggestions and proposals are welcome and have to be addressed to the Conference Secretariat ([aspdac2023@aspdac.com](mailto:aspdac2023@aspdac.com)) no later than July 29 (Fri), 2022.

**Contact:** Conference Secretariat: [aspdac2023@aspdac.com](mailto:aspdac2023@aspdac.com) TPC Secretariat: [aspdac2023-tpc@aspdac.com](mailto:aspdac2023-tpc@aspdac.com)