Special Issue

Hardware and Software Co-Design in Intelligent Systems

Message from the Guest Editors

The rapid advancement of AI is reshaping scientific and industrial domains, driving the development of increasingly sophisticated intelligent systems. As the complexity of AI models grows, HW/SW co-design has become essential to the creation of efficient, high-performance intelligent systems. AI algorithms must be optimized to suit specific platforms, and domain-specific hardware accelerators should be implemented to ensure the efficient execution of AI workloads. By seamlessly integrating hardware/software, co-design facilitates the effective deployment of AI across a broad range of applications, supporting both cloud and edge computing paradigms. While HW/SW co-design offers advantages, it faces several limitations, such as compatibility issues, significant constraints (edge devices), the need for continuous adaptation to evolving AI models, and a lack of standardization. To tackle these challenges, we are seeking submissions of original research articles and reviews from both academic and industrial experts in the field of HW/SW co-design for AI. Potential topics include but are not limited to: Algorithms, Hardware, Software, Systems, Applications and Benchmarking and Evaluatio

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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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