# **Special Issue**

## Recent Advances in Al Hardware Design

## Message from the Guest Editor

This Special Issue aims to bring together the latest research and developments in the field of AI hardware, topics of interest include the following:

- Field-programmable gate arrays (FPGAs)/system-onchip (SoC) for AI: design methodologies, performance optimization, and applications.
- Application-specific integrated circuits (ASICs) for Al: custom chip designs, fabrication technologies, and performance benchmarks.
- Central processing units (CPUs) for AI: architectures, enhancements for AI workloads, and case studies.
- Graphics processing units (GPUs) for AI: latest advancements, parallel processing techniques, and real-world applications.
- Tensor processing units (TPUs) and neural processing units (NPUs): design principles, performance evaluations, and use cases.
- Al cloud solutions: hardware accelerations, edge computing integrations, and scalable Al infrastructures.
- Photonic/quantum AI chips: innovations in photonic technologies, integration with electronic systems, and emerging applications.
- Emerging AI hardware technologies: novel hardware paradigms, experimental results, and future directions.

## Guest Editor

Dr. Tee Hui Teo

Engineering Product Development (EPD), Singapore University of Technology and Design, Singapore 487372, Singapore

## Deadline for manuscript submissions

31 December 2025



an Open Access Journal by MDPI

Impact Factor 2.6 CiteScore 6.1



mdpi.com/si/211390

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

mdpi.com/journal/ electronics





an Open Access Journal by MDPI

Impact Factor 2.6 CiteScore 6.1



electronics



## About the Journal

## Message from the Editor-in-Chief

*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.

#### Editor-in-Chief

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

## **Author Benefits**

## **High Visibility:**

indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, Inspec, Ei Compendex and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Electrical and Electronic) / CiteScore - Q1 (Electrical and Electronic Engineering)

#### **Rapid Publication:**

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).