

Special Issue

Modern Analysis and Partial Differential Equation

Message from the Guest Editors

Modern analysis, including but not limited to harmonic analysis, functional analysis, microlocal analysis, and geometry analysis is a central topic within mathematical analysis. Growing out of classical Fourier and harmonic analysis, it has developed broadly into many fields of mathematical analysis and partial differential equations, both pure and applied. This Special Issue, titled “Modern Analysis and Partial Differential Equations,” is designed to promote the modern analysis method in general, but with a preference for application- oriented papers or survey papers describing concrete aspects of modern analysis and their applications to partial differential equations. As example topics (though it is not an exhaustive list) let us mention the following areas on Euclidean space or manifolds: operator theory and operator algebra, Fourier Analysis (of functions or distributions), microlocal analysis, harmonic or wavelet analysis, pseudo-differential and Fourier integral operators, dynamic behavior of linear or nonlinear dispersive equations, transport equation and kinetic theory, fluid mechanics, quantum mechanics and more.

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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 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).