



MICRO 54

Call for Papers



ATHENS
- GREECE -

The 54th International Symposium on Microarchitecture

Athens, Greece, October 16-20, 2021

<http://www.microarch.org/micro54>

Important dates

Abstracts: **April 9, 2021**, at 11:59 PM PDT
Full Papers: **April 16, 2021**, at 11:59 PM PDT
Revision/rebuttal: **June 7–20, 2021**
Notification: **July 14, 2021**

The International Symposium on Microarchitecture® (MICRO) is the premier forum for the presentation and discussion of new ideas in microarchitecture, compilers, hardware/software interfaces, and design of advanced computing and communication systems. The goal of MICRO is to bring together researchers in the fields of microarchitecture, compilers, and systems for technical exchange. The MICRO community has enjoyed having close interaction between academic researchers and industrial designers—we aim to continue and strengthen this longstanding tradition at the 54th MICRO in Athens, Greece.

We invite original paper submissions related to (but not limited to) the following topics:

- Hardware, software, and hybrid techniques for improving system performance, energy-efficiency, security, cost, complexity, programmer productivity, predictability, quality of service, reliability, dependability, scalability, etc.
- Architectures for emerging application domains such as deep learning, machine learning, relational computation, neuromorphic, quantum, etc.
- Accelerator designs and heterogeneous architectures including system-on-chip architectures, application specific fixed function, programmable, reconfigurable, near-data and in-memory accelerators, etc.
- Architectural support for security, side-channel attacks and mitigation, privacy preserving computation, IoT/Cloud/Cyber-Physical-System security, security primitives, trusted execution environments, etc.
- Architecture, microarchitecture and/or compiler optimizations for graphics processor units (GPUs) or other programmable accelerators
- Microarchitecture and compiler techniques for optimizing the memory hierarchy, analysis of new memory hierarchies, emerging architectures based on new memory technologies
- Architectures for instruction-level, thread-level, and memory-level parallelism: superscalar, VLIW, data-parallel, multithreaded, multicore, many-core, etc.
- Processor, memory, interconnect, and storage architectures
- Compiler and microarchitectural techniques for parallelism (ILP, TLP, MLP)
- Microarchitecture techniques to better support system software, programming languages, programmability, and compilation
- Advanced software/hardware speculation and prediction schemes
- Microarchitecture modeling and simulation methodology
- Low-power, high-performance, and cost/complexity-efficient architectures
- Architectures for emerging embedded platforms, including smartphones, automotive, server/cloud, etc.
- Architecture and/or compiler optimizations for embedded processors, DSPs, ASIPs (network processors, multimedia, wireless, etc.)
- Insightful experimental and comparative evaluation and analysis of existing microarchitectures, hardware/software mechanisms and workloads

Submissions should follow the guidelines and formatting rules specified on the conference website. Papers that violate these guidelines and rules may be returned to author(s) without review.