Special Issue

Fractional Order Systems and Their Applications

Message from the Guest Editors

Fractional calculus (FC) generalizes the concepts of derivative and integral to non-integer orders. It was introduced by Leibniz (1646–1716), but remained a purely mathematical exercise for a long time, despite the original contributions of important mathematicians, physicists, and engineers. FC experienced rapid development during the last few decades both in mathematics and applied sciences, being recognized as an excellent tool to describe complex dynamics. From this perspective, several models governing physical phenomena in the area of science and engineering have been reformulated in light of FC for better reflecting their non-local, frequency- and history-dependent properties. Applications of FC include modeling of diffusion, viscoelasticity, and relaxation processes in fluid mechanics, dynamics of mechanical, electronic and biological systems, signal processing, control, and others. The Special Issue focuses on original and new research results on fractional order theory and applications. Manuscripts addressing novel theoretical issues, as well as those on more specific applications, are welcome.

Guest Editors

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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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