Special Issue

Security and Advanced Computing in Reconfigurable Hardware

Message from the Guest Editors

Digital and analog reconfigurable hardware circuits are now widely accessible, providing platforms for commercial solutions that may later migrate to ASICs or remain on reconfigurable devices. Rapid technological progress has created strong demand for engineers and researchers skilled in such platforms. Meanwhile, algorithm design has shifted: methods once conceived for sequential processors must now adapt to the parallel resources of reconfigurable hardware, motivating this Special Section. Security is a key driver: IoT, cloud, and big data systems require hardware-level protection. Cybersecurity has evolved from software-only approaches to independent, hardware-accelerated modules offering greater performance in data protection, integrity, and resilience. Beyond security, many IT fields—including AI and emerging paradigms such as quantum computing—are also migrating to reconfigurable platforms, where they can be both implemented and emulated. This section welcomes research papers, reviews, and case studies on digital and analog reconfigurable hardware, as well as integrated approaches involving reconfigurable computing, graphics accelerators, and heterogeneous architectures.

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Deadline for manuscript submissions

20 March 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/254038

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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