Special Issue

Innovations in High-Performance Computing

Message from the Guest Editors

High-performance computing (HPC) solves complex performance-intensive problems much faster and at less cost than traditional computing. It has been crucial to academic research and industry innovations for decades. All the newest discoveries in materials science, biology, drug development, artificial intelligence, and others could not be accomplished without HPC. We kindly invite the authors to contribute innovative ideas, novel approaches, and outcomes of advanced research projects that present the next frontier of high-performance computing. Topics of interest include but are not limited to:

- new computing paradigms for HPC;
- new HPC algorithms;
- innovative applications of HPC;
- high-performance networking and storage;
- exascale data analytics;
- HPC for digital twinning and real-time simulations;
- HPC architectures for neuromorphic computing;
- distributed and hybrid applications of HPC on the edge;
- novel approaches to non-functional aspects of HPC (safety, security, fault-tolerance, etc.).

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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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