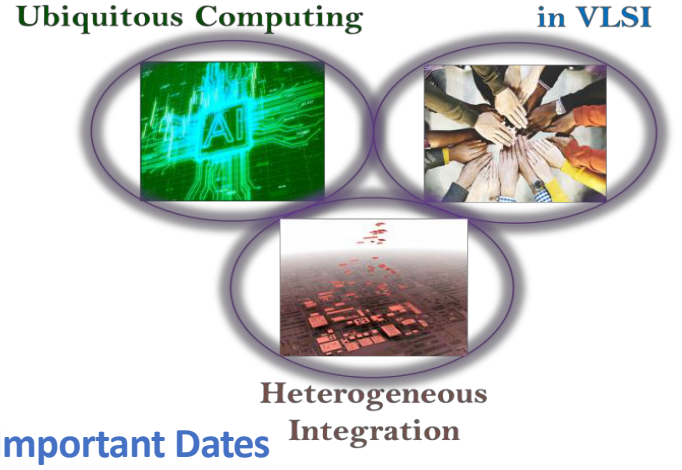
32nd IEEE International Conference on
Application-specific Systems, Architectures and Processors
Virtual, July 7-8, 2021

ASAP 2021

Application-specific Systems, Architectures and Processors

Call for Papers



Important Dates

Abstract submission deadline: **April 5, 2021**
Paper submission deadline: **April 12, 2021**
Notification of acceptance: **June 2, 2021**
Camera-ready papers: **June 18, 2021**
Video presentations: **June 21, 2021**

The 32nd IEEE International Conference on **Application specific Systems, Architectures and Processors** will go virtual in 2021. The history of the ASAP conference traces back to the International Workshop on Systolic Arrays, organized in 1986 in Oxford, UK. It later developed into the International Conference on Application-Specific Array Processors. With its current title, it was organized for the first time in Chicago, USA, in 1996. Since then, it has alternated between Europe and North-America. The conference covers the theory and practice of application-specific systems, architectures, and processors. For the 2021 edition of ASAP, manuscripts in the following categories are especially welcome:

- **Green AI for Ubiquitous Computing**
- **Diversity and Inclusion in VLSI**
- **Heterogeneous Integration**

Further, the conference will build upon traditional strengths in areas such as:

- Computer arithmetic
- Cryptography
- Compression
- Network processing
- Signal and image processing
- Reconfigurable computing (FPGAs, CGRAs, etc.)
- Application-specific instruction-set processors
- Hardware and reconfigurable accelerators
- Embedded systems and domain-specific solutions
- Approximate computing
- Heterogeneous computing, ranging from embedded to HPC systems and data centers
- Cloud computing infrastructures and acceleration
- Edge computing, wireless, mobile, and IoT systems
- Hardware and software architectures for CPS
- AI architectures, acceleration of machine learning (custom designs or based on FPGAs, GPUs, TPUs)
- Autonomous computing systems
- Design methods, tools, and compilers
- Simulation and prototyping (e.g., validation, performance analysis)
- System quality attributes (energy efficiency, fault tolerance, security, etc.)
- Accelerators for computational genomics, finance, big data, and other complex workloads
- Emerging technologies (e.g., quantum computing, optical computing or communication, 3D devices and interconnects, memristors for storage and logic, in-memory computing)

Authors are invited to submit original, unpublished research manuscripts on the above topics. Submissions must be done through Easychair (https://easychair.org/conferences/?conf=asap2021). All papers will be reviewed by at least three members of the program committee, with a double-blind review process. Manuscripts for full papers should not exceed 8 single-spaced, double-column pages using 10-point size font on 8.5x11 inch pages (IEEE conference style), including references, figures, and tables. Manuscript for short papers should not exceed 4 single-spaced, double-column pages. All papers must be submitted electronically in PDF format. All accepted papers must be presented by one of the authors in order to be included in the proceedings and published in the IEEE Xplore Digital Library. Selected papers will be invited to submit an extended version for a **Special Issue** in Springer's Journal of Signal Processing Systems.

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