

Special Issue

Recent Advances in Numerical Integration of Differential Equations

Message from the Guest Editor

This Special Issue seeks papers on recent developments in the construction, analysis and application of numerical methods in ODEs and PDEs. To bridge gaps in construction of numerical algorithms and applications in physical problems, for this Special Issue, potential topics include, but are not limited to, the following:

- Results on the construction of numerical methods for solving systems with conservative properties;
- Results on the numerical analysis of new numerical methods in ODEs and PDEs;
- Results on numerical methods applied to phase-field equations, physical plasmas, etc.;
- Results on the numerical analysis of methods for integrable systems based on perturbation theory, such as recent advances in numerical KAM theory;
- Results on numerical methods and analyses for highly oscillatory problems.

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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Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).