

Special Issue

New Insights into Hydraulic Fracturing and Reservoir Geomechanics

Message from the Guest Editors

Hydraulic fracturing and reservoir geomechanics constitute an inherently interdisciplinary field that underpins not only traditional resource extraction and underground engineering but also emerging low-carbon energy technologies such as enhanced geothermal systems and carbon storage. This Special Issue aims to gather high-quality original research papers, in-depth review articles, and practical engineering case studies. It welcomes original achievements focusing on fracture propagation law and fluid rock interaction mechanism, innovative research methods including multi-physics numerical simulation and field dynamic monitoring, and frontier technical practices oriented to geothermal stimulation and geological carbon storage. Relevant studies on environmental risk evaluation, induced seismicity regulation and sustainable industry development are also warmly accepted. This Special Issue bridges traditional engineering frameworks with frontier geoscientific and environmental research, aiming to advance a holistic understanding of hydraulic fracturing and reservoir geomechanics and provide robust theoretical and technical foundations for the low-carbon energy transition.

Guest Editors

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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