# Special Issue

# Advanced Computational Methods for Fractional Calculus

### Message from the Guest Editors

Fractional calculus governs many phenomena that occur in nature and plays an important role in the progress of engineering and technology. Fractional differential equations describe various phenomena such as fluid flow in a porous material, anomalous diffusion transport, signal processing, control theory of dynamical systems, viscoelasticity, etc. In the last few years, various numerical and computational methods and simulations have been developed and especially designed to handle symmetrical fractal and fractional problems, where the nonlocal properties and recursive algorithms play a fundamental role. In particular, Artificial Neural Network (ANN) methods have also been established as an additional powerful technique to solve a variety of real-world issues described by non-integer dimensional order operators...

### Guest Editors

Prof. Dr. Carlo Cattani

Dr. Praveen Agarwal

Prof. Dr. Shilpi Jain

### Deadline for manuscript submissions

closed (30 October 2022)

# Symmetry

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# About the Journal

### Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

### Editor-in-Chief

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