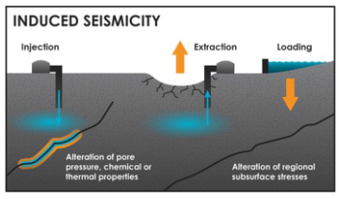
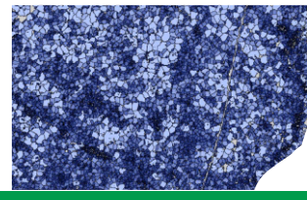
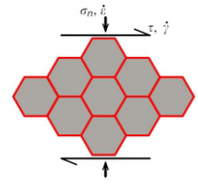
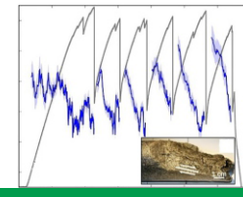
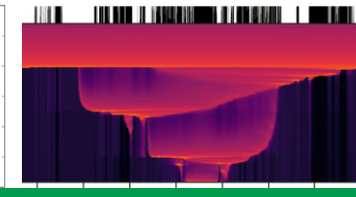
7th International Conference on Coupled THMC Processes: Earthquake and Faulting mechanics (GeoProc2019)



3-5 July, 2019, Utrecht, the Netherlands

http://www.GeoProc2019.sites.uu.nl

Overview

With destructive natural earthquakes having increasing impact as global population grows, and with seismicity caused by georesources extraction and geological storage activities becoming increasingly widespread, GeoProc2019 will focus on the key role of Coupled Thermo-Hydro-Mechanical-Chemical (THMC) processes on earthquake and faulting phenomena. Specifically the meeting will address the role multiscale THMC processes in controlling natural and induced seismicity.

Venue and Date

GeoProc2019 will take place at Utrecht University's Uithof Campus to the east of Utrecht city, in the Netherlands, 3-5 July, 2019. Utrecht is listed by the EU as one of its top cities for quality of life and by Lonely Planet in its top 10 of the World's unsung destinations.

Contributions

This theme will attract experimental, theoretical and modeling scientists, as well as engineers and practitioners in the field of seismic hazard assessment, to come together from different backgrounds to address common scientific issues in fault and earthquake mechanics relevant to tectonically active faults and to fault motion induced by human activities, such a geo-energy production and storage.

Invitations

Researchers working on any of the above topics are invited to submit abstracts addressing their most recent advances. Invited keynote lecturers will include

Eiichi Fukuyama, Elena Spagnuolo, David Dempsey, François Renard, Jan van Elk, Klaus Regenauer-Lieb, Nadia Lapusta, Yves Guglielmi, Tom Mitchell

Pre- and Post-symposium activities

A tour to the HPT lab of Utrecht University is arranged. GeoProc2019 expects to arrange a special issue in an AGU journal or "Tectonophysics".

Synopsis and Topics:

Recent developments are RAPIDLY advancing our understanding of faulting phenomenon, from brittle versus ductile faulting, to seismic versus aseismic slip, rupture nucleation, coseismic slip, slow slip and tectonic versus induced earthquake rupture behavior. However, ongoing progress increasingly depends on integrating different research fields and disciplines, including laboratory and numerical experiments, seismology, rock engineering, and advanced microscopy techniques. The complexity of the coupled THMC processes involved and the vast range of length and time scales that have to be considered is unprecedented. Topics to be addressed include:

- Slow to fast frictional experiments, theory and numerical modeling
- Geophysical observations and interpretation in terms of coupled THMC processes
- Empirical and (micro)physically based models of THMC processes in faulting
- Role of THMC processes in controlling natural destructive earthquakes
- Role of THMC processes in induced seismicity, fault reactivation and landslides

Important Dates

Final submission deadline:	**21st, Jan, 2019**
Acceptance announcement:	**1st, Feb, 2019**
Early-bird registration:	**31th, Mar,2019**
Conference:	**3-5, July, 2019**

Chairpersons

Prof. Chris Spiers
Prof. Jean Sulem
Prof. Klaus Regenauer-Lieb

Local organizers

Dr. Jianye Chen
Dr. Suzanne Hangx
Dr. Andre Niemeijer

Contact

Email: geoproc2019@uu.nl (Dr. Jianye Chen)
Address: Budapestlaan 4, 3584 CD Utrecht, NL

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