



3rd International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling and Application

Invitation

The Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application (CouFrac2022) invites you to Berkeley, California, November 14-16, 2022. The conference, which succeeds the first one held in Wuhan, China in 2018 and the second held in Seoul, Korea in 2020, will focus on new and exciting advances in all areas of coupled processes associated with fractured geological media, including numerical methods, in-situ tests, lab experiments, machine learning, and applications to different subsurface engineering activities. The conference will be held in person in Berkeley with the possibility of participation through video conferencing. We look forward to your participation!

Conference Chairs

Jonny Rutqvist (LBNL, USA)
Mengsu Hu (LBNL, USA)
Carl I. Steefel (LBNL, USA)
Ki-Bok Min (SNU, Korea)
Antonio Pio Rinaldi (ETH Zürich, Switzerland)
Pengzhi Pan (CAS, China)
Hideaki Yasuhara (Ehime University, Japan)

Conference Administrator

Shelby Bemiss (LBNL, USA)

Student Assistant

Ying Xin (SNU, Korea)

Conference email:

coufrac2022@gmail.com

Conference website:

<http://www.coufrac2022.org>

Important Dates

June 1, Deadline for Abstract submission
June 15, Notification to authors on acceptance
August 17, Deadlines for Extended Abstract submission
October 1, Deadline for Early Registration
November 1, Deadline for Regular Registration

Awards

Chin-Fu Tsang Coupled Processes Award

Panel Discussion: Carbon Neutrality



Honorary Panel Members:

Derek Elsworth, Ranjith Pathegama Gamage, Dongxiao Zhang, Maurice B Dusseault, Hajime Yamamoto

Keynote Lectures



Chin-Fu Tsang



Mark D. Zoback



Wenlu Zhu



Patrick Selvadurai



Jishan Liu



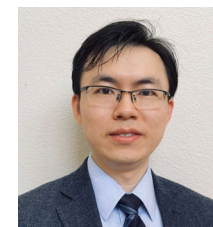
Janos Urai



Xuhai Tang



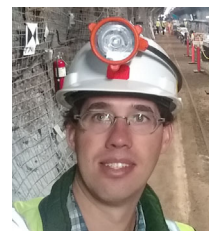
Anna Suzuki



Yi Fang



Cyprien Soulaine



Luke Frash



Sehyeok Park

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Special Sessions

SS1: Machine learning for coupled processes in the earth sciences and engineering

Conveners: Mengsu Hu, Laura J. Pyrak-Nolte

Sessions

S1: Multi-physics of high-enthalpy and supercritical geothermal systems

Conveners: Francesco Parisio, Keita Yoshioka

S2: Fracture propagation modeling in porous media

Conveners: Keita Yoshioka, Francesco Parisio

S3: THMC coupling in geologic CO₂ storage: from lab to field scale

Conveners: Roman Makhnenko, Víctor Vilarrasa

S4: Soft stimulation in enhanced geothermal system

Conveners: Zhihong Zhao, Bo Li

S5: Fostering geological hydrogen storage: Experiments, simulations, field observations

Conveners: Pania Newell

S6: Induced seismicity: from understanding the triggering mechanisms to its forecasting

Conveners: Víctor Vilarrasa, Roman Makhnenko

S7: Fusing data-driven and physics-based modeling in Enhanced Geothermal Systems

Conveners: Thomas Poulet, Manolis Veveakis

S8: Numerical modelling of long term THM coupled processes in fractured hard rock

Conveners: Diego Mas Ivars

S9: Coupled THM hard rock fracture behaviour- laboratory experiments and numerical modelling

Conveners: Diego Mas Ivars

S10: Coupled THM field experiments in fractured hard rock

Conveners: Diego Mas Ivars

S11: Laboratory evaluation of shear behavior of rock fractures from micro to macro scale

Conveners: Li Zhuang, Fengshou Zhang, Bo Li

S12: Exploring the THM processes via geophysical parameters: from laboratory experiments to field tests

Conveners: Takuya Ishibashi, Yusuke Mukuhira, Sho Ogata

S13: Hydraulic fracturing in deep oil/gas reservoirs with complex geologic discontinuities

Conveners: Xuhai Tang, Haiyan Zhu

Sessions

S14: Controlled enhanced geothermal system (EGS) development

Conveners: Hannes Hofmann, Günter Zimmermann

S15: Hydromechanical interactions and seismic hazards in mineral resources exploitation

Conveners: Wenzhuo Cao, Qinghua Lei

S16: THM processes in thermal and gas storage in geological formations

Conveners: Hejuan Liu, Pengzhi Pan, Zhaofeng Wang

S17: Advances in hydraulic fracture modeling and applications

Conveners: Fengshou Zhang, Egor Dontsov

S18: Multi-scale and multiphysics coupled processes in dynamics of geological discontinuities and application to subsurface energy storage and waste disposal

Conveners: Kyung Won Chang, Jeoung Seok Yoon

S19: Mechanical effects on fluid flow and contaminant transport in rock fractures

Conveners: Liangchao Zou, Jan-Olof Selroos

S20: Numerical modelling of coupled thermo-hydro-mechanical processes in fractured rocks

Conveners: Bruno Figueiredo, Jeffrey Hyman

S21: Numerical modelling of the interaction of coupled thermo-hydro-mechanical processes and complex geological settings and heterogeneities

Conveners: Bruno Figueiredo, Jeffrey Hyman

S22: Coupled thermal, hydrological, mechanical and chemical (THMC) in engineered barrier system and the host rock for high-level radioactive waste repositories

Conveners: LianGe Zheng, Jonny Rutqvist

S23: Coupled processes in the Earth's critical zone

Conveners: Qinghua Lei, Carl Steefel

S24: The role of fracture evolution in fluid and solute migration and leakage

Conveners: Sergi Molins

S25: Understanding flow paths and coupled processes in rock salt

Conveners: Laura Blanco-Martin

S26: Fluid and solute transfers in clay-rich fractured media

Conveners: Christophe Tournassat, Roman Makhnenko, Thomas Gimmi



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