Special Issue

Applications of Fractal Dimensions in Rock Mechanics and Geomechanics

Message from the Guest Editors

Fractal geometry has emerged as a powerful tool to quantify the complexity of irregular structures and scale-invariant patterns in geological media. In rock mechanics, fractal dimension provides critical insights into multiscale phenomena, ranging from microcrack networks to macroscopic rock mass behavior. This Special Issue aims to consolidate cutting-edge research on fractal dimension-based characterization, modeling, and predictive analytics for rock systems. We invite contributions that bridge theoretical innovations with engineering applications, addressing challenges such as nonlinear deformation, fracture propagation, fluid flow in fractured reservoirs, and seismic hazard assessment.

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Deadline for manuscript submissions

31 December 2025

Fractal and Fractional

MDPI

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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