CALL FOR PAPERS

7th IEEE International Conference on Rebooting Computing

8-9 December 2022
Hilton Hotel-San Francisco, Union Square
San Francisco, CA, USA
icrc.ieee.org

Co-located with IEDM

The IEEE International Conference on Rebooting Computing (ICRC) is the *premier venue for forward-looking research across the computing stack*, including novel materials, devices, circuits, algorithms and languages, system software, system and network architectures.

This is an *interdisciplinary conference* that has participation from a *broad technical community* and work encompassing *co-design* across the computing stack is particularly encouraged.

***Bridging analog and neural computing, reversible and quantum computing, and other new architectures*, the broad scope of ICRC extends to many areas of interest, including harnessing novel device physics and materials for energy efficiency, performance, density, and unique computing capabilities.**

Topics of Interest

- ***Future computing approaches***, **including neuromorphic, brain-inspired computing, approximate and probabilistic computing, and analog and physical computing; computing based on novel device physics and materials; energy-efficient computing including reversible, adiabatic, and ballistic computing, superconductor and cryogenic computing; quantum computing; optical computing; biological and biochemical computing; non-von Neumann computer architectures (e.g., in-memory processing, memory-based computing, content addressable memory, cellular automata, or neural networks); graph processing architectures.**

- ***Future computing design aspects***, **including extending Moore's law and augmenting CMOS; error-tolerant logic and circuits; future of design automation; post-CMOS, 3D, heterogeneous integration and packaging; future impact on performance, power, scalability, reliability, and supportability; modeling and simulation tools for future computing.**

- ***Future Software and Applications***, **including beyond von Neumann system software issues (operating systems, compilers, security, and resource management); future computing programming paradigms and languages; applications suitable for and driving next generation computing (e.g., machine learning, deep learning.); algorithms that are enabled by or optimized for new computing approaches.**

- ***Future computing use cases and prototypes***, **including ethics in design, implementation, and use; new technologies impacting the International Roadmap for Devices and Systems (IRDS); cybersecurity in future computing systems.**

Paper Submission

We are adopting two tracks that are meant to reflect different common practices in the fields of interest to ICRC. You will need to select from the following two formats that best fits with your content:

Short Paper: 5-pages (excluding refs)

- **Each accepted paper will receive a 15-minute speaking slot.**

Long Paper: 10-pages (excluding refs)

- **Each accepted paper will receive a 30-minute speaking slot.**

More Information…

- **Final version of all accepted papers will be included in the Proceedings on IEEE-Xplore**
- **Additional information and templates can be found at this link: https://icrc.ieee.org/authors-guidelines**
- **Papers can be submitted at the following link: https://easychair.org/conferences/?conf=icrc2022**

Important Dates

- **Paper submissions due:** ~~*3*~~ ***17 October 2022 (11:00 pm PDT)***
- **Author notification of acceptance:** ~~*1*~~ ***11 November 2022***
- **Final copies of papers due:** ~~*18*~~ ***28 November 2022***
- **Conference:** ***8–9 December 2022***

Full committee list: https://icrc.ieee.org/committee