Special Issue

Fractional Differential Equations and Control Problems

Message from the Guest Editor

Differential equations of non-integer order arise in a natural manner as mathematical models of dynamic systems that exhibit such properties as long-term memory and self-similarity. Such systems are then said to have fractional dynamics. Applications and examples of systems with fractional dynamics are ubiquitous in a diverse set of areas. The growing demand for efficient and high-performance systems exhibiting fractional dynamics induces growth in the demand for optimal control theories and methods. In this Special Issue, we aim to present the recent developments in the theory and applications of any types of fractional differential equations and inclusions, with a special emphasis on control problems for fractional ordinary and partial differential equations. This Special Issue will accept high-quality papers containing original research results and survey articles of exceptional merit in the following fields: Fractional differential equations and their applications; Stability analysis and control design for fractional order systems; Fractional optimal control; Fractional calculus of variations; Differential games with fractional derivatives.

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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