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The XIV Congress of the International Association for Engineering Geology and the Environment



Session 1-7

Multiphase Flow and Geomechanics in CO₂ Geological Sequestration

Conveners



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Brief Introduction of the Session:

Humans are facing a potentially catastrophic global problem owing to the excessive emission of carbon dioxide (CO₂) annually into the atmosphere. A potential solution to mitigate the effects is to store CO₂ in large porous/fractured reservoirs within the Earth. Fluid mechanics and geomechanics play crucial roles in determining both the feasibility and associated risks of this geological sequestration. The injection of significant volumes of CO₂ into the formation involves many natural processes, such as multi-fluids (CO₂, brine etc.) flow, convective mixing, reactive transport, and rock deformation and fracturing. Our limited understanding of these processes makes it difficult to improve the CO₂ sequestration efficiency and prevent the CO₂ leakage.

The objective of this minisymposium is to provide a platform for the discussion of all possible aspects of multiphase flow and rock mechanics in geological CO₂ sequestration, including theoretical, experimental, and numerical approaches. This topic will discuss the following issues, but not limited to:

- Multiphase flow in porous/fractured media
- Reactive transport in porous/fractured media
- Convective mixing of CO₂ and brine in porous/fractured media
- Rock deformation and fracturing when fluid injected

IMPORTANT DATES



Abstract for Oral Presentation and
Poster Submission Deadline

Jun. 30, 2023



Early Bird Registration Deadline

Aug. 10, 2023



Online Registration Deadline

Sept. 21, 2023

◆ SUBMISSION ◆

► For the full-length submission

The submission system is now open for full-length papers. The deadline for submission of full-length paper has been extended to May 31, 2023. Please read the guidelines for paper submittal prior to submitting your full-length paper.

Please read the guidelines prior to submitting your full-length paper or long abstract at <https://www.iaeg2023.org/cfp.html>

► For the abstract submission

The abstract submission system for oral presentations and posters is open! If you would rather prepare an abstract for an oral or poster presentation, rather than submitting a full paper, please submit your abstract for consideration by June 30, 2023.

Please read the guidelines prior to submitting your abstract at <https://www.iaeg2023.org/cfa.html>



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