fractal and fractional

Special Issue

The Craft of Fractional Modelling in Science and Engineering

Guest Editor:

Prof. Dr. Jordan Hristov
Department of Chemical Engineering, University of Chemical Technology and Metallurgy, 8 Kliment Ohridsky blvd, Sofia 1756, Bulgaria

jordan.hristov@mail.bg

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Message from the Guest Editor

Dear Colleagues,

Fractional calculus performs an important role in the fields of mathematics, physics, electronics, mechanics, and engineering in recent years. The modelling methods involving fractional operators are continuously generalized and enhanced especially during the last few decades. Many operations in physics and engineering can be defined accurately by using systems of differential equations containing different type of fractional derivatives.

The goal of this Special Issue is to report latest progress is to present craft of fractional modelling in science and engineering. We, therefore, invite researchers working within field of theory, methods and application of these problems to submit their latest findings in this Special Issue.

The best articles from the collection will be selected by the Guest Editor and the Editorial Board and published as a book.

The main topics of the collections include, but are not limited to:
Fractional modelling: a broad aspects; Solution techniques: analytical and numerical; Memory kernels: identification, construction and definitions of new fractional operators; Diffusion models; Local fractional calculus; Discrete fractional calculus; Heat, mass and momentum transfer (fluid dynamics) with relaxations; Mechanics and rheology of solid materials; Nano-applications of fractional modelling; Biomechanical and Biomedical applications of fractional calculus; Chaos and complexity; Thermodynamic compatibility of fractional models; Control problems and model identifications with fractional operators; Electrochemical systems and alternative energy sources; Electromagnetics; Fractional electric circuits.

Prof. Dr. Jordan Hristov
Guest Editor

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Fractal Fract Editorial Office, fractalfract@mdpi.com
St. Alban-Anlage 66, 4052 Basel, Switzerland
Tel. +41 61 683 77 34, Fax: +41 61 302 89 18

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