Special Issue

Advances in Fractional-Order Circuit Models: Theory and Applications

Message from the Guest Editor

Fractional-order calculus or fractional-order systems have been developed in physics, biomedical signal processing, neuromorphic applications, electronic circuits, medicine and electrical engineering, and so on. Fractional-order circuits are also used in modeling the electrical properties of biological materials. Fractionalorder systems and circuits have some characteristics which are hard to realize using integer-order systems and circuits, especially for multiple delay models. Time delays are ubiquitous not only in many practical integerorder systems and circuits but also in fractional-order systems and circuits. Time delays will affect the stability and synchronization of the dynamic systems and are naturally considered in fractional-order systems and circuits, no matter theory or applications. Recently, many research results about fractional-order calculus, fractional-order systems, and fractional-order circuits both with time delay and without time delay emerge in the literature. This Special Issue aims to address the current status of research in this area.

Guest Editor

Dr. Chunhua Feng Department of Mathematics and Computer Science, Alabama State University, Montgomery, AL, USA

Deadline for manuscript submissions

31 December 2025



an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 6.0



mdpi.com/si/231797

Fractal and Fractional Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 fractalfract@mdpi.com

mdpi.com/journal/ fractalfract



Fractal and Fractional

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 6.0





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 peerreviewed, open access journal that publishes high quality original research articles, review papers and short communications.

Editor-in-Chief

Prof. Dr. Carlo Cattani Engineering School (DEIM), University of Tuscia, Largo dell'Università, 01100 Viterbo, Italy

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, and other databases.

Journal Rank:

JCR - Q1 (Mathematics, Interdisciplinary Applications) / CiteScore - Q1 (Analysis)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).