Special Issue

Fractal and Fractional in Geotechnical Engineering

Message from the Guest Editors

Fractal theory offers an efficient approach to the micro-quantification of geomaterials that is envisaged to establish connections with the macro-mechanics of geomaterials and provide a new perspective for tackling challenging engineering problems in geotechnical engineering. The fractal dimension, in particular, has shown immense potential in a wide range of geotechnical applications, including the characterization and prediction of soil porosity, soil-water characteristic curve, permeability, soil strength, microscopic pore size distribution, and particle/pore shape. Moreover, fractional-order derivative has found its applications in soil constitutive models, as well as tunnel constructions, such as the forecasting of long-term deformation induced by soil creep, detection of cracks in shield tunnel segments, viscoelastic modeling of tunnel lining, and artificial intelligence framework for tunnels. These applications have proven the crucial role of fractional-order mechanics in the geotechnical engineering design field.

The aim of this Special Issue is to present Fractal and Fractional in Geotechnical Engineering.

Guest Editors

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Deadline for manuscript submissions

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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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