Special Issue

Advanced Research in Numerical Analysis of Partial Differential Equations

Message from the Guest Editors

The numerical analysis of PDEs is a rich and active field of modern computational and applied mathematics. The steady growth of this field is stimulated by the ever-increasing demands of natural sciences, engineering, and economics, with the aim of providing accurate and reliable approximations to mathematical models involving PDEs, whose exact solutions are either too complicated to determine or are not known to exist. The Special Issue aims to showcase cutting-edge research in numerical analysis of PDEs, focusing on advanced methodologies, algorithms, and applications. Topics of interest including, but are not limited to, the following:
Advanced finite difference, finite element, spectral method, and boundary element methods for solving PDEs;
Parallel and distributed computing techniques for large-scale PDE problems;
Numerical optimization and inverse problems in PDEs;
Computational fluid dynamics (CFD) and computational electromagnetics (CEM);
Applications of PDEs in geophysics, materials science, and mathematical biology, etc.;
Software development and implementation for PDE solvers;
Fractional differential equations.

Guest Editors

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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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