High-Performance Computing Algorithms and Their Applications 2021

Guest Editor:

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Deadline for manuscript submissions:
closed (30 November 2021)

Message from the Guest Editor

This special issue aims to provide an overview of the research frontiers of parallel algorithms and their application in **science and industry**. We invite you to submit high-quality papers to this Special Issue "High-Performance Computing Algorithms and their Applications" covering the whole spectrum of application domains: Astronomy, Biosciences, Digital humanities, Geoinformatics, … A submitted manuscript should describe the application domain, the principles of the algorithms that address the problem, and state-of-the-art on the field. The following is a (non-exhaustive) list of algorithms of interest:

- Particle and mesh-based simulations
- Machine learning methods (in HPC)
- Quantum algorithms
- Applied numerical methods
- Spectral methods
- Algebra problems
- Monte Carlo methods

Special Issue

Editor-in-Chief

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Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

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