

Special Issue

Application of Symmetry/Asymmetry in Fractional Differential Equations

Message from the Guest Editors

Due to its applicability in many domains of applied sciences such as mathematics, engineering, chemistry, physics, finance, and social sciences, researchers are interested in the exploration of symmetry and asymmetry fractional calculus in recent decades. These examples demonstrate the value of fractional calculus. As a result, various fractional derivative definitions have arisen in the literature. Used to provide more realistic representations of real-world events, a few well-known examples of fractional derivatives include Riemann–Liouville, modified Riemann–Liouville, Riesz, Grunwald–Letnikov, Caputo, ErdélyiKober, and Hadmard and Marchaud. Fractional calculus was proposed very recently. Although it has always played an important role in mathematics, it has recently grown in significance in several branches, including but not limited to topological indices, polynomials in graphs, molecular descriptors, differential of graphs, alliances in graphs, domination theory, complex systems, symmetry, asymmetry, geometry, fractional differential equations, fractional integral inequalities, and more...

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About the Journal

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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