Special Issue

High Performance Computing Technologies and Application Evolution

Message from the Guest Editors

The main topic of this issue will be on high-performance computing, rapidly evolving technologies and computing architectures, and increasing demand for extreme computation, data processing, high-performance data analysis, and artificial intelligence. Topics proposed for this Special Issue (but papers need not be limited to these):

- Design and architecture of novel CPU, GPU, FGPA, and other computational units for future high-performance systems
- Innovative architectures of HPC systems, novel approaches to scalability in computation and data processing, energy efficiency
- Algorithms for energy efficient computation at exa-scale
- Application development and porting to novel scalable architectures, high-performance toolkits, programming abstraction for different architectures
- Resource federation, integration with hyper-converged networks, federated authentication and authorization through IdP, security
- Large scale HPC application integration with fog, edge, distributed computing, clouds, virtualization and containerization
- Application use-cases, initiatives, project on exa-scale compute and data projects
- Quantum Computing technologies and applications

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Deadline for manuscript submissions

closed (31 May 2022)

Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.3

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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.

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