

Special Issue

Fractal Media and Fractional Viscoelasticity

Message from the Guest Editors

Fractional calculus has attracted considerable interest because of its ability to model complex phenomena in solid materials, fluids, and various dynamical systems. While the fractional integral has been used to describe the fractal structure of materials, the connections between fractal geometry and fractional-order calculus provide interesting opportunities and fundamental challenges to more accurately describe viscoelasticity, thermal and chemical diffusion, light-matter interactions, and their uncertainty. Recently, a physical connection between the fractional time derivative and fractal geometry of fractal media has been described and applied to viscoelasticity and thermal diffusion in elastomers. This has opened up new questions about the use of fractional calculus in engineering applications, which may help us elucidate complex multiscale processes in materials, fluids, and engineered systems.

Guest Editors

Dr. Somayeh Mashayekhi

Department of Mathematics, Kennesaw State University, Marietta, GA 30060, USA

Dr. William Oates

Department of Mechanical Engineering, Florida State University, Tallahassee, FL 32310, USA

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

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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

Prof. Dr. Carlo Cattani

Engineering School (DEIM), University of Tuscia, Largo dell'Università,
01100 Viterbo, Italy

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