Special Issue

Hardware Acceleration for Machine Learning

Message from the Guest Editors

Non-functional constraints such as execution time, memory capacity, and energy consumption pose significant challenges for designers in the field of machine learning systems. New applications are being proposed that integrate various functionalities into everyday objects, imposing several additional requirements on embedded system designers, such as the following:

- Increased computing workloads when elaborating and fusing multiple data, even when using advanced machine learning techniques;
- Reduced power consumption, allowing for smaller batteries and renewable power sources;
- Faster interaction with the environment, requiring a high level of data processing performance often reached using hardware implementations.

The topics relevant for this Special Issue include (but are not limited to) the following:

- Low-power IoT applications;
- Embedded FPGA and SoC implementations;
- Embedded ASIC implementations;
- Machine learning on the Edge;
- Efficient data processing algorithms.

Guest Editors

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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.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.8 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).

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