56TH US ROCK MECHANICS / GEOMECHANICS SYMPOSIUM

Santa Fe, New Mexico, 26-29 June 2022

Final Technical Program Schedule (June 26 version)

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Podium Session	06/27/2022	8:00 AM	Coronado Room
Session Subject:	**Rock mass characterization**		
Session Chairs:	Mathew Ingraham	(Open)	
8:00 AM	850 (57)	Tomas Lokajicek	Westerly granite anisotropy study
8:15 AM	942 (270)	Tingting Xu	Competition between biotite weathering and regional stresses: answers from homogenization and Finite Element simulation
8:30 AM	2197 (406)	Awais Butt	Dry and fluid permeated hydraulic fractures and their geophysical signatures in granitic rocks
8:45 AM	2373 (749)	Kun Su	Comparison of different approaches of 1D Mechanical Earth Model used in geomechanics
9:00 AM	993 (685)	Simon Libby	Direct measurements of the transmissivity distribution across single fracture planes on the multi-metre scale
9:15 AM			
Podium Session	06/27/2022	8:00 AM	Kearny Room
Session Subject:	**Induced seismicity and design tools in mining**		
Session Chairs:	Erik Westman	Wenzhuo Cao	
8:00 AM	2035 (625)	Guillaume Sasseville	(R) Control Measures to Manage Seismic Risk at the LaRonde Mine, a Deep and Seismically Active Operation
8:15 AM	912 (257)	Wen H Su	NIOSH Gas Well Stability Research - Preliminary Engineering Guidelines
8:30 AM	2341 (17)	Fidelis T Suorineni	The Qualitative Stability Graph for Open Stope Design – Recent Developments
8:45 AM	944 (300)	Alan G Thompson	Development and application of a novel dynamic loading simulation for reinforced blocks of rock
9:00 AM	1004 (13)	Zarina Mukhamedyarova	Strategy towards accurate location of seismic events sources in mining environments: Effects of voids and backfill
9:15 AM	2065 (615)	Exequiel Marambio	(R) Geotechnical analysis for narrow vein mining using MineRoc® software

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Podium Session	06/27/2022	8:00 AM	Sweeney Room
Session Subject:	**Unconventional geomechanics characterization i**		
Session Chairs:	Nicolas Espinoza	Zhi Ye	
8:00 AM	2307 (147)	Mohamed Lamine Malki	Effect of Mineralogy, Pore Geometry, and Fluid Type on the Elastic Properties of the Bakken Formation
8:15 AM	2132 (807)	Eril S Lanin	Geomechanical analysis of some potential shale reservoir formations in North Sumatra Basin, Indonesia
8:30 AM	2275 (464)	D. Nicolas Espinoza	Poroelastic and Adsorptive Properties of Activated Carbon
8:45 AM	2305 (781)	Abhijit Mitra	Static and Dynamic Mechanical Properties of Rock at Elevated Temperature
9:00 AM	2365 (831)	Ravi Prakash	Computational Modeling of creep behavior in shales induced by fluid-rock interaction.
9:15 AM	2374 (609)	Dee A. Moronkeji	A Review of Tensile Strength Measurement in Rock with Laminations/Bedding and its Implication on Rock Mechanical Properties and Fracture Pressure Gradient Estimation
Podium Session	06/27/2022	8:00 AM	Peralta Room
Session Subject:	**Microscale rock mechanics-numerical modeling and experiments**		
Session Chairs:	Mengsu Hu	Ingrid Tomac	
8:00 AM	910 (65)	CHENG ZHU	Investigating Influence of Freeze-Thaw Cycles on the Degradation of Sandstone through Discrete Method Modeling
8:15 AM	2289 (637)	Laura Pyrak-Nolte	Exploring the Geometry of Fracture Intersections Under Stress
8:30 AM	1018 (621)	Patrick Bianchi	A Study of Progressive Failure in Porous Rocks Using Numerical and Experimental Modeling
8:45 AM	2061 (330)	Lianbo Hu	Modeling of In-situ Indentation Tests in the Framework of Material Point Method
9:00 AM	2231 (170)	Mengsu Hu	Linking Microscale Processes to Macroscale Salt Creep With a New THMC Model
9:15 AM	2177 (557)	Jonny Rutqvist	Micromechanical Modeling of Shale-Indentation Experiments Imaged by Synchrotron X-Ray Micro-tomography
Remote Session	06/27/2022	8:00 AM	Keefe Room
Session Subject:	**Field and numerical experiments in geothermal energy**		
Session Chairs:	George Stutz	Wencheng Jin	
8:00 AM	880 (433)	Jiayan Ji	(R) Numerical investigation on heat extraction performance of the enhanced geothermal system based on the wellbore-reservoir coupling model

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
8:15 AM	2079 (292)	Peter Meier	(R) Results from benchmark testing of zonal isolation borehole completions for multi-stage EGS stimulation in the Bedretto underground rock laboratory in Switzerland
8:30 AM	2205 (483)	Raymi Castilla	(R) Data integration and model updating in a multi-stage stimulation in the Bedretto Lab, Switzerland
8:45 AM	2240 (2202)	Martin Pratt	(R) Flexible and Accessible 4D Subsurface Visualization Using a Web-Based Platform - Paper
9:00 AM	2306 (738)	Hieu Hoang	(R) Effect of cement behaviour on casing integrity in superhot geothermal wells: A numerical study
Podium Session	06/27/2022	11:00 AM	Keefe Room
Session Subject:	**Civil experimental geomechanics and geophysics**		
Session Chairs:	Kamelia Atefi Monfared	Marta Miletic	
11:00 AM	2225 (130)	Evan Lindenbach	(R) A Comparison Between Field-Measured and Empirically Estimated Rock Mass Modulus Values
11:15 AM	2297 (89)	Kam Ng	Mechanical and Fracture Behavior of Sedimentary Rocks under Uniaxial Compression
11:30 AM	2251 (264)	Ishtiaque Anwar	Detecting and characterizing fluid leakage through wellbore flaws using Fiber-Optic Distributed Acoustic Sensing
11:45 AM	2313 (762)	Mary MacLaughlin	Correlation of Near Surface Geotechnical and Geophysical Parameters for Six Bridge Sites in Central Montana
12:00 PM	2330 (815)	Kamelia Atefi-Monfared	Dynamic and static characterization of bio-cemented soils
12:15 PM	2333 (550)	Ghasem Shams	Microscale investigation of strength and failure behavior of rock-concrete interfaces under tensile loading
Podium Session	06/27/2022	11:00 AM	Kearny Room
Session Subject:	**Field and lab experiments**		
Session Chairs:	Bryan Tatone	Bo Kim	
11:00 AM	2303 (334)	Billel Sennaoui	An Experimental Study of CO2 Huff-n-Puff Enhanced Oil Recovery in Three Forks Formation, Williston Basin
11:15 AM	852 (19)	Bo Hyun Kim	Approaches to Determine Fault Shear Strength in Large-scale Direct Shear Test Simulations using Discrete Fracture Networks
11:30 AM	2318 (734)	Gyeonggyu Kim	Laboratory Test on Direct Shear Behavior of Rock Joints Using a Bar Drop Impact System
11:45 AM	898 (234)	Gabriel Walton	Strength of Utah Coal Evaluated Using Laboratory Tests with an Unloading Path
12:00 PM	881 (283)	Chris Thielsen	Application of Machine Learning to the Estimation of Intact Rock Strength from Core Logging Data: A Case Study at the Newcrest Cadia East Mine

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
12:15 PM	2060 (529)	Zulfiqar Ali	(R) Application of the full-field strain measurement to study the Kaiser Effect in granite under indirect tensile loading
Podium Session	06/27/2022	11:00 AM	Sweeney Room
Session Subject:	**Drilling - open hole wellbore mechanics & stability i**		
Session Chairs:	Ronny Hofmann	Kan Wu	
11:00 AM	934 (167)	Salem Abdullah Basfar	(R) Vermiculite as an Anti-Sag Additive for Water-Based Drilling Fluids
11:15 AM	2265 (646)	Chong Zhou	Effects of partially cemented annulus on casing integrity in salt formations
11:30 AM	2210 (425)	Euripides Papamichos	Comparisons of sand onset and sand mass analysis models in a field case
11:45 AM	2304 (774)	Richard A Birchwood	Stochastic Inversion of Wellbore Stability Models Calibrated With Hard and Soft Data
12:00 PM	885 (575)	Cristhian B Morales-Monsalve	Numerical Simulation of Wellbore Closure due to Shale Creep: Potential for Annular Sealing Barrier Formation
12:15 PM	923 (128)	Yuxing Xiao	Quantifying Flux-induced Sanding in Oil and Gas wells
Podium Session	06/27/2022	11:00 AM	Coronado Room
Session Subject:	**Salt systems and storage in salt**		
Session Chairs:	Steve Sobolik	Maria Nikolinakou	
11:00 AM	1013 (426)	Pierre E Berest	(R) Haze, Rain and Temperature Inversion in Gas-Storage Salt Caverns
11:15 AM	904 (547)	Maria Nikolinakou	Sediment stress in an extensional basin with pre-existing fault and salt roller
11:30 AM	2228 (640)	Benjamin Reedlunn	A New Constitutive Model for Rock Salt Viscoplasticity: Formulation, Implementation, and Demonstrations
11:45 AM	2027 (743)	Li Li	Salt Cavern Dissolution Mining: Lessons Learned from Simulations
12:00 PM	907 (95)	Lukas Baumgärtel	Special triaxial experiments on the fracture behavior of hollow rock salt specimens
12:15 PM	1015 (707)	Pierre E Berest	(R) Creep Tests on salt samples performed at very small stresse
Podium Session	06/27/2022	11:00 AM	Peralta Room
Session Subject:	**Egs collab**		
Session Chairs:	Jeff Burghardt	Hiroki Sone	
11:00 AM	1010 (278)	Luke Frash	Enhanced Geothermal System Design using GeoDT and Fracture Caging — EGS Collab Stimulation Prediction Study
11:15 AM	2203 (750)	Tim Johnson	3D Electrical Resistivity Characterization and Monitoring at the EGS-Collab Testbed #1: Results and Lessons Learned Applied to Testbed #2
11:30 AM	2224 (723)	Jeff Burghardt	EGS Stimulation Design with Uncertainty Quantification at the EGS Collab Site
11:45 AM	2261 (448)	Tim Kneafsey	The EGS Collab Project – Stimulations at Two Depths

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
12:00 PM	2266 (341)	Tim Kneafsey	Characterizing rock fractures and physical properties for Experiment 2 of the EGS Collab Project, Sanford Underground Research Facility
12:15 PM	2051 (726)	Eric Robey	Fracture Detection of Lab Scale Energetic Stimulation
Podium Session	06/27/2022	2:30 PM	Keefe Room
Session Subject:	**Fractures, faults, & fragmentation**		
Session Chairs:	Ange-Therese Akono	Debora Marotgi	
2:30 PM	2102 (211)	Omer OA Aydan	(R) Some attempts on Characterization and Evaluation of Properties of Fracture/ Shear Zones
2:45 PM	905 (447)	Ali Fakhimi	Critical crack opening of Charcoal granite
3:00 PM	995 (145)	Kyungsoo Han	Geophysical Response of Saturated Rock Joints during Shear
3:15 PM	2094 (40)	Babak Khadivi	Investigation of the relationship between rock brittleness and brittle fragmentation
3:30 PM	2199 (548)	Sana Zafar	Energy Partitioning during Fracturing in Granite under Stress Relaxation
3:45 PM	1011 (97)	Mikhail B Geilikman	(R) Injection-induced instability of the fault gouge
Podium Session	06/27/2022	2:30 PM	Kearny Room
Session Subject:	**Monitoring and modeling in mining**		
Session Chairs:	Tryana Garza-Cruz	Zoheir Khademian	
2:30 PM	2140 (715)	Paul Clarkson	Verification of a distributed fiber optic sensing slope stability monitoring solution
2:45 PM	2100 (671)	Robin N Thomas	Numerical Study of Three-dimensional Blast-induced Damage Patterns resulting from Simultaneous Borehole Blasting of Hard Rocks
3:00 PM	2221 (133)	Sina Javankhoshdel	Effect of Disturbance Factor Distribution Function on Stability of an Open Pit Mine
3:15 PM	2239 (118)	Akash Chaurasia	Influence of Grain Structure Representation on Bonded Block Models of a High Porosity Rock
3:30 PM	2245 (260)	Isabella West	Evaluating the Influence of Parameter Inputs on Macroscopic Behavior of Bonded Block Models with Inelastic Blocks
3:45 PM	868 (280)	Peter Zhang	Comparison of Measured and Modeled Casing Deformations of a Test Well in a Longwall Abutment Pillar
Podium Session	06/27/2022	2:30 PM	Sweeney Room
Session Subject:	**Hydraulic fracturing - modeling, new techniques and applications**		
Session Chairs:	Egor Dontsov	Kyungwon Chang	
2:30 PM	2157 (263)	Aishwarya Srinivasan	Analysis of strain responses in vertical monitoring wells for Low-Frequency Distributed Acoustic Sensing measurements

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
2:45 PM	889 (67)	Meng Cao	An Efficient Simulator for Microseismic Mapping of Fracture Networks
3:00 PM	2347 (545)	Gang Han	Reducing Breakdown Pressure in Hydraulic Fracturing: A Novel Cyclic Injection Procedure
3:15 PM	2238 (306)	Ahmed Merzoug	Simulation of Proppant Placement Efficiency at the Intersection of Induced and Natural Fractures
3:30 PM	2294 (754)	Xueling Song	Gas Huff-n-Puff with Pressure Containment Strategy Design for the Bakken Wells
3:45 PM	2363 (2359)	Renato Poli	Efficient and accurate thermoporoelastic fracture simulation based on adaptive multimeshing
Podium Session	06/27/2022	2:30 PM	Coronado Room
Session Subject:	**Underground storage i**		
Session Chairs:	Roman Makhnenko	Seunghee Kim	
2:30 PM	863 (28)	Oladoyin Kolawole	Impact of Biogeomechanical Process on CO2 Sequestration in Hydrocarbon-Depleted Carbonate Reservoirs
2:45 PM	2230 (449)	Ishtiaque Anwar	Permeability changes of damaged rock salt adjacent to inclusions of different stiffness
3:00 PM	2029 (501)	D. Nicolas Espinoza	Optimization of CO2 Injector Location and Rate in Compartmentalized Reservoirs
3:15 PM	2241 (614)	James E.J. Burtonshaw	The influence of hydraulic fluid properties on induced seismicity during underground hydrogen storage
3:30 PM	2264 (502)	Pouyan Asem	Measuring the Biot coefficient for a fluid-saturated crystalline rock
3:45 PM	2319 (730)	Sangcheol Yoon	Evolution of bentonite under high temperature heating and hydration: bench-scale laboratory experiments and coupled thermo-hydro-mechanical modeling
Remote Session	06/27/2022	5:00 PM	Sweeney Room
Session Subject:	**Production - injection hazards, faults & fractures stability and reactivation ii**		
Session Chairs:	Ruiting Wu	Yongzan Liu	
5:00 PM	866 (92)	De Liu	(R, potentially no-show) Numerical Analysis of the Effect of Cement Sheath Defects on Casing Damage in Heavy Oil Thermal Recovery Wells
5:15 PM	982 (195)	Xianbo Liu	(R) Numerical simulation of metal jet shape and rock damage law near tunnel under confining pressure
5:30 PM	963 (226)	Xi Xia	(R) Testing and analysis of potential damage factors in carbonate reservoir
5:45 PM	2054 (598)	Zhou Yugang	(R, potentially no-show) Research and application of integrated technology of chemical sand control and stratified water injection in offshore oilfields injection well
6:00 PM	2196 (823)	Kongyang Wang	(R) Study on relative slip of fault caused by multistage fracturing operation based on finite element simulation

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
6:15 PM	921 (248)	Chee P Tan	(R) Hydraulic 'Fracturing' Mechanisms of Unconsolidated Sands from Novel Laboratory Experiments and Modelling
Remote Session	06/27/2022	5:00 PM	Kearny Room
Session Subject:	**Mining geomechanics**		
Session Chairs:	Jeff Oke		
5:00 PM	2368 (68)	JU YINGTONG	(R) Experimental investigations of composite halite core with a hard rock creep behavior
5:15 PM	860 (600)	Di Wu	(R) Implementation of the Jones-Wilkins-Lee equation of state with solid high explosives element into the FDEM code, Y-Blast 2D
5:30 PM	2320 (8)	HAITAO LI	(R) Feasibility Study of Small-Spacing Twin Well Salt Cavern gas storage in Ultra Deep Formation
5:45 PM	2350 (827)	Amoussou Adoko	(R) Revisiting rockburst predictive models for seismically active mines
6:00 PM	2074 (667)	Yue Zhao	(R) Effect of saturation condition on the mechanical performance of mine backfill material
6:15 PM	2088 (670)	Shengyang Feng	(R) A new method for evaluating radionuclide migration in groundwater
Remote Session	06/27/2022	5:00 PM	Coronado Room
Session Subject:	**Near-wellbore physics and mechanics**		
Session Chairs:	Olga Kresse	DK Lee	
5:00 PM	867 (510)	Hui Zhang	(R) A new model for risk assessment of fault slip induced by hydraulic fracturing of shale gas in the Sichuan Basin
5:15 PM	919 (196)	jiang wei Luo	(R) A comprehensive case study on lost circulation of Changqing Mizhi Block in perspective of geomechanics
5:30 PM	920 (190)	Tianshou Ma	(R) Fully coupled thermo-hydro-mechanical model for wellbore stability analysis of a CBM horizontal well
5:45 PM	2050 (531)	Youcef Khetib	(R) Simulation of Drilling Challenges In Pressurized Saltwater Disposal: A Case Study in the Williston Basin
6:00 PM	2274 (470)	Shuqian Li	(R) An Analytical Model for Fracture Pressure of Injection Well in Weakly Consolidated Sandstone Considering Wellbore Plugging and Formation Damage
6:15 PM	2336 (357)	Xinrui Wang	(R) Numerical Simulation of Rock Breaking Mechanism Analysis of Drill Bit with Central Stinger in Axial Percussive Drilling
Remote Session	06/27/2022	5:00 PM	Keefe Room
Session Subject:	**Data analysis and coupled thmc experiments**		
Session Chairs:	Yi Fang	Brandon Schwartz	

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
5:00 PM	2198 (415)	Timur Merembayev	(R) Time-series event prediction for the uranium production wells using machine learning algorithms
5:15 PM	2287 (279)	Habib Ouadi	(R) Comparative Analysis Between Different Artificial Intelligence Based Models Optimized with Genetic Algorithms for the Prediction of Oilfield Cement Compressive Strength
5:30 PM	2295 (408)	Junxiong Yang	(R) Automated extraction of borehole breakout properties from acoustic televiewer (ATV) data
5:45 PM	2028 (277)	Guijie Sang	(R) Microbially Induced Calcite Precipitation for Sealing Anhydrite Fractures with Gouges
6:00 PM	2122 (202)	Li Cui	(R) Friction-Stability-Permeability Relationship of Longmaxi Shale Fractures from the Southern Sichuan Basin, Southwest China
6:15 PM	2185 (360)	Seyedbehzad Hosseinzadehsadati	(R) Application of a coupled thermo-hydro-mechanical-chemical simulation to a North Sea hydrocarbon chalk reservoir
Remote Session	06/27/2022	5:00 PM	Peralta Room
Session Subject:	**Hydraulic fracture modeling - experimental i**		
Session Chairs:	Shahrzad Roshankhah	Jiehao Wang Charalampos	
5:00 PM	984 (632)	Konstantinou	(R) Interpretation of fluid injection experiments in poorly consolidated sands
5:15 PM	2070 (687)	Rongchang Zhang	(R) Experimental study on fracturing and proppant setting in unconsolidated sand formation
5:30 PM	2078 (182)	Richao Cong	(R) Supercritical CO2 Shock Fracturing on Coal: Experimental Investigation on Fracture Morphology and Pressure Characteristics
5:45 PM	2153 (218)	Zhikun Pan	(R) Experimental study and analysis of proppant conductivity under gas-liquid alternation
6:00 PM	2286 (747)	Qingwen Shi	(R) Experimental Investigation to Fabricate Synthetic Laminated Rock with Different Bedding Plane Cohesive Strengths
6:15 PM	2096 (78)	He Qinyi	(R) Open Hole Extended Limit Model and Drillstring Rotation Speed Optimization in Horizontal Section of Slim-hole Horizontal Well
Remote Session	06/28/2022	8:00 AM	Sweeney Room
Session Subject:	**Reservoir - complex settings: structural, heterogeneous, deepwater, and salt systems**		
Session Chairs:	Alvin Chan	Ivan Gil	
8:00 AM	1000 (56)	Penglin Liu	(R) Study on cement sheath integrity of shale oil horizontal wells in northeast China
8:15 AM	933 (205)	Danni Gong	(R) Analysis of Low-Pressure Operation Stability of Underground Hydrogen Storage Salt Cavern

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
8:30 AM	970 (69)	Zhou Bao	(R) Analysis of Sticking and the Releasing Technology of the Composite Gypsum-Salt Rock in the Tarim Basin
8:45 AM	971 (158)	Zhou Bao	(R) Design and field application of large-size PDC bit in gravel layer in Tarim Basin
9:00 AM	2048 (553)	Ahmadreza Younessi	(R) Comprehensive Stress Modeling approach for High Topography-Complex Geological Structure of XGS Field
9:15 AM	2158 (509)	Zheng Fang	(R) Experimental study on water absorption characteristics of interbedded lithology in low permeability reservoir
Remote Session	06/28/2022	8:00 AM	Coronado Room
Session Subject:	**Drilling - cased hole wellbore integrity ii**		
Session Chairs:	Deepak Datye	MengMeng	
8:00 AM	1012 (117)	Danzhu Zheng	(R) The Influence of Elliptical-geometry Wellbore on Zonal Isolation
8:15 AM	2041 (603)	Yuting Zhou	(R) A prediction model of casing exterior wear during casing running
8:30 AM	2056 (388)	Jinlu Liu	(R) Research of Casing Deformation Problem Based on U-tube Effect during Cementing Injection Stage
8:45 AM	2113 (412)	Xueyu Pang	(R) Physical and mechanical performance of oil well cement systems under simulated shale oil in-situ conversion condition
9:00 AM	974 (160)	Liu Zhongfei	(R) Cementing Technology with Narrow Safety Density Window Based on Wall Shear Stress Theory
9:15 AM	2372 (252)	Yangang Wang	(R) Integrated Experimental and Numerical Study on Debonding of Cement-Casing Interface
Remote Session	06/28/2022	8:00 AM	Peralta Room
Session Subject:	**Hydraulic fracture modeling- experimental ii**		
Session Chairs:	Shahrzad Roshankhah	Jiehao Wang	
8:00 AM	869 (105)	Zhuang Cui	(R) Experimental study on fracture propagation morphology of deviated well in tight reservoir
8:15 AM	888 (123)	Yisu Zhou	(R) Experimental study and CFD modeling of flow characteristics in an annulus with a tubing collar
8:30 AM	957 (597)	Guifu Duan	(R) Investigation of multi-cluster fracture propagation and induced stress interference in horizontal wells
8:45 AM	969 (193)	Xiaohuan Zhang	(R) Effect of interlaminar difference on Height propagation behavior of hydraulic fracture in Lucaogou Shale
9:00 AM	990 (186)	Yuxi Zang	(R) A Visualization Study of Fracture Propagation in Tight Sandstone under Triaxial Loading
9:15 AM	2159 (220)	longqiao Hu	(R) Experimental Investigation on the conductivity of micro-fractures via dynamic proppant transport process

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Remote Session	06/28/2022	8:00 AM	Keefe Room
Session Subject:	**Underground storage ii**		
Session Chairs:	Roman Makhnenko	Seunghee Kim	
8:00 AM	2166 (617)	Guangyao Leng	(R) Experimental Study on High-Strength Resin Wellbore Annulus Plugging Technology of Underground Gas Storage Facilities
8:15 AM	2170 (212)	Yin Fuguo	(R) Evaluation of the timing of different stages of collaborative construction of underground gas storage and natural gas flooding
8:30 AM	2270 (435)	Robert Czarnota	(R) Acoustic response during brine-CO2 relative permeability testing of Bluff and Entrada sandstones
8:45 AM	2315 (804)	SITI SYAREENA M ALI	(R) Leveraging 2-Way Fully Coupled Geomechanics-Dynamic Modelling Workflow in Evaluating Highly Porous and Depleted Carbonate Field for CO2 Injection Site
9:00 AM	968 (137)	Yueyang Guan	(R) Analysis of concentration field in Underground-Storage salt cavern using Two-Well-Vertical Solution Mining
9:15 AM	2236 (524)	Amin Amirlatifi	(R) Estimation of Fluid Flow Boundary Conditions: The role of Pressure Transient Analysis in Safe CO2 Sequestration and Underground Storage
Remote Session	06/28/2022	8:00 AM	Kearny Room
Session Subject:	**Egs numerical simulations**		
Session Chairs:	Mark McClure	Branko Damjanac	
8:00 AM	877 (504)	Fuqiang XU	(R) Heat extraction and interlayer interference in heterogeneous multi-layer commingled production oil reservoir
8:15 AM	951 (107)	Zhanqing Qu	(R) Numerical simulation of hydraulic fracturing damage evolution in geothermal reservoirs with natural fractures based on THMD coupling model
8:30 AM	2043 (644)	Yijia Tang	(R) Study on Heat Extraction Performance of 3D Enhanced Geothermal System with Faults Connected
8:45 AM	2188 (298)	Dejian Zhou	(R) Optimization of Well Layouts for EGS Performance with Multi-Dimensional Two-Phase Flow Modelling and Comprehensive Evaluation Method
9:00 AM	2296 (588)	Emad Norouzi	(R) Numerical modeling of thermo-hydro-mechanical processes related to geothermal heat pump operations in a subarctic climate
9:15 AM	2343 (376)	Mu Du	(R) Numerical study on the effect of localized fluid pressurization on shear and hydraulic behavior of a single fracture in granite
Podium Session	06/28/2022	11:00 AM	Keefe Room
Session Subject:	**Civil tunneling**		
Session Chairs:	Reza Hedayat	Rita Sousa	

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
11:00 AM	949 (344)	Karnallisa D Halim	(R) Evaluation of natm tunnel cutting face in japan using machine learning
11:15 AM	851 (59)	Anuradha Khetwal	Assessing the effect of in-situ stress conditions in back-analysis of rock mass parameters of tunnels using machine learning techniques
11:30 AM	2216 (432)	Chenxi Zhao	Groundwater drainage-induced rock mass deformation during the Gotthard Base Tunnel excavation in the Swiss Alps: 3D modelling and comparison to field measurements
11:45 AM	2032 (60)	Doandy Yonathan Wibisono	Laboratory Characterization of a Synthetic Sandstone for Tunnel Rockburst Study
12:00 PM	2069 (662)	Seungwon Lee	Estimating Rock Mass Joint Roughness Using Terrestrial Laser Scanner and Artificial Neural Network
12:15 PM	945 (516)	Peitao Li	(R) A new analysis method for the influencing factors of surrounding rock stability and its application

Podium Session	06/28/2022	11:00 AM	Kearny Room
Session Subject:	**Ground control in mining**		
Session Chairs:	Navid Bahrani	Mark Board	
11:00 AM	873 (274)	Aydin Shaterpour Mamaghani	(R) Prediction of Reaming Performance of Vertical Raises Using Rock Properties and Operational Parameters
11:15 AM	2025 (42)	Navid Bahrani	Stability Analysis of Shotcrete Lining for a Mine Shaft Using the Finite-Discrete Element Method
11:30 AM	2038 (299)	Alan G Thompson	Development, creation and application of a reinforcement systems database
11:45 AM	2150 (88)	Gaobo Zhao	A new approach for mitigating subsidence influences on high tower structure induced by longwall mining based on foundation grouting reinforcement mechanism
12:00 PM	2160 (413)	Donovan J Benton	Comparative Analysis of Synthetic and Steel Mesh Performance
12:15 PM	2235 (878)	TIKOU BELEM	A new generalized solution for the required strength of the three types of cemented mine backfill

Podium Session	06/28/2022	11:00 AM	Sweeney Room
Session Subject:	**Characterization - novel techniques: petrophysics, rock physics, geophysics for geomechanics i**		
Session Chairs:	Ravi Prakash	Yanhui Han	
11:00 AM	2242 (628)	Jiayi Yu	(R) Permeability-Friction Relationships for Propped Fractures in Shale
11:15 AM	2143 (683)	Anna M. Stroisz	The hidden value of insufficiently preserved shale material
11:30 AM	2358 (261)	Yian Wong	Generating Synthetic Acoustic Well Logs with Bidirectional Long Short Term Memory Models
11:45 AM	2248 (698)	Jean E. Elkhoury	The First Pressuremeter Testing Campaign on Wireline Formation Testers in Deep Boreholes
12:00 PM	2331 (461)	Sherif Elkholy	Inferring Compressional Wave (P-Wave) Travel Time from Conventional Well Logs using Supervised Machine Learning: Case Studies from Texas Basins

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
12:15 PM	2087 (694)	Rune M Holt	(R, potentially no-show) Effects of anisotropic poroelasticity on stress and pore pressure changes around subsurface reservoirs and storage sites
Podium Session	06/28/2022	11:00 AM	Coronado Room
Session Subject:	**Constitutive behavior in geomechanics i**		
Session Chairs:	Brandon Schwartz	(Open)	
11:00 AM	2237 (714)	Serhii Lozovyi	How static stiffness is affected by non-elastic deformations in different lithologies
11:15 AM	2183 (686)	Kim S Mews	The impact of strain amplitude on Young's modulus in water saturated sandstone
11:30 AM	2192 (452)	Eric C Bryant	Microphysics-informed tension/compression asymmetry of damage evolution in granular materials
11:45 AM	2290 (736)	Joseph Morris	Modeling Thermomechanical Failure and Entrainment of Structural and Geological Materials into a Nuclear Fireball
12:00 PM	2366 (290)	Pouyan Asem	Remarks on linear and nonlinear failure criteria
12:15 PM	925 (913)	MARC c LOKEN	Methodology for Determination of Anisotropic Elastic Constants and Principal Orthotropic Directions from Laboratory Testing.
Podium Session	06/28/2022	11:00 AM	Peralta Room
Session Subject:	**Advancements in geothermal drilling / forge**		
Session Chairs:	Jiann Su	Kevin Jones	
11:00 AM	2178 (468)	Ajesh S Trivedi	Experimental Study for the Validation of Drilling Optimization Model for Improved Performance in Hard Rock Formations
11:15 AM	2190 (711)	Emilie N Gentry	Dynamic Fracture Network Evolution: Monitoring and Characterizing using a Geomechanically Constrained Time-lapsed Windowed Microseismic Imaging
11:30 AM	2068 (83)	Wencheng Jin	Influence of mechanical deformation and mineral dissolution/precipitation on reservoir thermal energy storage
11:45 AM	2076 (135)	Pengju Xing	Prediction of Formation Properties Based on Drilling Data of Wells at Utah FORGE Site Using Machine Learning
12:00 PM	2351 (272)	Zhi Ye	A Preliminary Wellbore In-situ Stress Model for Utah FORGE
12:15 PM	2354 (582)	JAMES RUTLEDGE	Downhole microseismic monitoring of injection stimulations at the Utah FORGE EGS Site
Podium Session	06/28/2022	3:00 PM	Keefe Room
Session Subject:	**Civil geomateial modeling**		
Session Chairs:	Cheng Zhu	José J. Lizárraga	
3:00 PM	2098 (217)	Omer OA Aydan	(R) Utilization of Impression Creep Tests as Index Testing Technique in Rock Mechanics and Rock Engineering

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
3:15 PM	1014 (422)	Liang Wang	Implementation of a damage mechanics model into the particle finite element method for rock slope failure analysis
3:30 PM	2309 (324)	Haozhou He	Numerical implementation of a cohesive zone element coupled with continuum damage mechanics volume elements
3:45 PM	2316 (469)	Craig D Foster	Meshfree penetration of projectiles into rock
4:00 PM	2329 (830)	Zdenek Bazant	Osmotic Ion Concentration Control of Steady-State Subcritical Fracture Growth in Shale
4:15 PM	960 (198)	TABISH RAHMAN	(R) Determination of Continuous Kinematic Criticality in Structurally Homogeneous Zones – A new Approach
Podium Session	06/28/2022	3:00 PM	Kearny Room
Session Subject:	**Mining case studies**		
Session Chairs:	Eric Poeck	Jeff Oke	
3:00 PM	2364 (534)	Muhammad Waqas	(R, potentially no-show) Design of larger span overhanging cliffs constructed in himalayas
3:15 PM	2212 (387)	Zoheir Khademian	A case study on longwall-induced rockmass permeability under medium cover: Potential gas inflow implications
3:30 PM	2353 (286)	Benoit Valley	Transient inverse analyses of overcoring data for improved stress estimation
3:45 PM	924 (486)	Aman Soni	Analysis of Pillar Strength and Design in a Karst-affected Underground Stone Mine
4:00 PM	2058 (756)	Ruilin Yang	A Case Study on Trim Blast Fragmentation Optimization Using MBF and MSW Models at an Open Pit Mine in Canada
4:15 PM	2187 (430)	Edward C Wellman	Thermal Imaging for Rockfall Detection
Podium Session	06/28/2022	3:00 PM	Sweeney Room
Session Subject:	**near - wellbore physics and fracture diagnostics**		
Session Chairs:	Mahdi Haddad	DK Lee	
3:00 PM	2314 (788)	Andres Chavarria	Multiwell DAS Microseismic and Strain Measurements for Fracture Diagnostics
3:15 PM	871 (188)	Ahmed Merzoug	Parent-Child Well Interaction in Multi-stage Hydraulic Fracturing: A Bakken Case Study
3:30 PM	989 (169)	Yuxing Wu	Numerical Investigation of Geopolymer Displacement in An Enlarged Wellbore: Implications for Wellbore Integrity
3:45 PM	2105 (702)	Erling Fjaer	Stress relaxation tests on an outcrop shale
4:00 PM	2362 (440)	Debora Martogi	Impact of Oil Based Mud on Chemo-Mechanical Properties of Cuttings and its Treatment
4:15 PM	2255 (320)	Nadia Mouedden	A Screening Methodology Using Fuzzy Logic to Improve the Well Stimulation Candidate Selection

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Podium Session	06/28/2022	3:00 PM	Coronado Room
Session Subject:	**Rock mechanics testing**		
Session Chairs:	Qiquan Xiong	TBD	
3:00 PM	2268 (551)	Arash Kamali Asl	Undrained creep response of shale: argon vs. scCO2
3:15 PM	987 (458)	Andrew Bunger	Triaxial Deformation Rate Analysis for Stress Estimation in the Sedimentary and Basement Rocks from the FutureGen Carbon Sequestration Project
3:30 PM	994 (454)	Yao Huang	Size dependence of Rock Fracture Toughness Obtained from Burst Experiments Predicted by Cohesive Zone Finite Element Simulations
3:45 PM	2201 (706)	Antonio F Salazar Vasquez	Insights into triaxial testing using coupled acoustic emission and distributed optical fiber strain measurements
4:00 PM	2250 (570)	Maciej Trzeciak	Cooling-induced acoustic emissions in Westerly granite: implications for in situ stress measurement
4:15 PM	2262 (131)	Nick W Hudyma	Relationship between macroporosity and Young's modulus through UCS tests on rock and analogue models, and numerical modeling – a literature review
Podium Session	06/28/2022	3:00 PM	Peralta Room
Session Subject:	**Simulations and general geothermal**		
Session Chairs:	Mark McClure	Branko Damjanac	
3:00 PM	2026 (282)	Matthew L McLean	Geometrical Controls on Thermal Short-circuiting in Multi-fracture Enhanced Geothermal Systems
3:15 PM	2234 (165)	Wenzhuo Cao	(R) Coupled THM modelling of induced seismicity associated with geothermal fluids re-injection: the role of transient cooling-induced permeability enhancement
3:30 PM	2311 (722)	Jesse Hampton	Measurements of elastic moduli and stress dependence of geothermal rocks
3:45 PM	2321 (789)	Jerjes Porlles Hurtado	Simulation-based economical modeling of hydraulic fracturing for Enhanced Geothermal System
4:00 PM	2326 (785)	Jerjes Porlles Hurtado	Simulation-Based Patterns Optimization of Enhanced Geothermal System
4:15 PM	2340 (99)	guizhong chen	Wellbore Shut-in Temperature Study after Fluid Circulations in a Fit-for-Purpose Research Well in Grimes County, Texas
Remote Session	06/28/2022	5:00 PM	Sweeney Room
Session Subject:	**Reservoir - field scale compaction, subsidence, casing deformation**		
Session Chairs:	Gang Li	(Open)	
5:00 PM	848 (14)	Fernando B Fernandes	(R, potentially no-show) Analytical Model for Mechanical Formation Damage Control in Permeability-Hysteretic Oil Reservoirs
5:15 PM	955 (79)	Sun Mengying	(R) Optimization of Reinjection fluids of Oil-based Drilling Cuttings
5:30 PM	2126 (214)	Mohammad Reza Hajiabadi	(R) Upscaling of mechanical properties in heterogeneous reservoirs for compaction analysis

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
5:45 PM	2220 (379)	Frederic Amour	(R) Contribution of the water weakening effect to plastic strain: Case studies from Danish North Sea chalk fields
6:00 PM	2103 (191)	Alessandra L Mazon	(R, potentially no-show) Simulation of wellbore annular closure in salt formations due to creep: potential for natural sealing barrier
6:15 PM	2325 (810)	HAITAO LI	(R) Feasibility study on transformation of abandoned salt caverns into underground gas storage in China
Remote Session	06/28/2022	5:00 PM	Keefe Room
Session Subject:	**Unconventional hydraulic fracturing: new techniques and applications i**		
Session Chairs:	Mark McClure	Ivan Gill	
5:00 PM	879 (25)	Leilei Jia	(R) Study on correlation between reservoir porosity and emulsified particle size of crude oil
5:15 PM	882 (658)	Tingxue Jiang	(R) The Study & Application of Maximizing Fracture Height Penetration and Complexity through Stratified Lithology in Lacustrine Shale Gas Play in Sichuan Basin, China
5:30 PM	911 (24)	Yong Zheng	(R) An investigation into proppant transport in a tortuous fracture during supercritical CO2 fracturing
5:45 PM	926 (229)	Ganghua Tian	(R) Experiment investigation on the fracture initiation characteristics of shale saturated with CO2 and brine
6:00 PM	928 (75)	Minghe Zhang	(R) Study on load-bearing characteristics of suction bucket foundation in deep-water based on finite element analysis and laboratory experiment
6:15 PM	2252 (817)	Andreas Michael	(R) Analysis of Transparent Gelatin as a Reservoir Analogue for Hydraulic Fracturing Laboratory Experiments
Remote Session	06/28/2022	5:00 PM	Coronado Room
Session Subject:	**Unconventional hydraulic fracturing: new techniques and applications ii**		
Session Chairs:	Ghazal Izadi	Egor Dontsov	
5:00 PM	2044 (112)	lufeng zhang	(R) Investigation on Diversion Acidizing for Fractured Carbonate Reservoir: An Case Study from KOA Oilfield in Kazakhstan
5:15 PM	2045 (178)	Er-dong Yao	(R) Comparative study on enhanced oil recovery effect of amphiphilic nanomaterials - Experiment and mechanism Investigation
5:30 PM	2115 (318)	Er-dong Yao	(R) Study on the Performance of High-temperature Resistant Cross-linked Acid for Acid Fracturing of Tight Carbonate Reservoirs
5:45 PM	2129 (596)	Hongyan Qu	(R) The comprehensive effects of group fracturing and depletion on stress redistribution in low permeable reservoirs
6:00 PM	2180 (369)	Ping Xie	(R) Micro model establishment and numerical simulation of supercritical CO2 filtration in porous media of shale oil reservoir
6:15 PM	2285 (256)	Fei Wang	(R) Numerical Simulation of Limited-Entry Fracturing in Multi-layer Heterogeneous Reservoir

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Remote Session	06/28/2022	5:00 PM	Kearny Room
Session Subject:	**Constitutive behavior in geomechanics ii**		
Session Chairs:	Qiquan Xiong	Jesse Hampton	
5:00 PM	965 (192)	Xu Li	(R) Modelling failure propagation using the phase-field method with the assistance of ultrasonic wave velocity measurement
5:15 PM	2080 (692)	Tobias M Mueller	(R) Pore boundary deformation and the Biot coefficient: a micromechanical analysis
5:30 PM	2127 (305)	Manman Hu	(R) A thermodynamics-based constitutive formulation for localised compaction bands
5:45 PM	2184 (383)	Nikolaos Reppas	(R) Numerical simulation of triaxial experimental results on Sandstone using critical state mechanics
6:00 PM	2089 (122)	Qi He	(R) Experimental Study on the Causes and Protective Measures of Hydrogen Sulfide in Formation and Wellbore
6:15 PM	865 (38)	Jack D Chieslar	(R) A Comprehensive Constitutive Model Solver
Remote Session	06/28/2022	5:00 PM	Peralta Room
Session Subject:	**Unconventional hydraulic fracturing - combined session i**		
Session Chairs:	Zhi Ye	Olga Kresse	
5:00 PM	2151 (599)	Yu Qinxin	(R) Identification of the location of the leakage layer under the condition of coexistence of circulation leakage and blowout: A case study of a block in the Bohai Sea
5:15 PM	875 (80)	Minghe Zhang	(R) Mechanism study of a novel expandable deep-water drilling conductor on improving the bearing capacity of subsea wellhead
5:30 PM	2055 (389)	Shuai Yuan	(R) Laboratory evaluation of micro-proppants on enhancement of microfracture conductivity in unconventional reservoirs
5:45 PM	2128 (361)	Manman Hu	(R) A coupled reactive-chemo-mechanical model for acidizing assisted hydraulic fracturing in carbonates
6:00 PM	976 (562)	Xiaodong Hu	(R) Effect of the Spatial Distribution of Gravels on the Mechanical properties of Conglomerates
6:15 PM	2107 (315)	Qiqi Wang	(R) Dynamic Fracture Conductivity Considering Stress-deformation Behavior of Proppants in Shale Formation
Remote Session	06/29/2022	8:00 AM	Sweeney Room
Session Subject:	**Drilling - open hole wellbore mechanics & stability ii**		
Session Chairs:	Kan Wu	Ivan Gil	
8:00 AM	861 (46)	Wenjun Cai	(R) Application of Geomechanical Modeling in the Study of Loss Mechanism of Fractured Formation—A Case Study from Bohai Bay, China

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
8:15 AM	927 (399)	Tianshou Ma	(R) Improvement of lost circulation control while drilling by using managed pressure drilling system
8:30 AM	975 (151)	Jiang Kaining	(R) Experimental study on true triaxial pressure-bearing plugging in micro-fractured formation
8:45 AM	1022 (12)	RAJEEV RANJAN KUMAR	(R) Mapping Overpressure Regime And Onset Of Plane Of Weakness Failure Across Dipping Structure In The Complex Geological Setting
9:00 AM	2095 (77)	He Qinyi	(R) A Double-parameter Optimization Method Based on the Open-hole Extension Capability of Extended Reach Horizontal Well
9:15 AM	2114 (623)	Abdulmalek Ahmed	(R) Influence of Curing Time on Oil Well Cement Properties Using Nanoclay
Remote Session	06/29/2022	8:00 AM	Keefe Room
Session Subject:	**Unconventional hydraulic fracturing: new techniques and applications iii**		
Session Chairs:	Mark McClure	Ghazal Izadi	
8:00 AM	931 (607)	Haiyan Zhu	(R) Combined network fracturing technology with variable viscosity injection procedure: simulation and field application in shale oil reservoir, China
8:15 AM	961 (363)	Fengchao Xiao	(R) Perforation location optimization considering microscopic structure for multi-cluster fracturing technology
8:30 AM	983 (85)	Hang Xu	(R) Development and Evaluation a Novel Delayed Crosslink, Low Friction, High Density Brine-Based Fracturing Fluid for Ultra-Deep Fracturing Stimulation
8:45 AM	2130 (427)	Runzi Xu	(R) Damage Assessment of Fracturing Fluid in Continental Sedimentary Tight Reservoir Based on NMR Technology
9:00 AM	997 (150)	Mingzhe Gu	(R) Laboratory imaging of 2D hydraulic fracture propagation in laminated shale
9:15 AM	2042 (484)	Er-dong Yao	(R) High-temperature resistant,low-concentration polyacrylamidee gel system
Remote Session	06/29/2022	8:00 AM	Coronado Room
Session Subject:	**Hydraulic fracture modeling - theoretical and numerical i**		
Session Chairs:	Egor Dontsov	Olga Kresse	
8:00 AM	2355 (365)	Jiajia Gao	(R, potentially no-show) A Fully Coupled Porochemoelastic Modeling for Borehole Stability in Chemically Active Porous Media
8:15 AM	890 (230)	Chengyu Hui	(R) A study of natural gas hydrate reservoir stimulation by combining radial well fracturing and depressurization
8:30 AM	918 (416)	Fushen Liu	(R) A numerical comparison of linear elastic and cohesive fracture models for hydraulic fracturing based on assumed enhanced strain (AES) method
8:45 AM	929 (496)	HaiYang Wang	(R) Numerical simulation study of thermoelastic stress field around the wellbore
9:00 AM	958 (108)	Liqiang Zhao	(R) Numerical simulation of multi-fracture non-uniformly propagating in shale oil reservoir using a fully coupled THM-XFEM model

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
9:15 AM	2083 (66)	Songcai Han	(R, potentially no-show) Mesomechanics-based crack evolution modeling in shale reservoirs stimulated by cryogenic liquid nitrogen
Remote Session	06/29/2022	8:00 AM	Kearny Room
Session Subject:	**Nuclear waste disposal**		
Session Chairs:	Juan Soto	Maciej Trzeciak	
8:00 AM	988 (699)	Heidar Gharbieh	(R) Sensitivity analysis of the dry density distribution of a bentonite buffer in a deep geological repository for spent nuclear fuel
8:15 AM	2063 (642)	Sho Ogata	(R) Coupled THMC simulation based on explicit fracture representation using extrinsic cohesive zone model
8:30 AM	2077 (689)	Zixin Zhang	(R) Earthquake-induced Shear Displacements and Transmissivity Changes in 3D Fracture Systems: Implications for Long-term Safety Assessment of Nuclear Waste Repositories
8:45 AM	2247 (792)	Tsubasa Sasaki	(R) Stress evolution of a geological nuclear waste repository in a creep-prone shale formation
9:00 AM	1006 (310)	Seyed Mohammad Hosein Seyed Ghafouri	(R) Numerical Investigation of the Influence of Bedding Plane Thickness and Friction on Cracking Pattern and Mechanical Behavior of Shale under Unconfined Loading Condition Using the Finite-Discrete Element Method (FDEM)
9:15 AM	2073 (152)	Shiyuan Li	(R) Numerical simulation study on creep characteristics and fracture closure of deep shale
Remote Session	06/29/2022	8:00 AM	Peralta Room
Session Subject:	**Unconventional geomechanics characterization ii**		
Session Chairs:	Nicolas Espinoza	Hunjoo Lee	
8:00 AM	2024 (10)	RAJEEV RANJAN KUMAR	(R) Constraining Tectonic Components During a Geomechanics-Aided Successful Hydrofracturing Campaign Targeting Deep Unconventional Reservoir
8:15 AM	2106 (250)	Zhenliang Chen	(R, potentially no-show) Experimental Study of Conglomerate-Breaking Characteristics of Axe-Shaped PDC Cutter
8:30 AM	2123 (172)	Partha Pratim Mandal	(R) Viscoelastic stress relaxation for estimating Shmin magnitude in deep sedimentary formations
8:45 AM	2181( )	Pascal-Alexandre Kane	(R) Novel environmentally friendly nano-additives for drilling fluids
9:00 AM	2271 (543)	Angel J Sanchez Barra	(R) Experimental Facility for Testing Unconventional Reservoirs: Effect of Geomechanics on Multiphase Fluid Flow Properties
9:15 AM	2293 (748)	Biao Li	(R) Geomechanical Dilation Assisted VHSD Process in Altered-Stress Mature Oilsands Reservoir: Geomechanical Studies and Field Experiences

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Podium Session	06/29/2022	11:00 AM	Kearny Room
Session Subject:	**Testing and waste disposal**		
Session Chairs:	Jonny Rutqvist	Hari Viswanathan	
11:00 AM	2066 (751)	Jose Maria Ferdinand V Calaunan	Coupled Effect of Glass Microfiber Reinforcement and Temperature Elevation to the Swelling and Compressibility Characteristics of Bentonite
11:15 AM	2283 (741)	Julia A Grasley	Experimental Investigation of Desiccation Behavior in Inorganic Microfiber-Reinforced Engineered Barrier Materials (IMEBM) for Geological Repository of Nuclear Spent Fuel
11:30 AM	2352 (456)	Nikita Bondarenko	Creep failure of dry and fluid-saturated rock
11:45 AM	2215 (273)	Teresa M Pique	Characterization of mechanical discontinuities using triaxial shear tests under high confining pressure
12:00 PM	2323 (794)	Hafssa Tounsi	Numerical Modeling of Coupled Thermal-Hydro-Mechanical Processes in Salt Formations for Geologic Disposal of Large Nuclear Waste Canisters
12:15 PM	992 (682)	Simon Libby	Selection and calibration of a hydromechanical model for discrete fracture networks
Podium Session	06/29/2022	11:00 AM	Sweeney Room
Session Subject:	**Drilling - cased hole wellbore integrity i**		
Session Chairs:	Deepak Datye	MengMeng	
11:00 AM	966 (96)	Al Moghadam	Modelling stress evolution in cement plugs during hydration
11:15 AM	1001 (233)	Adijat Ogienagbon	Experimental and Numerical Evaluation of the Integrity of Cement and Geopolymer Under Low and Elevated Temperature Well Conditions
11:30 AM	2082 (674)	Nicolaine Agofack	Effect of casing stand-off on cracks creation around the wellbore
11:45 AM	2086 (254)	MENG MENG	Factors Influencing the Initial State of Stress of Cement Annulus
12:00 PM	2179 (2179)	Xiyang Xie	How grooves can improve casing tripping-out from cemented borehole
12:15 PM	2282 (816)	Weicheng Zhang	Wellbore integrity evaluation for CO2 sequestration wells: an integrated experimental, geochemical, and numerical investigation
Podium Session	06/29/2022	11:00 AM	Coronado Room
Session Subject:	**Hydraulic fracture modeling - experimental iii**		
Session Chairs:	Shahrzad Roshankhah	Jiehao Wang	
11:00 AM	2267 (763)	Gabriel A Awejori	Fluid Induced Elemental and Mineralogy Alterations of Caney Shale
11:15 AM	950 (335)	Wenfeng Li	Transparent True-Triaxial Apparatus for Investigation of Hydraulic Fracture Branching
11:30 AM	2200 (2200)	Ghith Biheri	Experimental Study: Determine the Impact of Temperature on Proppant Settling Velocity Utilizing HVFR and Linear Guar

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
11:45 AM	2233 (239)	Guanyi Lu	Experimental investigation of hydraulic fracture growth in an anisotropic rock with pre-existing discontinuities under different propagation regimes
12:00 PM	2288 (2288)	Ghith Biheri	Experimental Study: Investigate the Proppant Settling Velocity in Static Model Using High Viscosity Friction Reducer and Linear Guar
12:15 PM	2302 (314)	Xiaojing Ge	Comparative Study of Anionic and Cationic High Viscosity Friction Reducers in High-TDS Marcellus Shale Formation Water
Podium Session	06/29/2022	11:00 AM	Keefe Room
Session Subject:	**Data analysis and machine learning applications in geomechanics**		
Session Chairs:	Yaakoub Elkhamra	(Open)	
11:00 AM	887 (522)	Ala Eddine Aoun	(R) Machine Learning Based Mechanical Earth Model: A Case Study
11:15 AM	858 (708)	Stanislaw Lasocki	EPOS Thematic Core Service Anthropogenic Hazards – open-access integrated infrastructures for research and innovation in the area of anthropogenic seismicity associated with the exploitation of geo-resources
11:30 AM	941 (713)	Jin Yang	Waveform Similarity of Micro-seismicity at the ToC2ME Hydraulic Fracturing Experiment Site
11:45 AM	2371 (487)	Hongkyu Yoon	Estimation of Mechanical Properties of Mancos Shale using Machine Learning Methods
12:00 PM	2057 (52)	Hamed Soroush	Early Prediction and Prevention of Tip Screen-out using Deep Learning
12:15 PM	978 (166)	Rakhat Meiramov	(R) A Machine Learning-based Microseismic Event Location and Wave Velocity Prediction
Podium Session	06/29/2022	11:00 AM	Peralta Room
Session Subject:	**Induced seismicity**		
Session Chairs:	Jesse Hampton	Yunhui Tan	
11:00 AM	2324 (771)	Majed Almubarak	(R) Experimental Conditions Affecting Fracturing Research
11:15 AM	2023 (285)	Lei Jin	A Numerical Investigation of the 2020 M4.2 Stanton, Texas Seismicity Sequence Using 3D Poroelastic Modeling
11:30 AM	2116 (129)	Shawn Maxwell	Omori Decay of Hydraulic Fracture Induced Seismicity
11:45 AM	2219 (764)	Jesse Hampton	Laboratory inspirational information on the “burst-like” and “swarm-like” energy releases from anthropogenic rock fracture processes
12:00 PM	2258 (549)	Nathan J. Welch	Stratigraphic Analysis of Microseismic Signatures during Hydraulic Stimulation
12:15 PM	2194 (1008)	Yunhui Tan	The impact of in-situ shear stress on microseismic temporal-magnitude patterns (Full Paper)
Podium Session	06/29/2022	2:00 PM	Keefe Room

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Session Subject:	**Interdiciplinary**		
Session Chairs:	Mathew Ingraham	Ki-Bok Min	
2:00 PM	2125 (86)	Xuanyu Zhu	(R) True Triaxial Testing of Anisotropic Solids
2:15 PM	2246 (704)	Dario Sciandra	3D hydro-mechanical modeling of shaly caprock response to CO2 long-term periodic injection experiment (CO2LPIE)
2:30 PM	2349 (2349)	Prasoon Garg	Characterization of fracture process zone associated with Mode II fracture in brittle rocks
2:45 PM	1020 (291)	William Kibikas	Thermal-Hydrological-Mechanical Characterization of the Ghareb Formation at Conditions of High-Level Nuclear Waste Disposal
3:00 PM	2218 (767)	Jesse Hampton	Optimally Extracting the Asymptotic Features of Rock Fracture Process from Mode-I and Mixed-Mode Tests under Three-point Bending
3:15 PM	2167 (821)	Juhyi Yim	(R) Determining elastic constants and indirect tensile strength from a single-orientation core of transversely isotropic rock by the uniaxial compression and Brazilian tests
Podium Session	06/29/2022	2:00 PM	Peralta Room
Session Subject:	**Hydraulic fracture modeling - theoretical and numerical ii**		
Session Chairs:	Egor Dontsov	Olga Kresse	
2:00 PM	2022 (54)	Yanhui Han	Numerical Investigation of Particle Bridging Near Fracture Entrance
2:15 PM	2062 (287)	Shahrzad Roshankhah	Hydraulic Fractures in Reservoirs Bounded by Layers of Other Rocks
2:30 PM	2134 (731)	Rob Gracie	Inertia Dominant and Transient Flow in Fractures - Beyond the Cubic Law
2:45 PM	2136 (740)	Rob Gracie	Non-cubic law fracture flow phenomena
3:00 PM	2284 (114)	Egor Dontsov	A comparison of hydraulic fracture front tracking algorithms
3:15 PM	2247 (792)	Tsubasa Sasaki	(R) Stress evolution of a geological nuclear waste repository in a creep-prone shale formation
Podium Session	06/29/2022	2:00 PM	Sweeney Room
Session Subject:	**Production - injection hazards, faults & fractures stability and reactivation i**		
Session Chairs:	Ruiting Wu	Yongzan Liu	
2:00 PM	2138 (672)	Marcin I Duda	(R) Impact of undrained pore pressure response on expected failure stress in anisotropic shales
2:15 PM	1002 (183)	Zihao Li	Fracture Opening Patterns in Granular Media Subjected to Injection of Non-Newtonian Fluids
2:30 PM	2084 (197)	Alvin W Chan	The Four Pillars for De-risking Fluid Loss Potential Along Fault Zones: A Framework for Well Designs, Drilling and Field Operations
2:45 PM	2033 (580)	Zhuang Sun	An Integrated Geology-to-Geomechanics Workflow to Assess Geomechanical Risk of CO2 Geological Storage

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
3:00 PM	2214 (268)	Lauren Reeher	Field Evidence and Elastic Dislocation Modeling of Stress Field Alteration in the Rock Mass Adjacent to Salt
3:15 PM	891 (246)	Chee P Tan	(R) Geomechanical Risks Mitigation for Safe Long Term CO2 Geological Storage
Podium Session	06/29/2022	2:00 PM	Kearny Room
Session Subject:	**Mechanics and physics of shale**		
Session Chairs:	Juan Soto	MACIEJ TRZECIAK	
2:00 PM	2281 (148)	Mohamed Lamine Malki	Effect of CO2 on Mineralogy, Fluid, and Elastic Properties in Middle Bakken Formation using Rock Physics Modeling
2:15 PM	2206 (50)	Sam Hashemi	Effect of supercritical CO2 on permeability and surface characteristics of fractures in shales
2:30 PM	2217 (814)	Lang Liu	Evolutions of Dynamic Elastic Properties of Opalinus Clay under Varying Stress Paths
2:45 PM	2030 (520)	Anne H Menefee	Coupled geochemical-geomechanical alterations in shale fracture systems
3:00 PM	2075 (353)	Lisa Winhausen	Insights into the anisotropic, hydro-mechanical behavior of Opalinus Clay through experimental and microstructural investigations
3:15 PM	2223 (716)	Bill Carey	An experimental study of fracture-induced chemical reactions
Podium Session	06/29/2022	2:00 PM	Coronado Room
Session Subject:	**Production decline and rock mechanics: mechanisms and mitigation**		
Session Chairs:	Wenfeng Li	Meng Meng	
2:00 PM	967 (601)	Panos Papanastasiou	(R) A Plasticity Mechanism for Hydraulic Fracture Height Containment
2:15 PM	901 (153)	Adnan H Almakrami	A Rock Mechanical Experimental Study on the Effect of Hydrostatic Pressure and Directional Stress on Rock Sample Permeability
2:30 PM	999 (18)	Balnur Mindygaliyeva	Application of Fracture Injection Test, Rate Transient Analysis, and Pearson Correlation in Niobrara and Codell Formations to Evaluate Reservoir Performance in a Northern DJ Basin
2:45 PM	2211 (210)	Daniyar Kazidenov	(R) Coarse-graining methods for modified JKR contact model on triaxial compression test
3:00 PM	2244 (480)	Palash Panja	Geomechanical Controls on Production Performance of Austin Chalk and Eagle Ford Oil Wells in Southern Texas
3:15 PM	917 (103)	Yuda Zhang	(R) Sand Production Prediction of Depleted-reservoir Underground Gas Storage - An experimental study
Remote Session	06/29/2022	4:00 PM	Sweeney Room
Session Subject:	**Characterization - novel techniques: petrophysics, rock physics, geophysics for geomechanics ii**		
Session Chairs:	Ravi Prakash		

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
4:00 PM	946 (174)	Honglin Huang	(R) Research on Formation Pore Pressure Prediction Method Based on Ensemble Methods
4:15 PM	854 (58)	Ernestos Nikolas Sarris	(R, potentially no-show) A Simplified Hydro-Mechanical Model for Sanding from Hollow Cylinder Tests
4:30 PM	909 (559)	Arne M Raaen	(R) The LOP revisited
4:45 PM	956 (266)	Jiahao Zhan	(R) Identification method of carbonate acid erosion fracture propagation morphology based on impulse analysis
5:00 PM	1021 (1021)	Yanling Gao	(R) Capillary imbibition of fracturing fluid in unconventional reservoirs: the impact of velocity-dependent dynamic contact angle
5:15 PM	2117 (697)	Kaikai Jia	(R, potentially no-show) Research on the influence of hydration on the evolution law of shale pore structure
Remote Session	06/29/2022	4:00 PM	Coronado Room
Session Subject:	**Machine learning and artificial intelligence applications for petroleum reservoirs**		
Session Chairs:	Ronny Hofmann	(Open)	
4:00 PM	972 (157)	Ye Sutao	(R) Influence of Trace H2S on CO2 Corrosion of Different Cr-containing Tubing Steels
4:15 PM	897 (375)	Yongdong Fan	(R) Enhanced Rate of Penetration Prediction with Rock Drillability Constraints: A Machine Learning Approach
4:30 PM	959 (358)	Xuechen Li	(R) Intelligence-driven Prediction of Shear Wave Velocity Based on Gated Recurrent Unit Network
4:45 PM	2121 (409)	Honglin Huang	(R) Study on Stick-slip Early Warning Model Based on LSTM
5:00 PM	2342 (485)	Hanqing Wang	(R) Prediction of mud loss type based on seismic data using machine learning
5:15 PM	914 (495)	Kaibin Qiu	(R) Digital Technology Optimize Well Planning for a High Risk Well in Western China
Remote Session	06/29/2022	4:00 PM	Peralta Room
Session Subject:	**Hydraulic fracturing: combined ii**		
Session Chairs:	DK Lee	Mahdi Haddad	
4:00 PM	2189 (761)	Mohamed A Gabry	(R) Integrating Moving Reference Point Analysis Technique with Planar 3D model to understand Fracture propagation
4:15 PM	2301 (777)	hichem aymene chellal	(R) Effect of Rock Elastic Anisotropy on Hydraulic Fracture Containment in The Bakken Formation
4:30 PM	2108 (398)	Wenrui Wang	(R) Stress Interference Between Fractures of Alternating Fracturing of Horizontal Wells
4:45 PM	886 (523)	Ala Eddine Aoun	(R) Technical Assessments of Horizontal Drilling with Multistage Fracturing to Increase Production from Hassi Tarfa Field, Algeria
5:00 PM	2154 (216)	Zhikun Pan	(R) Influence of stress field evolution on refracturing of horizontal wells

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
5:15 PM	2053 (530)	Youcef Khetib	(R) Modelling Slugging Induced Flow Instabilities and Its Effect on Production in Long Horizontal Wells
Remote Session	06/29/2022	4:00 PM	Keefe Room
Session Subject:	**Hydraulic fracturing: combined iii**		
Session Chairs:	Ghazal Izadi	Shahrzad Roshankhah	
4:00 PM	2081 (653)	Abinash Bal	(R) Accessible to total nanopore structure and complexity in Cambay shales, India: An implication on storage and transport of hydrocarbon
4:15 PM	2104 (325)	Tianbo Liang	(R) The Conductivity of Proppant and Impacts of Proppant Flowback on Fracture Conductivity in Different Conditions
4:30 PM	2147 (808)	Guanlin Li	(R) The Effect of Fracture Aperture on Fracturing Fluid Imbibition into Gas-Saturated Rocks
4:45 PM	1007 (155)	Jinyang Xie	(R) Influencing Factors of Acid Etching Fracture Conductivity of Tuff Reservoir in Northeastern Sichuan Block
5:00 PM	2322 (429)	Tianbo Liang	(R) Production enhancement with a new acid in tight sandstone reservoirs: accelerating guar breaking and minimizing formation damage
5:15 PM	2327 (574)	Tianbo Liang	(R) Dynamic characterization of water blockage during water-gas alternated flooding in the underground gas storage
Remote Session	06/29/2022	4:00 PM	Kearny Room
Session Subject:	**Unconventional geomechanics characterization iii**		
Session Chairs:	Nicolas Espinoza	Olga Kresse	
4:00 PM	862 (9)	Jiantong Liu	(R) Study on Fracture Development in Glutenite Reservoir
4:15 PM	916 (140)	Tianshou Ma	(R) Experimental investigation on mechanical characteristics of shale under water-rock interaction
4:30 PM	2034 (295)	Ferid Celen	(R) Characterization of Natural Discontinuities in Tight Sandstone and Gas Shale Unconventional Reservoir Rocks of Thrace Region in Turkey with DFN Method
4:45 PM	2378 (508)	Xuhai Tang	(R) Determining the mechanical property of Martial rocks using accurate grain-based model
5:00 PM	2186 (326)	Ankita Kukshal	(R) Determination of In-situ Stress using Elastic Parameters and Pore Pressure in Unconventional Shale Formations of the Indian Eastern Onshore Basin
5:15 PM	2243 (805)	Allan Katende	(R) Experiments and modeling of proppant embedment and fracture conductivity for the Caney Shale, Oklahoma, USA

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
Posters			
	849 (22)	Q. Gao	Effect of parent well production on wellbore breakout of child well in coalbed methane reservoirs
	892 (179)	Yang Li	Study on the Wellbore Shrinkage during Drilling Operation in Frozen Soil
	906 (465)	Angel M Padilla	Concrete Fracture and Stress Analysis using the Combined Finite-Discrete Element Method in the Brazilian Tension Test
	938 (421)	william roggenthen	Composition and Structure of the EGS Collab Test Bed 1 Based Upon Electrical Resistivity Tomography, Core Compositions, and Wireline Logging
	939 (90)	Oleg Vorobiev	Analysis and Modeling of Explosive Fracturing Process in a Transparent Surrogate of Jointed Rock
	979 (53)	Yanhui Han	Mitigation of Sand Production Risk using Thermally Expandable Polymeric Beads
	980 (225)	Clement Joulin	An Open-access Well Integrity Tool to Study Legacy Wells Re-Purposed for CO2 Injection
	991 (418)	Shinichiro Nakashima	Temporal variation in CT values of pore water in granite fracture subjected to long-term confining pressure and temperature
	2036 (627)	Bradford C Butcher	A case study on terrestrial SfM photogrammetry slope change detection without stable ground control points
	2040 (760)	Franek Hasiuk	Geological and Geomechanical Analyses for Hydrogen Storage in Salt Caverns, Central Kansas
	2071 (132)	Nick W Hudyma	Mapping and Characterization of Rockfall Runout Talus Deposits from Columnar Basalt Cliffs in Boise, ID
	2112 (381)	Quinn Wenning	Heat propagation through fractures during hydraulic stimulation in crystalline rock
	2173 (2173)	Xiyang Xie	Creep indentation test and lab-based simulation on Pierre II shale
	2176 (265)	Alyson M Stahl	Probing the effects of material model and geometry assumptions on ground response in the simulation of underground explosions
	2209 (294)	Tyler L Hagengruber	Strength effects of microfracture on granular microstructures evaluated by FDEM direct numerical simulation
	2232 (712)	Bijay K C	Improved Relationships of Moment Magnitude with Regional and Local Magnitudes for Earthquakes in the United States
	2249 (296)	Robert C Choens	Acoustic Emission Monitoring of Thermal Cycling in Salt at the Waste Isolation Pilot Plant
	2263 (319)	Doina Irofti	Shear waves anisotropy and image logs integration for improved fracture characterization
	2292 (339)	Aimen Laalam	New Insights into the Prediction of Shear Wave Velocity in the Williston Basin Using Big Data Analysis and Robust Machine Learning Algorithms
	2299 (441)	Aimen Laalam	A New Perspective for the Conception of Mechanical Earth Model Using Machine Learning in The Volve Field, Norwegian North Sea

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
	2345 (521)	Kyung Won Chang	Poroelastic stressing and pressure diffusion along faults induced by geological carbon dioxide storage
	2346 (622)	Kyung Won Chang	Reduced-order THMC coupled simulation of nuclear waste disposal in shale
	2377 (104)	Peng Ray	Geomechanics Rock Property Uncertainty Workflow using a Bayesian Machine Learning Framework
	899 (611)	Shay A Gregory	Understanding Salt Mine Ground Behavior through Geotechnical Monitoring and Data Analysis
	2328 (450)	Doina Irofti	A multiscale approach to investigate hydraulic attributes of natural fracture networks into two tight sandstone fields, ahnet, algeria.
Publication-Only			
	855 (35)	Zhenkai Pan	Study on the slope stability of the waste dump with adjacently to the tailings pond: a case study
	856 (23)	Liangliang Ye	Study on strength of rock salt with mudstone based on the Hoek-Brown criterion
	859 (301)	Saeed Salimzadeh	Early Detection of Fault Activation Using Surface Tilt Monitoring During A CO2 Injection Project
	864 (82)	Chioma Onwumelu	Integrated Assessment of Interaction Between Supercritical CO2 and Shale during Thermal Maturation
	870 (595)	Yiyi Chen	Surrounding Rock Mass Failure Mechanism and Microseismicity of Deep Tunnel Adjacent to Faults: Implications from Numerical Investigation and In-situ Monitoring
	872 (238)	Qisheng Wang	Mechanical properties of shales mapped at the nanometer scale
	874 (346)	Zhaosheng Ji	Numerical analyses of the granite fragmentation in rotary-percussive drilling with the consideration of pre-existing cracks
	883 (659)	Tingxue Jiang	Case study: Dual Temporary Plugging & High Proppant Intensity Fracturing Stimulation Technique in Deep Shale Gas Play in Sichuan Basin, China
	896 (519)	Wenjun Huang	Prediction Model of Horizontal Drilling limits and Its Applications in Optimal Drilling Design
	900 (98)	chinemerem obi	Using 3D Printing to Improve Fracture conductivity Experiments
	902 (554)	Jiawei Kao	Numerical Analysis of Interaction between Hydraulic Fracture and a 3D Spherical Cave
	908 (784)	Jinwang ZHANG	Influence of microscopic parameters of particle flow code on uniaxial compressive simulation of rock/coal material
	930 (213)	Dian Wang	Analysis of cement plug bonding surface integrity in CO2 geological storage
	932 (558)	Bo Liu	Permeability of water-rich sandstone experienced one freeze-thaw process under different confining pressures
	936 (567)	Wenbao Zhai	Quantitative Evaluation Method and Application of Fault/Fracture Slip Risk Based on Geomechanics

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
	940 (453)	Mina S Khalaf	Thermo-Poroelastic Analysis of Cold Fluid Injection in Geothermal Reservoirs for Heat Extraction Sustainability
	943 (641)	Dragan GRGIC	Impact of swelling on the permeability and mechanical properties of the Callovo-Oxfordian claystone
	952 (26)	Si He	Application of decline analysis in shale oil productivity evaluation and prediction: a case study of Jimsar shale oil
	953 (695)	宇江	The inversion of mechanical parameters of weak surrounding rock in high-stress tunnel after casting anchor
	977 (439)	Zhaopeng Zhu	Prediction Method of Cutting Settling Velocity in Gas-liquid Two-phase Flow Based on Multi-gene Genetic Programming
	986 (351)	DongHan Yang	PDC bit wear detection based on YOLO v5 and OpenCV
	1003 (538)	Xiaolei Shi	Optimization design method of excitation parameters and installation parameters of downhole vibration drag-reduction tools
	1005 (539)	Jiusen Wei	Effect of chamfer geometry of PDC cutters on the impact resistance, wear resistance and rock cutting efficiency
	1009 (517)	Xiaolei Shi	Prediction and Optimization Method of Drilling Trajectory for Push-the-bit Rotary Steering Tools
	1016 (515)	Xiaolei Shi	Optimal design method of oscillator installation position in sliding drilling
	1017 (541)	Xiaolei Shi	Prediction method on fatigue life of drill string with initial defects in extended-reach drilling
	1019 (164)	Gang Chen	Damage character and fracture propagation study of Longmaxi shale in southern Sichuan Basin during hydraulic fracturing
	2031 (61)	Xiongyu Hu	Closed Form Solution of Deep Tunnel Supported with Tangentially Yielding Liner in the Viscoelastic Burger Rock
	2037 (63)	Li Zhuang	Microscale observations of hydraulic fractures in Gonghe granite subjected to low- and high-cycle fatigue experiments
	2039 (616)	yu rui feng	Interference Analysis of Shale Gas Horizontal Wells Considering Magnetic Azimuth Correction
	2047 (308)	sofiane djezzar	Structural analysis and fractures kinematics using seismic 2d and geological maps
	2049 (311)	sofiane djezzar	Fractal analysis applied on naturally fractured reservoirs analog
	2052 (312)	sofiane djezzar	Application of Seismic Attributes on Digital Elevation Model: Fractures Detection and Reservoir Implication
	2059 (664)	Xiaoqiong Wang	The mechanical properties of three types of shale oil reservoirs and its influence on hydraulic fracturing
	2072 (660)	Shan Wu	Fracture propagation characteristics of shale oil reservoir in multi-cluster fracturing experiments based on acoustic emission monitoring
	2090 (30)	Wei Zhang	Study on Scale Effect of Soil-Rock Mixture based on Model Test and PFC
	2119 (655)	Chao Fang	Shale Wellbore Stability and Well Trajectory Optimization: A case study from Changning, Sichuan, China

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
	2124 (560)	Yansen Bi	Experimental study on coal damage near wellbore under cyclic alternating load
	2135 (262)	Martin Dutko	On averaging of toughness heterogeneity when modelling hydraulic fracture evolution
	2137 (526)	Xuejun Zhou	Experimental Determination of Poroelastic Properties of Utah FORGE Rocks
	2144 (336)	Abdelmalek Bellal	Molecular Simulation of Adsorption and Diffusion Behavior of CO2 in Bakken Nano-Porous Media for Enhanced Oil Recovery Assessment
	2148 (402)	Victor Nachev	Impact of the Back-Stress Effect on Horizontal Stress Values Calculation in Hydraulic Fracturing Experiments
	2149 (367)	yarlong Y Wang	Sand production in gas storage and prediction in Gas Hydrate Bearing Sediments
	2156 (709)	Xiaobing Bian	Fracture Conductivity of Shale Considering Sample Soaked in Slick Water
	2162 (414)	Yanjun Lyu	Laboratory investigation Fracture Penetration in Multi-interlayers with the Cyclic Hydraulic Fracturing
	2163 (142)	Gang Chen	A New Rate of Penetration Prediction Model based on the XGBoost and Explanation Method
	2165 (343)	Jianqiang Deng	Study on external water pressure and decompression measures of tunnel concrete lining
	2168 (156)	Gang Chen	Studies on Lost Circulation Risk of Deep Shale Formation Based on Fracture Prediction and Rock Mechanical Properties
	2174 (222)	Yan Peng	Numerical simulation on characteristics of hydraulic fracture initiation induced by circle pumping method
	2182 (219)	Yan Peng	Impact of stress concentration of pores on shale gas production
	2213 (451)	Mina S Khalaf	Numerical Investigation of Shock Wave Stimulation and Comparison to Experimental Work
	2226 (528)	Manoj Khandelwal	Effect of multiple loading rates on uniaxial compressive strength of rock
	2227 (527)	Manoj Khandelwal	Feasibility Study and Design of an Underground Entry/Access Structure at an Underground Gold Mine
	2253 (679)	ivan P. Damians	Numerical mesh sensitivity works performed to analyze advective gas flow in a compact clay
	2269 (393)	RUI CAI	Stability analysis of pillars between bedded salt cavern gas storage groups under triangular well layout
	2272 (288)	chinemerem obi	Investigation of Proppant shear behavior along Fracture/Fault lines; a gouge Analogy for Fracture Stability and Earthquake Potential
	2277 (556)	amin hekmatnejad	Rock-Discontinuity-Fragmentation (R-Dis-Frag) computer package code for characterization of large-scale fractured rock masses at real time
	2278 (681)	QIan Wang	Horizontal well orientation optimization based on the integration of draulic fracturing network simulation and productivity prediction
	2280 (684)	QIan Wang	Three-dimensional Geomechanical Modeling and Well Spacing Optimization Application in Sichuan Shale Gas Block

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
	2291 (757)	Gabriel Gallardo Giozza	Modeling the effects of hydraulic fracturing on borehole acoustic measurements
	2310 (332)	Xuezhe Yao	A Novel Method for Real-time Identification of Lithology Based on Machine Learning
	2312 (407)	Jianfeng Zhang	Influence of plastic dissipation on the behviour of hydraulic fracturing in a saturated porous elasto-plastic media based on the assumed enhanced strain (AES) method
	2335 (782)	Arjun Kohli	Impacts of variations of the minimum horizontal stress on hydraulic fracture growth and microseismicity
	2338 (368)	yarlong Y Wang	Fully Coupled THM Formulations with two-phase fluid flow in naturally fractured media
	2369 (775)	Sajjad Esmaeilpour	S-Wave Velocity Prediction based on Probabilistic Neural Network (PNN) and Deep Feed-forward Neural Networks (DFNN)
	2370 (776)	Sajjad Esmaeilpour	Permeability and Water Saturation Characterization and Prediction in Wellington Oil Field Using Core Analysis and Seismic Inversion
	948 (45)	Li Ma	Conductivity evaluation of cross propped fractures in shale reservoirs
	847 (15)	Fernando B Fernandes	Wellbore Solution for Mechanical Formation Damage Control During Oil Flow through Infinite Permeability Pressure-Sensitive Reservoirs
	857 (181)	Zhiqiang Tang	The influence of failure criterion on the estimation of in-situ stress using the wellbore breakout of inclined well
	894 (563)	Wenjun Huang	Mechanism analysis of the regular pipe sticking in extended-reach drilling in the eastern South China Sea
	2064 (663)	Xiaoqiong Wang	Analysis of elastic properties of organic rich shale based on petrophysical model
	2085 (31)	Abdelmalek Bellal	Prediction of discrete and continuous wellbore logs values using artificial neural network, decision trees and support vectors machine algorithms
	2093 (154)	Huayang Li	Prediction of Safe Drilling Fluid Density Window in X Oilfield Through an Integrated Geomechanics Approach: A Case Study of Well A
	2097 (493)	Lijun Liu	A coupled hydro-mechanical model for simulation of two-phase flow and geomechanical deformation in naturally fractured porous media
	2145 (668)	yarlong Y Wang	Wellbore integrity during drilling and production in gas hydrate-bearing sediments
	2191 (227)	Shan Yonglin	Cement Sheath Integrity Evaluation for Separated Layer Water Injection Well
	2204 (688)	Anup Kumar Shahi	Improved Upscaling Methods for Carbonate Rock Image Data
	2207 (822)	Ahmed Abdelaal	Real-time Rheological Properties Prediction of Flat Rheology Drilling Fluids
	2208 (824)	Ahmed Abdelaal	Formation Pressure Abnormality Identification Using Artificial Neural Networks: A Classification Model
	2332 (143)	Gang Chen	A Conventional Neural Network Lithology Classification Method Based on Vibration Data

Time	Paper ID (Abstract ID)	Corresponding Author	Paper Title
	2334 (569)	Wenbao Zhai	Quantitative Evaluation Method and Application of Wellbore Stability Based on Geomechanics
	2337 (473)	Ji Li	Deformation and Failure Characteristics and Borehole Instability Simulation of Ultra-Deep and High-Stress Dolomite
	2339 (373)	yarlong Y Wang	Temperature perturbation and Induced pressure changes during scCO2 Injection for Gas Storage Design
	2348 (836)	Xu Han	Study on Rock Breaking Mechanism and Optimization of PDC Cutter for Deep Water HTHP Plastic Mudstone
	2360 (386)	Wenke Cao	Experiment study of stress and pore pressure in setting cement paste
	2367 (16)	Fernando B Fernandes	Analytical Model to Effective Permeability Loss Monitoring and Boundary Effects Identification in Oil Wells with Finite Hydraulic Fractures
	996 (364)	Yang Luo	Optimization Method of Hydraulic Fracturing Design for Horizontal Shale Gas Well Based on Artificial Neural Network and Genetic Algorithm
	2356 (72)	Simon H Prassetyo	Assessing the performance of various initial support systems for tunneling in swelling clay - A case study from Manikin diversion tunnel in Indonesia
	2175 (224)	xianglong meng	(R) 3D geomechanical modeling for accurate in-situ stress characterization of a reservoir in Mahu oilfield, China