



## Department of Geology and Geological Engineering GGE Research Highlights...

<https://sites.google.com/sdsmt.edu/fang/home>

Please visit Dr. Fang's research page to learn more about his research!



SDSM&T Geology & Geological Engineering

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GGE Research Highlights...

Dr. Yi Fang studies flow and deformation in soft and hard rocks – the porous or fractured geomaterials that are often the geological hosts to subsurface energy (e.g., hydrocarbons or geothermal heat), water, and mineral resources. Sustainable exploitation of subsurface energy, water, and minerals is a key to improve the quality of human life. However, enormous geoengineering challenges need to be addressed when the subsurface geo-resources are tapped.

To address the geoengineering challenges, Dr. Fang applies geomechanics and geofluids to understand how fluid flow, heat transfer, deformation, mineral dissolution/precipitation concurrently work together in geoengineering activities, such as reservoir characterization, stimulation, and production optimization, energy and mineral waste storage and disposal, mitigation of natural or anthropogenic geohazards, and environmental remediation.

If you are interested in working with Dr. Fang to explore the coupled hydro-mechanical-chemical (HMC) processes in geomaterials related to subsurface CO<sub>2</sub> sequestration and geothermal energy recovery in complex rock formations, please don't hesitate to contact him.

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