

# Special Issue

## Numerical Analysis and Algorithms for High-Performance Computing

### Message from the Guest Editors

In recent years, high-performance computing has become increasingly essential in various domains, including scientific simulations, electromagnetic computation, structural mechanics, engineering, data analytics, and artificial intelligence. Topics of interest for this special issue include, but are not limited to:

- Numerical methods for high-performance computing
- Parallel and distributed algorithms
- Optimization techniques for numerical computation
- Sparse and structured linear algebra
- Parallel algorithms for electromagnetic computation
- Parallel algorithms for structural mechanics
- Machine learning algorithms for high-performance computing
- Multigrid and Domain Decomposition algorithms
- Parallel-in-time (PinT) algorithms

We invite researchers and practitioners to submit original research papers, review articles, and case studies that address the challenges and opportunities in numerical analysis and algorithms for high-performance computation. Submissions should present novel contributions, theoretical insights, experimental results, or practical applications relevant to the special issue's theme.

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### Guest Editors

Dr. Shengguo Li

Prof. Dr. Xiaoqiang Yue

Dr. Xuguang Chen

Dr. Tiaojie Xiao

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### Deadline for manuscript submissions

30 September 2025



## Mathematics

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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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### Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.3 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2024).