Special Issue

General Fractional Calculus: Theory, Methods and Applications in Mathematical Physics

Message from the Guest Editors

Fractional calculus can contain different fractional operators to obtain many fractional derivatives, and the generalisation is always a key concept in mathematics. Therefore, it is of utmost importance to study the general fractional calculus that enlarges the natural limitation of various definitions for fractional derivatives. This subject matter of this Special Issue aims at highlighting the general fractional calculus to solve problems that affect foundational mathematical research and engineering technology. Many phenomena from physics, chemistry, mechanics and electricity can be modeled using differential equations involving general fractional derivatives. In addition, the research in the field of general fractional calculus is interdisciplinary. Topics that are invited for submission include (but are not limited to):

- general fractional calculus theory/method/applications;
- fractional viscoelasticity;
- fractional dynamical systems;
- fractional calculus in anomalous diffusion;
- fractional operator theory and theoretical analysis;
- new definitions and properties of general fractional calculus;
- memory and heritability of general fractional calculus.

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Deadline for manuscript submissions

closed (25 March 2025)



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About the Journal

Message from the Editor-in-Chief

Fractal and Fractional (Fractal Fract.) is a scholarly online journal which provides a forum for discussion on new original models and methods in fractals and fractional calculus both from theory and applications. It is a peer-reviewed, open access journal that publishes high quality original research articles, review papers and short communications.

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