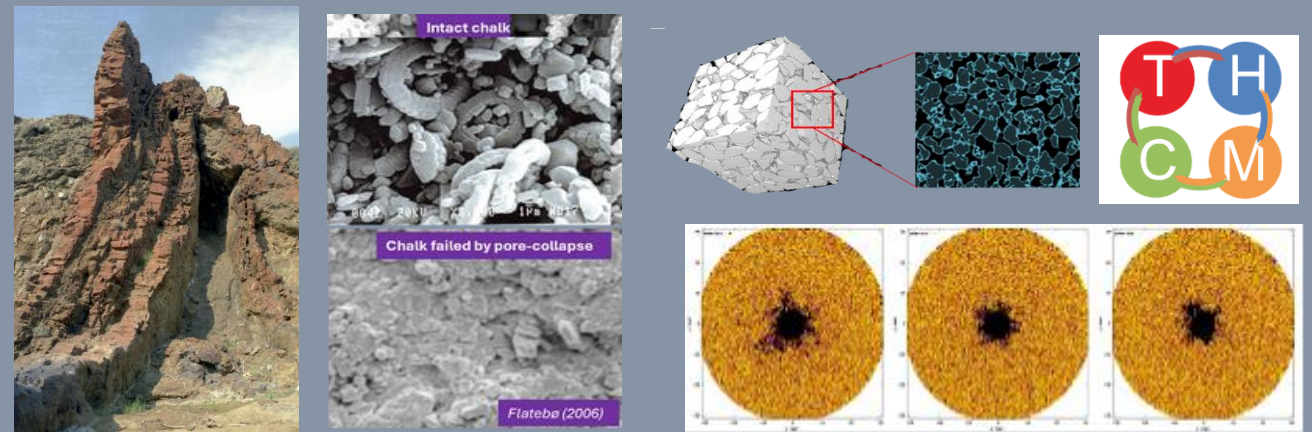# 8th International Conference on Coupled THMC Processes: Geomechanics for Energy and Environmental Applications (GeoProc2025)

20-23 October 2025, Nicosia, Cyprus

https://cyprusconferences.org/geoproc2025/

Overview

With the pressing issue of global climate change the protection of environment and the development and storage of geo energy resources in intelligent, efficient and sustainable way is vital. GeoProc2025 will focus on the key role of coupled Thermo-Hydro-Mechanical- Chemical (THMC) processes in Geomechanics for energy and environmental applications. Specifically, the meeting will address the role of multiscale, coupled THMC processes in geo energy extraction and storage and protection of subsurface environment.

Venue and Date

GeoProc2025 will take place in the brand-new building facilities of the Engineering School of the University of Cyprus in Nicosia, 20-23 October 2025. Cyprus is a member of the European Union, situated between three continents, a crossroad of civilizations with a history spanning more than four millennia, a place of unparalleled natural beauty, sandy beaches, 300 days of sun and good weather that offer its visitors an amazing experience.

Contributions

This theme will attract experimental, theoretical and numerical modeling scientists, as well as engineers and practitioners in the field of geomechanics for energy and environmental applications, to come together from different backgrounds to address common scientific issues in geomechanics relevant to energy and environment, such a geo-energy extraction, production, storage of gasses and hazardous waste disposal.

Invitations

Researchers working on any of the above topics are invited to submit abstracts presenting their most recent advances. A number of invited keynote lecturers will address all the relevant areas
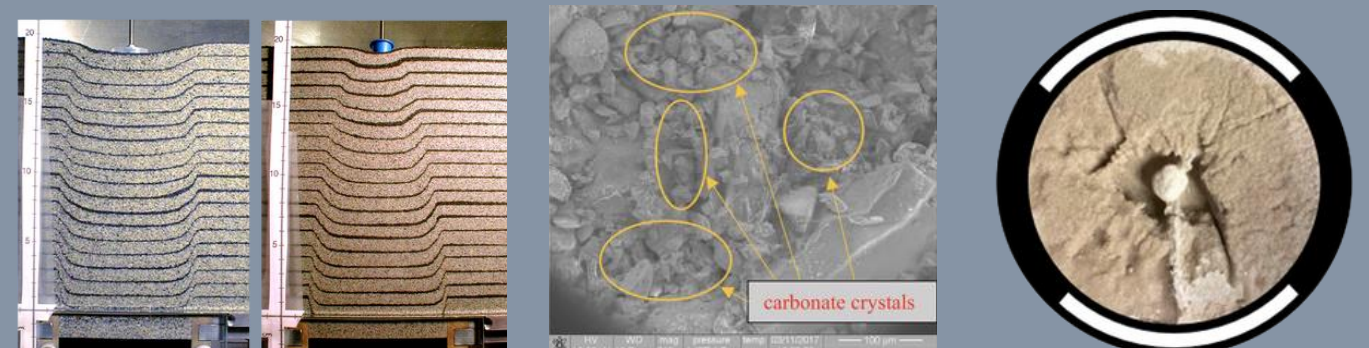
Pre-post activities

A tour to archaeological and tourist sites is scheduled. An extended versions of original research contributions will be published in the GETE Journal.

Synopsis and topics

The needs of sustainable energies drive recent subsurface developments in applications that advances our understanding of geomechanisms related to gasses extraction and storage. The related engineering applications include hydrocarbon extraction, CO_2 geological storage, Hydrogen storage, energy storage, shallow and deep geothermal extraction, nuclear waste disposal, ground protection and remediation. However, ongoing progress increasingly depends on integrating different research fields including laboratory and numerical experiments, advanced characterization techniques and disciplines, such as rock engineering, flow in porous media, geophysics and other. The complexity of the involved coupled THMC processes and the vast range of length and time scales to be considered is unprecedented. Topics to be addressed include:

- Theoretical, numerical and experimental advances in THMC processes in Geomechanics
- CO_2 geological storage and utilization for enhanced hydrocarbon production
- Underground Hydrogen storage
- Geomechanics in hydrocarbon exploration, development and production
- Deep and shallow geothermal energy systems
- Nuclear and hazardous waste disposal and storage
- THMC processes in fault activation, landslides and induced seismicity
- Mining and Rock Mechanics
- Ground remediation and protection

Chairpersons

Prof. Panos Papanastasiou (UCY)
Prof. Euripides Papamichos (AUTH)
Dr Charalampos Konstantinou (UCY)

Local organizers

Prof. Dimitrios Loukidis (UCY)
Prof. Ioannis Ioannou (UCY)
Dr. Nikolas Papadimitriou (GSD)
Prof. Ernestos Sarris (AUTH)

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Important dates

	14 APRIL 2025
Final submission deadline:	~~1 February 2025~~
Acceptance announcement:	1 May 2025
Early-bird registration:	1 July 2025
Conference:	20-23 October 2025