



Symmetry and Asymmetry in Nonlinear Partial Differential Equations

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Message from the Guest Editors

Dear Colleagues,

It is well known that partial differential equations (PDEs) play a fundamental role in modelling and solving practical problems in a wide range of fields. This is accomplished either by theoretically studying a PDE and obtaining information on the qualitative characteristics of its solution or by obtaining an exact, approximate or numerical solution for it. In both cases, conservation laws and the symmetric properties of the PDE under consideration often prove to be extremely useful. Symmetry may also be taken into consideration with respect to the domain geometry or the boundary conditions that accompany a PDE. Moreover, studying the symmetry or asymmetry of a PDE and its solution may provide further insight into the application that this PDE describes.

The main aim of this Special Issue is to collect a variety of papers on nonlinear partial differential equations in which the concepts of symmetry/asymmetry are utilised or studied.





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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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