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Symmetry Methods for Solving Differential Equations

Guest Editor:

Prof. Dr. Mehmet Pakdemirli
Professor Emeritus, Department of Mechanical Engineering, Manisa Celal Bayar University, 45140 Manisa, Turkey

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Message from the Guest Editor

Symmetry Analysis is a systematic method of solving differential equations which has been widely applied to many mathematical models in search of analytical solutions. The results of ad-hoc methods can be combined and classified within the context of symmetries of differential equations.

The aim of this Special Issue is to collect high-quality work and provide a dissemination of recent results on the topic. Lie Group Theory, Noether Symmetries, and the Exterior Calculus approach are widely used symmetry methods. Contributions to the development of these methods are within the scope of this Special Issue. Studies on new theories combining symmetry with perturbation methods, such as the approximate symmetry methods, are welcome. Classical Lie Point Symmetries, Equivalence Transformations, Group Classifications, Non-Classical Symmetries, and Lie–Backlund Symmetries are other techniques that may be considered. Papers employing special group transformations (Scaling, Translational, Spiral), as well as other similarity transformations, are also acceptable...