Special Issue

Energy-Efficient Architectures and Memory Innovations for High-Performance Computing and Distributed Systems

Message from the Guest Editor

With the rapid advancement of datasets and artificial intelligence, there is a growing need to design highly efficient hardware architectures to enhance performance. Several promising research directions include the following: In/Near-Memory Processing: Currently, the performance of most applications is limited by data transfer bottlenecks. Moving computer units inside or closer to memory can significantly mitigate memory-bound issues and improve efficiency. Software–Hardware Co-Design: By tightly integrating software algorithms with hardware capabilities, it is possible to optimize performance and energy efficiency. This approach involves designing hardware that is specifically tailored to the requirements of AI workloads, while simultaneously developing software that can fully leverage the hardware's unique features.

Guest Editor

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Deadline for manuscript submissions

15 October 2025

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/235741

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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 guest-edited by leading experts in selected topics of interest.

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