Special Issue

Advances in Fractional-Order Difference and Differential Equations

Message from the Guest Editors

Fractional-order difference and differential equations serve as robust tools for modeling, analyzing, and controlling systems characterized by memory effects, non-local interactions, and complex dynamic behavior, making them essential in contemporary applied mathematics and engineering. This Special Issue, "*Advances in Fractional-Order Difference and Differential Equations",* functions as a focused knowledge platform, facilitating the development and application of advanced methodologies while fostering collaboration and knowledge exchange within the global research community. Topics include but are not limited to:

- fractional calculus
- non-integer order systems
- memory effects
- non-local operators
- anomalous diffusion
- hereditary systems
- control systems
- signal processing
- viscoelastic materials
- biological systems
- heat and mass transfer
- financial modeling
- image processing
- epidemiological modeling
- discrete dynamical systems
- operator theory
- stability analysis
- existence and uniqueness
- Laplace transform method
- Adomian decomposition
- finite difference schemes
- predictor–corrector method

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About the Journal

Message from the Editor-in-Chief

Axioms is dedicated to the foundations (structure and axiomatic basis, in particular) of mathematical theories, not only from a crisp or strictly classical sense, but also from a fuzzy and generalized sense. This includes the more innovative current scientific trends, devoted to discover and solve new challenging problems. The prime goal of *Axioms* is to publish first-class, original research articles under an open access policy with minimal fees for the authors. We would be pleased to welcome you as one of our authors.

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