Special Issue

Numerical Algorithms: Methods and Applications

Message from the Guest Editor

This Special Issue aims to bring together recent advances in the development and analysis of numerical algorithms, with an emphasis on both methodological innovations and their practical applications across scientific and engineering disciplines. Topics to be discussed at this conference include (but are not limited to) the following:

- Novel numerical methods for differential equations;
- Parallel numerical algorithms;
- Uncertainty quantification and stochastic numerical schemes;
- Hierarchical, adaptive, domain decomposition, and local refinement methods;
- Robust preconditioning algorithms;
- Monte Carlo methods and algorithms;
- Numerical linear algebra;
- Multiscale and multiphysics problem;
- Machine learning-enhanced numerical solvers;
- Novel data formats for dense and sparse matrices;
- Numerical algorithms testing and benchmarking;
- Analysis of rounding errors of numerical algorithms;
- Languages, tools, and environments for programming numerical algorithms;
- Numerical algorithms on coprocessors (GPU, Intel Xeon Phi, etc.);
- Paradigms of programming numerical algorithms;
- Contemporary computer architectures;
- Heterogeneous numerical algorithms;
- Applications of numerical algorithms in science and technology.

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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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