Special Issue

Stochastic Dynamical Systems with Fractional Derivative: Theoretical Analysis and Numerical Simulation

Message from the Guest Editors

This Special Issue will focus on advanced research on theoretical analysis on topics related to the theoretical development of fractional calculus, fractional-order operator design, and dynamical properties analysis including the stabilization, response, reliability and control of stochastic structural systems in engineering under random excitation with fractional derivative damping. Papers on newly established techniques related to the numerical simulation of fractional dynamics are also welcome. Topics of interest include the following:

Response of stochastic dynamical system with fractional derivative damping;
Reliability of stochastic dynamical system with fractional derivative damping;
Fractional-order controller designs and realizations;
Optimization of fractional-order controlled systems;
Intelligent algorithm for solutions of stochastic dynamical system with fractional derivative;
Digital and numerical approximations for solutions of fractional-order systems;
Stabilization of the fractional dynamical system;
Applications of fractional-order dynamical systems.

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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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