Special Issue

Applied Fractional Calculus in Machine Learning and Biomedical Engineering

Message from the Guest Editor

The application of fractional calculus in machine learning and biomedical engineering is a novel and rapidly growing area of research. The intersection of fractional calculus (FC) with machine learning (ML) and biomedical engineering (BME) is an emerging field that promises to revolutionize the way we approach problems in data analysis, signal processing, biomedical system modelling, and control. This special issue aims to bring together cutting-edge research and developments in the application of FC to the fields of ML and BME, including but not limited to, the following:
Theoretical advances in FC and their implications for ML and BME;
Development of fractional-order algorithms for machine learning models;
Application of FC in the design of neural networks, including deep learning and reinforcement learning;
Fractional-order systems in biomedical signal processing and image analysis;
Modelling of biological systems using fractional-order differential equations;
Fractional-order control systems in biomedical devices and robotics;
Applications of fractional calculus in physiological modelling and bioinformatics;
Challenges and future directions in the integration of FC with ML and BME.

Guest Editor

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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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