Special Issue

Fractional-Order Learning Systems: Theory, Algorithms, and Emerging Applications

Message from the Guest Editor

Ideas of calculus based on the integration and differentiation of integer orders have firmly formed the mathematical basis for modelling signals, systems, and deriving methods for signal processing, learning, and control. However, integer-order calculus is a special case of a much wider framework that can accommodate the integration and differentiation of fractional orders. In recent years, it has come to the attention of researchers that using the integration and differentiation of fractional orders results in mathematical models of physical systems that are more accurate, highlighting the need for a comprehensive understanding of the deployment of fractional-order calculus in the fields of signal processing, control, learning, and circuit design. This Special Issue delves into recent advances in the theory of fractional-order calculus and its applications in information processing techniques.

Guest Editor

Dr. Sayed Pouria Talebi

Computer Science Department, University of Roehampton, London SW15 5PH, UK

Deadline for manuscript submissions

closed (20 January 2025)

MDPI

Fractal and Fractional

mdpi.com/journal/
fractalfract

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.

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).

MDPI