



# Call for Papers ASP-DAC 2022

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

January 17-20, 2022

Taipei, Taiwan

## Aims of the Conference:

ASP-DAC 2022 is the 27th annual international conference on VLSI design automation in Asia and South Pacific regions, one of the most active regions of design 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 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. **In light of the continued Covid-19 pandemic situation, the format of the conference is subject to future change.**

## 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 tools/methodology
- 1.5. Networks-on-chip and NoC-based system design

### [2] Embedded Systems and Cyberphysical 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 and 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 System Designs:

- 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

### [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
- 7.4. CAD for bio-inspired and neuromorphic systems

### [8] Logic/High-Level Synthesis and Optimization:

*Please 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 the author of the paper. ASP-DAC does not allow double and/or parallel submissions of similar work to any other conferences, symposia, and journals.*

## Submission of Papers:

Deadline for submission:	<b>5 PM AOE (Anywhere on earth)</b>	<b>Jul. 21 (Wed), 2021</b>
Notification of acceptance:		<b>Sep. 11 (Sat), 2021</b>
Deadline for final version:	<b>5 PM AOE (Anywhere on earth)</b>	<b>Nov. 5 (Fri), 2021</b>

For detailed instructions for submission, please refer to the "Authors' Guide" at: <http://www.aspdac.com/>

## ASP-DAC 2022 Chairs

General Co-Chairs:

Technical Program Chair:

Technical Program Vice Chairs:

Ting-Chi Wang (National Tsing Hua Univ.)

Masanori Hashimoto (Kyoto Univ.)

Gi-Joon Nam (IBM Research), Wai-Kei Mak (National Tsing Hua Univ.)

**Panels, Special Sessions, and Tutorials:** Suggestions and proposals are welcome and have to be addressed to the Conference Secretariat ([aspdac2022@aspdac.com](mailto:aspdac2022@aspdac.com)) no later than July 28 (Wed), 2021.

**Contact:** Conference Secretariat: [aspdac2022@aspdac.com](mailto:aspdac2022@aspdac.com) TPC Secretariat: [aspdac2022.tpc@gmail.com](mailto:aspdac2022.tpc@gmail.com)