Advances in Fractional Modeling and Computation

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Message from the Guest Editors

Fractional calculus is a branch of mathematics that deals with the study of fractional-order derivatives. Today, fractional calculus has many applications in various fields, including physics, engineering, finance, and biology. It can be used to model complex systems that exhibit non-local or long-range interactions, as well as to solve differential equations involving fractional derivatives. Many models of complex systems which use ordinary and partial differential equations do not have analytic solutions. There is an urgent need to develop effective computational methods for finding the solution and conducting analyses of fractional models.

The focus of this Special Issue is the development and advancement of models using fractional differential equations and processes. We welcome original and review papers on theory, computational, and Monte Carlo methods, and practical applications of fractional models in physics, chemistry, biology, engineering, economics, probability, and statistics.

Special Issue