

Time	Tuesday June 17					
	Cosmos 1 & 2 - Plenary Sessions and Opening Ceremony					
08:30 - 10:00			Opening Ceremoney			
10:00 - 10:30			Coffee break			
12:00 - 13:00			Keynote 1 - Mark Diederichs			
13:00 - 14:00			Lunch			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 1	Session 2	Session 3	Session 4	Session 5	
	Theme 04: Prognosis Models in Rock Tunneling	Theme 07: Laboratory Testing of Rock	Theme 02: Rock support design	Theme 08: Brittle Failure	Theme 05: Fluid Flow in Rock Mass	
Chair	NN	NN	NN	NN	NN	
Co-Chair	NN 12. Improved Analytical Thrust per Cutter	NN 09. Laboratory tests for demonstrating two	NN 06. Numerical Investigation of Load Transfer	NN 24. On modelling uniaxial quasi-static tension	NN 31. On the possible effect of roughness on	
14:00 - 14:20	Termilations for Hard Rock Tunnel Boring Machines Thomas Marcher	new methods for defining shut-in pressure in hydraulic tests for rock stress measurement Nghia Trinh	and Uplift Mechanisms in Rock Masses Surrounding Rock Anchors Bjarte Grindheim	24. On modelling unlasted quasi-static tension and compression tests on rock with explicit time stepping Timo Saksala	hydraulic fracturing pressure Alexandre Lavrov	
14:20 - 14:40	23. Modern tunnelling trends vs. the NTNU prognosis model for D&B blast design – a case study Sondre Gjengedal	32. Experimental study on the penetration characteristics of a button bit into rock Kimihiro Hashiba	11. Tension-torsion Coupling Effect and Failure Mechanism of Anchoring Section of Anchor Cable Shuren Wang	47. Monte Carlo Simulation of the Cohesion Weakening Friction Strengthening Approach for Assessment of Brittle Failure Around Underground Excavations Andrew Corkum	103. A THM coupled distinct element model for simulating hydraulic fracturing in discontinuum reservoir with application to enhanced geothermal system Botong Du	
14:40 - 15:50	Robert Holzer	123. Experimental investigation of pore collapse in Brazilian pre-salt carbonates Guilherme Righetto	34. SEMMERING BASE TUNNEL – Extaordinary deformations in a major fault system Mario Hein	51. A novel perspective on the transition from the consideration of damage-plasticity to the incorporation of damage modelling for intact rocks Vahid Azamipour	168. Permeability Evolution in Shear-Induced Rough-Walled Fractures: Role of Roughness and Tortuosity Min Gao	
15:00 - 15:20	60. Utilizing drilling data in data assimilation for prediction of ground deformation during construction of underground structures Yasuhisa Aono	59. Evolution of Mechanical Properties and Energy Loss in Cement Mortar under Loading and Unloading Cycles Abhay Anand	81. Effect of radial confining pressure on the mechanical behaviour of deformation-controlled rock bolts during tunnel excavation Masataka Mishiro	65. Evaluation of the Effectiveness of Face Destress Blasting for a Deep Drift Based on Energy Method Zongze Li	179. Design of Water Barrier Pillar for Safety in Underground Coal Mines Abhiram Kumar Verma	
15:20 - 15:40	83. Investigating Time and Stress-Dependent Behaviour of Swelling Rocks Cigdem Culha	64. Investigation of anisotropic failure in slate under thermo-hydro-mechanical coupling using the discrete element method Meng-Chia Weng	88. Calibration of 2D Finite Element Models using Pre-Yield Axial Testing Data for Fully Grouted Rebar Rockbolts Caitlin Fischer	112. Implementing emergent properties from PFC2D to control the constitutive behavior in FLAC2D in response to the maximum principal strain Fedilberto J. Gonzalez	190. Complete Permeability Tensor of Single Fracture Surface and Its Influence on Flow Characteristics Tai-tien Wang	
15:40 - 16:00		68. Experimental Assessment of the Geomechanical Properties of Mowry Shale Kam Ng	98. Estimation of the Failure Probability of Attenuator Rockfall Protection Structures Using a Reliability Analysis Approach (RBD) and Kriging Metamodel Maria Teresa Carriero	149. A rational method for assessing the occurrence of brittle failure in deep tunnels Alessandra Insana, Lorenzo Milan	191. Improving porosity and permeability of sandstone reservoirs for CO2 storage by enhancing mineral dissolution with bio-based biodegradable chelating agents Ryota Tamura	
16:00 - 16:20			Coffee break			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 6	Session 7	Session 8	Session 9	Session 10	
	Theme 04: Prognosis Models in Rock Tunneling	Theme 07: Laboratory Testing of Rock	Theme 02: Rock support design	Theme 08: Brittle Failure	Theme 05: Fluid Flow in Rock Mass	
Chair	NN	NN	NN	NN	NN	
Co-Chair	NN	NN	NN	NN	NN	
16:20 - 16:40	117. The NTNU model 1976 – 2016 Helge-Ivar Frostad	71. Experimental investigation of mechanical properties of gypsum over a range of strain rates Peerzadi Arzeena Imtiyaz	102. Practical span and support design strategies for underground rooms in stratified rock masses Ignacio Pérez-Rey	231. Numerical modeling of Rock Spalling in the Mine-by experiment, using Zero-thickness interface elements with a fracture-based visco- plastic constitutive model Laura Crusat	217. Impact of Tunnel Induced Stress Redistribution on Hydraulic Conductivity in Fractured Rocks Romain Le Goc	
	253. Modelling the interaction between jointed rock and concrete pilar structures for Korsvägen railway station in Gothenburg, Sweden Roger Olsson	85. Predicting time-to-failure of rocks based on secondary creep strain rate Mohammadreza Aghajanzadeh	Sensing for Improved RRS Understanding Theresa Maier	269. Mechanical stability of salt caverns under intensive gas storage conditions using LOCAS and DISROC Hajar Habbani	245. Estimation of groundwater inflow into tunnels in layered rockmasses Simone Markus	
17:00 - 17:20		101. Experimental study on the fracture toughness alternation of transversely isotropic shales in response to CO2-water-rock interactions Xuefeng Li	119. Interpreting Energy Absorbing Values for Rockbotts from Quasi Static and Impact Tests John Hadjigeorgiou	298. Effect of Splay Fractures on Fault Shear Behaviour and Microseismicity: A Discrete Element Analysis Lie Kong	267. Preliminary self-sealing laboratory test results for mudstones of the Mercia Mudstone Group and Ancholme Group in England Thomas Berry	
17:20 - 17:40		122. Effective Parameters on the Self-Healing Behavior of Rock Salt Sasan Moravej	124. Investigation of spiling behavior with respect to block size and joint orientation Mateusz Maciej Swillo		287. Simulating Cyclic Hydraulic Fracturing with a Novel Hydromechanical Damage Model Chang Xia	
17:40 - 18:00					300. Fault Thickening and Permeability Variations: Implications for 3D Hydraulic Models Mo Akbariforouz	



Time	Wednesday June 18					
	Cosmos 1 & 2 - Plenary sessions					
08:30 - 09:10	Keynote 2 - Marco Barla					
09:10 - 09:50	Keynote 3 - Åsa Fransson					
09:50 - 10:20			Coffee break			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 11	Session 12	Session 13	Session 14	Session 1: ECF	
	Theme 02: Rock support design	Theme 07: Laboratory Testing of Rock	Theme 01: New Tools and Techniques	Theme 13: Sustainability in Rock Engineering	Theme: ECF	
	NN	NN	NN	NN	Fengshou Zhang	
Co-Chair	NN 138. Design of an underground multilevel	NN 131. Mode I fracture toughness of a low-	NN 26. Predicting the Crack Stress Thresholds of	NN 87. Early-Age Strength Performance of	Jorge Terron-Almenara Welcome to ECF provided by ISRM President	
10:20-10:40	limestone mine Michael Alber	porosity rock subjected to freeze-thaw cycles Giulia Torsello	and multivariate analysis techniques	Shotcrete Mixes with Crushed Waste Glass as a Replacement for Natural Sand Dr. Mehdi Serati	Seokwon Jeon and President of ISRM Educational Fund Commitee Fengshou Zhang	
10:40 - 11:00		236. Study on gas moisture absorption- desorption characteristics and volumetric deformation law of red-bed mudstone under the influence of environmental humidity gradient YLFei	30. Method of fundamental solutions in computational geomechanics Alexandre Lavrov	198. Fundamental Study on Chemical Reaction of Rocks with CO2: Implication for Carbonate Precipitation Yang Xiurong	Senior ECF presentation 1 Decide your role and become an expert in the frontline of rock mechanics and rock engineering Chartie C. U	
11:00 - 11:20	162. Optimal rock slope support and geological survey from value of information analysis Renato Pereira	142. Evaluation of thermal damage in Bateig limestone through ultrasonic pulse velocity and resonant frequency technics Chamran Kazemi	70. Spatial analysis of intact rock strength properties using graph neural networks for geotechnical applications Jorge Alvarez	239. Modelling Hydrogen Embrittlement in Pressurised Lined Rock Caverns within Fractured Rock Masses Qinghua Lei	ECF. Integrating archival data and remote sensing for landslide inventory: a case study of Polog region, N.Macedonia Natasha Nedelkovska	
11:20 - 11:40			Coffee break			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 15	Session 16	Session 17	Session 18	Session 2: ECF	
	Theme 02: Rock support design	Theme 07: Laboratory Testing of Rock	Theme 01: New Tools and Techniques	Theme 12: Rock Mass Grouting		
	NN NN	NN NN	NN NN	NN NN	Fengshou Zhang Jorge Terron-Almenara	
11:40 - 12:00	197. Investigation of the performance of PVC-	146. Evaluation of Analytical Models in	86. A new method for rapid quantitative	10. Reducing subsidence technology by	ECF. Full stress tensor determination using the	
	Mehdi Serati	Estimation of the Breakdown Pressure in Hydraulic Fracturing Achini Ranasinghe	on the tunnel face Hayato Tobe	overlying bed separation grouting in thick coal seams top coal caving mining Wenbing Guo	CCBO method, sensitive to the variable stiffness matrix of the same rock material Alice Petrlikova	
	248. Dynamic Tensile-Shear Responses of Rock-Concrete Interfaces with Varying JRC Profiles Sunita Mishra	151. Height to Diameter Ratio Effect on Sample Failure modes and Mechanisms – Implications for Pillar and Underground Excavations Design Fidelis T Suorineni	optimization and tunnel construction in the sotra link project	16. Investigating the Relationship Between Grouting Response Curves and Stress Measurements at Fornebu Metro Line Martin Hovda Haugsand	ECF. Lessons learned from the seismic event "Haouz Earthquake", and the approach used to evaluate geohazards in mountainous regions liyasse Lamsaougar	
12:20 - 12:40	264. Consideration of the initial stress state for deep tunnels design – lessons learned from a collapse on Avrieux (TELT) Gabriel Lopard, Nicolas Berthoz, Adrien Saitta	154. Understanding the mechanics of drilling in rocks through experimental methods Shwetabh Yadav	means of radar technologies Jan Abram Maritz	259. Semmering Base Tunnel: Prediction of Groundwater Inflows and Aquifer Boundaries based on Hydraulic Field Testing carried as part of Grouting Robert Holzer	ECF. Effect of introducing porosity in numerical simulation of rock indentation by drilling insert Salma Souissi	
	conditions	156. Investigations into the Effect of Standardized Stress Rates on the Strength and the Deformation Behaviour of a Crystalline Rock Material Jens Schneider		261. Reducing CO2 emissions from grouting in hard rock tunnelling Helene Strømsvik	ECF. Numerical modelling of soil deformations due to ceiling breakdown of karst cavern in underlying rock Maria Topalska	
13:00 - 14:00			Lunch			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 19	Session 20	Session 21	Session 22	Session 3: ECF	
	Theme 10: Geohazards	Theme 07: Laboratory Testing of Rock		Theme 09: Rock Mass Monitoring	Theme: ECF	
Chair	NN	NN NN	NN	NN NN	Fengshou Zhang	
Co-Chair	NN	NN	NN	NN	Jorge Terron-Almenara	
14:00 - 14:20	calcareous rocks Stephan Rollbühler	174. Non-destructive testing in weathering evaluation - from rock massif to stone sculpture Malgorzata Sokołowska	open stopes in narrow vein orebodies Fidelis T Suorineni	18. Stress monitoring of tunnel support during excavation using distributed fibre optic sensing technology Hayato Nonaka	Senior ECF presentation 2 Sevda Dehkhoda	
14:20 - 14:40	in Rock Tunnels: A Comprehensive Classification Approach Ainala Dinesh Reddy	184. Effects of freeze-thaw history on the stability of rock slopes Dai Nakamura	Doctor Alexandre Lavrov	deformations at mid-latitude through an optical FBG array at the Acuto Field Laboratory (Central Italy) Matteo Fiorucci	ECF. The influence 19th century underground hard coal mining on the conditions of foundation of buildings in the 21st century Magda Durjasz-Rybacka	
	44. Fragmentation patterns during rockfall: analysis of the influence of discontinuities and impact conditions through drop tests Maddalena Marchelli	200. Fluid flow and heat transfer behaviors of fractured rock sample: physical test Jiacheng Wang	Explainable AI for prediction of Water Ingress in the Skaugum Tunnel Abishek Shrestha	66. Measuring and modelling the sea-waves impact on a cliff: first results from the Ventotene Field Laboratory (Italy) Federico Feliziani, Gian Marco Marmoni, Guglielmo Grechi, Mattia Montagnese, Salvatore Martino		
		205. Unlocking Precision in Carbon Sequestration Monitoring: Advanced Lab-Scale Monitoring of CO2 saturation with Combined Acoustic and Resistivity Measurement Kanithorn Adisomsupawat	monitoring stations in Cappadocia in relation	111. Passive seismic monitoring of a jointed rock mass at Acuto Field Lab (Italy) Lorena Di Toro		
15:20 - 15:40		207. Tensile-shear stress induced crack initiation in granite specimens loaded in compression Lars Jacobsson	Collapse extending in Abandoned Underground	144. Deformation characteristics of surrounding rock in a large underground opening situated in Southwest China Peiyang Yu		

	69. Simulation of Slope Movements at Åknes using 2D Distinct Element Modeling Christian Cancino	210. Behavior of H-B Parameters of Marble During Plastic Deformation Sarbartha Sarkar	274. Borehole tensor strainmeters based on interferometric displacement sensors Jiayong Tian, Cheng Jiang	173. Evaluating Wedge Stability Using Analytical and Numerical Approaches Hare Ram Timalsina, Sanyam Ghimire		
16:00 - 16:20	Coffee break					
Hall	Cosmos 1 & 2					
16:20-17:00	Keynote 4 - Jessa Vatcher					
17:00-17:10			Short break			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
		Session 23	Session 24	Session 25	Session 26	
		Theme 07: Laboratory Testing of Rock	Theme 01: New Tools and Techniques	Theme 09: Rock Mass Monitoring	Theme 11: 3D Modeling and Visualization	
Chair	NN	NN	NN	NN	NN	
	NN	NN	NN	NN	NN	
	Rock Bowl final	212. An experimental study on the physico- mechanical properties of pumice from Cappadocia and Gölcük volcanic provinces of Türkiye Omer Aydan	275. Deep-seated ground deformations measured by robotized system, Roma Metro C Line Danilo Godone	244. Rock mass dynamics during coal longwall mining at great depth Vlastimil Kajzar	33. Assessing inertial effects on Rockfall Protection Embankments: field & numerical tasts Maddalena Marchelli	
17:30 - 17:50	Rock Bowl final	216. Experimental and Numerical Analysis of Single Joint around Circular Hole Rakesh Kumar	295. Numerical analysis of the mechanical stability of salt caverns for Underground Hydrogen Storage under Severe Solicitations Hippolyte Djizanne	266. Back analysis of a rockfall catalog using radar tracking Qiuyi Li	56. Comparative Analysis of Multiple Mining Schemes for Large-Scale Deep Iron Ore Mines Haoyan Wu	
17:50 - 18:10	Rock Bowl final	227. Experimental Investigation on the Influence of Swelling on Hydraulic Conductivity in Sulfate Rocks Maximiliano R. Vergara	297. Phase field modeling of brittle-ductile fracture on OpenGeoSys Hanzhang Li	289. Understanding the behavior of intersections excavated at the URL of Andra: a feedback concerning three intersection experiments Jan Cornet	67. Stress-strain analysis of SLC mine design in Kyrgyzstan Alison McQuillan	
18:10 - 18:30	Rock Bowl final	135. Determination of the mode I fracture toughness of different types of rocks under the influence of temperature and pressure Yan Li	304. Advancing a Unified Data Repository for Decision-Making in Tunnel Construction: Automated Knowledge Extraction from Archived Documents Alla Sapronova		74. Uncertainty and probability analysis of rock slope engineering based on 3D modelling Jessica Ka Yi Chiu	
18:30 - 18:50	Rock Bowl final	241. Degradation Due to Swelling-Induced Cracking in Gypsum-Bearing Dolomite and Its Potential Impact on High-Speed Rail Infrastructure Zhangiun Dai	311. Advanced Acoustic Signal Classification for Rockfall Detection Using Machine Learning Karnel Drif			
20:00 - 23:00	Banquet Dinner					



Time	Thursday June 19					
	Cosmos 1 & 2 - Plenary sessions					
08:30 - 09:10	Keynote 5 - Hongwei Huang					
09:10 - 09:50	Keynote 6 - Thomas Marcher					
09:50 - 10:20	0:20 Coffe break					
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 27 Theme 06: Ground Investigations	Session 28 Theme 07: Laboratory Testing of Rock	Session 29 Theme 03: Rock Mass Characterization	Session 30 Theme 10: Geohazards	Session 31 Theme 11: 3D Modeling and Visualization	
	NN	NN	NN	NN	NN	
10:20 - 10:40	NN 25. In-situ rock stress determination from hydraulic fracturing test data by combining generalized least squares inversion and statistical analysis Yarad Bekele	NN 247. A Study on the Compressive to Tensile Dynamic Strength Ratio of Synthetic Sandstone Rock under varying Loading Conditions Sunita Mishra	NN 194. Classification systems for Geotechnical data collection Charles Baylis	NN 80. Comparison of erosion risk index methods for rocky coastal flysch cliffs, SW Slovenia Timotej Verbovšek	NN 84. Hydromechanical simulation of post- mining flooding and the associated seismicity Sevda Dahkhoda	
	76. Quality Assurance and Review of Acoustic Emission Based In-situ stress Measurements Arthur De Alwis	271. Experimental analysis of the influence of gas sorption and associated swelling on the pore-elastic properties and permeability of coal Professor Dragan Grigic	130. Non-destructive and destructive tests for mechanical characterization of an ornamental stone quarry under flexural buckling Federico Vagnon	99. An innovative design solution for mitigating rockfall risk: the Darfo Boario case study Gessica Umili	97. Analysis of behavior of underground coal panel surrounded with goaved-out workings Sreenivasa Rao Islavath	
11:00 - 11:20	204. Development of roadway through backfilled stope for underhand mining: a case study Pradeep Kurnar, Rakesh Kurnar	286. Micromechanical Effects of Chemical Weathering on Carrara Marble Azemeraw Wubalem	63. MWD Data-Based Rock Mass Classification Using Machine Learning Techniques Tek Bahadur Katuwal	100. Surveying existing rockfall flexible barriers to create a cartographic database aimed at the maintenance planning process Gessica Umili	108. Rock mechanical optimization of the shape and depth for a high-pressure lined rock cavern Lauri Uotinen	
11:20 - 11:40	221. Quantifying anisotropies in geotechnical parameters from pressuremeter testing in soft rocks Lang Liu	291. Evaluation of the impact of heating and subsequent liquid nitrogen cooling on the properties of Rajahmundry basalt Rajeswar Das		161. Hydrogeological investigations in slow- moving landslides Roberta Narcisi	110. Towards developing a large-scale 3D insitu stress model Sanyam Ghimire	
11:40 - 12:00			Coffe break			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
	Session 32 Theme 06: Ground Investigations	Session 33 Theme 07: Laboratory Testing of	Session 34 Theme 03: Rock Mass	Session 35 Theme 10: Geohazards	Session 36 Theme 11: 3D Modeling and	
		Rock	Characterization		Visualization	
	NN	NN	NN	NN	NN	
	NN 256. Investigating Roof Bolt Efficacy in Blast- Induced Damage Zone Around the Footwall Drive of an Underground Copper Mine Satyam Choudhury	NN 292. Anisotropic Behavior of Schists Under Brazilian Test Conditions Abhilash Mishra	NN 77. Unexposed rock joint identification based on point cloud analysis Chia-Chi Chiu	NN 213. Effect of coal seam gradient on the stability of internal dump in opencast coal mines Sreenivasa Rao Islavath	NN 116. Measuring physical aperture of a fracture affected by dislocation using photogrammetry Masoud Torkan	
12:20 - 12:40	260. Practical experience during rock stress measurements by using HF and HTPF methods at Røldal HPP Dirk Van Oosterhout	294. Enhancing Chalk Formation Integrity by Diammonium Phosphate Treatment: A Study on Downhole Cores Mahmoud Desouky	126. Application of Qslope classification in seismic prone regions Milorad Jovanovski	183. Factor of safety analysis in fractured multi layered stopes Kévin Elkharrat	147. Numerical assessment on the influence of faults in In-situ stress state distribution Bikash Chaudhary	
	280. Engineering geology in bridge design: Tower foundation stability - New Sotra Bridge Stian Femanger Mathiassen	299. Study the Impact of Fluid Formulations on Sandstone Rocks Through Core Flooding Experiments and Uniaxial Compressive Strength Tests Raghavendra Maddirala	52. A novel data-driven criterion to predict peak shear strength of rock fractures between different rock types Jinfan Chen		164. Discontinuum Response of Jointed Rock Tunnels under Impact Loads Balakrishna K	
13:00 - 14:00			Lunch			
14:00 - 14:50			Keynote 7 - Charlie Li			
14:40 -14:50			Short break			
Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D	
		Session 37 Theme 07: Laboratory Testing of	Session 38 Theme 03: Rock Mass	Session 39 Theme 10: Geohazards	Session 40 Theme 11: 3D Modeling and	
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Chair		Rock NN	Characterization NN	NN	Visualization NN	
Chair Co-Chair		Rock	Characterization			
		Rock NN NN 309. Determining Elastic Constants of Transversely isotropic Rock Using Digital Image Correlation and Strain Inversion from a Single Core Saungki Hong	Characterization NN NN IN Its. Proposals for development of protocols for in-situ stress characterization Asiah Hamidi	NN NN 28. Monitoring Bonnard rock glacier under the offect of climate change Erika Prina Howald	NN NN 177. Research on the structure optimization of gravity-type foundation for onshore wind turbines Jianqiang Deng	
Co-Chair		Rock NN NN 309. Determining Elastic Constants of Transversely Isotropic Rock Using Digital Image Correlation and Strain Inversion from a Single Core Seungist Hong 312. Mechanical behaviour of granite with naturally occurring open-joints under compression Susmita Chaudhury	Characterization NN NN 169. Proposals for development of protocols for in-aitu stress characterization Asieh Hamidi 49. Numerical Modelling of Uniaxial Compressive Tests on Sittle Bimrock Nazii Tunar Ozoan	NN NN 22. Monitoring Bonnard rock glacier under the effect of climate change Erika Prina Howald 238. Are fault-slip rockbursts triggered by static or dynamic effects? Qinghua Lei	NN NN T77. Research on the structure optimization of gravity-type foundation for onshore wind turbines Janajang Deng 195. Transberg Method. Utilising Drone Photogrammetry to create real time hazard maps and optimise slope monitoring. Glan Guy	
Co-Chair 14:50 - 15:10		Rock NN NN 309. Determining Elastic Constants of Transversely Isotropic Rock Using Digital Image Correlation and Strain Inversion from a Single Oore Soungk! Hong 312. Mechanical behaviour of granite with naturally occurring open-joints under compression	Characterization NN NN 169. Proposals for development of protocols for in-situ stress characterization Asieh Hamidi 49. Numerical Modelling of Uniaxial Compressive Tests on Sills Bimrock	NN NN 22. Monitoring Bonnard rock glacier under the effect of climate change Erika Prina Howald 238. Are fault-slip rockbursts triggered by static or dynamic effects? Qinghua Lei	NN NN 177. Research on the structure optimization of gravity-type foundation for onshore wind turblines Jianqiang Deng 195. Transberg Method. Utilising Drone Photogrammetry to create real time hazard maps and optimise slope monitoring.	

Hall	Cosmos 1 & 2	Cosmos 3A	Cosmos 3B	Cosmos 3C	Cosmos 3D
		Session 41	Session 42	Session 43	Session 44
		Theme 07: Laboratory Testing of Rock	Theme 03: Rock Mass Characterization	Theme 10: Geohazards	Theme 11: 3D Modeling and Visualization
Chair		NN	NN	NN	NN
Co-Chair		NN	NN	NN	NN
16:10 - 16:30		314. Influence of temperature on physico- mechanical properties of granite with reference to microcrack analysis Rishimon Munshi	characterising geotechnical zones of a Zimbabwean Great Dyke deposit	Erosion: Insights from Physical Spillway Model Testing	257. Integrating Ground Investigations and 3D Modeling to Assess the Dynamic Response of Low-Rise Residential Buildings to Blast- Induced Vibrations Monika Tewari
16:30 - 16:50		S65. Experimental Study of Thermal-Hydro- Mechanical Behavior of Gneiss Under True Triaxial Compression Zaobao Liu	characterize rock masses: the URLA case	underground mines and rock engineering	258. Are We Being Deceived by Visually Appealing Models? Emilie Kolstø Strømøy, Marcus Lawton
16:50 - 17:10			gauge material under confined conditions	Norway Nicole Ragvin	306. Digital solutions for rock cuts – Experiences from the Være rock cut, E6 Ranheim – Værnes Sander Zakariassen
18:00 -19:00	Closing Ceremoney				