



Application of Symmetry in Gravity Researches

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Message from the Guest Editors

Dear Colleagues,

The approximation symmetry approach plays an important role in evaluating the exact solutions of the differential equations. The Noether symmetries, in particular, are not only a mechanism for dealing with the solution of the dynamic, but their presence also provides suitable conditions so that one can specify the universe models under the gravitational framework physically and analytically, according to our recent observations. Such symmetries are believed to be an appropriate mathematical approach, which often investigates the exact solutions and computes the associated conserved and required quantities. The method based on the symmetries plays a central role in reducing the non-linear equation to a linear equation system. The numerous conservation principles, such as conservation of energy and angular momentum, are specifically linked to the symmetries of a specified dynamical system and provide the conserved quantities...





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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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