Nonlinear Dynamics and Applied Partial Differential Equations

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Message from the Guest Editors

Nonlinear partial differential equations arise in a wide variety of physical problems and areas such as engineering dynamics, fluid dynamics, plasma physics, solid mechanics and quantum field theory.

This Special Issue invites researchers belonging to a wide variety of fields to contribute high-quality and original research articles, as well as review articles. Topics should include discussions of nonlinear dynamics and the analysis of nonlinear partial differential equations. Specifically, submissions should discuss Navier–Stokes–Poisson equations, reaction–diffusion equations, nonlinear pseudo parabolic and hyperbolic equations, Newtonian and non-Newtonian fluid equations, magneto-hydrodynamic equations, nonlinear heat equations, Navier–Stokes equations, Boussinesq approximations equations, biological fluid dynamics, symmetric and axisymmetric flows, theory of partial differential equations, and numerical methods of partial differential equations.

Special Issue

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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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