ASYNC2020

Snowbird, USA - May 17-20

26th IEEE International Symposium on Asynchronous Circuits and Systems   **CALL FOR PAPERS**

The International Symposium on Asynchronous Circuits and Systems (ASYNC) is the premier forum for researchers to present their latest findings in the area of asynchronous design. Besides a regular paper track, the conference will also hold a special industrial papers track and a fresh ideas workshop. Top rated ASYNC 2020 papers will be invited to a special issue on Self-Timed Computing in Royal Society Philosophical Transactions.

REGULAR PAPERS:

Authors are invited to submit papers on any aspect of asynchronous design, ranging from design, synthesis, and test, to asynchronous applications in system-level integration and emerging computing technologies. Topics of interest include:

- Mixed-timed circuits, GALS systems, networks-on-chips, multi-chip interconnects, and 3D integration;
- Elastic and latency-tolerant synchronous design;
- Asynchronous pipelines, architectures, CPUs, and memories;
- Asynchronous logic in ultra-low power and power-constrained systems, energy harvesting and mixed-signal/analog design;
- Asynchrony in emerging technologies, such as bio, nano, and quantum computing;
- CAD tools for asynchronous design, synthesis, analysis, and optimization;
- Formal methods for verification and performance/power analysis;
- Test, security, fault tolerance, and radiation-hard design;
- Asynchronous variability-tolerant, resilient design and design for manufacturing;
- Asynchronous design for neural networks and machine learning applications;
- Circuit designs, case studies, comparisons, and applications.
- Hardware implementations of asynchronous models and algorithms, asynchronous techniques in clocked designs, and elastic and latency-tolerant synchronous design

Submissions must report original scientific work, in 6-8 pages IEEE double-column conference format, with author information concealed. Authors who feel that extra pages are absolutely required to obtain top quality of their article may contact the Program Chairs. Accepted papers will be published in the IEEE digital library IEEEXplore and symposium proceedings.

INDUSTRIAL PAPERS:

ASYNC 2020 will include a special industrial workshop with papers from industry on the state-of-the-art application of asynchronous designs to both existing and emerging technologies. We solicit 1- to 2-page submissions, using IEEE double-column conference format. These papers will go through a separate light-weight review process. Accepted papers will be published in the IEEE digital library IEEEXplore and symposium proceedings.

FRESH IDEAS AND EMERGING HOT TOPICS WORKSHOP:

ASYNC 2020 will accommodate a special workshop to present "fresh ideas" in asynchronous design, that are not yet ready for publication as well as "emerging hot topics" to describe emerging areas of interest for asynchronous designs. We solicit 1- to-2-page submissions for the workshop, which will go through a separate light-weight review process. Accepted submissions will be handed out at the workshop.

IMPORTANT DATES:

Abstract deadline:
Jan 6, 2020

Full paper deadline:
Jan 15, 2020

Notification of acceptance:
Feb 20, 2020

Fresh ideas deadline:
Feb 27, 2020

Industrial papers deadline:
Jan 31, 2020

SYMPOSIUM COMMITTEE:

General Co-Chairs:
Erik Brunvand, USA
Ken Stevens, USA

Program Co-Chairs:
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https://asyncsymposium.org/async2020/