

Special Issue

Advances in Field-Programmable Gate Array (FPGA)-Based Reconfigurable Systems

Message from the Guest Editor

FPGAs enable a designer to create custom, application-specific architectures to exploit algorithmic parallelism. Moreover, FPGAs are typically more energy efficient than a general-purpose processor, enabling a designer to achieve massive computational speedup on an application while consuming less energy. The following points are problematic in the development of reconfigurable systems: deficiency of high-level synthesis design languages and tools, operating systems for reconfigurable systems, debugging and verification tools, partial reconfiguration techniques, and design techniques for self-aware, secure, reliable, and fault-tolerant reconfigurable systems. Its topics are not limited by the keywords listed below:

- reconfigurable systems
- field-programmable gate arrays (FPGAs)
- reconfigurable computing
- reconfigurable accelerators
- reconfigurable computing platforms and architectures
- reconfigurable processors
- FPGA partial reconfiguration
- methods and tools for reconfigurable computing
- fault-tolerant computing
- reconfigurable control systems

Guest Editor

Prof. Dr. Valery Salauyou

Faculty of Computer Science, Bialystok University of Technology, 15-351 Bialystok, Poland

Deadline for manuscript submissions

closed (20 October 2025)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/217074

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

mdpi.com/journal/appls





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

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

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)