



FPGA/GPU Acceleration of Biomedical Engineering Applications

Guest Editors:

Dr. Gabriel Caffarena

Dr. Madhav P. Desai

Dr. Ruzica Jevtic

Prof. Dr. Encarnación Castillo

Deadline for manuscript
submissions:

closed (30 June 2022)

Message from the Guest Editors

Biomedical Engineering is one of the most active research fields. Traditionally, Bioinformatics applications were clearly in need of high-performance computing systems. However, in recent years, most biomedical applications have become data-hungry due to the thriving machine learning algorithms, as well as the increase in the data acquisition capabilities.

The use of microprocessors or microcontroller units for high-performance data analysis has severe limitations in terms of power consumption and throughput, so technologies oriented toward massive parallelization as graphics processor units (GPU) and field-programmable gate arrays (FPGA) are attractive and effective solutions acting as accelerators of applications. The former provides an extremely high level of parallelism while keeping a friendly software development system; as a drawback, power consumption is equivalent to that of high-end microprocessors. The latter allows for the design of optimal architectures with high parallelism, while the development times are in general notably increased.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Flavio Canavero

Department of Electronics and
Telecommunications,
Politecnico di Torino, 10129
Torino, Italy

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.

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), CAPlus / SciFinder, Inspec, and other databases.

Journal Rank: JCR - Q2 (*Electrical and Electronic Engineering*) CiteScore - Q2 (*Electrical and Electronic Engineering*)

Contact Us

Electronics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/electronics
electronics@mdpi.com
[X@electronicsMDPI](https://twitter.com/electronicsMDPI)