



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

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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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Message from the Editor-in-Chief

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