

## CouFrac 2022 Onsite POSTER SESSION

19:00-21:00, Monday, November 14, 2022

Chairs: Mengsu Hu, Carl I. Steefel, Jonny Rutqvist

OP-ID	EXTENDED ABSTRACT ID/ TITLE / AUTHOR
OP -01	012-- Basin-scale machine learning prediction for injection-induced seismicity in Oklahoma Sharmila Bolikoppa Palakshappa, Hideo Aochi, Zahra Derakhshandeh, Jonny Rutqvist, Mengsu Hu*
OP -02	229-- Upscaling Microscale Flow Effects using Differentiable Programming Javier E Santos*, Daniel O'Malley, Mohamed Mehana, Hari S Viswanathan, Eric Gultinan
OP -03	232-- Recognizing Faults and Multiscale Geologic Features in Mont Terri Using Machine Learning Justin Cheng, Utkarsh Mital, Martin Ziegler, Yves Guglielmi, Jonny Rutqvist, Mengsu Hu*
OP -04	240-- Improving detection accuracy of microseismic activity during geologic carbon storage using a machine learning method Daniel Lizama, Hongkyu Yoon*
OP -05	182-- Modeling Longitudinal Thermal Fractures Along Vertical Injection Wells: Implication to Well Productivity/Injectivity Enhancement Quanlin Zhou*
OP -06	132-- True-triaxial hydraulic fracturing of granite and shale samples for enhanced geothermal systems and petroleum production Tao Zhang*, Qin hong Hu, Wenyi Chen, Yang Gao, De Li, Xiating Feng, Yunqi Shen
OP -07	198-- On the permeability enhancement perpendicular to the shear slip direction from the microseismic perspective Yusuke Mukuhira*, Takuya Ishibashi, Takatoshi Ito, Hiroshi Asanuma
OP -08	146-- Effect of stratigraphic heterogeneities on heating and cooling-induced damage and brine migration in rock salt Hafssa Tounsi*, Jonny Rutqvist, Mengsu Hu
OP -09	241-- Underground gas storage in salt caverns related to Electrolysis-Methanation-Oxyfuel Laura Blanco-Martin*
OP -10	137-- Numerical modeling of fault activation, slip, and induced seismicity at a pilot-scale geological CO2 storage with discontinuous interface elements Sangcheol Yoon*, Jihoon Kim, Hikweon Lee
OP -11	149-- Importance of considering 3D stratigraphy for predictions of induced microseismicity in Illinois Basin Nikita Bondarenko*, Roman Makhnenko, Yury Podladchikov, Sherilyn Williams-Stroud
OP -12	156-- Simulation of Injection-Induced Sequences of Earthquakes and Aseismic Slip in complex fault zones: Role of off-fault damage and Heterogeneous rate-and-state properties Mohamed Abdelmeguid, Md Shumon Mia, Ahmed Elbanna*
OP -13	216-- Adaptive time-step control for reservoir simulation while resolving fluid-driven rupture and seismicity Zheng Han*, Rami M Younis
OP -14	028-- Is the hypothesis of a uniform thermodynamic state still valid in hydrogen underground caverns during fast cycling? Murad ABUAISHA*, Ahmed Rouabhi
OP -15	122-- Evaluation of fracture surfaces imaging methods for their use in numerical flow simulations Marco Fuchs*, Sina Hale, Gabriel Rau, Kathrin Menberg, Philipp Blum
OP -16	072-- 3D fully-coupled hydro-mechanical simulation of groundwater drainage-induced rock mass deformation during the Gotthard Base Tunnel excavation in the Swiss Alps Chenxi Zhao*, Qinghua Lei, Zixin Zhang, Simon Loew

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<b>OP -17</b>	<b>150-- The impact of the geometry and mechanical properties of the well-formation system on the shear failure of the well due to reverse faulting</b> Tsubasa Sasaki*, Preston Jordan, Bill Foxall, Floriana Petrone, Jonny Rutqvist
<b>OP -18</b>	<b>015-- Fluid flow in shale faults driven by the decoupling between slip and opening</b> Frédéric Cappa*, Yves Guglielmi, Christophe Nussbaum, Louis De Barros, Jens Birkholzer
<b>OP -19</b>	<b>083-- Exploring better injection strategies for hydraulic stimulation of a shale-sand-limestone multi-layered shale oil reservoir</b> Xuanhe Tang, Haiyan Zhu, Maurice B Dusseault*, Chuhao Huang, Liaoyuan Zhang, Bo Huang
<b>OP -20</b>	<b>084-- Effect of Particle size and Mixing Ratio on Thermal Properties of Backfill in Deep Geological Disposal</b> Yohan Cha*, Jae Owan Lee, Jin-Seop Kim
<b>OP -21</b>	<b>095-- Numerical modelling of the laboratory tests for coupled processes in fractured rocks by the TOUGH-3DEC simulator</b> Saeha Kwon*, Kwang-Il Kim, Changsoo Lee, Jin-Seop Kim
<b>OP -22</b>	<b>130-- A pulse-decay method for low permeability analyses of granular porous media: Mathematical solutions and experimental methodologies</b> Tao Zhang*, Qinrong Hu, Behzad Ghanbarian
<b>OP -23</b>	<b>049-- Parameter identification of Kunigel V1 bentonite using coupled thermo-hydro-mechanical model</b> MINSEOP KIM*, Changsoo Lee, Jinseop Kim
<b>OP -24</b>	<b>051-- Coupled thermo-hydro-mechanical modeling in the FE experiment using OGS-FLAC</b> Taehyun Kim*, Chan-Hee Park, Changsoo Lee, Jin-Seop Kim
<b>OP -25</b>	<b>067-- Property Analysis of Additives for Enhanced Buffer Materials of Engineered Barrier Systems</b> Gi-Jun Lee *, Seok Yoon, Seeun Chang
<b>OP -26</b>	<b>086-- Piping channel generation and self-healing of compacted bentonite for HLW disposal</b> Chang-Ho Hong*, Ji-Won Kim, Jin-Seop Kim
<b>OP -27</b>	<b>133-- Risk assessment of clay-rock fracture in repository systems under high gas pressures</b> Mostafa Mollaali*, Vanessa Montoya, Olaf Kolditz, Keita Yoshioka, Jörg Buchwald
<b>OP -28</b>	<b>135-- Modeling of thermal fracturing experiment at Meuse/Haute-Marne underground research laboratory using a ubiquitous joint model</b> Sangcheol Yoon *, Jonny Rutqvist, CARLOS PLUA, Gilles Armand

### Instructions of Onsite Poster Presentations

- The Onsite Poster Session will be held in the evening on Monday, November 14, 2022, on-site at LBNL, in Building 54
- Each poster should fit within a **4-foot-high by 4-foot-wide (120cm by 120cm)** space (poster boards provided are 4-foot-high by 8-foot-wide and there will be TWO posters per side per board)
- Printing services are NOT available onsite. Boxes will be available on Monday morning to collect and store your poster until the poster session (please be sure to label your poster and/or poster tube)