

## Special Issue

# Fractal and Multifractal Analysis in Environmental, Medical and Technical Fields: Pattern Recognition, Analysis and Processing of Images

### Message from the Guest Editors

Pattern recognition techniques applied to image processing and analysis have continually evolved over the years, mainly due to the significant increase in studies involving mathematical morphology, neural networks and image analysis systems based on machine learning. Texture analysis, for example, has been extensively employed for automatic pattern recognition in images, as an alternative to human cognitive capacity. The application of this technique directly benefits areas such as control theory, manufacturing, biomedicine and taxonomy, among others. In this context, the use of fractal descriptors, such as fractal dimension, succolarity, lacunarity and the multifractal spectrum, deserve attention because they can appropriately measure complex shapes, particularly those found in nature. Considering this, we encourage our colleagues to contribute to our multidisciplinary Special Issue. The aim of this Special Issue is to advance research on topics relating to Fractal and Multifractal Analysis in Environmental, Medical and Technical Fields: Pattern Recognition, Analysis and Processing of Images.

### Guest Editors

Dr. Erveton Pinheiro Pinto

Dr. Marcelo Pires

Dr. Nilson dos Santos Ferreira

### Deadline for manuscript submissions

closed (30 June 2025)



## Fractal and Fractional

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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.

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### Editor-in-Chief

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