

Special Issue

Numerical Linear Algebra and Matrix Computations

Message from the Guest Editor

The field of computational linear algebra is a foundational pillar of modern scientific and engineering computing, with ever-expanding frontiers. The Special Issue is devoted to state-of-the-art algorithms, analysis and applications in computational linear algebra. Topics include, but are not limited to:

- Differential geometry methods in linear algebra
- Ill-conditioned matrix problems and their regularization;
- Matrices depending on parameters;
- Analysis of matrix sequences and polynomials
- Iterative and direct methods for large-scale linear systems;
- High-performance eigenvalue and singular value computations;
- Fast algorithms for structured matrices (e.g., Toeplitz, Hankel, sparse matrices);
- Perturbation analysis of matrix problems;
- Eigenvalue and eigenspaces sensitivity;
- Computations related to matrix pencils and matrix polynomials;
- Jordan and Schur algorithms in matrix computations;
- Computing matrix functions;
- Numerical solution of matrix equations and linear matrix inequalities;
- Numerical matrix methods for solving difference and differential equations;
- Applications in data science, machine learning, computational physics, image and signal processing, network analysis and control theory.

Guest Editor

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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).