Special Issue

Stochastic Modeling in Biological System

Message from the Guest Editor

The aim of this Special Issue is to publish original research articles covering advances in the theory of stochastic modeling in biology. In this framework, continuous and discrete time stochastic processes will be discussed, as well as stochastic differential equations, fractional differential equations, correlated processes, first-passage-time problems, stochastic optimal controls, parameter estimation, and simulation techniques. All the above topics are intended to be treated in the spirit of modeling the evolution of stochastic systems of interest in biology. Potential topics include but are not limited to the following:

- Stochastic processes for neuronal activity;
- Jump-diffusion processes;
- First-passage-time problems;
- Markov and semi-Markov processes;
- Time-changed processes;
- Markov chains;
- Fractional processes;
- Fractional Brownian motion.

Guest Editor

Dr. Mario Abundo

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Deadline for manuscript submissions

closed (31 August 2023)

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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.

Editor-in-Chief

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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).