



Advance in Partial Differential Equations of Applied Mathematics

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Message from the Guest Editors

For many years, partial differential equations (PDEs) have been considered an efficient modeling tool in many scientific areas. This Special Issue aims to construct and produce some recent applications of PDEs in applied mathematics. The scope of this Special Issue covers areas such as analytical methods, numerical methods, and Lie symmetry analysis methods for both partial and ordinary differential equations, including fractional-order derivatives.

The manuscripts in this issue will focus on PDEs and their applications to solve the problems arising in engineering as well as natural sciences. The papers will address new theoretical improvements and applied results with the help of topics such as operational calculus, differential operators, lie symmetries analysis and lie point symmetries, related methods of wave equations to find soliton solutions, different methods for numerical solutions, recent progress on nonlinear Schrödinger systems, modeling, novel iterative schemes, the iterative methods of linearization, and identifying and using the underlying symmetries of the given nonlinear differential equations.





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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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