



Advances in High-Performance Computing, Optimization and Simulation

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Message from the Guest Editors

High-performance computing, optimization and simulation have led to advances in several areas of science, engineering and technology. Recent developments permit the successful completion of computationally intensive problems such as those in chemistry, physics, aerospace, energy, material, healthcare, automobile development, etc. However, further research is required for developing new algorithms, methods and models for new hardware and software architecture, since many heterogeneous many-core processors with accelerators or coprocessors are now an integral part of modern computing systems, especially supercomputers. To fulfill the increasing computing demands, strategies based on heterogeneous computing, mixed precision computing, communication-avoiding computing, etc., have been adopted.

The suggested topics include the following:

- High-performance computing;
- Numerical analysis;
- Accurate computing;
- Mixed-precision algorithm;
- Large-scale heterogeneous computing;
- Performance tuning;
- Optimization;
- Parallelization;
- Modeling and simulation.





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Message from the Editor-in-Chief

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