Special Issue

Advances in Microarchitecture for High-Performance Computing Application

Message from the Guest Editors

High-performance computing (HPC) has become the backbone of modern scientific discoveries, artificial intelligence, and large-scale data analytics. At the core of these advances lies microarchitecture—the fundamental design of processors, memory hierarchies, and interconnected systems that determine computational efficiency, scalability, and energy consumption. With the slowdown of Moore's Law and Dennard scaling, microarchitectural innovation has reemerged as the primary driver of performance improvements, making it a central topic of both academic research and industrial development.

This Special Issue seeks to collate cutting-edge contributions that address the pressing challenges and opportunities in next-generation computing systems. This Special Issue welcomes the submission of both original research papers and comprehensive reviews. Research areas include, but are not limited to, the following:

Design of processor cores and hardware accelerator;
Memory subsystem and interconnect architectures;
Hardware–software co-design for performance, energy efficiency, and programmability;
Reconfigurable, domain-specific, and heterogeneous architectures;

Guest Editors

Dr. Weihong Xu

Dr. Darong Huang

Dr. Chang Meng

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Electronics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
electronics@mdpi.com

mdpi.com/journal/electronics

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guestedited by leading experts in selected topics of interest.

Editor-in-Chief

Prof. Dr. Flavio Canavero
Department of Electronics and Telecommunications, Politecnico di Torino, 10129 Torino, Italy

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