

## Special Issue

# Nonlinear Elliptic Partial Differential Equations: Theory, Computations, and Applications

### Message from the Guest Editors

Partial differential equations (PDEs) and boundary value problems (BVPs) provide a mathematical framework for describing natural phenomena. Mathematically understanding the properties of solutions to PDEs and BVPs while also being able to use computers to approximate the unknown solution(s) reliably and efficiently has become an invaluable tool for describing and understanding the physical world. As numerical techniques have evolved alongside improving computing technology, new analytic techniques have been discovered, and more sophisticated mathematical models using PDEs have been developed, there has been an ever-expanding need to both theoretically and computationally understand PDEs and BVPs.

Theoretical results inspire computational research, and computational results help to build the understanding of PDEs and BVPs. An interdisciplinary approach to PDEs and BVPs naturally evolves both the numerical analysis and the theoretical analysis required to understand the expansive applications and the elegant mathematics linked to PDEs and BVPs.

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### Guest Editors

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### Deadline for manuscript submissions

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## Mathematics

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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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