

Accepted Abstracts for the **Rocscience International Conference 2025**

ID	Title	Primary Author	Abstract Status
002	Rock mass characterization	Zahoor Ahmad	Conditionally Accepted
003	Basic approach in rock mass discrete fracture network modelling for preliminary assumptions in engineering analyses: A case study on a hill slope outcrop at Mvan-North, Yaounde, Cameroon	Roger Bissaya	Accepted
004	Analytical analysis of the M'HAOUDATT pit slopes	Hemed Ahmed	Accepted
005	Preliminary estimation of jointed rock mass strength using a three- dimensional model and the original gelological strength index chart: A case study from blocky outcrop at Mvan-North, Yaounde, Cameroon	Roger Bissaya	Conditionally Accepted
006	Further discussion upon the 8th October 2023 collapse of a uphill lake dam at Mbankolo, Cameroon: The potential thorough triggering causes	Roger Bissaya	Accepted
007	iStress: Development of an Advanced Software for Estimation of In-Situ Stress Using ATV Data	Hamid Roshan	Accepted
008	Phase-Field Modelling of Dynamic Hydraulic Fracturing in Porous Media Using a Strain-Based Crack Width Formulation	Mohammad Vahab	Accepted
009	RS2 as a Tool for Simplified and Effective Analysis of Urban Tunnel-Induced Settlements	Amichai Mitelman	Accepted
010	A multi-criteria ranking approach for assessment of geotechnical data uncertainty	Vadim Louchnikov	Accepted
011	A practical approach to the causes of the rate of convergence in a tunnel under similar geological conditions and the same primary support class. – A case study Railway tunnel in Himalaya, Phyllite rock mass, Rishikesh- Karanprayag Board Gauge Rail Link Project (PKG 5)	Vahid Abolhasani Rahnama	Accepted
012	The Quantification of the Geological Strength Index (GSI): A Review	Fahmy Osman Mohammed	Accepted
013	ROOT CAUSE ANALYSIS OF COLLAPSE IN A HYDROPOWER TUNNEL	Paul Schlotfeldt	Accepted
014	Dragline bench stability in open cut coal mining	Jiwoo Ahn	Accepted
015	Insitu stress determination. 3D rock properties and numerical modelling	Phil Dight	Accepted
017	Rockfall Back Analysis of an Experimental Case History	Mateusz Kazimierczak	Accepted
018	Using 3D Slope Stability Analysis in an Open-cut Coal Strip Mine: A Case Study	Jiwoo Ahn	Accepted

019	Reliability assessment of slope stability with stepwise increase in slope complexity	Zoran Berisavljevic	Accepted
020	Overall block stability analysis of rock slope with semi-automatic extraction of joint properties from point cloud	Zoran Berisavljevic	Accepted
021	Slope Stabilization Strategies for Road Sections in Italy: A Case Study of Post-Landslide Interventions	Laura Araque	Accepted
022	3D Finite Element Analysis of Sub-Level Caving Plan for Indicative Ground Support Design at Bozymchak Mine, Kyrgyzstan	Neil Bar	Accepted
023	Virtual Experiments on Coarse-Grained Soil Using X-Ray CT and Finite Element Analysis	Mohamed Abdennadher	Accepted
024	Simplified Solutions for a Pier in a two-Layered System and Subjected to Lateral and Moment Loadings	Helen Chow	Accepted
025	Feasibility of reinforcing tailings storage facilities using polyethylene terephthalate waste fibers	Shiella Mudenge	Accepted
026	Applying Machine Learning for SPT-N Prediction from Raw CPT Data	Milad Fatehnia	Accepted
027	Geotechnical Assessment for Supporting Re-Mining TSF Gold Tailing Using Conventional Excavator and Trucks Method	Lufi Irwan Rachmad	Accepted
028	Geotechnical characterization of the Yucatan karstic rock mass by evaluating the ceiling collapse of caves	Mario Galvan	Accepted
029	Application of Discrete Fracture Networks in 3D finite-element models	Gordon Sweby	Accepted
030	Forecasting Pastefill Line Blockage Related Falls of Ground and Ground Support Performance	Gordon Sweby	Accepted
031	Effect of Blasting on internal dragline dump slope stability	Rajesh Rai	Accepted
032	Site Development on Soft Gulf Coast Clays: The Example of Port Arthur Liquefaction Project.	Francisco Arias	Accepted
033	Time dependent settlement prediction of a coal mine overburden dump of Jharia Coalfield using C-Band SAR Data	Subodh Kumar	Accepted
034	BENCH COUNTERWEIGHT METHOD IN THE STAGE PLAN FOR SOFT MATERIAL LOADING IN PIT E BLOK 43-50, BINUNGAN MINE OPERATION	Muhammad Ainurofiq	Accepted
036	Hybrid barriers and attenuators: full scale tests based on a reliability-design approach for actions and resistances, aimed to calibrating numerical models.	Luca Gobbin	Accepted
037	Artificial Intelligence for Hybrid Rock Mass Characterization and Data Collection to Enhance Geotechnical and Contour Blast Design	David Martinez Barrón	Accepted
038	A new tool to quantify the failure probability of rockfall net fences	Valerio De Biagi	Accepted
039	Synthetic slope profiles to assess rockfall hazard on open pit: influence of topography uncertainties	Maddalena Marchelli	Accepted

040	STABILITY AND EARTHQUAKE-RESISTANT ENGINEERING STRUCTURES	Zvonimir Šepac	Conditionally Accepted
041	Investigated Physical/Strength Properties and Elastic Constants of Fimbul Granular Ice Applied to Ice Cliff Stability Analysis	Joanthan Arthur Olivu Econi	Accepted
042	Numerical study on the response of buried pipelines to deep excavations	Fu-Hsuan Yeh	Accepted
043	Tracking and Analysing Progressive Failure in Sublevel Caving: A Case Study from Kiruna Mine.	Tomas Villegas	Accepted
045	A study on the automated identification of rock fractures using YOLOv8	Shih-Heng Tung	Accepted
046	Application of the SHANSEP Model in Slope Stability Analysis for a Tailings Deposit	Luz Daniela Solano	Accepted
047	Slope Stability Analysis Using Limit Equilibrium and Finite Element Methods for Pit Inrush Risk Assessment in Cadia Hill Open Pit	Fery Cahyo	Accepted
048	3D Slope Stability Modeling Integrated with 3D Real Ap-erture Radar to Enhance Confidence in Mining Under Geohazard Areas: A Case Study	Tri Febrianto Simaibang	Accepted
049	A Geotechnical Reconciliation Journey Implementing A Risk-Based Framework Utilising Unmanned Aerial Vehicle (UAV) Photogrammetry-Based Mapping	Robert Botha	Accepted
050	Efficient simulation of tunnel-induced failure in brittle rock based on a mesh-independent fracture mechanics approach	Penghao Zhang	Accepted
051	Improvement of Wall Stability Through Cable Bolting at Thunderbox Gold Mine	Nurk Teleu	Accepted
052	Machine Learning-Based Estimation of Unconfined Compressive Strength and Deformation Modulus of Heated Sandstones	Stephen Akosah	Accepted
053	Monitoring and Prediction of Coastal Rockfall Hazard: An Application of RocSlope3 in Newcastle (Australia)	Abigail Watman	Accepted
054	Probabilistic Stability Assessment of Underground Mining Structures Through Discrete Fracture Network Modelling: A Case Study in Western Australia	Edwin Malliquinga	Accepted
055	Investigating Thermal Damage of Sandstone	Qianhao Tang	Accepted
056	Deformation and crack evolution of rock salt under cyclic creep: insights from DEM modelling	Kai Zhao	Accepted
057	MatGBM: A Computer Vision-Aided Triangular Mesh Generator for High- Fidelity Grain-Based Model of Polycrystalline Rocks	Zihan Liu	Accepted
059	Understanding Optimal Rock Cover Thickness in Cavern Design Using RocSupport and RS2: A New Perspective	Sihao Yu	Accepted
060	Slope Stability Analysis of a Surface Portal: A case study of a platinum mine	Abercon Mbezi	Accepted
061	Probabilistic Seismic Landslide Runout: Integrating Random Large- Deformation Analysis and Deep Learning-based Surrogate Model	Xuejian Chen	Accepted

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062	Three-dimensional numerical model calibration of an underground mine based on in-situ stress measurements	Lucas Guimarães de Carvalho	Accepted
063	Numerical Simulation of Compression Loaded Small-Diameter Defective and Intact Bored Piles.	Eliza Rios	Accepted
064	Block-flexural Toppling Deformation using Numerical Modelling	Hasan Tri Atmojo	Accepted
066	Determination of slope excavation rate considering pore pressure dissipation through back-analysis	Lucas Guimarães de Carvalho	Accepted
067	Evaluation of the accuracy of RSPile simulations and semi-empirical methods for CFA piles in tropical stratigraphy	Lucas Albergaria	Accepted
068	Comparison of Limit Equilibrium and Stress-Strain Stability Analyses of an Open-Pit Mine	Lucas Guimarães de Carvalho	Accepted
069	Geomechanical Assessment of Unstability in the Access Drift of Bloque-2 Sector, El Teniente Mine, Codelco	Maria Benavides	Accepted
070	Stability analysis of an open pit mine with spatially variable strengths, using FEM	Sina Moallemi	Accepted
071	Unveiling Unknowns: Combination Slope Monitoring Using Satellite Based Monitoring (InSar) and Surface Ground based Monitoring (Slope Stability Radar – Hydra Radar) to Identify Slow Movement Slope Instability	Arfinsa Ainurzana	Accepted
072	Kinematic Analysis of Geological Structure Control on Potential Long-Term Slope Instability Issues, East Wall, Barani Pit, PT Agincourt Resources	Arfinsa Ainurzana	Accepted
073	The use of Slide 2 software for evaluating the effect of sectorized post- grouting technique on the stability of soil nailing walls.	Alexsander Mucheti	Accepted
074	RS3 Stability analysis of cemented pasted-backfilled stopes transitioning from open pit at an Argentinian gold mine	Lina Marulanda	Accepted
075	Control of pore water pressure for embankment on soft soil with perforated pipe	Frantan Butarbutar	Accepted
076	Digital Innovations in Slope Stability: Addressing South Africa's Unique Challenges	Keshia Myburgh	Accepted
077	Calibrating Rockfall Models with Real Data: Analyzing the Behavior of Rocks That Bypass Catch Benches in Open-Pit Mines	Jose Andres Restrepo	Accepted
078	Bio-admixture for shotcrete performance enhancement	Kunze Li	Accepted
079	Stability analysis of the road tunnel portal for the conditions in the Carpathian Flysch	Mikolaj Jemielniak	Accepted
080	The influence of foundation permeability on the rising rate of filtered tailings storage facilities	Gino Calderon Vizcarra	Accepted
081	THE INFLUENCE OF MATERIAL LAYERS ON THE PREDICTION OF ROCKFALL HAZARDS FOR HIGHWALLS	Simone Avanzini	Accepted

082	Validation of failure surfaces of a heap leach pad in the Peruvian Andes using LEM and SSR method	Jimmy Johan Tapia Vasquez	Accepted
083	SWEDISH ROAD CUTTINGS – NATIONAL INVENTORY, DEFINITION AND RISK STATUS	Aaron Hantler	Accepted
084	Critical Hazard Management of a bullnose configuration with the aid of integrated 3GSM and Rocscience Tools at OK Tedi	Mathew Montai	Accepted
085	Development of Empirical Correlations between Compressional (Vp) and Shear Wave Velocities (Vs) and Standard Penetration Test (SPT)-N Values of Soils	Michael Angelo Valdez	Accepted
086	Comparative Analysis of Cone Penetration Testing (CPT) and Standard Penetration Testing (SPT) in Assessing Liquefaction Potential in the Philippine Geotechnical Context	Jonalyn Cabañas	Accepted
087	Correlation Between the In-Situ Soil Conditions and Strength of Jet Grout Soilcrete by a Double-Fluid System	Mikaela Angie Cruz	Accepted
088	Ground Improvement through Permeation Grouting	Ma. Rosella Mantal	Accepted
089	IMPROVING SLOPE STABILITY ASSESMENT: Limit Equilibrium Analysis with Bored Pile and Geomat as Reinforcement at Jetty Area On Murung Raya Regency, Central kalimantan Province, Indonesia	Mochamad Reza Nuzuludin	Accepted
090	Stress measurements in a deep level seismically active mine in Western Australia	Paul Brenchley	Accepted
091	Slope Stability Analysis Using Rocscience Software on Artisanal Mining to Optimize theFactor of Safety and the Reserve Excavation in the Special Region of Yogyakarta	Hizkiel Purba	Accepted
092	Analysis to evaluate the effect produced by the variability of the geometry of the disturbed zone used to simulate the disturbed rock mass zone in an open pit by means of limit equilibrium models	Cristian Espinoza	Accepted
093	Interpretation of Menard's Pressuremeter Tests in sandy soils through analytical and numerical methods	Saul Minuche	Accepted
094	A first pass for listing the detail required for utilising radar data for assessment in deterministic and probabilistic assessment of the pit slope condition	Sharla Coetsee	Accepted
095	Hydro- Mechanical Coupled Modelling of Concrete Gravity Dam on Jointed Rock Mass by Using Psuedo-Discontinuum FEM Approach	Amit Gautam	Accepted
096	Evaluation of Factor of Safety (FS) variation over time in dams through transient flow	Thiago Bretas	Accepted
097	EFFECT OF SHEAR MODULUS REDUCTION CURVES ON SEISMIC PILE RESPONSE	Mehmet Fahrettin Erener	Accepted
098	Differencial settlements evaluation on landfill for belt conveyor system construction using RS3	Thiago Bretas	Accepted

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099	A Data-Driven Approach to Dam Stability: Integrating Machine Learning and Sensitivity Analysis	Vinicius Gustavo de Oliveira	Accepted
100	3D Anchored Retaining Wall stability analysis	Thiago Bretas	Accepted
101	Improved knowledge of the stress state through ventilation raise breakout observations and in-situ stress measurements - a case study from Cuiabá Gold Mine, Brazil	Rodrigo César Padula	Accepted
102	Comparative assessment of residual shear strength on saturated contractive zones in a centerline tailings dam.	Emanuel Silveira	Accepted
103	Silty-Sand Tailings Behavior at Different Stresses levels in a Centerline Tailings Dam	Matheus Rabelo	Accepted
104	Calibration of advanced constitutive model parameters for Nonlinear Deformability analyses	Alexandre Vilaça	Accepted
105	Establishment and Optimization of the design criteria for the Tailings Facility site at Uis Tin Mine Company	Victoria Upindi	Accepted
106	Integrating Limit Equilibrium Analysis using Slide2 software and Visual Assessments: A Dual Approach in ensuring dam safety during the rehabilitation of Nkadimeng Dam	Ayanda Tsitsa	Accepted
107	A Probabilistic Framework for Kinematic Sensitivity Analysis of Rock Slope in PSP Developments	Vaishnavi Sanap	Accepted
108	Impact of Thawing-Refreezing Cycles on Tunnel Stability in Permafrost: A Comprehensive Parametric Analysis	Vaishnavi Sanap	Accepted
109	Statistical Analysis of Dam Monitoring Data: A Machine Learning Approach	Vinicius Gustavo de Oliveira	Accepted
110	Application of Analytical and Numerical Models in As-sessing the Uplift Resistance of Root Piles	Isabela Araújo de Campos	Accepted
111	Step-by-Step Implementation of the Universal Discontinuity Index for Rock Strength Characterization at Laboratory and Field Scales	Amin Hekmatnejad	Accepted
112	Transient 2D Numerical Analysis of Wastewater Infiltration Effects on the Stability of Typical Slopes in Rio de Janeiro	lane Loise Moreira Gomes	Accepted
113	Stability modeling of complex slip surfaces in metamorphic rocks and stabilization measures	Gabriel Colorado	Accepted
114	Effect of blast vibration on open pit slope stability by lim-it equilibrium	Thiago Bretas	Accepted
115	The effect of rapid drawdown on the stability of dam using FEM and LEM	Sina Moallemi	Accepted
116	Exploring Static Liquefaction Assessments in Tailings Dams Considering Uncertainties in the Critical State Line	Alexandre Vilaça	Accepted
117	Investigation of Shallow Tunnel Stability in a Brittle Fractured Rock Mass with Pre-Existing Tunnels, Using RS2 and RS3	Sina Moallemi	Accepted

ROCSCIENCE INTERNATIONAL CONFERENCE

Beyond the Surface

118	Stabilization Project, Implementation of the Instrumentation Project and Monitoring of the Different Stages of Construction of the 'Quiatoni' Junction in Oaxaca, Mexico	Jorge Salazar	Accepted
119	Comparative analysis of rock mass classification system	Nayadeth Cortés	Accepted
120	Three-Dimensional Back Analysis of Landslide in Nanggerang Village, Sukasari District, Sumedang Regency, West Java Province	Immanuel Aruan	Accepted
121	Study of Potential Post-Mining Slope Instability (Case studies : Open Pit Coal Mine, East Kalimantan, Indonesia)	Masagus Ahmad Azizi	Accepted
122	Utilizing Monitoring Data and Back Analysis to Optimize and Validate Geotechnical Parameters of Rock Properties in Underground Spaces: A Comparative Study Using RS2, PLAXIS, and Abaqus	Ghader Saadati	Accepted
123	Geotechnical Characterization of Rare Earth Tailings and Spatial Variability	Alexandre Vilaça	Accepted
124	Evaluation of Deformation and Safety Factors in Slopes Through Geotechnical Correlations	Alexandre Vilaça	Accepted
125	DRAINAGE AND MONITORING OF GROUNDWATER FOR THE CONSTRUCTION OF THE WATER DAM IN MOQUEGUA	Melissa Barron	Accepted
126	Assessment of Norsand's Performance under Zero Strain Boundary Conditions	Wyatt Handspiker	Accepted
128	"Rock Mass Characterization and Excavation Stability in the Mumbai- Ahmedabad High-Speed Rail Project: A Comparative Study of JICA and RMR Classifications (C2 Package)"	Vipin Parihar	Accepted
129	Advancing Rock Mass Classification Through Artificial Intelligence Algorithms for Enhanced Geotechnical Engineering	Ghader Saadati	Accepted
130	Utilization of Dips Software for Kinematic and Static Analysis of Rock Slope Stability: A Case Study of Tunnel St. Michael on the Wachau-Bahn, Lower Austria	Ghader Saadati	Accepted
131	Experimental investigation of shear-induced mechanical and fracture behavior in jointed basalt rock using acoustic emission monitoring	Dapeng Wang	Accepted
132	Energy-Driven Constitutive Modelling of Particle Breakage in Porous Rock	Yaolan Tang	Accepted
133	Novel dimensioning for attenuators - the Case of Rhigos Mountains, Wales	Helene Lanter	Accepted
135	Stability Risk and Economic Analysis of Steepened East Wall of Huni Pit- A case study	Mustapha Seidu	Accepted
136	Reliability of Factor of Safety where Liquefaction is the Cause of Failure: A case for the value of advanced constitutive model such as NorSand	Alireza Azami	Accepted
137	Simulation of progressive failure of defected marble using 2D and 3D finite element models	Navid Bahrani	Accepted

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138	Multi-scale Characterization of Sandstone-Shale Interbedded Formations: Integrating Rock Material Properties for Stability Analysis	Mohd Nordin Mohd Mustaqim	Accepted
139	3D Anisotropic FEM and LEM Modelling of Interbedded Sandstone-Shale Slopes: Assessing the Impact of Material Variation in Weathering Environments	Mohd Nordin Mohd Mustaqim	Accepted
140	Back analysis of a basalt quarry multi-bench failure using three-dimensional limit equilibrium and finite element method	Mohammadali Sepehri	Accepted
141	Numerical analyses using two constitutive models that simulate flow liquefaction in tailings storage.	Francisco Alonso Flores Lopez	Accepted
142	A Case Study On Preloading And Drain Column Applications For An Industrial Facility	Tolga H. Bilge	Accepted
143	Numerical analysis of the drained/undrained behaviour of clays from self-boring pressuremeter test	Ba Phu Nguyen	Accepted
144	Design of ground support to meet the challenges present in tall tunnels in a high stress and high movement environment in Sydney, Australia.	Jock Russell	Accepted
145	Soil Nailing Stabilization of a Failed Hillside in Belo Horizonte (MG): modelling, design and execution	Tiago de Jesus Souza	Accepted
146	Application of a new fragmentation module for rockfall simulation	Davide Ettore Guccione	Accepted
147	Enhancing Slope Stability Analysis Through 3D Mining Rock Mass Modelling: Accurate Representation of Rock Bridges and Discontinuities for Open Pit Slope Design	Clive Seymour	Accepted
148	IMPACTS OF THE SYDNEY METRO CITY & SOUTHWEST TUNNEL CONSTRUCTION ON EXISTING RAIL TUNNELS – BELMORE PARK CASE STUDY	Mohammad Pournaghiazar	Accepted
149	Assessment of the impact of the slope geometry and rock block characteristics on the rockfall parameters	Arindam Dey	Conditionally Accepted
150	Al Application in Slope Stability - A Comprehensive Review	Elizabeth Wilson- Sowah	Accepted
151	3D Assessment of Rock Fall Risk to an Important Pilbara Site	Michael Farmer	Accepted
152	Seismic response of tiered MSE wall simulated with construction sequencing	Arindam Dey	Accepted
153	Radar Slope Movement Data validation with Slide3D: A Case Study at Km147 Main Road at OK Tedi	Ta Peryoga	Accepted
154	Three-dimensional stability assessment of a tailings dam embankment adjacent to an open pit	Michael Habte	Accepted
155	Damage accumulation of Underground Hydropower Caverns Under Blasting Excavation and Earthquake Impact	Yimo Zhu	Accepted

156	The integration of muon tomography with 3D finite element modelling to assess tailings embankment stability	Alison McQuillan	Accepted
157	Use of RocSlope3 to manage bench to multiple bench geotechnical instability	Greg Kennedy	Accepted
158	INTEGRATION OF NUMMERICAL MODELLING, 3D SLOPE STABILITY AND REAL-TIME SLOPE PERFORMANCE MONITORING USING SSR TO SUPPORT COAL OPTIMIZING IN PIT SC	Yudanta Arba Ramadhona	Accepted
159	A complex interaction of processes impacting on footwall stability	Kai Koosmen	Accepted
160	Auckland Anniversary Weekend Floods: Recovery and Resilience in the Face of Climate Change	Vick Kumaran	Accepted
161	Brisbane's Cross River Rail Project: Assessment of Cavern and Shaft Interaction for Albert Street Station	Michael Habte	Accepted
162	Influence of pattern foliation on rockmass excavation stability	Marcelo Campos	Accepted
163	Two-Dimensional numerical simulation of the behavior of a dam in Brazil	Andre Querelli	Accepted
165	Recent Innovative Interpretation of Root Pile Length Using Magnetometry	Tiago de Jesus Souza	Accepted
166	Energy-based Burst Envelope: Strain-burst Prediction for Deep Underground Mines	Rupesh Kumar Verma	Accepted
167	Deep Underground Mining: RS3 Based Numerical Modelling Assessment	Rupesh Kumar Verma	Accepted
168	The DAC and Model confidence in Iron Ore deposits	Arturo Maldonado	Accepted
169	The shear strength of bedding planes of shale rocks from the Pilbara	Arturo Maldonado	Accepted
170	Utilizing AI Techniques to Integrate Quantitative and Qualitative Data in Geotechnical Engineering: A Preliminary Investigation	Steve Chai	Accepted
171	Slope Stability Challenges in Opencast Coal Mines in India: A Geotechnical Perspective with Numerical Modelling Insights	Sravan Kumar Gara	Accepted