CouFrac 2022 VIRTUAL POSTER SESSION
17:30-19:00, Monday, November 14, 2022

Chairs: Pengzhi Pan, Antonio Pio Rinaldi, Hideaki Yasuhara, Ki-Bok Min

Session VPA	Online Moderator: Bo Li	
VPA-ID	**TIME**	**EXTENDED ABSTRACT ID/ TITLE / AUTHOR**
VPA-01	17:30-17:40	**233-- Experimental investigation on the particle migration phenomenon of drilling fluid through porous media** Jithin S Kumar*, Ramesh Kannan Kandasami, Jitendra S Sangwai
VPA-02	17:40-17:50	**055-- Analysis of CO2-induced deflections of cap rocks in the low and high buoyancy low regimes** Ernestos Nikolas Sarris*, Elias Gravanis, Loizos Papaloiou
VPA-03	17:50-18:00	**025-- A Mechanical Constitutive Model for Simulating THMC Processes in Enhanced Rock-salt Geothermal Systems (ERGS)** Ishmael D Yevugah*, Hartmut Hollaender, Pooneh Maghoul
VPA-04	18:00-18:10	**094-- Permeability fluctuations of unmated rock fractures subject to loading and unloading processes** Bo Li*, Bingming Yan, Yangyang Mo, Liangchao Zou
VPA-05	18:10-18:20	**192-- A numerical approach to study clay swelling on permeability induced by the invasion of fracturing fluid** Bailong Liu*, Deyi Yang, Takatoshi Ito
VPA-06	18:20-18:30	**217-- Numerical investigation of the factors affecting the fracture penetration in interbedded shale oil reservoirs** Dan Xu, Yan Jin, Shiming Wei*
VPA-07	18:30-18:40	**202-- Fluid Flow: Importance of Fracture Network Orientation relative to Gravity** Lina Margarita Rico Arévalo*, Jared Bland, Laura Pyrak-Nolte

Session VPB	Online Moderator: Roman Makhnenko	
VPB-ID	**TIME**	**EXTENDED ABSTRACT ID/ TITLE / AUTHOR**
VPB-01	17:30-17:40	**056-- Coupled processes to explain induced seismicity: the case of the Underground Gas Storage of Castor, Spain** Victor Vilarrasa*, Silvia De Simone, Jesus Carrera, Antonio Villaseñor
VPB-02	17:40-17:50	**032-- Geothermal reservoir induced seismic hazard assessment through integration of multi-disciplinary datasets and probabilistic classification** Sara Hanson-Hedgecock*, Victor Vilarrasa
VPB-03	17:50-18:00	**178-- Modelling induced seismicity in the Hengill Geothermal Field: from field scale with statistical models to reinjection zone with statistical and hybrid models** Vanille A Ritz*, Antonio Pio Rinaldi, Shyam Nandan, Stefan Wiemer
VPB-04	18:00-18:10	**197-- Performance comparison of statistical and hybrid induced seismicity forecasting models** Victor Clasen Repolles*, Antonio Pio Rinaldi, Federico Ciardo, Luigi Passarelli, Stefan Wiemer
VPB-05	18:10-18:20	**223-- An experimental study on the effect of lateral intermediate stress on friction and stability of a fracture in sandstone** Jinmeng Zhao*, Zhechao Wang

CouFrac 2022 VIRTUAL POSTER SESSION
17:30-19:00, Monday, November 14, 2022

VPB-06	18:20-18:30	**188-- Risk Management of Underground Fluid Injection-Induced Seismicity by Traffic Light System Method** Qi Li *, Miao He
VPB-07	18:30-18:40	**110-- Prediction method for calculating the porosity of insoluble sediments for salt cavern gas storage applications** Xilin Shi*, Peng Li, Yinping Li, Hongling Ma, Chunhe Yang
VPB-08	18:40-18:50	**215-- Formation fracturing by high-impulse, short-duration mechanical loading** Wen Cao*, Rami M Younis

Session VPC	Online moderator: Hideaki Yasuhara

VPC-ID	TIME	EXTENDED ABSTRACT ID/ TITLE / AUTHOR
VPC-01	17:30-17:40	**057-- Sequentially Coupled Modeling of Hydrological and Mechanical Processes in Rock Fracturing** Goodluck Ofoegbu*, Biswajit Dasgupta
VPC-02	17:40-17:50	**119-- Development of Pore Pressure Cohesive Element to Simulate Fluid Driven Fracturing in Saturated Rock Mass** Subhadeep Sircar*
VPC-03	17:50-18:00	**193-- Proppant transport during hydraulic fracture closure** Vadim I Isaev*, Ludmila Belyakova, Semen Idimeshev, Leonid Semin, Alexey Tikhonov, Egor Dobretsov
VPC-04	18:00-18:10	**039-- A transient wellbore-reservoir model and analytical solution in naturally fractured formation during cold/hot fluid circulation** Yarlong Y Wang*
VPC-05	18:10-18:20	**170-- The presence of distant faults may extend the spatiotemporal seismic footprint of reservoir stimulation in enhanced geothermal systems** Iman Rahimzadeh Kivi*, Victor Vilarrasa, Kwang-Il Kim, Hwajung Yoo, Ki-Bok Min
VPC-06	18:20-18:30	**041-- Simulating THM Responses with Two-Phase fluid Flow in Naturally Fractured Reservoirs by Simplified IMPES Algorithm** Yarlong Y Wang*
VPC-07	18:30-18:40	**026-- A coupled thermal-hydraulic-chemical model for simulating methane hydrate dissociation using the finite element method** Li Zhang, Bisheng Wu*; Haitao Zhang, Yuanxun Nie

Session VPD	Online moderator: Ki-Bok Min

VPD-ID	TIME	EXTENDED ABSTRACT ID/ TITLE / AUTHOR
VPD-01	17:30-17:40	**082-- 3D Digital Quantitative Analysis of fracturing in Rock-encased-backfill Structure under Hydromechanical Cyclic Loading** Xin Yu*, John Kemeny, Weidong Song, Yuye Tan, Shengwen Qi
VPD-02	17:40-17:50	**195-- A brief review of mechanical behaviors and stress wave propagation characteristics of fractured rocks under dynamic loads** Peng Li*, Meifeng Cai, Fenhua Ren
VPD-03	17:50-18:00	**205-- Strength Variations Due to Grain Size in Augen Gneiss with Different Temperature by Point Load Test** Ajita Bhandari*, Suman Panthee

CouFrac 2022 VIRTUAL POSTER SESSION
17:30-19:00, Monday, November 14, 2022

VPD-04	18:00-18:10	**238-- Shear band evolution and acoustic emission characteristics of rocks in direct shear tests** Shuting Miao, Pengzhi Pan*, Chuanqing Zhang, Zhaofeng Wang
VPD-05	18:10-18:20	**230-- Multiphase flow experiments through 3D printed fractures** Nathan J. Welch, Samantha Peterson, Javier E Santos*, Luis Angel Chavez Atayde, Eric Guiltinan
VPD-06	18:20-18:30	**236-- Study of hydraulic fracture extension behavior in shale reservoirs combining digital image technology and HMD method** Xin Liu, Zhengzhao Liang, Na Wu*, Chunan Tang
VPD-07	18:30-18:40	**117-- The effects of thermal and pressure induced fracture aperture variation on the performance of enhanced geothermal systems using H2O and scCO2 as working fluids** Dejian Zhou*, Alexandru Tatomir, Martin Sauter
**Session VPE	Online moderator: Zhijun Wu**		
VPE-ID	**TIME**	**EXTENDED ABSTRACT ID/ TITLE / AUTHOR**
VPE-01	17:30-17:40	**045-- A Multiphysics Model for Biogenic Gas Extraction: The Role of Bioconversion Processes** Qi Gao*, Jishan Liu, Yifan Huang, Yee-Kwong Leong, Derek Elsworth
VPE-02	17:40-17:50	**060-- A fully coupled low-temperature thermo-hydro-mechanical model for the combined finite-discrete element method** Lei Sun*, Xiaofeng Li, Xuhai Tang, Giovanni Grasselli
VPE-03	17:50-18:00	**062-- Coal Multiphysics Modelling: The Role of Transient Processes in REV** Yifan Huang*, Jishan Liu, Qi Gao, Derek Elsworth, Yee-Kwong Leong
VPE-04	18:00-18:10	**166-- Computationally effective modeling of hydraulic stimulation and production from naturally fractured reservoirs** Aleksandra Peshcherenko*, Dimitry A Chuprakov, Mikhail Anisimov
VPE-05	18:10-18:20	**239-- Numerical study on small cracks effects to the main fault activation under biaxial compression** Zhaofeng Wang, Pengzhi Pan*, Wenbo Hou, Shuting Miao, Guangliang Feng, Hejuan Liu
VPE-06	18:20-18:30	**155-- Extending the combined finite-discrete element method to account for the thermo-poromechanics phenomena in fluid-saturated porous rock masses** Wenjun Cui*, Zhijun Wu, Quansheng Liu
VPE-07	18:30-18:40	**047Thermo-hydro-mechanical coupled simulation of an aquifer thermal energy storage in Shanghai, China.** Yang Wang, Fengshou Zhang*, Fang Liu
**Session VPF	Online moderator: Pengzhi Pan**		
VPF-ID	**TIME**	**EXTENDED ABSTRACT ID/ TITLE / AUTHOR**
VPF-01	17:30-17:40	**019-- Numerical modeling of gas injection induced cracking with unsaturated hydromechanical process in the context of radioactive waste disposal** Zhan YU*, Jianfu SHAO, Xiating Feng
VPF-02	17:40-17:50	**038-- Coupled THM Formulations with a Two-phase Fluid Flow and analytical wellbore solution in Naturally Fractured Media of Dual-porosity Model** Yarlong Y Wang*

CouFrac 2022 VIRTUAL POSTER SESSION
17:30-19:00, Monday, November 14, 2022

VPF-03	**17:50-18:00**	**085-- Distributions of thermal performance and deposition hole spacing of high-level radioactive waste repository based on bentonite types, rock thermal properties and geothermal gradient in Korea** Kwang-Il Kim*, Changsoo Lee, Dongkeun Cho, Seok Yoon, Hyoungchan Kim
VPF-04	**18:00-18:10**	**237-- A full-scale three-dimensional modelling of the Horonobe EBS experiment** Pengzhi Pan*, Wenbo Hou, Zhaofeng Wang, Shuting Miao
VPF-05	**18:10-18:20**	**037-- Analytical Modeling of Propagation and Arrest of Thermal Fractures Induced by Cold Fluid Injection Through Horizontal Wells** Bin Chen*, Quanlin Zhou
VPF-06	**18:20-18:30**	**186-- A three dimensional hydraulic fracturing model based on peridynamics** Mingqi Qin*
VPF-07	**18:30-18:40**	**201-- Physics or Guesswork: Choosing the Model for Fracture/Matrix/Fluid Interactions** Gary D Couples*

Instructions of Virtual Poster Presentations

• The 6 concurrent virtual poster sessions will be held between 17:30-19:00 on Monday, November 14, 2022, with onsite exhibition in Building 54 of LBNL and online everywhere else.

• Each virtual poster should be **60 cm-high and 90 cm -wide** (landscape mode).

• At least one of the co-authors of each virtual poster must show up online during the virtual poster presentation period. Each presenting author will be given 3~4 minutes for a live presentation to introduce the work followed by a 6~7-minute Q&A session with the online and onsite conference participants.

• Each virtual poster must be uploaded to Whova by **November 13, 2022 at the latest**. Detailed instructions for uploading to Whova will be distributed soon.