



Digital Rock Analysis

Guest Editor:

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Deadline for manuscript
submissions:

closed (25 September 2022)

Message from the Guest Editor

Dear Colleagues,

Digital rock physic (DRP), digital rock analysis, or computational rock physic techniques are becoming a standard tool in special core/sample analysis in many areas, including enhanced hydrocarbon recovery, mineral exploration, geothermal energy, groundwater resources, CO₂ sequestration, and others. The numerical simulation of various physical and chemical processes in digital rock samples allows for pore-scale analysis and upscaling of rock properties, such as electric resistivity, permeability, etc. Moreover, DRP allows for the non-destructive assessment of different scenarios at in situ and ex situ conditions. For examples, CO₂ sequestration or the injection of non-condensable gases into geothermal fields causes rock matrix dissolution or mineral precipitation, changing all the macroscopic properties of rocks, thus requiring detailed preliminary numerical study before applying this to real aquifers.

We wish to invite you to contribute a manuscript to a Special Issue of Geosciences devoted to advancements in digital rock physics, including but not limited to 3D imaging, image processing, mathematical modeling, numerical modeling, and case studies.





Editor-in-Chief

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Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

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