

PODIUM PRESENTATIONS

Monday (June 24) Session #1 8:30 am - 10:00 am	Civil Track (Hill Hall 202)	Mining Track (Green Ctr - Metals Hall)	Petroleum Unconventional Track (Green Ctr - Bunker Aud.)	Petroleum Conventional Track (Green Ctr - Petro. Hall)	Geothermal Track (CTLM 102)
	Numerical Modelling in Geomechanics: Civil Engineering Applications	Experimental Mining Rock Mechanics	Hydraulic Fracturing I - Theoretical And Numerical Modeling	Drilling & Completion: Openhole	Geothermal Reservoir Design and Testing
8:30 am - 8:45 am	<p>620 - Enhancement of an FDEM-based geomechanical simulation software with hybrid FEM-FDEM and elasto-plastic modeling capabilities: Application to slope stability analysis</p> <p>Lisjak, Andrea*; He, LiQiang; Ha, Johnson; Tatone, Bryan; Mahabadi, Omid</p>	<p>1046 - Crack Initiation (CI) Thresholds from Acoustic Emission and Stress-Strain Data: A Comparison of Values Measured for Rocks from Montana and Idaho</p> <p>Humphreys, Mary*; Link, Curtis; Berry, Steve; MacLaughlin, Mary M</p>	<p>256 - Analysis of Shear Slip Ahead of Hydraulic Fracture along A Frictional Interface not aligned with Principal Stresses and Conditions for Secondary Branching</p> <p>Weng, Xiaowei*</p>	<p>426 - Transient Effects of Time-Dependent Drilling Fluids on Wellbore Stability</p> <p>Ma, Yue; Dokhani, Vahid*; Miao, Hailong; Geng, Tie; Shi, Zhaorui</p>	<p>123 - Simulating coupled THM problem and wellbore integrity analyses with two-phase fluid flow in naturally fractured reservoirs</p> <p>Wang, Yarloung Y*</p>
8:45 am - 9:00 am	<p>585 - Investigation of a collapsed deep-seated gravitational slope deformation in Western Carpathian Mts., Slovakia</p> <p>Tolocka, Andrius; Mortazavi, Ali*; Kapustova, Veronika</p>	<p>617 - Characterization and monitoring of damage evolution in brittle rock during primary, secondary, and tertiary creep phases</p> <p>Imani Tilenoei, Mehrdad*; Hedayat, Reza; Walton, Gabriel</p>	<p>1112 - Modeling Near-Wellbore Hydraulic Fracture Behaviors Under Combined Impacts of Wellbore Perforation and Natural Fractures</p> <p>Fu, Wei*; Damjanac, Branko; Radakovic-Guzina, Zorica; Finnila, Aleta; Podgorney, Rob; McLennan, John</p>	<p>283 - Assessment of thermal effects on the formation breakdown gradient in APB mitigation scenarios</p> <p>Souza, Bruno*; Souza, Charlton; Fontoura, Sergio</p>	<p>235 - An Assessment of Geomechanical Considerations in Thermal Energy Storage Systems Using 3D Coupled Thermo-Hydro-Mechanical Models</p> <p>Mutlu, Uno U*; Ghassemi, Ahmad; Boitnott, Greg</p>

<p>9:00 am - 9:15 am</p>	<p>399 - Numerical Simulation of Elastic Wavefield Evolution in heterogeneous Fractured Media based on a Combined Discontinuity-Discrete Fracture Network Model</p> <p>Wang, Shuaifeng*; Zhang, Zixin; Huang, Xin; Lei, Qinghua</p>	<p>762 - Mechanical Responses and Dynamic Seepage Evolution Laws of Rock Mass Containing Inclined Rough Fracture Under Three-Dimensional Stress</p> <p>Tang, Jinzhou*; Zhao, Guangming; Chang, JuCai; Yin, Zhiqiang; Duan, Minke; Wang, Tuo</p>	<p>454 - Challenges and Uniqueness of a Dual-Injection Fracture Model</p> <p>Kresse, Olga*; Hobbs, Brandon; Pei, Yanli</p>	<p>658 - Investigation of failure mode and permeability evolution of Inclined heterolithic Strata using coupled Discrete Element Method-Computational Fluid Dynamics model</p> <p>Yin, Xuehan; Zhang, Bo*</p>	<p>31 - Modeling a Deep Coaxial Closed-Loop Vacuum Insulated Tubing (VIT) Completion in a Geothermal Research Test Well Using FEFLOW</p> <p>Chen, Guizhong*; Wright, Charles L; liu , Jintao; Gomez , Chris; Garcia , Alexis</p>
<p>9:15 am - 9:30 am</p>	<p>615 - A unified computational framework for modelling rock failure evolution: From progressive degradation to catastrophic rupture and avalanche</p> <p>Wang, Liang*; Lei, Qinghua</p>	<p>1092 - Post-Peak Multi-Stage Triaxial Testing of Miniature Rock Mass Samples</p> <p>Cylwik, Scott D*; Childs, Daniel; Mahoney, Dan; Plange, Kojo; Grubb, Chris</p>	<p>428 - The Sunset Solution: closure on leaking proppant</p> <p>Peirce, Anthony P*; Abbas, Safdar; Detournay, Emmanuel</p>	<p>724 - Research and Application of ROP Enhancing Technology with Axial-torsional Coupled Percussion in Tight Shale Drilling</p> <p>Sun, Zhaowei; Wu, Xiaoguang*; Wang, Zikang; Huang, Zhongwei; Mu, Zongjie; Wang, Xiangyang; Yury, Popov</p>	<p>979 - Unsupervised Machine Learning for Delineating Stratigraphy in Subsurface Reservoirs for the Utah FORGE Geothermal Project</p> <p>Mustafa, Ayyaz*; Kelley, Mark; Lu, Guanyi; Bunger, Andrew</p>
<p>9:30 am - 9:45 am</p>	<p>846 - Growth parameter conditioning of genetic discrete fracture networks to trace length distribution data</p> <p>Kim, Jineon*; Choi, Jiwon; Leem, Junsu; Song, Jae-Joon</p>	<p>783 - Dynamic stress wave behaviors across single fluid-filled rock fractures</p> <p>Yang, Hui; Duan, Huan-Feng; Zhao, Qi*; Zhu, Jianbo</p>	<p>641 - Poroelastic Effects on the Interpretation of Diagnostic Fracture Injection Tests</p> <p>Du, Jun*; Li, Boshen; Huang, Tianxiang; Xu, Guanshui</p>	<p>799 - A Statistical approach to estimate the drilling mud window based on field data and ten failure criteria in depleted reservoirs - new modified failure criterion</p> <p>Alsubaih, Ahmed A*; Sepehrnoori, Kamy; Lopez, Alberto ; Espinoza, D. Nicolas; Allawi, Raed ; Swadi, Hyfaa</p>	<p>238 - FDEM modeling of PDC cutter – rock interactions for geothermal drilling applications</p> <p>Heilman, Erin K*; Euser, Bryan; Frash, Luke; Meng, Meng; Li, Wenfeng; Lei, Zhou; Rougier, Esteban</p>

<p>9:45 am - 10 am</p>	<p>661 - Investigation on the spatial variation in fracture orientation and its impact on hydraulic behavior of rock mass</p> <p>Choi, Jiwon*; Kim, Jineon; Song, Jae-Joon</p>	<p>621 - 3DEC Modelling Exploration of Residual Stress Mechanisms</p> <p>Trzop, Max*; Corkum, Andrew G</p>	<p>566 - Impact of cold fluid injection on hydraulic fracture propagation</p> <p>Rueda Cordero, Julio Alberto*; Mejia Sanchez, Eleazar Cristian; Roehl, Deane; Rossi, Diogo; Sousa, Emilio; Ferreira, Francisco H; Chaves, Ricardo; Henriques, F</p>	<p>27 - Reservoir Compaction Damage Evaluation in Hydraulically Fractured Oil Wells Incorporating Geomechanics</p> <p>Fernandes, Fernando B*; Braga, Arthur Martins; Duarte, Matheus C; Gildin, Eduardo</p>	<p>561 - Tool Development and Field Test of the Stress Measurement Method with Dual Bit Coring Applicable to Geothermal Fields</p> <p>Ito, Takatoshi*; Kaneko, Kenji; Sasaki, Manabu; Ogawa, Kouji; Yokoyama, Tatsuya; Funato, Akio; Tezuka, Kazuhiko</p>
<p>Monday (June 24) Session #2 11:00 am - 12:30 pm</p>	<p>Civil Track (Hill Hall 202)</p>	<p>Mining Track (Green Ctr - Metals Hall)</p>	<p>Petroleum Unconventional Track (Green Ctr - Bunker Aud.)</p>	<p>Petroleum Conventional Track (Green Ctr - Petro. Hall)</p>	<p>Geothermal Track (CTLM 102)</p>
	<p>Innovative Testing of Rocks and Rock-like Materials</p>	<p>Case Studies in Mining Geomechanics - I</p>	<p>Hydraulic Fracturing II - Experimentation, simulation, and field results</p>	<p>Reservoir Geomechanics I - Analytical and Numerical modeling</p>	<p>Geothermal Reservoir Simulation</p>
<p>11:00 am - 11:15 am</p>	<p>173 - Acoustic Emission Characteristics on the UCS of a Synthetic Rock</p> <p>Gautam, Pradeep Kumar*; Gutierrez, Marte</p>	<p>262 - Lessons learned from Recent Longwall Mine-by Cases with Uncemented Casings</p> <p>Zhang, Peter*; Su, Wen H; Tulu, Ihsan B; Kim, Bo Hyun</p>	<p>128 - Modeling Fracture Mechanics for 3D-Printed Porous Replicas using Phase-field Finite Element</p> <p>Almetwally, Ahmed G.*; Wheeler, Mary</p>	<p>694 - Pressure and stress prediction using seismic velocities, 3D geomechanical models and the full stress tensor: Mad Dog field, deepwater GoM</p> <p>Nikolinakou, Maria*; Flemings, Peter; Heidari, Mahdi; Wang, Xiaonan; Johri, Madhur</p>	<p>532 - A Microscale Analysis of Millimeter-wave Induced Vitrified Basalt for Use in Enhanced Geothermal Energy Systems</p> <p>Meltzer, Eve*; Stefaniuk, Damian; Einstein, Herbert</p>

<p>11:15 am - 11:30 am</p>	<p>115 - Mechanical and Hydraulic Characterization of 3D Printed Rock Analogues of Poorly Cemented Sandstone</p> <p>Cartagena Pérez, Daniel*; Rangriz Shokri, Alireza; Zambrano Narvaez, Gonzalo; Chalaturnyk, Rick</p>	<p>789 - Longwall-induced shale gas well casing deformations and stresses-critical effects of geologic and geometric parameters</p> <p>Su, Wen H*; Zhang, Peter</p>	<p>872 - Effect of shear thickening fluid on the hydraulic fracturing behavior</p> <p>Mukuhira, Yusuke*; Watanabe, Noriaki; Sueyoshi, Kazumasa; Takuma, Kohei; Zhang, Rongchang; Tomai, Takaaki; Arai, Yuko; Uno, Masaoki; Ito, Takatoshi; Goto, Ryota; Tongfei, Tian; Sokolovski, Vladimir; Naoi, Makoto</p>	<p>1144 - Influence of Injection Induced Fractures Along Horizontal Wells with ICDs during Subsurface Cold Fluid Injection</p> <p>Hu, Jinchuan*; Sharma, Mukul</p>	<p>836 - Solving coupled partial differential equations in porous/fractured geomaterials</p> <p>Cui, Xin*</p>
<p>11:30 am - 11:45 am</p>	<p>464 - Experimental Investigation of Damage Induced Creep in Organic Rich Shales: Insights from Beetaloo Shale, Australia</p> <p>Farooq, Umar*; Siddiqui, Mohammed Abdul Qadeer; Roshan, Hamid</p>	<p>20 - Investigating the energy balance of two mining methods set in a deep underground metal mine in the U.S.</p> <p>Kim, Bo Hyun*; Emery, Tyler M; Armatys, Mathieu</p>	<p>1158 - Optimizing Hydraulic Fracturing in the Paradox Formation: A Geomechanical Study of the Cane Creek Play</p> <p>Dvory, Noam*; McLennan, John; Mcperson, Brian J.</p>	<p>272 - Evolution of the Reservoir Stress Path During Depletion and Re-inflation and Its Implications</p> <p>Seth, Puneet*; Mikulencak, Duane; Hofmann, Ronny; Dudley, John W</p>	<p>689 - Thermo-poro-elastic stress alteration around an EGS well due to cold fluid circulation</p> <p>Lu, Guanyi*; Lu, Yunxing; Kelley, Mark; Raziperchikolaee, Samin; Bunger, Andrew</p>
<p>11:45 am - 12:00 pm</p>	<p>571 - Mode I fracture behavior of metakaolin-based geopolymers made of mine tailings</p> <p>Asadzadeh, Mostafa*; Clements, Cara; Hedayat, Reza; Tunstall, Lori; Bolanos Sosa, Héctor Gelber; Tupa, Néstor; Yanqui Morales, Isaac</p>	<p>1011 - Investigation into the rock mass response to pillar extraction in a hard rock tabular mine</p> <p>Moyo, Senzeni; Chikande, Tonderai; Zvarivadza, Tawanda*; Masethe, Richard RT; Adoko, Amoussou; Onifade, Moshood; Firoozi, Ali</p>	<p>1022 - Modelling the hydraulic injection fracture response in layered media for megablock experiments</p> <p>Magsipoc, Earl*; Grasselli, Giovanni</p>	<p>349 - Numerical study on mode I fracture characteristics of rock under confining pressure</p> <p>Luo, Senlin*; Zhang, Guangqing; Sun, Bin; Qiu, Renyi; Ling, Yansen</p>	<p>158 - Coupled thermal-mechanical behavior of slate and its anisotropic failure criterion</p> <p>Weng, Meng-Chia*; Lin, Shih-Shiang; Lee, Chih-Shan; Pham, Minh Triet; Le, Khanh Hoang</p>

<p>12:00 pm - 12:15 pm</p>	<p>437 - Development of a methodology for predicting the strength of intact bentonitic shale and gypsiferous siltstone using fragments and micro-indentation modulus testing</p>	<p>760 - A Study of the Key Factors Associated with a Massive Pillar Failure in an Underground limestone Mine using Numerical Models</p>	<p>905 - Deciphering the tensile fracturing process using acoustic emission</p>	<p>1126 - Study on Adsorption Characteristics of Micro-nano Proppants in Fractures and Related Numerical Simulation</p>	<p>1103 - Laboratory Evaluation of Natural Fracture and Hydraulic Fracture Interactions Using Digital Image Correlation</p>
<p>12:15 pm - 12:30 pm</p>	<p>706 - Effect of Physical Properties on the Mechanical Behavior of Wyoming Siltstone under Uniaxial and Triaxial Compression</p>	<p>461 - New Afton Convergence Monitoring and Rehabilitation Planning in the B3 Footprint</p>	<p>622 - A Play-Agnostic Thermo-Poro-Hydro-Mechanical Approximation for Hydraulic Fracture Initiation: Insights on Stress Distortions Between the Wellbore and a Perforation Tunnel</p>	<p>1030 - Búzios Field: Coupled Model to Face the Geomechanical Challenges of the Giant Carbonate Offshore Field</p>	<p>1162 - Coupled Thermo-Hydro-Mechanical Modeling in Geothermal Systems</p>
	<p>Tohm, Calvin*; Lingwall, Bret N; Mitra, Rudrajit</p>	<p>Rashed, Gamal M*; Xue, Yuting; Evanek, Nicole</p>	<p>Wu, Shan*; Yang, Hui; Zhao, Qi; Su, BoYang; Cai, Guanglei</p>	<p>Lu, Cong*; Zhu, Qiuyan; Li, Ye; Luo, Cheng; Liu, Tianbo</p>	<p>Shandilaya, Shivesh; Roshankhah, Shahrzad*</p>
	<p>Ng, Kam*; Khatri, Lokendra; Alomari, Esraa M</p>	<p>Owre, Sam*; Tilley, Eric; Kamp, corey</p>	<p>Bouabdallah, Nassim*; Michael, Andreas</p>	<p>Falcao, Flavia*; Cordovil, André Gustavo DP; Matias Maria, Ana Lucia Almm; Orrico, Gabriel; Fidalgo, Bruno; Parceros, Manuel; Alves, A.; Fernandes, livia</p>	<p>Huang, Yao*; Stansberry, Aidan Ripley; lipnikov, Konstantin; Moulton, J. David; Hyman, Jeffrey; Sweeney, Matthew Ryan; Huang, Xiang; Lei, Zhou; Stauffer, Philip H</p>

Monday (June 24) Showcase Sessions 2:30 pm - 4:00 pm	Canadian Mining Rock Mechanics (CARMA) (Green Center - Friedhoff Hall)		Fiber Optic Sensing (Green Center - Bunker Auditorium)
2:30 pm - 2:52 pm	685 - Rock Engineering in Canadian Mining – Highlights, Challenges and Contributions		1218 - Fiber Optic Monitoring in Mines
	Véronique Falmagne Agnico Eagle Mines Ltd		Herb Wang, Dante Fratta University of Wisconsin, Madison
2:52 pm - 3:14 pm	1212 - Time for a change? The role of rockmass characterization and Discrete Fracture Networks on the assessment of caving rockmasses		1227 - Frontiers in fiber optic sensing beyond seismic data
	Jose L Carvalho WSP		Eileen Martin, Shihao Yuan, Tomas Snyder, Colorado School of Mines Daniel Homa, Zack Dejneka, Gary Pickrell, Virginia Tech Anbo Wang, Logan Theis, Sentek Instrument
3:14 pm - 3:36 pm	1234 - Rocks, Data, Algorithms: A roadmap for practical Machine Learning adoption in Rock Engineering		1111 - Seismic source characterization with distributed acoustic sensing
	Josephine Morgenroth University of British Columbia		Jiaxuan Li, Caltech Weiqiang Zhu, UC Berkeley Ettore Biondi, Zhongwen Zhan, Caltech
3:36 pm - 3:58 pm	1208 - Towards Mine Closure: Assessing the Long-Term Stability of Open Pit Mine Slopes		1221 - Scalable civil infrastructure monitoring through non-dedicated distributed acoustic sensing
	Erik Eberhardt The University of British Columbia		Jingxiao Liu, MIT, Siyuan Yuan, Biondo Biondi, Hae Young Noh, Stanford

Monday (June 24) Session #3 4:15 pm - 5:15 pm	Civil Track (Hill Hall 202)	Mining Track (Green Ctr - Metals Hall)	Petroleum Unconventional Track (Green Ctr - Bunker Aud.)	Storage & Sequestration Track (Green Ctr - Petro. Hall)	Geothermal Track (CTLM 102)
	Slope Stability, Dams, and Foundations	Ground Support in Mining	Wellbore Mechanics	CO2 Utilization & Storage I	Seismicity and Geomechanics in Geothermal Environments
4:15 pm - 4:30 pm	827 - Failure Mechanisms in Jointed Rock Slopes concerning the Dip Angle of Continuous Joints Shandilaya, Shivesh; Roshankhah, Shahrzad*	1048 - Rockfall Barrier Testing in an Open Pit Mine: Comparing Empirical and Modeled Rockfall Dynamics McNabb, James C*; Meyer, Benjamin J; Potter, Julia; Warren, Sean N; Wagner, Dane	237 - Research on the evolution of fracture network considering anti-Frac hits of oilfield He, Xinru*; Zhu, Haiyan; Zhao, Peng; Chen, Shijie; He, Xiao; SHe, Chaoyi; Zheng, Majia; Wang, Dajiang; Li, Yuanzhao; Song, Junbei	772 - Assessing CO2 Leakage Risks and Fault Stability: A Coupled Flow and Geomechanics Simulation with Uncertainty Analysis of Fault Properties Yoon, Sangcheol*; Prioul, Romain; Bailey, William ; Birchwood, Richard A; Rodríguez-herrera, Adrian; SteFani, Joe	502 - The influence of stress heterogeneity on hectometer scale hydraulic stimulation experiments Bröker, Kai*; Valley, Benoit; Gholizadeh Doonechaly, Nima ; Rosскопф, Martina; hertrich, Marian; Giardini, Domenico; Rinaldi, Antonio Pio; Clasen Repolles, Victor; Obermann, Anne; Ma, Xiaodong
4:30 pm - 4:45 pm	284 - Predicting scour in unlined rock spillways: a coupled analytical-numerical modeling approach Weidner, Luke M*; George, Michael; Clohan, Daley D	1170 - Probabilistic rockfall analysis in 3D in the Peña Colorado open pit (Colima Mexico) Yalan , Luis*; Samaniego, Antonio; Pozo, Raul; Jimenez, Eduardo ; Villa, Alberto	196 - Wellbore Stability Analysis of Wells in Paradox Play in Southeastern Utah: Investigating the Impact of Salt Mobility Xing, Pengju*; McCormack, Kevin L; Edelman, Eric C; list, Dave; Maxwell, Gregor; McLennan, John	1080 - Elastic, viscoelastic, and permeability response of Kentucky Sandstone in the presence of scCO2 Kamali Asl, Arash*; Kovscek, Anthony	106 - Thermal Damage in Crystalline Rocks: The Role of heterogeneity in Mechanical Performance and Fracture Mechanisms Dang, Yike*; Yang, Zheng; Yang, Shangtong; Shang, Junlong

<p>4:45 pm - 5:00 pm</p>	<p>503 - A Comparison of Tensile Testing Techniques and Predictive Correlations Using Simulated Rock</p> <p>lindenbach, Evan*; Foran, Jack; Bearce, Richard</p>	<p>941 - An Improved Time-Dependent Convergence Confinement Method for Estimation of Tunnel Support Loads in Squeezing Ground Conditions</p> <p>Arora, Ketan*; Gutierrez, Marte</p>	<p>1181 - Modelling transient wellbore behavior and near wellbore damage during carbon-dioxide injection in depleted gas reservoirs</p> <p>De Gennaro, Vincenzo*; Vasper, Adam</p>	<p>1102 - Permeability of serpentinized harzburgite and its implications on mineral carbon storage</p> <p>Asem, Pouyan*; Nguyen, Anh; Bazant, Zdenek P; Matter, Juerg; Labuz, Joseph F</p>	<p>788 - A Study of Rock Breakage under Extreme Submerged Confining Pressure: Can DTH Hammer Drilling Deliver?</p> <p>Gerbaud, Laurent ; Velmurugan, Naveen; Aising, Jorge; Chambres, Cedric; Naderi, Sadjad; Latham, John-Paul*; Xiang, Jiansheng; Yang, Xiaowei</p>
<p>5:00 pm - 5:15 pm</p>	<p>251 - Physical models of dry masonry retaining walls</p> <p>Alejano, Leandro R.*; Pérez-Rey, Ignacio; Muñoz-Menéndez, Mauro; Ding, Bing Dong</p>	<p>998 - Investigation on the setting time improvement of geopolymer cementitious material developed for pumpable roof supports</p> <p>Motameni, Sahand; Nikvar Hassani, Arash*; Zhang, lianYang</p>	<p>1089 - Enabling Geomechanical Insights from Drilling Data: Automated and Data-driven Proxy Mechanical Earth Modeling</p> <p>Jeong, Cheolkyun*; Lin, Sheng-Hau; Reyes, Allan; Sharma, Vipin; Wendt, Anke Simone</p>	<p>1107 - Carbon Mineralization in Mafic Formations: Fracture topology and hydro-chemo-mechanical coupling</p> <p>Muñoz Ibáñez, Andrea*; Santamarina, J. Carlos</p>	<p>774 - Modeling coupled hydro-mechanical processes during hydraulic stimulation at the Bedretto Underground Laboratory</p> <p>Clasen Repolles, Victor*; Jiang, DanYang; Rinaldi, Antonio Pio; Obermann, Anne; Wiemer, SteFan; Broeker, Kai; Ma, Xiaodong; Roskopf, Martina; Gholizadeh, Nima; hertrich, Marian; Maurer, Hansruedi; Giardini, Domenico</p>

Tuesday (June 25) Session #1 8:30 am - 10:00 am	Civil Track (Hill Hall 202)	Mining Track (Green Ctr - Metals Hall)	Petroleum Unconventional Track (Green Ctr - Bunker Aud.)	Storage & Sequestration Track (Green Ctr - Petro. Hall)	Interdisciplinary Track (CTLM 102)
	Tunnels and Underground Structures	Case Studies in Mining Geomechanics - II	Hydraulic Fracturing III - Theoretical And Numerical Modeling	CO2 Utilization & Storage II	Novel Evaluation and Computational Techniques from Lab to Field
8:30 am - 8:45 am	<p>1090 - Estimation of tunnel project completion time by combining the CSM2020 Discrete Event Simulation model with Decision Aid in Tunneling (DAT)</p> <p>Khetwal, Anuradha*; Rostami, Jamal; Einstein, herbert</p>	<p>578 - Assessing Pillar Stability In Underground Stone Mines: Impact of Geological Structures and Stress Variations In the Appalachian Region</p> <p>Elibol, Alim*; Tuncay, Deniz; Agioutantis, Zach</p>	<p>55 - Production Enhancement by Microproppants: Concept Proof using Laboratory Experiment and Numerical Modeling</p> <p>Han, Yanhui*; liang, Feng; Liu, Hui-hai</p>	<p>90 - Caprock stress contrast measurement, mechanism investigation and development of area in-situ stress characterization, Northern lights CCS, offshore Norway</p> <p>Thompson, Nicholas; Meneguolo, Renata; Rasmussen, Sten; Bautmans, Peter; Reitan, Håvard; Stroisz, Anna M; Cruz, Leonardo*</p>	<p>934 - Modelling faults as fracture swarms to introduce multi-scale heterogeneity</p> <p>Libby, Simon*</p>
8:45 am - 9:00 am	<p>1007 - GEMINI, a novel software system to improve the penetration rate of a Tunnel Boring Machine</p> <p>Aliguer, Ignasi*; Oliver, Isaura; de Santos, Cristian; Vara, F; Gomez, J</p>	<p>834 - Semi-Automated Geotechnical Workflow Utilizing UAV Data for Enhanced Hazard Assessment and Safety at Rio Tinto Kennecott</p> <p>Fahle, Lukas*; Bakken, Karen; Telfer, Jeffrey; Williams, Chad</p>	<p>141 - Enhancing Cluster Efficiency by Modeling Swelling Diverter Particles in PKN-type Fractures</p> <p>Luo, Bo*; Wong, George K</p>	<p>252 - THMC cement initial state of stress model and its numerical implementation for CO2 storage well integrity simulations</p> <p>Joulin, Clement*; Le Blevet, Thomas; Kostorz, Wawrzyniec; Perez-Fernandez, Maria; Bourgeois, Frederic; Benmesbah, Mohamed Oukil</p>	<p>247 - Shear band development and permeability anisotropy evolution in fault gouge</p> <p>Li, Qiang; Chen, Jianye; Zhang, Chongyuan; Zhang, Fengshou; Gan, Quan*; Elsworth, Derek</p>

<p>9:00 am - 9:15 am</p>	<p>541 - SINTEF-TriPOD in underground design – a demonstration for two projects in Norway</p> <p>Trinh, Nghia Quoc*; Grøv, Eivind</p>	<p>851 - Mixed-Reality Geotechnical Cell Mapping for Slope Stability Assessment at Rio Tinto Bingham Canyon Mine</p> <p>Akbulut, Nilufer*; Bakken, Karen; Fahle, Lukas; Williams, Chad; Onsel, Emre</p>	<p>1118 - Optimization of Proppant Placements for Larger Propped Areas</p> <p>Wang, Jiacheng*; Olson, Jon</p>	<p>507 - Assessing Caprock Integrity through Thermo-Hydro-Mechanical Modeling of CO2 in a Deformable Chalk Depleted Gas Reservoir</p> <p>Hosseinzadehsadati, Seyedbehzad*; Amour, Frederic; Abdollahi Chahardah Cheriki, Armin ; Hajiabadi, Mohammad Reza; Ferreira, Carlos A. S.; Nick, Hamid</p>	<p>444 - Stress and load path dependent static and dynamic moduli and ultrasonic velocities in granite</p> <p>Knippel, Erik P*; Wu, Chao-Sheng; Xiong, Qiquan; Villaquiran Vargas, Ana P; Hampton, Jesse</p>
<p>9:15 am - 9:30 am</p>	<p>422 - Control Technology of High Prestress Excavation Compensatory Support in Tunnels through Fault Fracture Zones</p> <p>Sun, Jihao*; Yang, Xiaojie; He, Manchao</p>	<p>807 - Reliability-based design (RBD) updating by sample reweighting for rock slope design</p> <p>Aladejare, Adeyemi*; Idowu, Kayode Augustine; Ozoji, Toochukwu Malachi</p>	<p>718 - Quantifying non-API Proppant Transport and Fracture Permeability as a Function of Solids Loading and Particle Shape</p> <p>Leonardi, Christopher R*; Łaniewski-Wołk, Łukasz; Di Vaira, Nathan</p>	<p>1183 - Machine Learning Application for CCUS Carbon Storage: Fracture Analysis and Mapping in The Illinois Basin</p> <p>Liu, Guoxiang*; Kumar, Abhash; Harbert, William ; Siriwardane, hema ; Crandall, Dustin; Cunha, Luciane</p>	<p>1195 - A Modeling Study of Injection-induced Rupture and Seismicity in Complex Faults</p> <p>Cao, Meng*; Rutqvist, Jonny; Guglielmi, Yves; Tounsi, Hafssa; Mital, Utkarsh; Cihan, Abdullah; Glubokovskikh, Stanislav; Reagan , Matthew; Jordan, Preston; Birkholzer, Jens</p>
<p>9:30 am - 9:45 am</p>	<p>200 - Tunnel-Ground Interaction Modelling in Jointed Stratified Rock Masses under Long-term High-speed Train Loading</p> <p>Zhang, Zixin*; Yang, Junyao; Pan, W.B.; Wang, Shuaifeng; Lei, Qinghua</p>	<p>1202 - Characterizing Rock Degradability as basis for Slope Instability Mitigation for Open Pit Closure</p> <p>Carter, Trevor G*; Lorig, Loren; de Graaf, Phil</p>	<p>1194 - Probabilistic Distribution Model to Predict Fracture height</p> <p>Oyarhossein, Mohammad*; Dusseault , Maurice B</p>	<p>603 - Stress variations controlled by rock composition in an appraisal well in the US: Evaluating lithology, stress measurements, and methods</p> <p>Cruz, Leonardo*; Jimba, Solomon; Affinito, Ralph; Husain, zoya</p>	<p>493 - A 3D Subspring Network Breakable Voronoi Model for Rock: Laboratory-Scale Behavior</p> <p>Potyondy, David O*; Fu, Wei</p>

<p>9:45 am - 10 am</p>	<p>590 - Tunnel interaction in low-permeability, squeezing ground Nordas, Alexandros N.*; Leone, Thomas; Anagnostou, Georgios</p> <p>499 - Numerical Analysis of Slope Stability in Open Pit Mining based on an Integrated Geology and Geomechanics Approach Sun, Zhuang*; Raman Balasubramanian, Ganapathi; Fager, Andrew; Crouse, Bernd; Barlow, Glenn; Abouaali, Mounir</p> <p>121 - The Energy Budget in Fluid-Driven Fracturing: A Continuum Damage Approach Mobasher, Mostafa*; Waisman, Haim</p> <p>693 - Numerical Simulation Applications for Optimizing Fiber Optics Strain Monitoring During Injection in Fractured Reservoirs Eynila, Dorcas S*; Emadi, Hossein; Navaid, Humza Bin; Arora, Aman; Kebir, Abir</p> <p>932 - A novel high-stress method to measure total horizontal stress in mudrocks subjected to uniaxial strain loading and unloading Kim, Kiseok*; Awad, Mohamed; Espinoza, D. Nicolas</p>				
<p>Tuesday (June 25) Session #2 10:30 am - 12:00 pm</p>	<p>Civil Track (Hill Hall 202)</p>	<p>Mining Track (Green Ctr - Metals Hall)</p>	<p>Petroleum Unconventional Track (Green Ctr - Bunker Aud.)</p>	<p>Storage & Sequestration Track (Green Ctr - Petro. Hall)</p>	<p>Petroleum Conventional Track (CTLM 102)</p>
	<p>Risk Assessment, Geohazards, and Constitutive Modeling in Rock Mechanics</p>	<p>Numerical Modeling for Mining Applications</p>	<p>Hydraulic Fracturing IV - Experimentation, Simulation, and Field Results</p>	<p>Hydrogen Storage</p>	<p>AI/ML and Data Science</p>
<p>10:30 am - 10:45 am</p>	<p>527 - Influence of Monitoring Time on Rockfall Magnitude-Frequency Uncertainty Phillips, Cameron J*; Walton, Gabriel</p> <p>82 - Simulating Large-Scale Supported Pillar Laboratory Experiments in 3DEC Chaurasia, Akash*; Walton, Gabriel</p> <p>300 - Development Of Hydraulic Fracturing Evaluation Techniques using Chemical Adsorption Mechanics Zhang, Shang; Zheng, Danzhu*; Yu, Mengjiao</p> <p>145 - Modification of the Rock Mechanical Design of Salt Caverns on the Basis of Recent Research Zapf, Dirk*; Körner, Feline; Leuger, Bastian; Baumgärtel, Lukas</p> <p>626 - Enhancing Well Kick Classification in Drilling Operations Using a Novel PCA-Based Machine Learning Approach Wang, Junzhe*; Jing, Haorong; Ozbayoglu, Evren; Baldino, Silvio; Zheng, Danzhu; Li, Xiang</p>				

<p>10:45 am - 11:00 am</p>	<p>575 - Investigation of the frost-induced shallow alpine rockfall process using 3D FDEM</p> <p>Sun, Lei*; Grasselli, Giovanni</p>	<p>296 - Numerical modelling to investigate the influence of jointing on production blast fragmentation</p> <p>Dare-Bryan, Peter*</p>	<p>540 - Experimental Study of Underground heat Storage via Hydraulic Fractures</p> <p>Möri, Andreas; Naftalski, Jean; Liardon, Tristan; Talebkeikhah, Mohsen; Lecampion, Brice*; Lu, Guanyi; Burghardt, Jeff</p>	<p>419 - Geomechanical effects of cyclic loading on rocksalt</p> <p>Houben, Maartje*; Van Der Linden, Arjan; El Azouzi, Khalid; Marcelis, Fons; Coorn, Ab; van Schalm, Robert</p>	<p>24 - Estimating Well Specific Sanding from Numerically Generated Sanding Database</p> <p>Xiao, Yuxing*; Vaziri, Hans</p>
<p>11:00 am - 11:15 am</p>	<p>1049 - Development of a Prototype Thermal Imaging Rockfall Detection System</p> <p>Potter, Julia*; Meyer, Benjamin J; Ross, Brad; McNabb, James C; Keefner, John; Williams, Chad; Brown, Leonard; Prescott, Bobby; Cabrejo, Albert</p>	<p>522 - Sub-level caving blast modelling to determine the impact of blast design parameters and rock mass characteristics on fragmentation</p> <p>Khodayari, Ahmadreza*; Xu, Chaoshui; Dowd, Peter; Dare-Bryan, Peter; Metcalfe, Andrew</p>	<p>679 - Back to Basics: Experimental Measurement of liquid and Solid-liquid Properties to Predict Hydraulic Fluid Behavior in Fractures</p> <p>AlDajani, Omar*; Germaine, John; Einstein, herbert</p>	<p>601 - Evaluating Caprock Integrity During Underground Hydrogen Storage (UHS) in Subsurface Rocks</p> <p>Ajibona, Abduljeleel I*; Pandey, Rohit</p>	<p>439 - Improve Mechanical Earth Model Calibration using Statistical Concepts</p> <p>Ray, Peng*</p>
<p>11:15 am - 11:30 am</p>	<p>753 - Effect of Joint Orientation on Rock Mass Erosion based on Experimental Results using a Pilot Plant Spillway Model</p> <p>Karnati, Vineeth Reddy*; Saeidi, Ali; Rouleau, Alain; Quirion, Marco</p>	<p>591 - Concept Feasibility and Predicted Behavior of Mining a Rock Tower with Drill-and-Blast Undermining Using Dynamic Three-Dimensional Discontinuum Numerical Models</p> <p>Abouseiman, Rami*; Contreras, Carlos; Cremeens, Jim; Worsley, Tristan; Rouse, Nathan</p>	<p>759 - Experimental Study of Proppant Crushing and Conductivity Reduction within Rough Fracture in Shale Gas Formations</p> <p>Li, Liu*; Ma, Xinfang; Zou, Yushi; Zhang, Shicheng; Zhang, Xiaohuan; Wang, Wenchao; Liu, ShiKang</p>	<p>791 - Implications of Underground Hydrogen Storage on the Sealing Ability of Aged Cement</p> <p>Hussain, Athar*; Emadi, Hossein; Thiyagarajan, Sugan Raj; Maury Fernandez, Diana C; Ispas, Ion; Watson, Marshall</p>	<p>1061 - Shale Anisotropy made Simple</p> <p>Holt, Rune M*; Bakk, Audun; Lozovyi, Serhii</p>

<p>11:30 am - 11:45 am</p>	<p>551 - Numerical Analysis of Induced Mechanism of Rockbursts in Tunnels</p> <p>Deng, Jian*; Gong, Yanglin; Li, Shaojun</p>	<p>533 - Approximation of stress near tunnel intersections in deep burst-prone mines for support selection and rockburst hazard assessment</p> <p>Rigby, Alex; Malovichko, Dmitriy*; Kaiser, Peter</p>	<p>1071 - Numerical modeling of fluid-driven fractures in permeable media using symmetric cohesive elements</p> <p>Mejia Sanchez, Eleazar Cristian*; Rueda Cordero, Julio Alberto; Roehl, Deane</p>	<p>817 - Effects of Underburden Fault Properties, Operational Properties, and Stresses on Induced Basement Fault Seismicity during Hydrogen Storage in Depleted Gas Fields</p> <p>Burtonshaw, James E.J.*; Paluszny, Adriana; Mohammadpour, Aslan; Zimmerman, Robert W</p>	<p>1066 - Predicting strength properties applying machine learning techniques for highly heterogeneous microbial limestones from Brazilian pre-salt reservoirs</p> <p>Ferreira, Francisco H*; Borba, Anselmo; Garcia, Paulo Fernando V; Santos, Erick; Falcao, Flavia</p>
<p>11:45 am - 12:00 pm</p>	<p>434 - Chemo-mechanical modelling of anhydritic claystones</p> <p>Nousiou, Antonia*; Anagnostou, Georgios</p>	<p>651 - A Coal Pillar Burst Assessment Index Based on Numerical and Analytical Tools</p> <p>Cardenas Triana, Cristian; Androulakis, Vasileios; Agioutantis, Zach*</p>	<p>954 - Field experiences of near-wellbore poroelastic effects and benefits of pump-out in Microfrac in Unconventional reservoirs</p> <p>Sen, Souvik*; Chakrabarti, Prajit; Franquet, Javier</p>	<p>178 - Insights from Thermohydrromechanical Simulations For Real-time Monitoring of UHS in Saline Aquifers</p> <p>Okoroafor, Esuru R*</p>	<p>916 - Machine Learning-Based Drill Bit Wear Prediction for Enhanced Drilling Performance</p> <p>Khalifa, Houdaifa*; Tomomewo, Olusegun S; Doghman, Bachir; Berrehal, Badr Eddine; Benabid, Mouna Keltoum</p>

Tuesday (June 25) Showcase Sessions 2:00 pm - 3:30 pm	Tunneling (Green Center - Friedhoff Hall)		Fault Mechanics (Green Center - Bunker Auditorium)
2:00 pm - 2:22 pm	1213 - Numerical prediction of thermo-mechanical spalling around a deep nuclear waste repository in crystalline rock		508 - Meter-scale Laboratory Earthquakes Triggered by Fluid Injection and the Role of Background Stress in Mediating Runaway Ruptures
	Andrea Lisjak, Omid Mahabadi, Johnson Ha, Geomechanica Diego Mas Ivars, SKB		Gregory McLaskey Cornell University, NY, USA
2:22 pm - 2:44 pm	1224 - Tunnel Design and Construction in Ohio Shale Formation		405 - Micromechanics of sub-critical failure in a porous rock: insights from integrating sound and x-ray vision
	Chi Park, Gregory Rogoff, Brad Murray Delve Underground		Alexis Cartwright-Taylor, Heriot-Watt University, U.K., Maria-Daphne Mangriotis, NOC, U.K.; Ian G. Main, Ian B. Butler, Andrew Curtis, Florian Fousseis, Andrew F. Bell, U. of Edinburgh, U.K.; Edward Andò, EPFL Lausanne, Switzerland; Martin Ling, Edinburgh Hacklab, U.K.
2:44 pm - 3:06 pm	1193 - Tunneling in Alpine fault zones – Case study Semmering Base Tunnel		515 - Microscopic defect dynamics during a brittle-to-ductile transition
	Helmut Wannenmacher, Implenia Österreich GmbH Manuel Entfellner, Thomas Fiest, Implenia AG Wulf Schubert, TU Graz		Matej Pec, Hoagy O'Ghaffari, Ulrich Mok, Hilary Chang, Brian Evans, Yves Bernabe, MIT; Tushar Mittal, Penn State; Andrew Cross, Woods Hole Oceanographic Institution
3:06 pm - 3:28 pm	1236 - Response to Movement within an Open-Cut Rock Face: Case Study from Ottawa light Rail Project, Ontario, Canada	1235 - Simulating Induced Earthquakes in Complex Fault Systems	
	Anna M. Crockford Brierley Associates	Kyungjae Im, Jean-Philippe Avouac, Taeho Kim, and Linxuan Li California Institute of Technology	

Wednesday (June 26) Session #1 8:30 am - 10:00 am	Interdisciplinary Track (Hill Hall 202)	Mining Track (Green Ctr - Metals Hall)	Petroleum Unconventional Track (Green Ctr - Bunker Aud.)	Storage & Sequestration Track (Green Ctr - Petro. Hall)	Petroleum Conventional Track (CTLM 102)
	Innovative Rock Testing and THMC Coupled Processes	Deep Mine Stability & Induced Seismicity	Geomechanics Reservoir Characterization I	Waste Disposal & Storage (Nuclear waste storage & waste water disposal)	Drilling & Completion: Cased hole
8:30 am - 8:45 am	<p>618 - Seismic investigation of monotonic and constant pressure hydraulic fracturing schemes in granite</p> <p>Butt, Awais*; Hedayat, Reza; Moradian, Omid</p>	<p>448 - Micro-seismic Monitoring in Mines - Benefits and limitations</p> <p>Rebuli, Daryl*</p>	<p>114 - Elastic Anisotropy in Bakken Formation</p> <p>Mitra, Abhijit*; Merzoug, Ahmed; Cobb, Steve; Mokhtari, Mehdi</p>	<p>109 - Implementation and Verification of Enhanced Munson-Dawson Creep Model for Rock Salt</p> <p>Cheng, Zhao*</p>	<p>305 - An Experimental Study on the Influence of Cyclic Loading and Eccentric Casing Geometry on Cement Sheath Integrity</p> <p>Zheng, Danzhu*; Ozbayoglu, Evren; Miska, SteFan; Baldino, Silvio</p>
8:45 am - 9:00 am	<p>779 - Geomechanical properties of hydrate-bearing sediments from the Gulf of Mexico - viscoplastic behavior</p> <p>Cardona, Alejandro*; Bhandari, Athma R; Flemings, Peter B.</p>	<p>610 - Experimental Assessment of the Energy Dissipation and Deformation Capacity of Ground Support Systems Under Dynamic Loading: Insights from LaRonde Mine Dynamic Drop Test Program</p> <p>Durham, Christopher*; Caron, Marie-Eve; Falmagne, Véronique; Braendle, Rico</p>	<p>473 - Mechanical Upscaling in Highly heterogeneous Rock Masses: Impact on Anisotropy and Subsurface Stress Prediction in the Bone Spring and Wolfcamp Formations of the Delaware Basin, USA</p> <p>Cheng, Liwei*; Crawford, Brian; Chen, Huangye; Macquaker, James; Mclendon, Darren</p>	<p>543 - Progressive Excavation Disturbance Zone Evolution during and Post Mine-by Tunneling (PRECODE) – Insight into a New Underground Research Laboratory for Crystalline Rocks in the BedrettoLab</p> <p>Hamdi, Pooya*; Achtziger-Zupancic, Peter; Dickmann, Jonas S.; Kruszewski, Michal; Rinaldi, Antonio Pio; Villiger, linus; Shakas, Alexis; Perras, Matthew; Bahrani, Navid; Jiang, DanYang; Amann, Florian; Wiemer, SteFan</p>	<p>258 - Hyper fast THMC well integrity simulator for powering optimization, sensitivity and risk analysis</p> <p>Kostorz, Wawrzyniec*; Le Blevec, Thomas; Joulin, Clement</p>

<p>9:00 am - 9:15 am</p>	<p>1091 - Quantifying the Uncertainties of Macro- and Micro-Mechanical Measurements on Sequestration Reservoir Formations</p> <p>Wu, Zhidi*; Edelman, Eric C; Ritterbush, Kathleen; McPherson, Brian</p>	<p>154 - The Role of Thick Competent Strata in Face Bursting in Underground Longwall Mines</p> <p>Chambers, Derrick J*; Boltz, Shawn; Khademian, Zoheir; Walton, Gabriel; Shragge, Jeff</p>	<p>63 - A thermo-visco-plastic study of the Wolfcamp shale: experiments and modeling</p> <p>Rassouli, Fatemeh; Haghghat, Ehsan ; Juanes, Ruben; Zoback, Mark*</p>	<p>682 - Simulation of coupled THMC processes in fractured rocks using a dual-media approach</p> <p>Mosley, Kyle*; Hartley, Lee; Turnbull, Robert; Cottrell, Mark G ; Bym, Tomas; Mas Ivars, Diego</p>	<p>904 - Use of combined analytical and numerical sand production prediction methods to define simple cut-off for sand control and well completion selection</p> <p>Khaksar, Abbas*; Younessi, Ahmadreza; likrama, Fatmir; Gui, Feng</p>
<p>9:15 am - 9:30 am</p>	<p>146 - Experimental Study of the Effect of Porosity on EICP Biomineralization in Dolostone and Shales Under Uniaxial Compressive Stress Condition</p> <p>Ngoma, Mary C*; Kolawole, Oladoyin; Olorode, Olufemi M; Kwon, Tae-Hyuk</p>	<p>924 - Changes in seismicity, stress, and stress proxies before and after the large seismic event with Mw 4.2 on May 18, 2020 in Kiirunavaara Mine (Sweden)</p> <p>Dineva, Savka*; Dahner, Christina; Beck, David; Piana Agostinetti, Nicola; Mihaylov, Dimitar; Erguncu Guclu, Irem</p>	<p>263 - A New Apparatus to Measure the Coefficient of Friction and Changes in Fracture Permeability</p> <p>Sathyanath, Arun*; Sharma, Mukul M.</p>	<p>849 - Laboratory Replication of Gas Mixture Transport in Fractured Porous Tuff Following a Subsurface Explosion</p> <p>Li, Wenfeng*; K C, Bijay; Meng, Meng; Frash, Luke; Neil, Chelsea; Stauffer, Philip</p>	<p>436 - Kinematic Analysis of Geomechanical Displacement Fields to Assess lifetime Integrity of Wellbores</p> <p>Sathuvalli, Udaya Bhaskar R*; Suryanarayana, P V Suri; Lewis, David</p>
<p>9:30 am - 9:45 am</p>	<p>792 - Assessment of Subsurface Ice-Based Thermal Energy Storage: THM Coupled Geomechanical Study</p> <p>Tounsi, Hafssa; Zhang, Yingqi; Rutqvist, Jonny*; Birkholzer, Jens</p>	<p>616 - Seismic Risk Management Practices at Vale's Sudbury Operations</p> <p>Yao, Mike*; Landry, Dave</p>	<p>764 - Permeability Test on Opalinus Clay shale with a Preexisting Discontinuity</p> <p>Arzuaga Garcia, Ignacio A; Einstein, herbert; Casagrande, Camilo; Celleri, Humberto*; Sánchez, Martín</p>	<p>948 - A New Finite Element Code for Thermo-Hydro-Mechanical Coupling in Geomechanics: Application to Deep Borehole Disposal of High-Level Radioactive Waste</p> <p>Yoo, Hwajung*; Min, Ki-Bok</p>	<p>248 - Mechanical Performance of One Latex Cement System for Thermal Storage Wells</p> <p>Meng, Meng*; Pyatina, Tatiana; Frash, Luke; K C, Bijay; Madenova, Yerkezhan; Lyare, Uwaila C; Li, Wenfeng; Zhang, Weicheng</p>

<p>9:45 am - 10 am</p>	<p>58 - helium Gas Release by Rocks Undergoing Crushing</p> <p>Kibikas, William*; Paul, Matthew; Wilson, Jennifer; Kruichak-Duhigg, Jessica; Broome, Scott</p>	<p>1184 - Shifting Highwall Blast Vibration Frequencies Higher Maintaining PPV Lower from Near-Field Blasts</p> <p>Yang, Ruilin*; Proulx, Remi; Rodriguez, Areli</p>	<p>1113 - Strain and stress analysis ahead of the propagating fracture through bedding planes using Digital Image Correlation (DIC)</p> <p>Bhadariya, Vishesh*; Lee, Hunjoo</p>	<p>1178 - Modeling of thermo-hydro-mechanical processes in a bentonite buffer under high temperature</p> <p>Samarakoon, Radhavi*; Zheng, liange</p>	<p>614 - Solids Production Geomechanical Evaluation In A Fractured/Vuggy Carbonate Reservoir from Abu Dhabi Offshore Field : Postmortem Analysis And Advanced Finite Element Simulations</p> <p>Pourpak, Hamid*; Su, Kun; Bikong, Christian; Rammal, Hadi; Bigno, Yann; Xi, Guifen; Kheidri, Hamza; Bere, Adam T; Kato, Jun</p>
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Wednesday (June 26) Showcase Sessions 12:30 pm - 2:00 pm	Mining Industry Rock Mechanics (Green Center - Friedhoff Hall)		Governance Perspectives on CCS & Geothermal (Green Center - Bunker Auditorium)
12:30 pm - 12:52 pm	1219 - The Role of Major Geological Features in the Planning, Development, and Operation of Panel Cave Mines		1209 - Underground Injection Control (UIC) Class VI
	Ryan Campbell Freeport McMoRan		Sharon Newman EPA
12:52 pm - 1:14 pm	609 - Geomechanical practices in developing open-pit slopes at Kinross Gold		1223 - DOE's Carbon Transport and Storage Program: Supporting Storage Infrastructure Build-Out Critical for Decarbonization
	Jerry J Ran Kinross Gold Corporation		Gillian Rosen, Amanda Raddatz Bopp, Darin Damiani, Traci Rodosta, Rajesh Pawar, Robert Smith, Kevin Dooley US DOE
1:14 pm - 1:36 pm	1206 - Managing risks associated with mining through the Wendy stopes at the Candelaria Open Pit Mine		1230 - Drilling for Opportunities: The Geothermal Technologies Office
	Marc Ruest, Lundin Mining Jaime Campos, Candelaria Copper Mining Complex		Kevin Jones, Lauren Boyd DOE Geothermal Technologies Office
1:36 pm - 1:58 pm	1225 - Rock Engineering at Kiruna Mine – the Change Journey		1068 - Induced seismicity in geothermal settings: historical perspective, enhanced geothermal systems, setbacks, and future directions
	Matthias Wimmer LKAB		J. Ole Kaven USGS Earthquake Science Center

Wednesday (June 26) Session #2 2:15 pm - 3:45 pm	Interdisciplinary Track (Hill Hall 202)	Mining Track (Green Ctr - Metals Hall)	Petroleum Unconventional Track (Green Ctr - Bunker Aud.)	Storage & Sequestration Track (Green Ctr - Petro. Hall)	Petroleum Conventional Track (CTLM 102)
	Applications of AI in experimental, numerical, and geophysical rock mechanics	Fundamental rock mechanics, instrumentation and monitoring in mining	Geomechanics Reservoir Characterization II	Geomechanical Challenges in Underground Storage	Reservoir Geomechanics II - Lab experiment
2:15 pm - 2:30 pm	<p>921 - AI-Driven Predictive Maintenance for Enhanced Reliability of Top Drive Thrust Bearings</p> <p>Benarbia, Achouak*; Sami Riadh, Ghachi ; Khalifa, Houdaifa; Tomomewo, Olusegun S</p>	<p>312 - Automation of Underground Void and Support Deformation Monitoring – Effective Decision making Data and Tools Without the Penalty in Time and Effort</p> <p>Franke, Jochen*; Gonzalez, Carlos</p>	<p>878 - Permeability evolution of fractures in shale in the presence of high salinity water</p> <p>Bai, Tianhao*; Melkougian, Nouné; Hashemi, Sam; Badalyan, Alexander; Zeinijahromi, Abbas</p>	<p>257 - Natural sealing of leaky wells by creep of rocksalt</p> <p>Terheege, Jan*</p>	<p>757 - Stress-permeability characterization and proposal of creep model for pre-salt carbonates under lab-scale stepwise hydrostatic loading and unloading</p> <p>Garcia, Paulo Fernando V*; Santos, Erick Slis; Rossi, Diogo; Ferreira, Francisco H; Borba, Anselmo</p>
2:30 pm - 2:45 pm	<p>95 - Improving Rock Excavation Efficiency Through Monitoring of Pick Cutter's Wear Condition</p> <p>Morshedlou, Amid*; Dagli, Ismet ; Rostami, Jamal; Moradian, Omid; Belviranli, Mehmet</p>	<p>174 - A Statistical Review of Rock Mass Classification With Some Surprising Results</p> <p>Wellman, Edward C*; Kemeny, John</p>	<p>837 - Effects of interactions between produced formation fluid and rock matrix on pore structure of Caney Shale, southern Oklahoma</p> <p>Xiong, Fengyang; Awejori, Gabriel A; Radonjic, Mileva*</p>	<p>671 - Evaluation of caprock integrity with laboratory scale in-situ CO2 injection test</p> <p>Adisornsupawat, Kanitthorn*; Sangnimnuan, Anusarn; Rabiabpo, Porranut; Govindarajan, Sudarshan; Thombare, Akshay; Gokaraju, Deepak; Aldin, Munir</p>	<p>46 - Use of Minifrac and PVC Data to Constrain Re-pressurization Stress Path</p> <p>Zhang, Jianguo*; Edwards, Stephen; Majidi, R; Mahadev, K; Duvivier, G</p>

<p>2:45 pm - 3:00 pm</p>	<p>447 - Predicting Rock Fluid Transport and Mechanical Properties using Graph Neural Networks</p> <p>Chung, Jaehong*; Ahmad, Rasool; Liu, Mingliang; Sun, WaiChing; Cai, Wei; Mukerji, Tapan</p>	<p>19 - Strength Characteristics of Highly Anisotropic Burst-Prone Coal Considering Mineralogical Compositions</p> <p>Kim, Bo Hyun*; Larson, Mark K</p>	<p>1099 - Integrating Rock Physics Templates for Enhanced Seismic Interpretation: A Comprehensive Analysis of Influencing Factors on Frequency-Dependent Velocity of Tight Carbonate Formations</p> <p>Malki, Mohamed Lamine*; Allam, Lotfi MY; Mellal, Ilyas; Latrach, Abdeldjalil; Rasouli, Vamegh; Larbi, Anis; chellal, hichem aymene; Aymene, Hichem</p>	<p>498 - Modeling of Thermal-Mechanical Impact on Wellbore Integrity Due to CO2 injection</p> <p>Sun, Zhuang*; Fager, Andrew; Crouse, Bernd</p>	<p>337 - Experimental investigation of chalk influx in a depleted reservoir</p> <p>Bhuiyan, Mohammad*; Papamichos, Euripides</p>
<p>3:00 pm - 3:15 pm</p>	<p>1154 - Machine learning enhanced interpretation of wellbore data for underground storage</p> <p>Bondarenko, Nikita; Ankul, Ansh; Makhnenko, Roman*; Ganesh, Pooja; Williams-Stroud, Sherilyn; Goldberg, Cassandra</p>	<p>194 - Dynamic Rock Testing and Implications for Blast-Induced Ground Vibration Mitigation</p> <p>Tetteh, Harriet*; Rinehart, Alex; McLemore, Virginia T.; Li, Wenfeng</p>	<p>1079 - Comparison of Geochemical Reactivity of Marcellus and Caney shale based on effluent analysis</p> <p>Bethel Dje, Loic*; Awejori, Gabriel A; Radonjic, Mileva</p>	<p>588 - Tailoring Barrier Design Process to Assess Cement Integrity in CCS Wells</p> <p>Jandhyala, Siva Rama Krishna*; Lewis, Samuel</p>	<p>25 - Poroelastic Properties of Indiana limestone</p> <p>Kalbekov, Arkhat*; Naumann, Marcel; Duranti, Luca; Prasad, Manika</p>

<p>3:15 pm - 3:30 pm</p>	<p>431 - Predicting excavation-induced damage depth through MLP</p> <p>Golabchi, Yousef*; Perras, Matthew; Khan, Usman</p>	<p>207 - An Autoencoder-Based Deep Learning Model for Enhancing Noise Characterization and Microseismic Event Detection in Underground Longwall Coal Mines Using Distributed Acoustic Sensing Monitoring</p> <p>Tourei, Ahmad*; Martin, Eileen R; Ankamah, Alexander; Hole, John; Chambers, Derrick JA</p>	<p>1132 - Study on the law of underwater electric pulse fracturing in sandstone</p> <p>Lu, Cong*; Zeng, Qijun; Li, Xinyang Xin; Zhu, Qiuyan; Li, Qiuyue; Wang, Shouxin; Meng, Qingyang; Luo, Cheng; Huan, Yaqi</p>	<p>640 - Generation of Micro Fracture Clouds in Rocks: Mechanisms and Implications</p> <p>Mutlu, Uno U*; Boitnott, Greg; Iisjak, Andrea; Mahabadi, Omid; Sherizaddeh, Taghi; Guner, Dogukan; Nowak, Samuel V; Ghassemi, Ahmad</p>	<p>417 - Strength characterization and empirical correlations for carbonate rocks from the Brazilian pre-salt reservoirs</p> <p>Sampaio, Rafaella Villela*; Righetto, Guilherme L; Fontoura, Sergio; de lima, Claudio; Naumann, Marcel</p>
<p>3:30 pm - 3:45 pm</p>	<p>96 - Progressive reduced order modeling: from single-phase flow to coupled multiphysics processes</p> <p>Kadeethum, Teeraton*; Chang, Kyung Won; Jakeman, John D.; Yoon, Hongkyu</p>	<p>1191 - Development of a Non-Destructive Stress Measurement Technique with Applications in Deep Mining Using Distributed Sensing</p> <p>Hendi, Sepideh*; Eberhardt, Erik; Gorjian, Mostafa; Stead, Douglas</p>	<p>748 - Reservoir fine evaluation of horizontal well multi-stage fracturing based on unsupervised cluster machine learning</p> <p>Wang, Wenchao*; Ma, Xinfang; Zou, Yushi; Zhang, Shicheng; Li, liu; Yang, Peng; Zhao, Ziwen; Zheng, Ao; Wang, Xin; Yang, lifeng</p>	<p>341 - Mechanical stability analysis of fracture-cavity carbonate gas storage</p> <p>Tang, Huiying*; Zheng, Xin; Wang, Xiaoping; Zhao, Zihan; Chen, Yuye; Zhao, Yulong; Zhang, liehui</p>	<p>103 - Sand rate in gas flow</p> <p>Papamichos, Euripides*; Varkas, MiChail; Walle, Lars Erik; Berntsen, Andreas N</p>

POSTERS

Monday (June 24), 5:15 pm - 6:15 pm

Green Center - Friedhoff Hall

Civil Track

36 - Prediction of engineering characteristics of rock masses using actual TBM performance data with supervised learning algorithms Samadi, Hanan; Hassanpour, Jafar*; Rostami, Jamal; Khatti, Jitendra	423 - The Thrust-Penetration Gradient: Decoding Geomechanical Dynamics and TBM Response Schlicke, Marcel*; Wannemacher, helmut; Amann, Florian; Marcher, Thomas; Nübel, Konrad	511 - DEM Modeling of 3-D Kinematics in Rock Slope Failure Keissar, Yuval*; Brown, Ian; Sitar, Nicholas; Gardner, Michael	653 - Predicting Excavation Performance of EPB TBM by Using Soil Properties: A case study of Dudullu Bostanci Metro Project Seyedrezaei, Mirali*; Tumac, Deniz	876 - Multi-source Data Fusion and Knowledge Presentation for Shield Tunnel Maintenance Work Based on Knowledge Graph Pang, Haojun; Zha, Chenchen; Jia, Fei; Xue, Yadong*
117 - Real-Time Prediction of Potential Hazard Area In Seville's During Underground Excavation With EPB Bahri, Maziyar*; Duzgun, Sebnem; Mascort Albea, Emilio Jose ; Romero hernandez, Rocio	430 - Monitoring Slope Movement using Photogrammetry and Thermal Imagery Models Collected using UAV Tohm, Calvin; Lingwall, Bret*; Yu, linus	545 - Influence of buttressing and lateral confinement on a large block prior to rockfall Longar, Elizabeth*; Walton, Gabriel	715 - New insights for stress conditions of laboratory shear tests Chai, Shupeng*; Zhao, Qi	892 - Quantitative Assessment of Anisotropic Elastic Properties with Cylindrical Specimens Kim, Daeyeong; Kim, Kwang Yeom*; Diaz, Melvin B; Kim, Sangseob; Seo, Sumin; Kim, Hanna; Park, Eui-Seob
147 - Evaluating a Practical Method for Rockfall Magnitude Cumulative Frequency Estimation Werley, Keara*; Sala, Zac; Hille, Madeline; Vessely, Mark; Walton, Gabriel	432 - Shear Strength and 1D Compressibility Characteristics of Fine-Grained Soil and Weathered Shale Exposed to Desiccation Cycling Tohm, Calvin; Lingwall, Bret N*	574 - Development of Photogrammetric Rockfall Database and Analysis of Trends at a Rock Slope along I-70W, West of Idaho Springs, CO Hollander, Jacob A*; Walton, Gabriel; Kromer, Ryan	733 - Incorporating Roughness Degradation within the Critical State Framework: Modeling the Shear Behavior of Rock Joints Matsuoka, Yuki*; Kikumoto, Mamoru; Ogata, Sho; Kishida, Kiyoshi	1062 - An Investigation of the Influence of Random Packing on PFC3D Simulations of Unconfined Compression, Brazilian, and Three-Point Bending Tests Haydn-Myer, Madison*; MacLaughlin, Mary M; Arnold, Lorne

Civil Track	<p>156 - Investigation of the Failure Mechanisms for Inducing Rock Slope Hazard in New Jersey, United States</p> <p>Oppong, Felix; Khadka, Prabhakar*; Kolawole, Oladoyin</p>	<p>455 - A New Approach to Model Irregular Particles Breakage with Deploying Image Analysis Techniques on Discrete Element Method</p> <p>Amir Hosseini, Mehryar*; Tahmasebi, Pejman</p>	<p>580 - Improving Rockfall Analysis: A Review of Cluster Filtering Methods for Point-Cloud-Based Slope Monitoring</p> <p>Emmons, Edward B*; Walton, Gabriel</p>	<p>811 - Slope Stability Finite Element Modeling of El Misti Volcano, Peru</p> <p>Hollander, Jacob A*; Walton, Gabriel; Villeneuve, Marlene; Alvarez, Guido Edgard Salas; Huillca, Carlos Alberto Luza</p>	<p>1204 - Hypoplastic model predictions for Ennore sand under monotonic and cyclic loading conditions</p> <p>Wani, Sahil*; Ul Rehman, Mujeeb; Rao, Mahima S; Kadasami, Ramesh Kannan; Banerjee, Subhadeep</p>
	<p>380 - Evaluation of the sensitivity of compressional waves to assess the presence of a macroscopic flaw in a pre-fractured Agaria marble specimen</p> <p>Verma, Anita*; Shirole, Deepanshu; Sinha, Sankhaneel</p>				
Mining	<p>53 - Preliminary Blast Fragmentation Modeling in an Underground Aggregate Operation</p> <p>Shields, Lauren*; Agioutantis, Zach; Calnan, Josh; Silva, Jhon; Maldonado, Ernesto</p>	<p>285 - Deformation Characteristics and Damage Evolution Mechanisms of Dry and Saturated Argillaceous Siltstone under Cyclic Loading</p> <p>Wu, Peng; Chen, Jian*; Fu, Xiaodong; Huang, Jue-hao</p>	<p>544 - Characterization of Direction-Dependent Properties of Sierra White Granite: Initial Results</p> <p>Kafle, Laxman*; Villamor-Lora, Rafael; Mok, Ulrich ; Germaine, John ; Einstein, herbert H.</p>	<p>767 - Update on Rock-type Specific Hoek-Brown Constant "s"</p> <p>Khamitova, Arailym; Suorineni, Fidelis T*; Madenova, Yerkezhan</p>	<p>1072 - Calibration of Numerical Rockbolt Behaviour in Pull to Laboratory Testing Data using Finite Element Method Bolt Models and 3D Material Models</p> <p>Fischer, Caitlin P*; Diederichs, Mark S; Forbes, Bradley</p>

Mining	<p>67 - Rock mass failure and remedial measures implemented when excavating ultra-deep shaft stations</p>	<p>363 - Study on the damage mechanism of rock around wells subjected to impact loading</p>	<p>586 - Behavior of post-yielding parameters of marble during plastic deformation</p>	<p>784 - Challenges and Opportunities for Machine Learning in Rock Mass Classification</p>	<p>1081 - Laser-Induced Rock Breakage (LiRB) Technology in Mining Engineering - A Review</p>
	<p>lindsay, Jared*; Hall, Alex K; Cai, Ming; Simser, Brad</p>	<p>Huang, Tao*; Liu, Qingyou; Zhu, Haiyan; Dai, Xianwei; Ji, Ran; He, Xiao; SHe, Chaoyi; Zheng, Majia</p>	<p>Sarkar, Sarbartha; Kumar, Rakesh*</p>	<p>Ambah, Emmanuela; Elmo, Davide*</p>	<p>Madavi, Rohit Pandurang*; Mitra, Rudrajit; Diwakar, Prasoon</p>
	<p>83 - Enhanced method for measuring joint roughness using sub-millimeter resolution 3D laser scanning</p>	<p>445 - Measuring brittle damage thresholds of crystalline rocks by acoustic emissions on compressive and tensile laboratory tests</p>	<p>713 - Optimal Camera Angle for Measuring Joint Roughness using UAV-based 3D Photogrammetry</p>	<p>825 - Laboratory investigation on relations between characteristic impedance, energy transformation and dynamic stress induced faults in rocks</p>	<p>1106 - Periodic assessment of micro-seismicity to assess the ground support requirements on potential fault headings - Case studies</p>
<p>Shintassova , Mariya*; Sepúlveda, Sergio; Fatolahzadeh, Sina</p>	<p>Malicki, Ethan*; Packulak, Timothy RM; Gagnon, Émélie; Diederichs, Mark S; Day, Jennifer J</p>	<p>Leem, Junsu*; Choi, Jiwon; Kang, Il-Seok; Song, Jae-Joon</p>	<p>Ozaji, Toochukwu Malachi*; Zhang, Zongxian; Aladejare, Adeyemi; Serasinghe, Bathiya; Bakkamuntala, Nikhil; Obaje, Nuhu; Umar, Mohammed</p>	<p>Leite, Ana RS*; Landry, David; Ramdass, Navita; Hooey, Garrett; Roy, Justin</p>	
<p>116 - A proposed framework to estimate pillar strength in room-and-pillar hard rock mines</p>	<p>509 - Optimizing overall slope angle and net present value (NPV) through the utilization of ground-based pit wall monitoring data</p>	<p>761 - Study on changes of mechanical parameters of coal seam roof rock under the influence of artificial fractures</p>	<p>1003 - Geotechnical design for open pit coal mining in proximity to electrical power lines: risks, mitigation, and regulatory compliance</p>	<p>1124 - Geotechnical Implications of Shale layers on the Stability and Productivity of Iron Ore Mines: A Comparative Study</p>	
<p>Dzimunya, Nevaïd Z*; Fujii, Yoshiaki</p>	<p>Quansah, Ebo A*; Anani, Angelina ; Adewuyi, Sefiu</p>	<p>Zhou, Hang*; Shi, Guanghao; Zhou, Fujian; Li, liu; Wang, Wenchao; Liu, Yunyi; Zhang, li; Wang, Bo</p>	<p>Zvarivadza, Tawanda*; Ng'andu, Sampa; Zindi, Luke; Mohutsiwa, Moshe; Masethe, Richard RT; Adoko, Amoussou; Onifade, Moshood; Chikande, Tonderai; Moyo, Senzeni; Firoozi, Ali</p>	<p>Mohanty, Anshuman*; Mishra, Manoj Kumar; Rostami, Jamal; Ghosh, Subhamoy; Sahoo, Barun Bedanta ; Behera, Chandrakant; Sesay, Manso Deen</p>	

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Interdisciplinary	<p>68 - A cross-scale characterization of porous rocks altered by flow and dissolution</p> <p>Xu, Zijie*; Li, Wei</p>	<p>199 - Numerical evaluation of mass transfer process on acid reactive flow in carbonate rocks</p> <p>Cunqi, Jia*; Alkaabi, Saif; Sepehrnoori, Kamy</p>	<p>453 - High-performance modeling of coupled hydro-mechanical behavior with graphical processing units</p> <p>Bondarenko, Nikita*; Podladchikov, Yury; Makhnenko, Roman</p>	<p>690 - Study on Numerical Simulation Method of Profile Control with Polymer Microspheres</p> <p>Ma, Mengqi*; Li, Junjian; Zhu, Zhouyuan; Yuan, Shuai; Yu, Fuwei; Su, Hang</p>	<p>1098 - Deformation and Damage Evolution Characteristics in Laminated Rocks Using Discrete Element Method</p> <p>Pothana, Prasad*; Garcia, Fernando; Kegang, Ling</p>
	<p>170 - Fluid Flow in a Fracture Network under Changing Stresses: A Laboratory Study</p> <p>Mei, Zijin*; Li, Wei; Jin, Wencheng; Neupane, Ghanashyam; Atkinson, Trevor</p>	<p>345 - Mechanism transition for fracture energy dissipation of Shale under crack-parallel compression</p> <p>Zhang, Min*; Zhang, Guangqing; Ling, Yansen; Yang, Feng; Zhong, Anhai; Zheng, Xuelin</p>	<p>683 - Statistical Analysis of Rock Cutting Forces Acquired from Full-Scale linear Rock Cutting Machine Tests</p> <p>Ishaq, Muhammad*; Thyagarajan, Muthu Vinayak; Rostami, Jamal</p>	<p>708 - Stress Distribution in Accreting Sediments: A Geomechanical Study of Upper-Plate Faults</p> <p>Lopez-Campos, Graciela*; Nikolinakou, Maria; Flemings, Peter; Saffer, Demian</p>	<p>1201 - Investigating the Deformation Characteristics of Dry Mohr-Coulomb Material During Radial Fluid Injection</p> <p>S Kumar, Jithin*; Kandasami, Ramesh Kannan; Chaudhuri, Abhijit; Detournay, Emmanuel</p>

Storage & Sequestration	<p>78 - Stress Corrosion Cracking in Carbonates Initiated by Carbonic Acid, A Reactive Molecular Dynamic Simulation</p>	<p>255 - Geomechanical and petrophysical effects of long-term hydrogen exposure on Berea sandstone – An experimental study</p>	<p>501 - Nonlinear acceleration of the iterative-sequentially coupled flow and geomechanics fixed stress scheme</p>	<p>696 - Experimental Research on Characteristics of CO₂-CH₄ Transport in Water-Bearing Carbonate Gas Reservoirs</p>	<p>897 - Laboratory characterization of backfill-buffer bentonite blocks under hydration aided by X-ray CT technology</p>
	<p>Wang, Jingru*; Liu, Yuetian; He, Yuting; Liu, Xinju; lin, Ziyu; Zhang, Bowei; Chai, Rukuan</p>	<p>Thiyagarajan, Sugan Raj*; Emadi, Hossein; Hussain, Athar; Maury Fernandez, Diana C; Ispas, Ion; henderson, Steven K; Watson, Marshall</p>	<p>Waziri, Sohail*; ren, guotong; Tomin, Pavel; Guyaguler, Baris</p>	<p>Huang, Yize*; Elsworth, Derek; Li, Xizhe; Hu, Hu; Wu, Zhenkai; Guo, Qimin; Pei, XiangYang</p>	<p>Lee, Gyung Won; Yun, Seo Hyeon; Diaz, Melvin B; Kim, Minseop; Kim, Jin Seop; Lee, Chang Soo; Kim, Kwang Yeom*</p>
	<p>142 - Stability study of tight sandstone reservoirs during CO₂ dynamic storage process</p>	<p>400 - Damage evolution of sandstone under cyclic loading for underground gas storage</p>	<p>584 - An investigation of fault geometric effects on fault activation mechanisms in CO₂ storage</p>	<p>800 - Understanding Cement Hydration in CO₂ Reservoirs: Geochemical Modeling in the Powder River Basin</p>	<p>1110 - Thermodynamic modelling of carbonation of blended cements for wellbore integrity</p>
<p>He, Yuting*; Liu, Yuetian; Wang, Jingru; jingpeng, li; Zhang, Bo; Chai, Rukuan; Fan, Pingtian</p>	<p>Zhang, Wenhong*; Tian, Shouceng; Weng, Jintao *; Sheng, Mao; Wang, Tianyu; Ma, Zhengchao</p>	<p>Mortazavi, Ali*; Maratov, Torekeldi</p>	<p>Allam, Lotfi MY*; Malki, Mohamed Lamine; Mellal, Ilyas; Kolla, Nazia; Rasouli, Vamegh; Dehdouh, Abdesselem; Abdelhamid, Cilia</p>	<p>Rahman, Farzana*; Ferron, Raissa Douglas</p>	
<p>162 - Fracture Characteristics of Shale: Unraveling CO₂-Driven Mechanical Metamorphosis at Microscale</p>	<p>409 - Determination of Thermo-mechanical Coal Deformations and Implication for CO₂ Storage in Deep Coal Formations</p>	<p>650 - A Feasibility Study on the Pressure Monitoring Above the Injection Zone for CO₂ Geological Storage in the Uinta Basin, USA.</p>	<p>844 - Wavelet Transform and Hidden Markov Model Application for Unsupervised Clustering of Microseismic Events from CO₂ Injection</p>	<p>1159 - Estimating Pressure and Fronts in Underground Storage through Tilt Data Inverse Modelling</p>	
<p>Mahgoub, Samah A.*; Abedi, Sara</p>	<p>Zhang, Kunming; Liu, Shimin*</p>	<p>Bakelli, Omar*; Xiao, Ting; McPherson, Brian; Vega, Carlos; Moodie, Nathan; chellal, hichem aymene; Mellal, Ilyas</p>	<p>Willis, Rachel M*; Yoon, Hongkyu; Harding, Jenny</p>	<p>Abdollahi, Reza*; Movassagh, Abbas; Kasperczyk, Dane; Haghighi, Manouchehr</p>	

<p>Storage & Sequestration</p>	<p>210 - Effects of fracture network distribution on lined rock caverns subject to high internal gas pressure</p> <p>Zhao, Chenxi; Lei, Qinghua*; Zhang, Zixin</p>	<p>446 - Multiphase hydraulic properties of reservoir rock in geologic H2 storage</p> <p>Kim, Hyunbin*; Bondarenko, Nikita; Ding, Shirui; Makhnenko, Roman</p>	<p>681 - Continuous in situ characterization by AFM of surface mechanical and electrical features of shale organic matter under different atmospheres</p> <p>Kang, Ying*; Ning, Zhengfu; Lyu, Fangtao; Jia, Zejiang</p>	<p>868 - Numerical evaluation of viscous fingering behavior during underground hydrogen storage in saline aquifers</p> <p>Cunqi, Jia*; Hu, Jinchuan; Sepehrnoori, Kamy</p>	<p>1180 - Experimental Study on the Corrosion Behavior of Casing Steels under Oilfield Wastewater ReInjection</p> <p>Wang, Yangang*; Feng, Yongcun; Li, Saxing; Yu, Bo</p>
<p>Geothermal</p>	<p>177 - Maximizing Geothermal Energy Recovery from Enhanced Geothermal Systems through Huff-and-Puff: A Comprehensive Simulation Study</p> <p>Sekar, Lokesh; Okoroafor, Esuru R*</p>	<p>504 - Feasibility of Repurposing Oil and Gas Wells for Geothermal Energy Production in Wyoming, USA.</p> <p>Latrach, Abdeldjalil*; Dehdouh, Abdesselem; Abdelhamid, Cilia; Mellal, Ilyas; Rabiei, Minou</p>	<p>647 - Fracture Initiation and Propagation Characteristics of SC-CO2 Fracturing in Hot Dry Rock: A Coupled Thermal-Hydraulic-Mechanical-Damage Numerical Model Based on Phase Field Method</p> <p>Zhou, Xiaoxia; Wang, Tianyu*; Ma, Zhengchao; Zhang, xu; Hsu, Maoya; Sun, Yaoyao; Tian, Shouceng</p>	<p>766 - Experimental determination of the fracture toughness of rocks from deep geothermal reservoirs in Bavaria, Germany</p> <p>Drexl, Catharina*; Mattheis, Justin; Thuro, Kuroschi</p>	<p>980 - Molecular Dynamics Modeling of Effects of Water and Temperature on Rock Strength</p> <p>Liu, li; Li, Xinlong; He, Wenhao*; Zhang, Runqing; Fan, Gaojian; Ji, Ran; Shi, Huaizhong; Xiong, Chao</p>
	<p>261 - Methodology for Constructing Three-Dimensional DEM Model of Rock Specimen from CT Scan</p> <p>He, Changdi*; Mishra, Brijes</p>	<p>579 - Enhanced Geothermal Site Characterization using Generative Adversarial Network and Ensemble Method</p> <p>Bao, Jichao; Lee, Jonghyun; Yoon, Hongkyu*</p>	<p>686 - Fluid Injection-Rate Controls on Seismic Moment</p> <p>Roseboom, Matthew*; Eijsink, Agathe M; Elsworth, Derek; Yu, Jiayi; Marone, Chris ; Rivière, Jacques; Shokouhi, Parisa; Wang, Junpeng</p>	<p>858 - Analysis of the Deadwood Formation in North Dakota: Applying Rock Physics</p> <p>Alamooti, Moones*; Namie, Shane</p>	<p>1015 - Study of High-Temperature Hot Dry Rock Fracture Features under True Triaxial Stress with Supercritical CO2 Fracturing</p> <p>Fan, Xuhao; Wang, Haizhu*; Liu, Mingsheng; Wang, Bin; Zhang, YaoChen; Mao, Zelong; Zhang, Guo Xin; Stanchits, Sergey; Cheremisin, Alexey</p>

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	<p>Han, Kyungsoo*; Pyrak-Nolte, Laura; Bobet, Antonio</p>	<p>Christoforidou, Eirini*; Bobet, Antonio; Pyrak-Nolte, Laura</p>	<p>Li, Kun; Sun, Zhaowei; Wang, Zikang Wang; Wu, Xiaoguang*; Wang, XiangYang; Ye, Shanlin; Liu, Muchen</p>	<p>Dehdouh, Abdesselem*; Bettir, Nassima; Mellal, Ilyas; Abdelhamid, Cilia; Allam, Lotfi MY; Rasouli, Vamegh; gyimah, emmanuel</p>	<p>Mindygaliyeva, Balnur*</p>
<p style="text-align: center;">Petroleum Conventional</p>	<p>86 - Research on the cuttings transport in large-sized hole based on CFD-DEM method</p>	<p>184 - Deformation and failure mechanism of ultra-deep dolomite and FDEM numerical simulation</p>	<p>322 - Evaluation of mechanical properties of heavy oil thermal recovery pipe strings in multi-component thermal fluid corrosive environment</p>	<p>408 - Decomposition of rock deformation during proppant embedment</p>	<p>1040 - The Perlite Usage in High Density Oil-Well Cement</p>
	<p>Zhao, Jun*; Huang, Wenjun; Deli, Gao</p>	<p>Li, Hongda hong*; Lu, Yunhu; Li, Ji; Zeng, Ping; Fu, Xing</p>	<p>Weng, Jintao **; Tian, Shouceng; Tian, Kangjian; Wang, Tianyu; Tan, Yawen; Zhang, Wenhong</p>	<p>Li, YaoYang*; Zhang, Guangqing; Xie, Pengxu; Wang, Jue</p>	<p>Ahmed, Abdulmalek*; Ali, Ahmed ; Elkatatny, Salaheldin</p>
	<p>87 - Numerical simulation of enhancing coalbed methane recovery by RF heating with small spacing well pattern</p>	<p>254 - Real-Time Distributed Fiber Optic Sensing for Cement Sheath Integrity Monitoring</p>	<p>332 - Study on the influence mechanism of the absence cement sheath in salt-gypsum layer on casing</p>	<p>581 - Comparative analysis of critical bond strength parameters of neat Class G cement and fly ash enhanced cement to steel</p>	<p>1056 - Review of Remedial Cementing: Factors, Design Considerations, and Case Studies</p>
	<p>Liu, Rui*; Dong, xuelin; Gao, Deli</p>	<p>Su, Feiyu*; Feng, Yongcun; Li, Xiaorong; Li, Saxing</p>	<p>Zhu, Mingchi*; Chen, Xuyue</p>	<p>Potter, Corey M*; Meng, Meng; Eckert, Andreas; Zhang, Weicheng; Jones, Joshua</p>	<p>Youssef, Amir*; Mahmoud, Ahmed Abdulhamid; Elkatatny, Salaheldin</p>

Petroleum Conventional	88 - Dynamic response and fatigue analysis of the Steel Catenary Riser carrying slug flow based on VFIFE method	282 - Kick Warning and Pressure Inversion Method Based on Wellhead Pressure Signal	335 - Numerical analysis for mechanical integrity of oval shape wellbore in creep formation	735 - Dual-Target Predictive Intelligence Model for Predicting D90 Particle Size and Total Concentration of Lost Circulation Materials	1059 - Real-Time Rate of Penetration Prediction for Motorized Bottom Hole Assembly Using Artificial Intelligence
	Zhang, Guangrui*; Wang, Yanbin; Gao, Deli	Duan, Shiming*; Song, xianzhi; Yao, Xuezhe; Xu, Zhengming; Zhou, MengMeng; Zhu, Zhaopeng; Cui, Yueqi	Zhu, Mingchi*; Chen, Xuyue	Shang, Guanyi*; Yang, heng; Feng, Yongcun; Li, Xiaorong	Youssef, Amir*; Elkatatny, Salaheldin; Abdurraheem, Abdulaziz; Rahmatullah, Idham Kholid
Petroleum Unconventional	49 - Physical Simulation Experiment Research for Hydraulic Fracturing in Tight Sandstone Reservoir under Different Stress Conditions and Nature Fracture Combinations	224 - Analysis of the influence of defective cement ring on casing stress during CO2 geological storage	562 - Fracture Morphology in Glutenite Reservoirs Stimulated by Radial Borehole Fracturing	738 - Study on the influencing factors of matrix acidification effect in carbonate reservoir	880 - Numerical research of fracture initiation in hydrate reservoirs based on XFEM
	Fan, Pingtian; Liu, Yuetian; lin, Ziyu*; Wang, Jingru; He, Yuting; Zhang, Bowei	Li, Hui*; Li, Jun; Shan, Liping; Liu, Jinlu; Zhao, Xing	Yong, Yuning*; Tian, Shouceng; Guo, Zhaoquan; Wang, Tianyu; Wei, Chengxiang; Zhai, Jiaheng; Sheng, Mao	Zhang, Liangjun*; Xu, Hualei; Kangjia, Zhao; Wang, Jie; Jiang, Houshun	Wang, jinshan Z; Zhang, Yiqun*; Hui, Chengyu; Ren, Yingqiao; Cui, Xu; Jiang, Yiquan; An, Youkeren; Huang, Haochen

<p style="text-align: center;">Petroleum Unconventional</p>	<p>69 - Proppant Migration and Distribution Simulation in Tortuous Fractures with Gradually Narrowing Walls</p>	<p>232 - Experimental study on interaction behavior between caves and acid fractures in fractured-vuggy carbonate rock</p>	<p>563 - Coupled Thermo-Hydro-Mechano-Damage finite element analysis of hydraulic fracturing considering grain boundary weakness and fluid-rock heat transfer</p>	<p>754 - Study on rock mechanics microscopic heterogeneity characterization, fracture propagation simulation and Frac-ability prediction of complex mode conglomerate in Mahu Block</p>	<p>886 - Study on the Mechanism of Wellbore Instability in Complex Shale Formations Considering Fault Influence: A Case Study of Fushan Oilfield</p>
	<p>Yan, Pengyin*; Wang, Zhiming</p>	<p>Zheng, Zhenquan*; Hou, Bing; Zhao, Zhiqiang</p>	<p>Ikeda, Shotaro*; Ogata, Sho; Yasuhara, Hideaki; Kishida, Kiyoshi</p>	<p>Liu, ShiKang*; Zou, Yushi; Zhang, Shicheng; Ma, XinFang; Zhang, Zhaopeng; Zhang, Xiaohuan; Li, liu; Zhao, Ziwen</p>	<p>Yu, Xing*; Wang, Haizhu; Huang, Qirui; liang, Tongyao; Wang, Bin; Stanchits, Sergey; Cheremisin, Alexey ; Fan, Xuhao; Zhang, Yunpeng</p>
	<p>70 - Four-dimensional stress evolution and optimization of child well fracturing parameters in multi sub-layers shale gas reservoir</p>	<p>347 - Experimental study on the size effect of fracture process zone of mixed mode I-II crack in sandstone</p>	<p>596 - Characterization of non-uniform propped fractures and critical aperture strain caused by the stresses in conglomerate reservoir</p>	<p>781 - Correlations between microscale dimensions and elastic Anisotropy in Shale</p>	<p>898 - Numerical Simulation of Hydraulic Fracture Vertical Propagation in Bedded Shale by Phase-Field Method</p>
	<p>Yang, Haixin*; Tang, Xuanhe; Zhu, Haiyan</p>	<p>Sun, Bin*; Zhang, Guangqing; Luo, Senlin; Cai, Dingshan; lin, Yansen; Zhou, Dawei</p>	<p>Du, Buge B*; Zhang, Guangqing; Liu, Kaixin; Wang, Xiaohan; Xu, Changzhuo</p>	<p>Zhu, Junfeng*; Zhang, Guangqing; Zhang, min</p>	<p>Tian, Ganghua*; Wang, Haizhu; Wang, Bin; shi, mingliang; Zheng, Yong</p>

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<p>76 - Design and application of differential staged fracturing in continental shale oil: A case study of well X from Fuxing area, China</p> <p>Wang, xinliang W; Mou, jianye; Gao, budong; Zhang, lufeng*</p>	<p>383 - The Impact of Bedding Plane Density on the Hydraulic Fracture Vertical Propagation and the Near-wellbore Fracture Patterns in Shale Oil Reservoirs</p> <p>Zhu, DanYang*; Mou, Jianye; Zou, Yushi; Zhang, Shicheng; Zhou, Xuehe; Zhang, Xiaohuan; Zhao, Ziwen</p>	<p>633 - Numerical simulation of gas leakage during Controlled Retracting Injection Point process for Underground Coal Gasification</p> <p>Wang, Tianduoyi*; Shi, Juntai; Wu, Keliu; Chen , Zhangxin</p>	<p>787 - Study on stress sensitivity damage evaluation in tight low-permeability gas reservoirs</p> <p>Yu, Xing*; Wang, Haizhu; Zhu, Qingjiangpeng; liang, Tongyao; Huang, Qirui; Wang, Bin; Stanchits, Sergey; Cheremisin, Alexey ; Zhai, hengli</p>	<p>958 - Testing the key fracture mechanical parameters of shale-sand bedding interface by digital image method</p> <p>Xiong, Dong*; Ma, XinFang; Zhang, Shicheng; Yang, Huanqiang; Zhu, Jian; Zhang, Xiaohuan; Li, liu</p>
<p>100 - Numerical simulation of flow field and erosion characteristics in hydraulic fracturing tool</p> <p>Song, Xianzhi; Cui, Yueqi*; Zhou, MengMeng; Xu, Zhengming; Zhu, Zhaopeng; Li, Gensheng</p>	<p>393 - Simulation of Elastic Waves Transmission and Attenuation Considering Fluids Properties Change and Radiator of Branches Well</p> <p>Tan, Yawen*; Tian, Shouceng; Zhang, Yiqun; Wang, Tianyu; Wang, Fei</p>	<p>634 - Modeling of immiscible fluid flow in mixed-wetted porous media using the lattice Boltzmann method</p> <p>Zhang, Shengting; Li, Jing; Wang, Tianduoyi*; Zhu, Qingyuan; Wu, Keliu; Chen , Zhangxin</p>	<p>855 - High-precision Triple Multiscale Model Characterizes The Complex Pore-fracture System Of Continental Shale Reservoir</p> <p>Li, Haoyu*; Wang, Wendong; Su, Yuliang; Deng, Yuxuan; Li, Dongxia; Li, Lei; Hao, Yongmao</p>	<p>986 - Research on the Characteristics of Supercritical CO2 Shock Fracturing Flow Field Based on Numerical Simulation</p> <p>Zeng, Changhui*; Mu, Zongjie; Wang, Haizhu; Xu, Chuanyou; Yi, Yonggang; Stanchits, Sergey; Cheremisin, Alexey ; Popov, Yury</p>
<p>201 - Study on microscopic pore-fracture structure of metamorphic buried hill reservoirs</p> <p>Wang, Xifeng*; Huang, Shijun; Zhao, Fenglan; Liu, Xirong</p>	<p>483 - Experimental study on the formation mechanism of complex fracture network during supercritical CO2 fracturing in Jimsar oil field</p> <p>Li, Lizhe*; Hu, Longqiao; Tang, Weiyu; Hou, Xiaoyu; Wang, Bo; Zhou, Fujian</p>	<p>719 - Simulating Cyclic Hydraulic Injection-Induced Fatigue with an Improved Discrete Element Method Model</p> <p>Xia, Chang*; Zhao, Qi</p>	<p>861 - Study on Fracture Propagation Law of Cement Sheath Interface during Fracturing Process</p> <p>Lai, Chenxi*; Feng, Yongcun; Su, Feiyu; Gu, Chenwang; Li, Xiaorong</p>	<p>1125 - Foam-Based Hydraulic Fracturing From Lab to Field Applications: A Brief Review</p> <p>Abdelaal, Ahmed*; Saleh Aljawad, Murtada; Al-Shehri, Dhafer</p>

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	Li, Hui*; Li, Jun; Shan, Liping; Liu, Jinlu	Wang, Zhiwei*; Sheng, Mao; Ren, Lejia; Deng, Chao; Wang, Bo; Wang, Jia	Kangjia, Zhao*; Jie, Wang; Hualei, Xu; Houshun, Jiang	Wu, Hua*; Wang, Xiaoqiong; Ge, Hongkui; Song, Jiaxin; Hou, ShuoYang; He, Jixiang; Wang, Zhenyu	Rahmani, Fereshteh; Espinoza, Wilson*

**Tuesday (June 25), 4:30 pm - 5:30 pm
Green Center - Friedhoff Hall**

Civil Track	181 - Damage mechanism and parameter optimization of rock mass blasting under high in-situ stress	488 - Numerical Stress Computation Around Cavity using Boundary Element Method for Elastic Material	692 - Computational-Rock Mechanics in Pedagogy and Practice for Engineering Geology Applications	899 - Analysis of convergence confinement of circular tunnel by supporting elements using elasto-plastic solution of ground	1033 - Characterization of geotechnical properties of Phnom Penh bedrock: case study in Chrouy Chongvar and Dangkao districts
	Zhang, Xin*; Xia, Xiang; Li, Haibo; Fu, ShuaiYang	Habibi Babadi, Ahmadreza*	Kayen, Robert*; Russo, Brittany	Nishimura, Tsuyoshi*; Kohno, Masanori; Kawasaki, Takumi; Kimura, Koutaro	Boeut, Sophea*; Fujii, Yoshiaki; Sieng, Peou; Kaing, Sainglong; Badrul Alam, A. K. M.; Dzimunya, Nevaïd Z; Oudom, Sokly; Boeut, Sopak
	265 - A Discussion of Traditional Rock Slope Stability Analysis Methods with a Technical Evaluation of a Former Quarry Site in Jessup, Pennsylvania	668 - An analytical Solution for Deep Circular Tunnels in Rock Based on GZZ Criterion	780 - An Ontology of Risk Management for Tunnel Construction	1024 - Rockfall Occurrence and Precipitation Modeling to Simulate Correlation Patterns	1198 - Design And Implementation of Innovative, Openable, In-Trench Rockfall Catchment Fences for Improvement of Worker Safety in Steep Slope Pipeline Construction
	Fleischer, Noah*; Thomas, R. Drew	Chen, Haohua*; Zhu, hehua; Zhang, LianYang	Xue, Yadong; Hou, YingCai*	Williams, Frances A*; Walton, Gabriel	Hajen, Christian; Philip, Lucy*; Gesche, Jayden; Burgin, Andrew; Nichols, John; Bichler, Ahren

<p>Civil Track</p>	<p>470 - Influence of specimen shape on new simple shear test using rock prism specimen Sato, Ikuri*; Togashi, Yota; Kotabe, Haruhiko; Hatakeyama, Ken; Osada, Masahiko</p> <p>220 - CFD Simulation to Study the Grouting Behavior in Rough-Walled Fractures Miyoshi, Takako*; Yasuhara, Hideaki; Kishida, Kiyoshi</p>				
<p>Mining</p>	<p>43 - A Numerical Solution to the Flow-Induced Vibration of a Hanging String in a Storage Cavern Chieslar, Jack D*</p>	<p>357 - A brief description about all the steps related to the development of lattice-based synthetic rock mass (LS-SRM) for slope stability analysis. Paganin Neto, Miguel*; lima Rasmussen, Leandro</p>	<p>554 - Tackling Data-limited Rock Mechanics Models Maleki, Hamid*</p>	<p>775 - Axial stiffness evolution of rock observed during uniaxial and triaxial compression strength tests Gaines, Steven*; Diederichs, Mark S</p>	<p>982 - Appraisal of Boreability Characteristics of Rocks to Estimate the TBM Advancement Yagiz, Saffet*; Yazitova, Aitolkyn; Smirnov, Gleb; Hassanpour, Jafar; Thyagarajan, Vinayak</p>
	<p>44 - Sonar Surveys/Nurb-Surfaces/Adaptive, Body-Fitted Meshing for Large-Scale Modeling of Multiple Solution Mines Chieslar, Jack D*</p>	<p>360 - A Comparative Study of Preparation Methods, Weighting Agents, and Temperature on Quality of Imaging Fluid in Near Borehole Imaging Technology Abbasian, Leila*; Akindele, Oluwatimilehin Mary; Abugarara, Abdelsalam N.A.; Butt, Stephen</p>	<p>558 - Case Study: Investigation, Analysis and Mitigation of Rock Instability for a Potential Slope Failure in Highly Weathered Granite at Pinto Valley Mine in Arizona Ureel, Scott*</p>	<p>801 - Thembelani and Khuseleka Mines in the Bushveld Igneous Complex's Western limb in South Africa Masethe, Richard RT*; Durapraj, Shane; Adoko, Amoussou; Ngwenya, Mbulelo; Zvarivadza, Tawanda; Modika, Moses</p>	<p>1009 - Assessing the variability in direct shear testing interpretation for sets of natural fractures Franco M, Maria A*; Potter, Julia; Meyer, Benjamin J</p>

Mining	<p>54 - Proactive Identification of Adverse Geological Structure in a Deep Mine Environment</p> <p>Hall, Alex K*; Simser, Brad; Marshfield, Stephen; Howell, Lloyd; Cai, Ming; lindsay, Jared</p>	<p>438 - Intact rock properties of the Rotonda Granite for the PRECODE Project in the BedrettoLab</p> <p>Perras, Matthew*; Golabchi, Yousef; Bahrani, Navid; Hamdi, Pooya; Amann, Florian</p>	<p>582 - Analyzing the effect of bolt spacing on coal rib stability through numerical simulation</p> <p>Xue, Yuting*; Mohamed, Khaled M</p>	<p>835 - Chipping mechanisms in rotary-percussive drilling: Experimental insights into the role of the median crack as precursor of the dynamic fragmentation process.</p> <p>Aising, Jorge*; Gerbaud, Laurent; Sellami, hedi; Sénéchal, Pascale ; Moonen, Peter ; Ugarte, Ignacio</p>	<p>1069 - Methodology Development to incorporate anisotropy in slope stability analysis at Los Bronces mine®</p> <p>Cordova, Manuela *; Vallejos, Javier; Velasquez, Jorge i</p>
	<p>71 - Experimental and numerical investigations into fracturing process of brittle rocks</p> <p>Khadivi, Babak*; Masoumi, Hossein T</p>	<p>481 - Integrating stress fracturing and bulking monitoring for deformation-based ground support design calibration in a deep caving operation</p> <p>Primadiansyah, Avesiena A*; Eberhardt, Erik; Campbell, Ryan; Firmanulhaq, Sandi; Silaen, hendri; Perdana, Anton</p>	<p>670 - Geotechnical Hazards in Deep Mines: Case Studies of Seismicity and Boundaries Changes</p> <p>Masethe, Richard RT*; Leite, Ana RS; Landry, Dave</p>	<p>864 - Numerical Simulation of Toppling Failure in Sedimentary Rock Slope Cuts with Alternating Soft and Hard Bands</p> <p>Ashraf , Mohsin; Emad, Muhammad; Waqas, Muhammad*; Moazzam, Hamza</p>	<p>1083 - Numerical analysis for the design assessment of underground mine operations</p> <p>Cammarata, Giuseppe*; Bui, Tuan Anh; Brasile, Sandro</p>
	<p>85 - A comprehensive comparison between discrete fracture network and generalized anisotropic material behavior for modeling jointed rock mass</p> <p>Ko, Byung Hun*; Moallemi, Sina; Dang, Kien; Yacoub, Thamer</p>	<p>500 - Analysis of Rockfall Risk Using Image Analysis and Data-Driven Models</p> <p>Ghahramanieisalou, Milad*; Sattarvand, Javad; Peik, Bijan; Battulwar, Rushikesh; Abbasi, Behrooz</p>	<p>684 - Effect of Cyclic Freezing and Thawing on Permeability and Mechanical Properties of Red Sandstone under Triaxial Compression Condition</p> <p>Liu, Bo; He, Yanqing*; Han, Yanhui; Li, Wenhao; Zeng, Jingyuan</p>	<p>867 - Examining the Anisotropic Strength of Plain and Steel Fiber Reinforced Shotcrete</p> <p>Khan, Muhammad; Waqas, Muhammad*; Emad, Muhammad; Tahir, Muhammad</p>	<p>1114 - Development of Chilean open stope empirical stability database using MineRoc and their comparison with literature</p> <p>Vallejos, Javier; Retamal, Felipe; Barberan, Antonio; Velasquez, Jorge i*</p>

<p style="text-align: center;">Mining</p>	<p>152 - Probabilistic Slope Stability Analysis Based on the Modified Stability Graph</p> <p>de Préval, Cyrille*; Ouellet, Amélie; Andrieux, Patrick</p>				
<p style="text-align: center;">Interdisciplinary</p>	<p>35 - An Innovative Combination of Scratch Test and Weibull's Statistical Fracture Theory</p> <p>Zhang, Yazhou*; Jin, Yan; Sun, Xiuxia; Zeng, Ping</p>	<p>287 - Characterization of the accuracy by AIC picking and manual picking with the decaying of event magnitude</p> <p>Kong, Dekai; Wang, Chengyu; Lin, Qing; Xiong, Qiquan*; Knippel, Erik P; Hampton, Jesse</p>	<p>635 - Correlation of Static and Dynamic Mechanical Properties of Australian Sedimentary Rocks</p> <p>Li, Jimmy Xuekai; Chen, Shuai; Flottmann, Thomas; Huang, Yixiao; Saber, ErFan; Chen, Zhongwei*; Qian, Sijin</p>	<p>952 - Where does the energy go in percussion drilling? FDEM's answer</p> <p>Yang, Xiaowei*; Xiang, Jiansheng; Naderi, Sadjad; Wang, Yanghua; Aising, Jorge; Ugarte, Ignacio; Gerbaud, Laurent; Latham, John-Paul</p>	<p>1029 - Application of Machine Learning Algorithms for Minerals Volume Prediction in Unconventional Reservoirs Using Conventional Well Logs</p> <p>Bettir, Nassima*; Mellal, Ilyas; Dehdouh, Abdesselem; Rabiei, Minou; Malki, Mohamed Lamine; Allam, Lotfi MY</p>
	<p>161 - A review of the anelastic strain recovery (ASR) technique for in-situ stress measurements: A suggested test protocol and further challenges</p> <p>Lin, Weiren*; Sakai, Yuhi; Kamiya, Nana; Cao, Yupeng; Ishitsuka, Kazuya; Sun, Dongsheng; Zhang, Chongyuan; Nagano, Yu</p>	<p>486 - Thermal-mechanical-chemical coupling analysis of coal rock in underground pyrolysis conversion</p> <p>Xue, Junjie; Chen, Yanpeng; Zhao, Yufeng; Dong, Zhen*; Chen, Hao; Zhang, Mengyuan; Zhang, Mengyuan</p>	<p>697 - Coupling between weathering and fracture: finite element modeling of granite weathering using cohesive elements</p> <p>Xu, Tingting*; Arson, Chloe</p>	<p>1005 - Destruction of Rock Microstructure: an Experimental and Numerical Modelling Study of High-Pressure Water Jet Rock Cutting under Subsurface Confining Pressure Conditions</p> <p>Xiang, Jiansheng; Naderi, Sadjad; Gerbaud, Laurent; Velmurugan, Naveen; Sellami, hedi; Latham, John-Paul*</p>	<p>1085 - Improved Shale Volume Prediction Using Machine Learning Algorithms in Complex Reservoirs</p> <p>Bettir, Nassima*; Dehdouh, Abdesselem; Mellal, Ilyas; Kareb, Ahmed; Rabiei, Minou</p>

<p style="text-align: center;">Interdisciplinary</p>	<p>277 - Hyperparameter tuning of an artificial neural network (ANN) for laboratory acoustic emission source location</p> <p>Xiong, Qiquan*; Johnson, Ellie; Wu, Chao-sheng; Hampton, Jesse</p>	<p>510 - Study of the stress state around dynamically pressurized underground cavities in porous saturated rock formations and its implication for the fracture growth analysis</p> <p>Vorobiev, Oleg*; Ezzedine, Souheil</p>	<p>782 - Elastic wave behaviors across rocks subjected to cyclic tensile loads</p> <p>Yang, Hui; Han, Dongya; Wu, Shan; Zhao, Qi*</p>	<p>721 - Measurement of Crack Tip Opening Displacement and Strain fields using Global Digital Image Correlation (DIC)</p> <p>Bhandari, Tushar*; Deb, Debasis</p>	
<p style="text-align: center;">Storage & Sequestration</p>	<p>21 - Geomechanical Analysis of Caprock Integrity and Fault stability for Greensand CO2 Storage Project Feasibility</p> <p>Younessi, Ahmadreza*; Kaarstad, Eirik; Basu, Prमित; Larsen, Michael; Burachok, Oleksandr</p>	<p>352 - Experimental study on shale mechanical properties interacted with supercritical carbon dioxide and brine</p> <p>Feng, Jie; Ma, Tianshou*; Liu, Yang</p>	<p>557 - Unveiling the invisible: mapping basement faults using microseismic clouds</p> <p>Wang, Chaoyi*; Sherman, Christopher S; Kroll, Kayla; Glubokovskikh, Stanislav; Alumbaugh, David; Morris, Joseph</p>	<p>741 - Evaluation of Gas Flooding Effect in Mahu Tight Sandstone Reservoir</p> <p>Zhao, Ziwen*; Zhang, Shicheng; Zou, Yushi; Zhang, Xiaohuan; Zhu, DanYang; Liu, ShiKang; Yang, Peng; Li, liu</p>	<p>944 - Well integrity analysis during CO2 injection in a depleted chalk field</p> <p>Amour, Frederic*; Hosseinzadehsadati, Seyedbehzad; Hajiabadi, Mohammad Reza; Nick, Hamid M.</p>
	<p>89 - Experimental and numerical validation of cooling-induced stress change within a caprock shale – seal integrity insights from the Northern lights CCS project</p> <p>Thompson, Nicholas*; Griffiths, Luke; Bjørnarå, Tore Ingvald; Andrews, Jamie S; Smith, Halvard</p>	<p>457 - Consolidation behaviours of clays, mudstones and shales -CO2 storage sites in Horda Platform, offshore Norway</p> <p>Grande, Lars*; Skurtveit, Elin; Choi, Jung Chan; Mondol, Nazmul; Thompson, Nicholas</p>	<p>565 - Fault leakage risk assessment via coupled probabilistic modelling during CO2 sequestration</p> <p>Sorgi, Claudia*; Welsh, Pete; De Gennaro, Vincenzo</p>	<p>819 - Fully coupled thermal-hydro-mechanical model for SC-CO2 storage in shale gas reservoirs</p> <p>Tian, Jianwei*; Zeng, Jie ; Sun, Yingfeng</p>	<p>951 - Investigating leakage pathways in Diatomite Formations: A Study of Overburden Dynamics and Fracture Networks in Hydrocarbon Fields.</p> <p>Hajiabadi, Mohammad Reza*; Nick, Hamidreza</p>

Storage & Sequestration	202 - De-risking stress testing operations and maximizing injection longevity	476 - Injection from well experiments in axisymmetric triaxial cells: example of hydraulic fracturing	577 - Crystallization Pressure and Reaction-Induced Cracking in Olivine Carbonation: Insights from Etch Pit Analysis	841 - Cracking behaviour of mineralised fractures under direct-shear	1026 - Investigating the effect of Fault Presence on the Feasibility and limitation of Above Cap Rock Pressure Monitoring in the Inyan Kara, North Dakota
	Karpfinger, Florian*; Donald, John A; Gisolf, Adriaan; Diaz Granados, Ivan; Velez, Edgar I; Schlicht, Peter	Kovalyshen, Yevhen*; Dautriat, Jeremie; Kiewiet, Leigh; Sarout, Joel; Maney, Bruce; Kager, Shane; Penny, Ian	Lyare, Uwaila C*; Li, Wenfeng; Neil, Chelsea; Boampong, Lawrence; Meng, Meng; Frash, Luke; Carey, Bill; Detournay, Emmanuel; Viswanathan, Hari	Kong, Lie*; Shang, Junlong	Chellal, Hichem Aymene*; Malki, Mohamed Lamine; Egenhoff, Sven
	259 - SOSAT: Geohazard Risk Assessment in Carbon Sequestration Operations	521 - Numerical Simulation of Long-term Stability of Irregular Underground Salt Caverns under Alternating Loads	709 - Exploring the Potential and Geomechanical Implications of Underground Hydrogen Storage in the Broom Creek Saline Aquifer	891 - Evaluating Geological Seals for Underground Hydrogen Storage: A Comprehensive Assessment.	1086 - Coupled Reservoir-Geomechanics Simulation of CO2 Storage at the Wyoming CarbonSAFE Storage Hub
	Haagenson, Ryan*; Burghardt, Jeff; Wang, Wenjing; Saxena, Swasti; Appriou, Delphine	Chang, Zhi*; Xia, Yan; Kun, Dai; Liu, Tianen; Zhang, Qi; Ban, Fansheng	Laalam, Aimen; Chellal, Hichem Aymene; Khalifa, Houdaifa*; Benarbia, Achouak; Benabid, Mouna-Keltoum; Tomomewo, Olusegun S	Galvis Silva, Henry M*; Okoroafor, Esuru R; Liu, Kai-Wei	Bai, Tao*; Yu, Ying; Li, Peng; Jiao, Zunsheng; Johnson, Matthew; Nye, Charles; McLaughlin, J. Fred; Quillinan, Scott

<p style="text-align: center;">Storage & Sequestration</p>	<p>297 - A Conceptual Subsurface Risk Management and Measurement, Monitoring and Verification Design for an Offshore Carbon Capture and Storage Site in Japan</p> <p>Nii, Kyohei; Nakayama, Shotaro; Ohira, Akane; Ashida, Takafumi; Qiu, Kaibin*; Lee, Haeseon; Wada, Naoya ; Yamabe, Hirotatsu</p>				
<p style="text-align: center;">Geothermal</p>	<p>119 - A Wellbore-reservoir coupled model and its application in Sand Production Prediction during Sandstone Geothermal Exploitation</p> <p>Zeng, Hao; An, Youkeren; Liu, Jinjian; Zhang, Yiqun*; Khanjar, Hasan; Jin, Yan</p>	<p>206 - Uncovering the influence of divalent ions on the reinjection of deep geothermal sandstone reservoirs: A case from Guanzhong Basin in China</p> <p>Zhang, Wentong*; Huang, Hai; Shang, Xiongtao; Luo, Weiyun; Gao, Qian; Zhang, Jiahui; Li, Xinru</p>	<p>303 - Structural deformation characteristics and geological significance of the Mesoproterozoic augen granite gneiss in Hainan Island, China</p> <p>Feng, Jianyun*; Yun, Xiaorui; Luo, Jun; Zhang, Ying; Zhang, Le; Zeng, Yan; liao, Dawei; Zhang, Qiaoxun</p>	<p>497 - Laboratory Demonstration of Fracture Caging in a Fault with Calibrated Seismic Monitoring</p> <p>Madenova, Yerkezhan*; Li, Wenfeng; Meng, Meng; K C, Bijay; Hampton, Jesse; Frash, Luke</p>	<p>831 - Design of a Meso-Scale Test of a Fracture Thermal Energy Storage (FTES) System</p> <p>Burghardt, Jeff*; Lecampion, Brice; Möri, Andreas; linneman, Dory; Fichera, Marissa</p>

Geothermal	165 - Granite rock mass identification and geothermal well location deployment based on the wide field electromagnetic method: a case study of Sanshui Basin	217 - Geothermal Resource Evaluation Based on Geological Modeling in Fushan Sag, Beibuwan Basin	467 – Laboratory strategies to evaluate enhanced geothermal systems (EGS) in scale model experiments	537 - Anelastic Strain Recovery (ASR) as a measure of in situ stresses at FORGE	1130 - Electrical Resistivity Tomography based monitoring of stress perturbations to optimize placement of high-precision strain meters
	Zhang, Qiaoxun*; Zhang, Ying; Feng, Jianyun; Luo, Jun	Yun, Xiaorui*; Feng, Jianyun; Zhang, Ying; Zeng, Yan	Villaquiran, Ana P*; Opperman, Nate; Knippel, Erik P; Sutton, Collin; Xiong, Qiquan; Zahasky, Christopher; Hampton, Jesse	Ingraham, Matthew*; Ghassemi, Ahmad	Johnson, Tim*; Burghardt, Jeff; Hammond, Glenn; Karra, Satish; Jaysaval, Piyoosh; Hyman, Jeffrey ; Rosso, Kevin
	167 - Geological analysis of typical geothermal systems in east of China Feng, Jianyun*; He, Zhiliang; Zhang, Ying; Luo, Jun; Zeng, Yan; Yun, Xiaorui; liao, Dawei				
Petroleum Conventional	28 - Log-Log Analysis for Compaction Damage Evaluation Caused by Pores Collapse in Depletion-Dependent Oil Reservoirs Fernandes, Fernando B*; Carvalho Duarte, Matheus; Braga, Arthur Martins; Gildin, Eduardo	179 - Equivalent circulating density calculation after gas kick considering temperature and pressure Jiang, Zhenxin; Tao, Zhenyu*; Wang, Zheng; Zhang, Wenbo; Liu, Yuhan; Liu, Jitong; Fu, Jing; Fan, Honghai; Sun, LeWang	420 - Triaxial rock deformation cell for inside micro-CT scanner Houben, Maartje*; Coorn, Ab; Van der Linden, Arjan	756 - A Study of the Collapse of Fractured Sandstone Strata Characterized by High In-situ Stress Differences in Deep Formations Xu, Zehao; chen, junlong*	1025 - Research and application of rock mechanics evaluation method for drill cuttings in complex ultra-deep well Chang, Long*; Wang, Haige; Zhuo, Lubin; Hao, Chen

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	<p>Tang, Bin; You, Zhi; Gao, HaiYang; Liu, Sen; Xiao, Guilin; Li, Hongda hong*; Lu, Yunhu</p>	<p>Li, Jia*; Wen, Ming; Jiang, Zeyin; Liu, Shuang; Li, Na</p>	<p>Zhang, Xudong; Zhou, Jun*; Zhou, Zhou</p>	<p>Zhou, MengMeng; Wang, Huanhao; Xiao, Hao; Song, Xianzhi; Qi, Yiqun; Wang, Haobo; Han, Liang; Duan, Shiming; Xu, Zhengming; Zhu, Zhaopeng*</p>	<p>Bhandari, Athma R*; Ewy, Russell; Flemings, Peter; Germaine, John</p>
	<p>97 - A graph-based drained wellbore stability analysis in Mohr-Coulomb rock formation under hydrostatic in situ stress field</p>	<p>355 - In-situ horizontal stress inversion and error analysis based on borehole deformation monitoring</p>	<p>490 - Bentonite Prehydration and its Impact on Cementing Job Execution</p>	<p>884 - Laboratory study of Fracture propagation behaviors in fractured-cavity carbonate reservoirs in Shunbei oilfield</p>	<p>1058 - Numerical approach to evaluate cements sheath barrier during reservoir compactation in vertical oil wells</p>
	<p>Wang, Xu; Chen, Sheng-li*; Han, Yanhui; Abousteiman, Younane</p>	<p>Chen, Jie; Ma, Tianshou*; Liu, Yang; Xu, Wen</p>	<p>Rahmatullah, Idham Kholid*; Mahmoud, Ahmed Abdulhamid; Elkatatny, Salaheldin</p>	<p>Luo, Pandeng; Li, chunyue; Sun, Yaoyao*; Huang, Zhongwei; Wu, Xiaoguang; Zhang, Xu; Yang, Ruiyue; Wang, ZiKang</p>	<p>David, Juan D*; Melo, Daniel; Fontoura, Sergio; Braga, João</p>

Petroleum Conventional	<p>134 - Application of a Modified Warpinski Method for In-Situ Horizontal Stress Prediction Coupled with Thermal Effects-Strain Prediction Coupled with Thermal Effects"</p>	<p>402 - Modeling of Local and Macroscopic In-situ Stresses of Salt Layer in the Tarim Basin</p>	<p>516 - Numerical simulation study on multi-directional etching connection in acid fracturing</p>	<p>901 - Experimental and numerical investigation on the fracture characteristics of different PDC cutters penetrating limestone</p>	<p>1136 - Analysis of influencing factors of fracturing effect based on artificial neural network</p>
	<p>Carvalho Duarte, Matheus*; Bastos Fernandes, Fernando</p>	<p>Sheng, Yong; Li, Ji*; Liu, Huiliang; Luo, Renkun; You, Zhi; Zhan, Qing; Lu, Yunhu; Wei, Shiming</p>	<p>Wang, XiaoYang*; Qin, Qiuping; Zhou, linbo; Huang, Xin; Zhang, Meizhu; Tang, Xuhai</p>	<p>Fu, Xinkang*; Huang, Zhongwei; Zhang, Zhuangz.; Ji, Guodong; Zhang, Jiawei</p>	<p>Lu, Cong*; Sun, Jihong; Li, Ye; Li, Miao; Liu, Jiaqi; Zhu, Qiuyan; Li, Qiuyue; Zeng, Qijun; Wang, Shouxin</p>
	<p>168 - Study on RF heating Mode of heavy Oil Reservoir Rocks Based on Two Antenna Elements Distributed along the Horizontal Well</p>	<p>407 - Analysis of Casing Damage Mechanism of Carboniferous Salt Layer in Tarim Basin</p>	<p>645 - Intelligent Optimization of Water Alternating Gas Flooding with Carbon Dioxide: A Win-Win Strategy for Enhancing Oil Recovery and Carbon Storage</p>	<p>946 - High-Performance lightweight Cements: A Review</p>	<p>1187 - Numerical analysis of dissolution process on the casing design integrity near salt caverns</p>
	<p>Wang, Zhengxu*; Guo, Qingfeng; Cai, Xiao; Zhang, Jingtian; Zhao, Qing; Li, Bo; Chen, Xuefeng; Gao, HaiYang</p>	<p>liang, Hongjun; Huang, Chenxing*; Qin, Hongde; Luo, Renkun; Deng, Qingshan; Lu, Hui; Zhan, Qing; Lu, Yunhu; Wei, Shiming</p>	<p>Zhang, Liang; Deng, Rui; Kang, Bo; Wang, Lian*; Zhao, Xing; Xu, Bing; Jia, Yanran</p>	<p>Matovu, Stewart Peter*; Mahmoud, Ahmed Abdulhamid; Al Shafloot, Talal</p>	<p>Braga, João*; Melo, Daniel; David, Juan D; Fontoura, Sergio; Okama, Charlton; Dias, Rafael</p>
	<p>169 - Modeling Erosion in Hollow Cylinder Tests: The Case of Low Pressure Under Variable Confining Stress Kakonitis, Panayiotis ; Gravanis, Elias; Papaloizou, Loizos; Sarris, Ernestos Nikolas*</p>				

Petroleum Unconventional	<p>52 - Study on the Mechanism of wellbore stability and drilling fluid technology countermeasures in ultra-deep composite salt formations in the Tarim Basin</p>	<p>182 - Study on post-fracturing inter-well interference in deep shale gas</p>	<p>350 - Investigation on the damage mechanisms of unconsolidated sand, tight sand and shale induced by cryogenic temperature</p>	<p>491 - Characterization of Water-Rock Interaction in Water-Sensitive Tight Oil Reservoirs and Its Mitigation Method with Pilot Tests</p>	<p>883 - Non-Darcy coefficient in fractured rocks</p>
	<p>Zhang, Zhen; Fang, Zheng*; Li, Jiabin; Sheng, Yong; Zhou, Bo; Zhao, Li; Lu, Yunhu</p>	<p>Wang, Chen; Zhu, Haiyan*; Tang, Xuanhe; Mingyan, He; Kong, Fansheng; Li, Danlong; He, Xiao; She, Chaoyi; Zheng, Majia; Wu, Jianfa; Zeng, Bo; Huang, Haoyong; Li, Junfeng; Gui, Junchuan; Xu, Ersi</p>	<p>Zheng, Xuelin*; Lu, Mingjing; Wang, Dongying; Qian, Qin; Zhong, Anhai; Zhang, liaoyuan; Yang, Feng; Li, Yuan; Zhang, Yuzhe; Su, Quansheng; Zhou, Dawei; Zhang, min; Zhang, Guangqing</p>	<p>Xie, Bobo; Wang, Bin; Wang, Mingxing; Teng, Jinchi; He, Bingxian; liang, Tianbo*</p>	<p>Cabrera, Daniel*</p>
	<p>57 - Hydration Impact on Pore Structure and Methane Adsorption in the Lower Silurian Longmaxi Shale of the Sichuan Basin</p>	<p>191 - Numerical Simulation of Proppant Transport and Backflow in Unconventional Reservoir Hydraulic Fractures Based on CFD-DEM</p>	<p>362 - Composite proppants sintered from fly ash and their application in fracturing tight oil reservoirs</p>	<p>529 - MultiFracSimPPM: A Data-Driven Probabilistic Predictive Model for Hydraulic Fracture Growth from Uniformly and Non-Uniformly-Spaced Perforation Clusters</p>	<p>906 - lithology Identification of Deep Coal Seam Based on Machine Learning</p>
	<p>Wang, Duo*; Yuan, Hang; Wei, Shuijian; Li, Xiao</p>	<p>Lv, Mingkun*; Guo, Tiankui; Chen, Ming; Jia, Xuliang; Yang, Renjie; Jia, Hui; Qu, Zhanqing</p>	<p>Ren, Hongda; Xu, Fangzhou; Dong, Jingfeng; Wang, Bin; Zhang, Jingchun; liang, Tianbo*</p>	<p>Michael, Andreas*; Kalu, Chukwuemeka; Bouabdallah, Nassim</p>	<p>An, Qi; Li, Yesong*; Liu, Hai; Zhang, Feng; Yang, Qi; Wang, Xin; Li, Xingting; Li, Wei; Li, Hui; Zhou, Fujian; Li, Ben</p>

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Unconventional**

94 - Experimental research on fracture propagation of multi-well pad fracturing based on distributed strain sensing (DSS)

Zhang, Bo; Guo, Tiankui*; Chen, Ming; Qu, Zhanqing; Xue, linrui; Zhang, Yuanhang; Hu, Zunpeng

214 - Simulation study of hydraulic fracturing on deviated well under strike-slip stress regime in Tarim Basin, China

Haifeng, Fu*; Hou, Bing; Zhong, Taixian; Zhao, hexiang; Cai, Bo; Yang, Zhanwei; Wang, liao; Ren, Dengfeng; Huang, Jinhua

374 - Characteristic analysis of flow field and cuttings removal of straight-swirling integrated jet during tubing cleaning

Xiao, Yongjun; Zheng, Jian; Wu, Chunlin; Chen, Zhi; Luo, Xin; Liu, Bingxiao; Ren, Yingqiao*; Huang, Haochen

555 - Quantitative evaluation of controlling factors of nonuniform production in deep shale gas based on optic fiber logging technology

Shao, Sharui*; Hu, Hang; Yang, Zixuan; Tan, Peng

917 - Analysis of sensitivity parameters of crack propagation in deep coal seam and countermeasures of efficient fracturing construction technology

Wu, Jian; Zhou, libo*; Jiang, Yao; Wang, Yun; Yang, Qi; Qian, Chunjiang; Zhang, Cheng; Lv, Ningbo; Li, Hui; Zhou, Fujian; Li, Ben

105 - Development and Validation of a New Wellbore Stability Prediction Model for Complex Reservoirs: Application to the Keshen Gas Field in the Tarim Basin

Liu, Yingjun*; Xian, Chenggang

226 - Feasibility Evaluation of RF heating heavy Oil Reservoir Based on the Interaction Between Rocks and Electromagnetic Waves

Wang, Zhengxu*; Guo, Qingfeng; Cai, Xiao; Zhang, Jingtian; Zhao, Qing; Li, Bo; Chen, Xuefeng; Gao, HaiYang

401 - Numerical Simulation of Fracture Propagation on Proactive Utilization of Stress Interference in the Yingxiangling Shale Oil Reservoir

Chen, Xin*; Xian, Chenggang; Liu, Yunyi; Wan, Youyu

599 - Coupled wellbore-reservoir-geomechanics modeling of parent well depletion-induced stress evolutions and their potential impact on infill well fracturing

Guo, XuYang*; Jin, Yan; Chen, Mian; Song, Hongwei

919 - Feasibility Study of Underbalanced Fishbone Drilling Application for Enhanced Recovery in the Bakken Unconventional Formation

Dehdouh, Abdesselem; Khalifa, Houdaifa*; Kareb, Ahmed ; Bettir, Nassima; Al Krmagi, Mouad

Petroleum Unconventional	<p>126 - Analysis of Production Data from Multi-fractured Shale Gas-condensate Wells Coupled the Microscale Effects of Gas Transport</p>	<p>301 - Development Of Hydraulic Fracturing Evaluation Techniques using Microchip Sensing System</p>	<p>414 - The slipping characteristics of bedding interface under shearing stress in unconventional reservoirs</p>	<p>637 - An efficient complex fracture network inversion method through adaptative particle filter based on quadratic programming for 3D shale oil reservoir</p>	<p>1000 - A Casing Force Prediction Method with A Missing of Cement Sheath Based on Cementing Displacement Efficiency</p>
	<p>Bai, Wenpeng*; Cheng, Shiqing; Cai, Dingning; Guo, Qiao; Guo, XinYang; Wang, Yang</p>	<p>Zhang, Shang; Zheng, Danzhu*; Yu, Mengjiaoq; Jakaria, Md</p>	<p>Chen, Lei*; Li, Fengxia; Huang, Zhiwen; Zhou, Tong; Chen, Shijing; Zhang, min; Zhang, Guangqing</p>	<p>Zhao, Guoxiang*; Lu, Hongjun; Qi, Yin; Ni, Qiang; Chen, Wenbin; Tao, liang; Zhang, Tongwu; Xian, Chen; Adenutsi, Caspar Daniel; Liu, Qi</p>	<p>Liu, Jinlu*; Li, Hui; Li, Jun; Yang, Hongwei</p>
	<p>130 - A Novel Model for Evaluating Temporary Plugging Effectiveness Between Clusters in Shale Gas Horizontal Wells</p>	<p>308 - Investigation on mechanical test and fracture propagation for deep coal</p>	<p>421 - Fracturing Breakthrough and Comprehensive Evaluation of CP1 Well in Yingxiongling Shale Oil Reservoir, Qaidam basin</p>	<p>660 - Dynamic and static Biot's coefficient of transversely isotropic Longmaxi shale</p>	<p>1001 - Study on the fracture propagation mechanism in deep CBM reservoirs</p>
	<p>Zhan, li*; He, Le; Qian, Bin; Guan, Bin; Ren, Yong; Chen, Mingzhong; Qu, Jianfeng; Liu, Yuhao; Zou, Longqing; Zhang, Yao</p>	<p>He, JiaYuan*; Wang, Lei; Li, Danqiong; Wang, xinliangW; Li, Xiaolong</p>	<p>Liu, Yunyi*; Xian, Chenggang; Cao, Wei; Liu, Yang; Chen, Xin; Zhang, MuYang; Wan, Youyu</p>	<p>Jia, lichun*; Deng, Hu; Xu, Qicong; Xu, Wen ; Li, Lei; Li, Luchun</p>	<p>Wei, Shiming*; Shentu, Junjie; Jin, Yan; Chen, Siyuan; Peng, Fen; Gao, Baochao</p>

Petroleum Unconventional	<p>175 - Insights into Fracture Dynamics Through Advanced Coupled Flow and Geomechanics Modeling</p>	<p>346 - 3D fracture propagation simulation of shale oil reservoirs with bedding interfaces and natural fractures development</p>	<p>487 - Influence of Increasing Mean Stress on Rock Fatigue Fracture Characteristics and Failure Mechanism</p>	<p>879 - Sequential propagation of multiple fractures in horizontal wells</p>	<p>1023 - Study on fracture initiation and expansion of coal rock by CO2 foam fracturing</p>
	<p>Pei, Yanli*; Sepehrnoori, Kamy</p>	<p>Wang, HaiYang*; Guo, Tiankui; Chen, Ming; Zhang, Bo; wang, jiwei</p>	<p>Hou, Yanan*; Wang, li; Liu, Yishan; Wu, Guangai; Yin, Zhiming; Wang, Junyan; Fan, Baitao; Peng, Yan; Zhang, min</p>	<p>Wang, Tianyu; Yong, Yuning*; Zhai, Jiaheng; Tian, Shouceng; Zhou, Xiaoxia; Sheng, Mao</p>	<p>Xie, Yonggang; Fan, Xuhao*; Zhou, Changjing; Wang, Haizhu; Mao, Zelong; Wang, Bin; Mao, Fengxiang; Stanchits, Sergey; Cheremisin, Alexey</p>
	<p>185 - Productivity prediction of multilateral horizontal wells in low-permeability gas reservoirs under two-phase flow conditions</p>				
	<p>Guo, XinYang*; Cheng, Shiqing; Bai, Wenpeng; Cai, Dingning; Xu, Zexuan; Wang, Yang</p>				

Wednesday (June 26), 3:45 pm - 4:45 pm

Green Center - Friedhoff Hall

Civil Track

<p>155 - Rock Mechanical Characterization of Epoxy-Based Grouted Sandstone</p> <p>Oppong, Felix; Kolawole, Oladoyin*; Olorode, Olufemi M</p>	<p>310 - Investigation of the Effect of Confinement on Intact Wombeyan Marble Using Continuum Grain-Based Model (CGBM)</p> <p>Venkata Satheesh, Poralla*; Shirole, Deepanshu; Sinha, Sankhaneel</p>	<p>572 - Mode I fracture behavior of lightweight concrete made of mine-tailings-based aggregates</p> <p>Asadizadeh, Mostafa*; Hedayat, Reza; Tunstall, Lori; Taboada Neira, Martin; Vega Gonzalez, Juan Antonio; Vera Alvarado, Jorge Wilfredo</p>	<p>687 - Confinement effect on operating limits of TBM based on a theoretical model for rock indentation</p> <p>Yang, Hongwei*; Liu, Wenjie</p>	<p>1037 - Application of novel structural finite elements implemented within combined finite-discrete element methods</p> <p>Padilla, Angel M*; Lei, Zhou; Munjiza, Antonio; Rougier, Esteban; Knight, Earl</p>
<p>218 - Engineering Geological Hazards Along Doroud-KhorramAbad Railway Rock NATM Tunnels</p> <p>Tarigh Azali, Sadegh; Samadi, Hanan; Hassanpour, Jafar*; Rostami, Jamal; Hamidishad, Mohammad Hossein</p>	<p>546 - Experimental Investigation of Damage Evolution and Strain Fields of 3D-Printed Rock-like Specimens Based on X-ray Computed Micro-Tomographic Imaging and Digital Volume Correlation</p> <p>Shao, Yulong*; Kim, Jineon; He, Chen; Song, Jae-Joon</p>	<p>649 - Visualization of Roughness Indices in Amplitude-Frequency Space from Wavy Simulated Profiles</p> <p>Gray, Russell; Hudyma, Nick W*; Chittoori, Bhaskar; MacLaughlin, Mary M</p>	<p>889 - Underground Space Design Using DFN-based Tools: Comparisons of Static Kinematic Block Stability vs Distinct Element Modelling Assessments</p> <p>Ng, Julian*; Wang, Jack; Button, Edward A; Ye, Jianzhong</p>	<p>1142 - TBM tunnelling under adverse geological conditions: Case study of a long-distance and deep-buried water conveyance tunnel</p> <p>Xie, Wei-Qiang*; Zhang, Xiaoping; Liu, Xiaoli; Qian, Ruipeng; Liu, Quansheng</p>
<p>552 - A 3D Continuum-based Voronoi Tessellated Model (VTM) for hard rocks</p> <p>Hamediazad, Farzaneh FH; Bahrani, Navid*; Moallemi, Sina; Yacoub, Thamer</p>				

Mining	64 - Sensitivity analysis of a dynamic subsidence prediction model for longwall extraction	309 - Calibration of rockmass failure criteria for mines using seismic monitoring data	506 - Comparison of European (EN) and American (ASTM) Abrasion Resistance Test Standards on Some Igneous and Carbonate Origin Natural Stones Subjected to Foot Traffic	665 - Assessment of ground-support interaction using continuum grain-based models	860 - Experimental and Numerical Investigations on Fully Grouted Instrumented Rock Bolts Subjected to Pull Load
	Maldonado, Ernesto*; Romero Benitez, Jesus David; Agioutantis, Zach	Malovichko, Dmitriy*; Rigby, Alex	Buyuksagis, Ismail Sedat*; Cakir, Ali; Gursoy, Mustafa; Rostami, Jamal	Sinha, Sankhaneel*; Walton, Gabriel; Shirole, Deepanshu	Modi, Jemishkumar Vijaykumar*; Deb, Debasis
	93 - Laboratory procedure to calibrate non-stressed borehole size	358 - Exploring Ground Penetrating Radar (GPR) Simulation for Imaging and Determining Electromagnetic Wave Velocity in Volcanogenic Massive Sulfide (VMS) Deposits	524 - Evolution of seismicity at Malmberget Mine	734 - On Sweet Spot in Percussive Drilling: Single Impact Experiments	862 - Stability analysis of a tunnel nearby folded strata using numerical modeling
lin, Cui*; Zou, D.H. Steve	Abbasian, Leila*; Butt, Stephen	Jonsson, Kristina*; Dineva, Savka	Borges Dos Santos, Joao Victor*; Richard, Thomas; Kovalyshen, Yevhen	Ali, Haidar; Shahzaib, Muhammad; Emad, Muhammad; Waqas, Muhammad*; Ijaz, Waleed	
164 - Case study of program-assisted Q-system rating based on point cloud analysis	373 - Coupled Numerical Simulation of Coal Failure caused by Thermal Impacting in Underground Coal Gasification Zone	530 - Utilizing coseismic strain in the modelling of tunnel loading in deep burst-prone mines	785 - Seismic monitoring systems in mines, where are we today?	911 - AI-Powered Semi-automated Trace Detection Techniques on 3D Digital Rock Mass Models	
Chiu, Chia-Chi*; Liu, Chun-Yuan	Zhao, Yufeng; Zhang, Mengyuan*; Chen, Yangpeng; Dong, Zhen; Chen, Hao; Chen, Shanshan; Xue, Junjie; Konietzky, heinz	Malovichko, Dmitriy*; Rigby, Alex; Kaiser, Peter	Meyer, Stephen*	Mehrishal, Seyedahmad*; Kim, Jineon; Song, Jae-Joon	

Mining	<p>302 - Effect of the stress regime on injection-induced seismicity</p> <p>462 - Tight filling Challenges - Comparing Uncoupled and Coupled Stope Backfilling with Cemented Paste Backfill</p> <p>607 - Rockburst Damage Characterization in a South African Gold Mine Subjected to High Horizontal Stresses</p> <p>786 - Time-dependent Fracturing in Granite under Uniaxial Compression</p> <p>1047 - Enhancing joint detection and RQD estimation in acoustic televiewer imaging through automated instance segmentation and deep learning</p>
	<p>Yan, Xiao*; Yu, Haitao</p> <p>Veenstra, Ryan L*; Grabinsky, Murray; Thompson, Ben</p> <p>Masethe, Richard RT*; Adoko, Amoussou; Zvarivadza, Tawanda; Wienand, Gerald</p> <p>Zafar, Sana*; Hedayat, Reza; moradian,omid</p> <p>Houshmand, Negin; Esmaeili, Kamran*; Goodfellow, Sebastian</p>
Mining	<p>306 - Laboratory study on the strength deterioration characteristics of solid potash ore samples in moist environment</p> <p>468 - Digital Representation of Microstructures of Cretaceous Formation Rock Cuttings in the Tarim Basin</p> <p>608 - Analyzing Shale Gas Well Casing Deformation in Pittsburgh Seam Longwall Chain Pillars: A Case Study Integrating Numerical Methods and Field Monitoring</p> <p>809 - Simulating li-Ion Extraction: A Reservoir-Scale Feasibility Study</p> <p>1138 - Strategic Design and Analysis of Yielding Pillars: A Case Study from Deep Underground Mining at Vale's Copper Cliff Mine</p>
	<p>Zhang, Jinwang*; Wang, Shuo; Yang, Shengli; Chen, Xu; Wei, Weijie; Li, Lianghui</p> <p>liang, Hongjun; Luo, Jiaqi*; Wen, Tao; Yan, Hui; Feng, Weixiong; Jin, Yan; Xia, Yang</p> <p>Tulu, Ihsan B*; Zhang, Peter; Su, Wen H; Kim, Bo Hyun; Khademian, Zoheir</p> <p>Mura, Miki*; Sharma, Mukul</p> <p>McBride, Michael W*</p>
Interdisciplinary	<p>37 - Effects of epidote and chlorite on the frictional stability of granite faults: Implications for seismicity in deep geothermal reservoirs</p> <p>288 - A training experiment on the cost and benefit of training U-Net for laboratory signal processing</p> <p>627 - Analysis of machine learning models for prediction of petrophysical data</p> <p>976 - Machine Learning (ML) Model for Blasting And Seismic Event Classification On Chilean Copper Mines</p> <p>1109 - Artificial Neural Network for the Prediction of Unconfined Compressive Strength of Ultra lightweight Cement for Oil and Gas Wells</p>
	<p>An, Mengke*; Zhang, Fengshou; Huang, Rui; Elsworth, Derek</p> <p>Kong, Dekai; Wang, Chengyu; Lin, Qing; Xiong, Qiquan*; Opperman, Nathan; Wu, Chao-sheng; Knippel, Erik P; Hampton, Jesse</p> <p>Vega, Carlos*; Panja, Palash; McPherson, Brian; Edelman, Eric C; list, David; Maxwell, Gregor</p> <p>Otaiza, Juan R*; Jimenez, Oscar; Sartori, Rafaela; Vera, Miguel</p> <p>Addo-Yobo, Andrew D*; Emadi, Hossein; Hussain, Athar; Maslowski de Moraes, Elio; Watson, Marshall</p>

Interdisciplinary	<p>186 - Seismic data and prediction of mud loss risk based on physical information constraints</p> <p>Xie, Renjun; Zhou, Changsuo; Fu, Xing; Wan, Xiaojian*; Song, Yangjie; Zhang, Xin; Lu, Yunhu</p>	<p>289 - Evaluating the data augmentation on acoustic emission (AE) signals for training a deep neural network</p> <p>Kong, Dekai; Wang, Chengyu; Lin, Qing; Xiong, Qiquan*; Wu, Chao-Sheng; Knippel, Erik P; Opperman, Nathan; Hampton, Jesse</p>	<p>940 - Quantifying Anisotropic Viscoelastic Parameters Using In-situ Pressuremeter Testing in Shale</p> <p>Liu, Lang*; Trzeciak, Maciej; Xie, XiYang; Chalaturnyk, Rick</p>	<p>1073 - Investigating Mechanical and Acoustic Properties of 3D Printed Materials: A Focus on Printing Orientation</p> <p>Ifrene, Ghoulem*; Pothana, Prasad; Nagel, Neal; Hickey, James; Egenhoff, Sven</p>	<p>1203 - Experimental investigation and modeling of geomechanical behavior for methane hydrate-bearing sediments</p> <p>Rao, Mahima S*; Wani, Sahil; Kandasami, Ramesh Kannan</p>
	<p>279 - Deep learning for S-wave arrival time picking in acoustic emission source location analysis</p> <p>Xiong, Qiquan*; Johnson, Ellie; Wu, CHao-sheng; Hampton, Jesse</p>	<p>553 - Physical and transport properties study of Westerly granite monitored by P and S waves on spherical samples: effect of temperature and hydrostatic pressure</p> <p>Lokajicek, Tomas*; Rimnacova, Daniela; Petruzalek, Matej; Prikryl, Richard; Racek, Martin; Aminzadeh, Ali; Natherova, Veronika</p>			
Storage & Sequestration	<p>84 - Cyclic loading-unloading impacts on salt cavern stability: Implication for underground hydrogen storage</p> <p>Chang, Kyung Won*; Ross, Tonya</p>	<p>379 - Thermal Measurements and Geothermal Gradient from Deep Boreholes in the Revell Batholith, Northwest Ontario</p> <p>Kasani, Hossein A.*; DesRoches, Aaron ; Sykes, Eric; Parmenter, Andy; Khorshidi, Mostafa</p>	<p>567 - Geomechanics Finite Element Modelling for Nuclear Waste Storage</p> <p>Mohamad-Hussein, Assef*; Ni, Qinglai; Haas, Maximilian; De Gennaro, Vincenzo; Subbiah, Surej Kumar; Rodriguez-herrera, Adrian</p>	<p>797 - Effect of thermal cycling on cemented sandstone in relation to CCS</p> <p>Smith, Halvard*; Soldal, Magnus; Grande, Lars; Griffiths, Luke</p>	<p>950 - Probabilistic Analysis of Compressed Air Energy Storage Cavern Stability Considering Rock Mass Property Uncertainties</p> <p>Lu, Hui*</p>

Storage & Sequestration	135 - Salt is Not a Steady-State Creep Material	465 - Subsurface Migration of Signature Noble Gases for Underground Nuclear Explosion Detection	593 - Experimental Investigation of CO ₂ -Brine Simultaneous and Alternate Injection: Implications for Geomechanics and CO ₂ Storage Capacity	823 - Methodical Risk Analysis of Legacy Wells Based on Available Information	969 - A new geomechanical modeling workflow for CCUS near-well integrity assessment in layered poroelastic medium
	Chieslar, Jack D*	K C, Bijay*; Meng, Meng; Li, Wenfeng; Frash, Luke; Neil, Chelsea; Stauffer, Philip	Eyitayo, Stella I*; Kolawole, Oladoyin; Ispas, Ion; Watson, Marshall; Moronkeji, Dee A.	Anwar, Ishtiaque*; Meng, Meng; Carey, Bill; Stauffer, Phillip; Lackey, Greg	Zhai, Guang*; Peters, lies; Candela, Thibault
	229 - Parameter study on crystalline and sedimentary rock for high-level radioactive waste disposal considering the geological characteristics of the Korean Peninsula	513 - High-Temperature Performance of Compacted Bentonite Blocks for High-Level Nuclear Waste Repository: A Study of Desiccation Crack Control and Gas Permeability with Glass Microfiber Reinforcement	623 - Understanding Hydrogen Flow in Geologic Formations	882 - Numerical investigation on the effect of different interlayers content collapse sediments on safety of gas storage in salt cavern	1043 - Geomechanical Lessons From Oil and Gas Produced Water Injection Towards Subsurface Carbon Dioxide Sequestration
Cheon, Dae-Sung*; Park, Jai-Young; Jin, Kwangmin; Lee, Hangbok	Noh, Dong-Hwa; Kim, Seunghee*; Eun, Jongwan; Kim, Yong-Rak	Panja, Palash*; Sorkhabi, Rasoul; Edelman, Eric C; Vega, Carlos; Deo, Milind	Pan, Pengzhi*; Hussain, Altaf	Ramos, Gangerico G*; McLennan, John; Ispas, Ion; Green, Sid	
264 - Hydraulic crack propagation and rock permeability under osmotic pressure gradients with implications for deep CO ₂ sequestration and fracking	548 - Multiphysical Testing and Computational Modeling of Microfiber-Reinforced Bentonite Clay for Geological Repositories of Nuclear Spent Fuel	725 - The mechanical response and sealing characteristics of caprock during CO ₂ injection in depleted reservoirs	913 - Reference stress solution and benchmark of thermo-poro-elastic modelling of cooling effects induced by CO ₂ storage in depleted reservoir	1101 - Tensile strength of serpentized harzburgite	
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<p>Geothermal</p>	<p>38 - Formation Model of Granite Geothermal System in the Fujian, Guangdong and Hainan Provinces in Southeast China</p> <p>Feng, Jianyun*; Zhang, Ying; Zheng, herong; Luo, Jun; Zeng, Yan; Yun, Xiaorui</p>	<p>75 - Fluid geochemical genesis of the Rehai high temperature geothermal system in the southeast Himalayas</p> <p>Dawei, liao*; Yingchun, Wang; Yinlei, Hao; Feng, Jianyun; Ying, Zhang</p>	<p>290 - High Temperature Triaxial Direct-Shear Testing for FORGE and Field Scale Implications</p> <p>Frash, Luke*; lyare, Uwaila C; K C, Bijay; Meng, Meng; Smith, Megan; Kroll, Kayla</p>	<p>853 - Evolution of hydraulic fracture permeability in EGS considering natural fracture compressibility and strength of the surrounding rock</p> <p>McLean, Matthew L*; Espinoza, D. Nicolas; Ahmmed, Bulbul</p>	<p>961 - Research on fracture characteristics of supercritical CO2 fracturing hot dry rock based on THMD coupling</p> <p>Liu, Mingsheng; Wang, Haizhu*; Zhang, Xu; Fan, Xuhao; Wang, Bin; Tian, Ganghua; Yi, Yonggang; Stanchits, Sergey; Cheremisin, Alexey</p>
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