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!

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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

Organized by

Plenary Session for Emerging Scientists

Xuhai Tang
Anna Suzuki
Yi Fang

Cyprien Soulaine
Luke Frash
Shyeok Park

Sponsored by
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 Mukuhiira, Sho Ogata

S13: Hydraulic fracturing in deep oil/gas reservoirs with complex geologic discontinuities
Conveners: Xuhai Tang, Haiyan Zhu

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 Figueirêdo, Jeffrey Hyman

S21: Numerical modelling of the interaction of coupled thermo-hydro-mechanical processes and complex geological settings and heterogeneities
Conveners: Bruno Figueirêdo, 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: Liang Ge 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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