

Special Issue on  
**Computational and Experimental Investigations of Fluid  
Flow in Rock Materials**

# CALL FOR PAPERS

Rock is a porous material with natural fissures and induced fissures. The induced fissures are generated by the expansion and intersection of the original cracks and thus can be extremely complex especially in underground rock with high confining pressure and high temperature. A better understanding of fluid flow in rock materials is of great importance in underground engineering applications, such as hydraulic fracturing, geothermal extraction, oil and gas production, and carbon dioxide geological sequestration. However, understanding and prediction of fluid flow in rock have yet to be well addressed due to the complex underground conditions, factors affecting the flow behavior, and the interactions between different physical processes. The mechanisms of fluid flow, crack initiation/propagation and especially interactions between different physical processes in rocks under complex geology and engineering conditions are potential challenging topics.

This special issue aims to call for research papers and review articles concerning fluid flow in rock materials under complex loading conditions, including theory analysis, laboratory experiments, and numerical simulations. The research areas, the mechanism of the interactions between fluid and rock, and hydrological properties of the rocks are particularly welcomed.

Potential topics include but are not limited to the following:

- ▶ Determination of rock hydrological properties
- ▶ Flow in unconventional rocks, such as coal and shale
- ▶ Seepage properties of crushed rock
- ▶ Coupled hydro-mechanical-thermal processes
- ▶ Hydraulic fracturing in unconventional reservoirs
- ▶ Multiphase flow
- ▶ Carbon dioxide geological sequestration
- ▶ New advances in numerical methods for simulating fluid flow in rock

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ace/ceif/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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