ISRM International Symposium 2024 and 13th Asian Rock Mechanics Symposium (ARMS13), 22-27th Sept. 2024, New Delhi, INDIA	
VENUE: EROS HOTEL, NEHRU PLACE, NEW DELHI	
Day-3; 24 SEPTEMBER 2024, TUESDAY	
08:30-09:00 hrs	Registration
09:00-10:30 hrs	Opening Ceremony *Venue: RBR-1*
10:30-11:00 hrs	High-Tea
11:00-11:45 hrs	Rocha Medal award ceremony *Venue: RBR-1*
11:45-12:30 hrs	Franklin Lecture *Venue: RBR-1*
12:30-13:15 hrs	Eda Quadros - Special session *Venue: RBR-1*
13:15-14:15 hrs	Lunch

Day-3; TECHNICAL SESSION - 1A (TS-1A): Oral Presentations (OP)		
Theme-B1: Analytical, Numerical and Constitutive Modelling		
Date: 24.09.2024	**Time: 14:15-15:45**	**Venue: RBR-1**
OP-1-011	Discrete element modeling thermal-mechanical coupling behavior of foliated metamorphic rocks: *Minh Triet Pham, Meng-Chia Weng, Hoang-Khanh Le, Shih-Shiang Lin*	
OP-2-031	A coupled thermal-damage-breakage constitutive model for cemented granular materials: *Ziyang Zhou, Xianda Shen, Fengshou Zhang*	
OP-3-032	Study on Machine Learning Algorithm for Optimal Tunnel Blasting Design: *Kazuo Sakai, Shuntaro Miyanaga, Alla Sapronova, Soliman Abdallah Ahmed Fouad Elsayed, Masahito Yamagami*	
OP-4-034	A novel computational method for evaluating time-dependent closure behavior of rock fractures under normal stress: *Zhenyu Song, Bo Li, Bingming Yan, Liangchao Zou*	
OP-5-055	The thermo-hydro-mechanical coupled phase-field modeling of hydraulic fracturing in deep hydrocarbon exploitation: *Hanzhang Li, Fengshou Zhang, Yuhao Liu*	
OP-6-058	Experiences from application of empirical and analytical methods in slope stability analyses for weak rocks on Macedonian road network: *Milorad Jovanovski*	

Day-3; TECHNICAL SESSION - 1B (TS-1B) : Oral Presentations (OP)		
Theme-C1: Advancement in Laboratory Testing Techniques		
Date: 24.09.2024	**Time: 14:15-15:45**	**Venue: RBR-2**
OP-1-007	Effects of fracture damage level of granite on the hydraulic conductivity: an experimental study using fault damaged analogue samples: *Hinako Hosono, Daisuke Asahina*	
OP-2-016	Short-term and long-term observation of permeability in fractured granite under different experimental conditions: *Li Zhiqi Sho Ogata, Shinichiro Nakashima, Hideaki Yasuhara, Kiyoshi Kishida*	
OP-3-041	Experimental study on the mechanism and precursor of rockburst: *Dongqiao Liu, Jie Sun, Qingfeng Sun, Guangtian Wang, Huili Huang*	
OP-4-043	Impact of heat treatment on the modulus of elasticity and the wave velocities of a Jodhpur sandstone: a comparative analysis using destructive and non-destructive techniques: *Shivani Verma, NIKHIL NINAD SIRDESAI, Sandeep Panchal, Rahul Rooplal Katre*	
OP-5-045	Experimental evidence of mixed-mode behaviour of desiccation cracks on a clayey rock front gallery: *Stephen Hedan, Valéry Valle, Richard Giot, Maxime Faivre, Philippe Cosenza*	
OP-6-104	Effect of Diametrical Variation on Tunnel Intersection Under Impact Load: *Shipra Sinha, K. Seshagiri Rao, Tanusree Chakraborty*	

Day-3; TECHNICAL SESSION - 1C (TS-1C) : Oral Presentations (OP)		
Theme-D1: Drilling, Blasting and Slope Stability		
Date: 24.09.2024	**Time: 14:15-15:45**	**Venue: RBR-3**
OP-1-008	Dam Rock Engineering in China during the Past Decades: Developments and Challenges: *Peng Lin, Daoxiang Chen, Zhiwei Zhang, Shigang She*	
OP-2-023	Effects of cover rock thickness and buttress on restraining rock slope slip deformation along geological discontinuity: *Cheng Zhang, Mingwei Gang, Amagu Amagu Clement, Jun-Ichi Kodama, Atsushi Sainoki*	
OP-3-025	Investigating the Failure Mechanisms of Overhanging Slopes and Associated Rockfall Trajectories: *Meng-Chia Weng, Geng-Man Zhang, Hoang-Khanh Le*	
OP-4-039	Development of "T-DrillPacker / Pressure-feed type" for Investigations of Groundwater Flow Paths in Forward Drilling: *Yusuke Hiratsuka, Sou Kumamoto, Hajime Yamamoto*	
OP-5-040	Geotechnical evaluation of a rock-cut slope at Narayanghat-Mugling Highway in Nepal: *Hare Ram Timalsina, Naba Raj Neupane, Krishna Kanta Panthi*	
OP-6-082	Evaluating Stability Assessment of rock-cut slope of Selected Stretches of Narayanghat-Mugling Road in Central Nepal: *Bhagawan Shrestha, Krishna Kanta Panthi, Krishna Kanta Panthi*	

Day-3; TECHNICAL SESSION - 1D (TS-1D) : Oral Presentations (OP)		
Theme-E: Rock Supports and Instrumentations		
Date: 24.09.2024	**Time: 14:15-15:45**	**Venue: Lutyens Lounge**
OP-1-119	Study on the safe position of dual-mode (TBM-EPB) shield mode conversion based on the four-dimensional stability of the surrounding rock: *Guangming Yu, Liyang Bai, Kuzin Victor, Jun Lei, Xiangfei Zhu, Lijun Kuang, Guohong Lu, Tongzeng Zhang, Yanping Zhang*	
OP-2-108	Design and Construction methodology for State-of-the-Art Monopile Foundation *Vaibhav Samadhiya, Akshay Sakhuja, C. Suresh, Doraswamy Raju G*	
OP-3-123	Performance evaluation of polymeric liner as surface support by simulating a field-size coal pillar in an underground mine: *Gopi Krishna Dondapati, Debasis Deb, Ian Porter, Shivakumar Karekal*	
OP-4-146	Investigation of behavior of PVC-Concrete based support system using 3D numerical modelling technique: *Shatadru Kundu, Sreenivasa Rao Islavath*	
OP-5-095	Review on mechanical anisotropy of rocks: Characterization methods and data analysis: *Yoonsung Lee, Juhyi Yim, Seungki Hong, Youn-Kyou Lee, Jung-Woo Cho, Ki-Bok Min*	
OP-6-070	Failure mode of Granite under the combined effect of confining pressure and displacement rate: *Susmita Chaudhury, Arindam Basu*	

Day-3; TECHNICAL SESSION - 2A (TS-2A) : Oral Presentations (OP)		
Theme-A1: Site Investigations and Characterization of Rocks & Rock Masses		
Date: 24.09.2024	**Time: 16:15-18:00**	**Venue: RBR-1**
OP-1-024	Rock mass quality characterization and stability assessment of a proposed road tunnel in Nepal Himalaya: *Bimala Piya Shrestha, Krishna Kanta Panthi*	
OP-2-026	The study of joint roughness simple estimation method for field investigation: *Chia-Chi Chiu, Ting-Yi Hong*	
OP-3-028	Stress Tensor Determination by Modified Hydraulic Tests on Pre-existing Fractures in Inclined Boreholes: *Guiyun Gao, Ningyu Wu, Chenghu Wang, Jikun Liu*	
OP-4-056	Effects of mild direct current fields on the physical characteristics of silica sand: *Vandana V, Sovik Das, Deepanshu Shirole*	
OP-5-148	Estimating Compressive Strength of Jointed Brittle Rocks Using Machine Learning Regression Approaches: A Data-Driven Experimental Investigation: *Aadarsh Thakur, Vivek Padmanabha, Neeraj Kumar Sharma*	
OP-6-068	Material Characterization of Gypsum as a Model Material for Soft-porous Rocks: *Peerzadi Arzeena Imtiyaz, Dr. Shwetabh Yadav*	

Day-3; TECHNICAL SESSION - 2B (TS-2B) : Oral Presentations (OP)		
Theme-C2: Advancement in Laboratory Testing Techniques		
Date: 24.09.2024	**Time: 16:15-18:00**	**Venue: RBR-2**
OP-1-046	Evaluation of Flattened Brazilian Disc test to analyze the indirect tensile strength of rock: *Manali Sarkar, Arindam Basu*	

OP-2-049	Experimental study on mechanical properties and evolution process of fracture failure of granite including initial temperature damage and prefabricated fissure length: *Dejian Li, Chunxiao Li, Bo Hu, Jili Feng*
OP-3-052	A Study on the Relationship Between the Mechanical Properties and Wave Propagation Characteristics of Fractured Rock Under Shearing: *Zheng-Yi Cai, Hoang-Khanh Le, Hung-Hui Li, Meng-Chia Weng, Chia-Hao Ku, Chih-Chun Chien*
OP-4-053	Evaluation of the influence of temperature on physico-mechanical properties of intercalated shale-sandstone: *Rishimon Munshi, Arindam Basu*
OP-5-086	Examining Rock Abrasiveness Using the Gouging Test: *Yudhidya Wicaksana, Ridho Kresna Wattimena, Seokwon Jeon*

Day-3; TECHNICAL SESSION – 2C (TS-2C)		
Date: 24.09.2024	**Time: 16:15-18:00**	**Venue: RBR-3**
ROCK BOWL EVENT		

Day-3; TECHNICAL SESSION - 2D (TS-2D) : Oral Presentations (OP)		
Theme-F: Tunneling, Underground Space and Storage		
Date: 24.09.2024	**Time: 16:15-18:00**	**Venue: Lutyens Lounge**
OP-1-130	Effect of Impact Loads on Unlined Parallel Twin Tunnel Models in Layered Rock Mass: A Numerical Study: *Asifa Bano, Rohan Ramesh Dhamne, Rao K Seshagiri*	
OP-2-142	Subsurface Storage of Hydrogen in Lined rock Caverns: Exploring Prospects and Hurdles: *Yugal Patanwar, Debasis Deb*	
OP-3-153	Geological Challenges During the Construction of Three Large Underground Parallel Caverns -A Case Study from Lift Irrigation Project, India: *Devendra Rawat, Ajay Kumar Naithani, Dr. L. G Singh, Prasanna Jain*	
OP-4-156	Analysis on Influence of permeable features on Seepage Assessment for Underground storage rock caverns: *Anjali J, Altaf Usmani, Saikat Pal*	
OP-5-157	Study On Effectiveness of Vertical Water Curtain System for Hydrogeological Confinement of Cavern with Horizontal Joint: *Altaf Usmani, C.P Chakravarthy, Atul Nanda, Saikat Pal*	
OP-6-189	Overcoming Geological Challenges for the Successful Daylighting of Head Race Tunnel of Parbati Hydroelectric Project, Stage-II: *Nirmal Singh, Rajeev Anuj Sharma, Rahul Kumar*	

Day-3; POSTER SESSION – 1; Poster Presentations (PP)		
Date: 24.09.2024	**14:15-18:00**	**Venue: RBR-1**
Theme-A: Site Investigations and Characterization of Rocks & Rock Masses: Poster Presentations (PP)		
PP-01: 006	Accurately determine the fault architectures and geostress based on knowledge-constrained inversion analysis: *Fei Gao, Xuhai Tang, Jiangmei Qiao*	
PP-02: 015	Effect of Temperature on Mechanical Characteristics of Rock Salt: *Chandan Kumar*	
PP-03: 018	Freeze-thaw damage of frost and non-frost heave rocks under 1D and 3D temperature changing conditions: *Mingwei Gang, Cheng Zhang, Jun-ichi Kodama, Dai Nakamura*	
Date: 24.09.2024	**14:15-18:00**	**Venue: RBR-2**
Theme-C: Advancement in Laboratory Testing Techniques: Poster Presentations (PP)		
PP-04: 027	Experimental Study on Drilling Fluid Particle Migration Through Porous Media: *Jithin S Kumar, Ramesh Kannan Kandasami*	
PP-05: 048	Shear strength and deformation failure characteristics of sandstone under true triaxial stress shear tests: *Liang Hu, Jun Zhao*	
PP-06: 067	Evolution characteristics of b value for uniaxial compression of rock with consideration to spatial attenuation of AE amplitude: *Xubiao Deng, Jinlong Guo, Wei Wang, Yumin Zhang, Qianqian Li*	
PP-07: 071	Study of the damage behaviour of rockmass analogues prepared via thermal stimulation: *Girish Chand, Deepanshu Shirole*	
PP-08: 083	Experimental Study on True Triaxial Shear Mechanical Characteristics and Failure Mechanism of Granite Containing Hard Structural Plane: *Jiarong Wang, Jun Zhao, Gang Wang*	
Date: 24.09.2024	**14:15-18:00**	**Venue: RBR-3**
Theme-D: Drilling, Blasting and Slope Stability: Poster Presentations (PP)		
PP-09: 005	A Basic Study on the Analysis of the Current Status and Improvement Direction of Rock Blast in Construction Site: *Yong Baek, Byoung Ho Jeong, Young pan Ha, Jin Hwan Kim*	

PP-10: 013	Hydration-Induced Fracture Growth and Strength of Shale with Silt Layers: A Perspective on Slope Stability*: AKM Badrul Alam, Yoshiaki Fujii, Nahid Hasan Dipu*
PP-11: 072	Characteristics of excavation damage zone in fractured rocks: *Zhihong Zhao, Ma Du, Yaoyao Zhao, Yuanfeng Suo*
PP-12: 088	Tunneling through weak rockmass in the Lesser Himalaya Region, Central Nepal: A Case Study of Seti Khola Hydropower Project: *Shuvam Adhikari*
PP-13: 102	Evaluation of Impact of Time Dependence After Stoppage for Rectangular Pipe Jacking: *Hideki Shimada, Bosong Yu, Takashi Sasaoka, Akihiro Hamanaka, Fumihiko Matsumoto, Tomo Morita*
PP-14: 113	Determination of Ultimate Pit Limit by Combining Floating Cone Method and Lerchs-Grossman Algorithm: *Kun Ui Hong, Chung Il Kim, Un Chol Han, Jang Hyok Pak*
PP-15: 150	Determination of Energy Absorption Capacity of NRL and SBR Across Rock Joints: *Kallol Saha, Resmi Sebastian*
Date: 24.09.2024	**14:15-18:00** **Venue: Lutyens Lounge**
Theme-E: Rock Supports and Instrumentations: Poster Presentations (PP)	
PP-16: 012	Structural Deformation Detection of Railway Tunnels Based on Mobile Laser Scanning Techniques: *Zhaohui Zheng, Jie Liu, Xinjin Zhang, Shengteng Li, Yadong Xue*
PP-17: 020	Rapid Inspection and Identification Method for Lining Leakage of High-Speed Railway Tunnels: *Wenpei Xie, Fei Jia, Zhaohui Zheng, Yadong Xue, Jie Liu*
PP-18: 022	Research on tunnel lining crack disease detection based on improved DeepLabV3+: *Zhutian Pan, Zhang xuepeng, Yujing Jiang*
PP-19: 094	Rock Load Estimation and Composite Liner Performance of Shallow Horseshoe-Shaped Railway Tunnel Excavated in Claystone: *Simon Prassetyo, George Tuwan, Mario Wijaya, Deo Danava, Erwin Lim, Silvester Mulyadi, Tri Karian, Ridho Wattimena*
PP-20: 101	Design of rockfall protection works: *Anna maria ferrero, Gessica Umili, Battista Taboni, Chiara Caselle, Maria Teresa Carriero, Maria Migliazza, Federico Vagnon*
PP-21: 185	Design Optimizations using Permanent Bolts for Tunnels: A step towards sustainability: *Akx Malik, Arumugam D, G Arun Kumar, Preksha Chaudhary*
Date: 24.09.2024	**14:15-18:00** **Venue: Lutyens Lounge**
Theme-F: Tunneling, Underground Space and Storage: Poster Presentations (PP)	
PP-22: 009	Research Into Gas-Dynamic Activity of Host Rocks at Depths Above 1000 m Using the Rock Mass State Modeling: *Iryna Kovalevska*
PP-23: 105	Analysis and Design of Road Tunnel in Lower Himalayas: *Ankur Chauhan, Altaf Usmani, J T Shahu*
PP-24: 199	Analytical Assessment of Primary Support System in Tunnelling of Lower Siwalik Rocks of Himachal Pradesh, India - A Case Study: *Gottimukkala Sandeep, Parihar Vipin, Naik Nihar, Goricki Andreas*

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VENUE: EROS HOTEL, NEHRU PLACE, NEW DELHI	
Day-4; 25 SEPTEMBER 2024, WEDNESDAY	
Plenary session-1 Venue: RBR -1	
09:00-09:30 hrs	**Keynote Lecture 1 -** Damage to rock engineering structures by the February 2023 Great K. Maraş Earthquakes in Türkiye and some implications on their seismic design. by ***Prof. Ömer Aydan***
09:30-10:00 hrs	**Keynote Lecture 2 -** Celebrating 50 years of Q system development for infrastructure design and follow-up. by ***Dr. Nick Barton***
10:00-10:30 hrs	Corporate Presentations
10:30-11:00 hrs	Tea
Plenary session-2 Venue: RBR -1	
11:00-11:30 hrs	**Keynote Lecture 3 -** Blasting a boon for Sustainable Infrastructure Development. by ***Dr. H.S. Venkatesh***
11:30-12:00 hrs	**Keynote Lecture 4 -** Multifaceted and Adaptive Finite Element Methods for Applications in Geomechanics. by ***Prof. Debasis Deb***
12:00-12:30 hrs	Corporate Presentations
12:30-13:00 hrs	Networking
13:00-14:00 hrs	Lunch
13:15-14:30 hrs	Asian Council Meeting *Venue:* Governor hall

Day-4; TECHNICAL SESSION - 3A (TS-3A): Oral Presentations (OP)		
Theme-B2: Analytical, Numerical and Constitutive Modelling		
Date: 25.09.2024	**Time: 14:00-15:45**	**Venue: RBR-1**
OP-1-063	Three-Dimensional Hydraulic Fracture Test Simulation using Particle Flow Code: *You Jie Huang, Tai Tien Wang, Fu Shu Jeng*	
OP-2-064	Seismic Vulnerability of Underground Structures in Varying Rock Mass Qualities: A Numerical Analysis: *Suresh Raj Kalouni, Harendra Raj Kalauni*	
OP-3-069	Using Discrete Fracture Network to Assess Hydraulic Properties of Fractured Rock Mass at different depths: *Po-Kai Chen, Tai-Tien Wang*	
OP-4-084	Meta-model based probabilistic study of a strip footing placed over a spatially varying rock mass: *Pratishtha Mishra, Debarghya Chakraborty*	
OP-5-091	Physics Informed Neural Networks (PINNs) in geomechanics applications: *Sejin Kim, Ki-Bok Min*	
OP-6-100	Extended Finite Element based Digital Image Correlation for analysis of discrete discontinuity around a circular hole: *Tushar Bhandari, Debasis Deb, Rakesh Kumar*	
OP-7-124	Geomechanical modelling for assessing the feasibility of CO2 storage in a depleted oil field: *Yashvardhan Verma, Vikram Vishal, Sankhajit Saha*	

Day-4; TECHNICAL SESSION - 3B (TS-3B): Oral Presentations (OP)		
Theme-C3: Advancement in Laboratory Testing Techniques		
Date: 25.09.2024	**Time: 14:00-15:45**	**Venue: RBR-2**
OP-1-111	Effects of heating on the physical properties and Brazilian tensile strength of Basalt: *Rajeswar Das, Bikash Kumar Ram, Deepak Amban Mishra*	
OP-2-138	Experimental investigation of slopes subjected to cut-and-fill process at the toe: *Mohammad Hossein Khosravi, Thirapong Pipatpongsa, Gholamreza Saedi, Hassan Sarfaraz*	
OP-3-140	Dilation behavior of brittle rock - An experimental study: *Sarbartha Sarkar, Jemishkumar Modi, Rakesh Kumar*	
OP-4-141	Simulating CO2 mineralization of ultramafic rocks under in-situ stress conditions: Novel laboratory setups: *Muhannad Al Kalbani, Mehdi Serati, Harald Hofmann, Thierry Bore, Hamid Roshan*	
OP-5-160	Calibration of Split Hopkinson Pressure Bar and Strain Gauges for Testing Rock Specimens: *Rabin Kumar Samal, Sunita Mishra*	
OP-6-166	Implementation of Acoustic Emission (AE) Energy to Determine the Stress Thresholds of the Devprayag Sandstone Subjected to Compressive Loading: *Shubham Chajed, 69 Singh*	
OP-7-059	Assessment Roughness Anisotropy of Rock Discontinuity using Photogrammetry: *Tae Hyeon Kim, Hwi Hoon Park, Kwang Yeom Kim*	

Day-4; TECHNICAL SESSION - 3C (TS-3C): Oral Presentations (OP)		
Theme-D2: Drilling, Blasting and Slope Stability		
Date: 25.09.2024	**Time: 14:00-15:45**	**Venue: RBR-3**
OP-1-115	Slope Stability Analysis of Mines Overburden Treated with Microbially Induced Calcium Carbonate Precipitation (MICP) Technique: *Shivam Pandey, Arvind Kumar Jha, Trilok Nath Singh*	
OP-2-117	Controlled Blasting for Rock Excavation in an Operating Airport: *Gopinath G*	
OP-3-135	Impact of Thermal Treatment on Abrasivity: *Rahul Katre, Nikhil Ninad Sirdesai, Sandeep Panchal*	
OP-4-139	Quantifying differential erosion and the related collapses of a sedimentary slope: *Yachu Chiu, Yu-Lin Tsai, Hsin-Chieh Lin*	
OP-5-149	Effect of Underground Blasting on the Rock-Socketed Piles: *Srinivas Chappidi, Ajil B, Geetanjali Lohar, Ankesh Kumar*	
OP-6-161	Comparative Analysis of Longitudinal and Transverse Loading in the Dynamic Response of Residential Structures to Blast-Induced Ground Vibrations: *Monika Tewari, Anup Tiwari, Bibhuti Bhusan Mandal*	
OP-7-163	Rockmass characterization by deciphering near-field ground vibrations – A novel approach for bench blast design: *Nachiket V. Bhagade, V.M.S.R. Murthy, Suman K. Modi*	

Day-4; TECHNICAL SESSION - 3D (TS-3D): Oral Presentations (OP)		
Theme-H: Monitoring and Applications of SMART devices		
Date: 25.09.2024	**Time: 14:00-15:45**	**Venue: Viceroy**

OP-1-019	Rock strength evaluation technology using rock breaker vibration acceleration during rock excavation in mountain tunnels: *Yasuyuki Miyajima, Keisuke Kurihara, Kei Yamashita, Yasuhiro Yokota, Kensuke Date, Kazuhiko Masumoto*
OP-2-047	Development of tunnel face observation method on VR space and its application: *Moeru Kojima, Shuntaro Miyanaga, Kazuo Sakai, Masahito Yamagami*
OP-3-051	Fundamental study of lining and road maintenance management of in-service road tunnel combined 3D point clouds and life cycle data: *Hiroyuki Honda, Trissha Anneta, Hisatoshi Taniguchi, Yasuhiro Mitani*
OP-4-057	Smartification and Accuracy Verification of Long-term Survey Method Using Tunnel Excavation Blasting as Seismic Source: *Masahito Yamagami, Shyuntaro Miyanaga, Kazunori Murata*
OP-5-060	Convolutional Neural Network based 3-dimensional Rock Discontinuity Trace Mapping and Orientation Characterization: *Sang Seob Kim, Gyung Won Lee, Kwang Yeom Kim*
OP-6-062	Impact of Point Cloud Model Resolution on Interpretation of Outcrop Survey: *Yong-Zhi Huang, Tai-Tien Wang, Fu-Shu Jeng*
OP-7-065	A Review of Technology Advancement and LiDAR Approach in Subsidence Measurement Method: *Nirmana Fiqra Qaidahiyani, Seokwon Jeon*
OP-8-042	Analysis on the in-situ rock stress data of Norway: *Sanyam Ghimire, Krishna Kanta Panth*i

Day-4; TECHNICAL SESSION - 4A (TS-4A): Oral Presentations (OP)		
Theme-A2: Site Investigations and Characterization of Rocks & Rock Masses		
Date: 25.09.2024	**Time: 16:15-18:00**	**Venue: RBR-1**
OP-1-137	Properties of earthquake faults and their implications on ground motions and crustal stresses: *Ömer Aydan, Halil Kumsar, Sefer Beran Celik, Naoki Iwata*	
OP-2-191	Impacts of Freeze-Thaw on Grouted Rock Mass: Evaluation of Mechanical Properties under Uniaxial Compression Loading: *Gaurav Kumar Mathur, Arvind Kumar Jha, Gaurav Tiwari*	
OP-3-190	Experimental Investigation on Effects of Rate of Loading on Rock Socketed Pile under Axial Static Load: *Amit Jain, Ramanathan Ayothiraman*	
OP-4-181	Damage Assessment in Asphalt Mixes with Real-Time Ultrasonic Monitoring: *Aayush Kumar, Ian van Wijk, Mehdi Serati, Prashanth Vangla, Andrew Kidd*	
OP-5-180	Creep behaviour of rocks with a pre-existing flaw: *Rajaguru Rajagopal*	
OP-6-192	Thermo-mechanical Assessment of Rocks for Geothermal Reservoir in Jharia Coal Field, India: *Anupal Jyoti Dutta, Debashis Konwar, Ramprasad Adhikary, Debasis Deb, Sandeep D. Kulkarni*	

Day-4; TECHNICAL SESSION - 4B (TS-4B): Oral Presentations (OP)		
Theme-G: Deep Underground Mining Method		
Date: 25.09.2024	**Time: 16:15-18:00**	**Venue: RBR-2**
OP-1-001	Model test investigation of the performance of a deep-buried segmental tunnel crossing an active fault: *Zhen Cui, Xiancheng Mei, Jiawei Zhang, Xianlun Leng*	
OP-2-093	Excavation Sequence and Stability of Underground Stopes and Pillars Developed in Friable Rocks Under an Open-pit Mine: *Sruti Narwal, Debasis Deb, Gopinath Samanta, Sreenivasa Rao Islavath*	
OP-3-145	Discontinuous Modeling for Analysis of Sinkhole Subsidence in a Hard Rock Mine: *Nageswara Rao Kolikipogu, Vinod Kumar J, Prem Kishore P, John Loui Porathur, Sreenivasa Rao Islavath*	
OP-4-168	Mining-induced seismicity classification for rockburst prediction in deep mines: *Amoussou Adoko, Richard Masethe, Toluwase Daniel Olaiya, Tawanda Zvarivadza*	
OP-5-033	Influence of Hydromechanical Coupling Process on Instability of Pit Wall: A Case Study from Mae Moh Mine, Thailand: *Phopthorn Maneepong, Cheowchan Leelasukseree, Apipat Chaiwan*	

Day-4; TECHNICAL SESSION – 4C (TS-4C)		
Date: 25.09.2024	**Time: 16:15-18:00**	**Venue: RBR-3**
ROCK BOWL EVENT		

Day-4; TECHNICAL SESSION - 4D (TS-4D): Oral Presentations (OP)		
Theme-J1: Case Studies in Rock Engineering Projects		
Date: 25.09.2024	**Time: 16:15-18:00**	**Venue: Viceroy**

OP-1-014	Precision Blasting for Tunnel Expansion: A Case Study of Barcem Tunnel of Konkan Railway: *Narayan Kumar Bhagat, Rakesh Kumar Singh, Arvind Kumar Mishra*
OP-2-017	Analysis result experiment triaxial test for plastic concrete of the Cutoff Walls in the NamPhak Hydropower Project in Laos: *Quoc Tuan Pham, Van Cuong Nguyen, Sy Ngoc Nguyen*
OP-3-169	Estimation of Brittle Fracturing in Overburden Rock Due to Underground Coal Mining: A Case Study: *Imran Landage, Ketan Arora, Kaushik Dey, Jayanta Bhattacharya*
OP-4-061	Remote sensing and ground LiDAR scanning-assisted landslide investigations: Lessons learned from example nearby Southern Cross-Island Highway in Taiwan: *Pai-Chaio Lo, Yong-Zhi Huang, Tai-Tien Wang, Wei-Chia Chu, Hsi-Hung Lin*
OP-5-154	Ultrasonic Pulse Velocity as an Index to the degree of fissuring in Sedimentary Rocks- A Case Study: *Sufi Md Gulzar, Lal Bahadur Roy*
OP-6-089	Preliminary Case Study on Managing Extended Tensile Zone (Back Break) While Mining in The Deep Gold Mine: *Richard Masethe, Harold Mohlala, Amoussou Adoko*
OP-7-098	Stability Analysis and Design of Tunnel Supports in the Himalayan Region: A Case Study of the Tehri Pumped Storage Plant: *Pratibha Sharma, Arvind Kumar Mishra, Siddhartha Agarwal, Dr. R. D. Dwivedi*

Day-4; POSTER SESSION – 2: Poster Presentations (PP)		
Date: 25.09.2024	**Time: 14:00-18:00**	**Venue: Lutyens Lounge**
Theme-A: Site Investigations and Characterization of Rocks & Rock Masses: Poster Presentations (PP)		
PP-01: 097	Recognition of the in-situ stress field in Baihetan right bank by borehole breakout data: *Wang Chenghu*	
PP-02: 103	Rock mass characterization for shallow granite by integrating rock core indices and seismic velocity: *Daming Lin, Shumao Qiu, Zhenyu Tang, Yanli Zhang, Zhiyan Li, Wei Qiao, Haoying Xia*	
Theme-B: Analytical, Numerical and Constitutive Modelling: Poster Presentations (PP)		
PP-03: 002	Research on poromechanical problems of hydrate sediment during phase transition process: *Shuitao Zhang, Xinyu Liu, Ting Gao, Linlin Wang*	
PP-04: 036	Distributed measurement theory and technological innovation of mining-induced stress in coal and rock mass: *Chunyuan Li, Tuan He, Weiyu Zheng, Jianwei Zheng, Liang Zhang, Qingxin Qi, Guorong Lei, Zhengyi Li, Chunyang Cui, Shouguang Wang*	
PP-05: 038	Machine learning approach for prediction of shaft excavation performance in the rock mass of Himalaya: *Tek Bahadur Katuwal, Chhatra Bahadur Basnet, Sailesh Adhikari, Krishna Kanta Panthi*	
PP-06: 066	Effects of boundary conditions on continuum grain-based modeling (CGBM) of intact Wombeyan marbles: *Poralla Venkata Satheesh, Deepanshu Shirole, Sankhanaeel Sinha*	
PP-07: 076	Numerical Modeling of Unstable Mine Dumps using FLAC 3D : Preliminary Observations: *Shashank Shekhar*	
PP-08: 078	A quasi-state-based peridynamics method for the whole process of multi-type brittle failure of rocks: *Feng Tian, Zaobao Liu, Qiang Yang, Jinxin Zhou, Houyu Wang, Ming Wu*	
PP-09: 081	Modeling of compressive-shear cracking in heterogeneous brittle granite using grain-based phase field method: *Ming Wu, Zaobao Liu, Zhan Yu, Houyu Wang, Qingfeng Tan*	
PP-10: 085	Investigation of Image Observation Techniques and 3D Modeling Methods for Efficient Tunneling Operation: *Yuta Kagaya, Naohiro Ohtsuka, Masahiro Katayama, Shigetaka Ishihama, Koichi Aoki, Yoko Ohtomo, Youhei Kawamura*	
PP-11: 196	Numerical Study of the Influence of Fault Parameters on the Occurrence of Surface Rupture: Case Study of the 2014 Northern Nagano Prefecture Earthquake: *Naoki Iwata, Kenichi Tsuda, Takaaki Ikeda, Keita Higashi, Omer Aydan*	
Theme-C: Advancement in Laboratory Testing Techniques: Poster Presentations (PP)		
PP-12: 010	Impact of dynamic and static anisotropic poroelastic parameters on horizontal stresses prediction in shale: *Lichun Jia, Kexu Chen, Guoqiang Tang, Hu Deng*	
PP-13: 044	Experimental Study of Temperature, Normal Stress, and Lateral Stress on Shear Mechanical Properties of Sandstone: *月 郭, Jun Zhao*	
Theme-D: Drilling, Blasting and Slope Stability: Poster Presentations (PP)		
PP-14: 195	The Classification of Rock Fragmentation Based on the Blastability Index of Blasted Rock Mass: *Nor Shahira Ederose, Muhammad Irfan Shahrin, Mohammad Ashikur Rahman, Radzuan Sa'ari, Rini Asnida Abdullah*	
PP-15: 200	Global stability analysis of pylons and pier foundation Abutments at the Mumbai and Pune ends of the valley slope in the cable-stayed Bridge of the missing link project, Lonavala: *Parihar Vipin, Ghatge Sandeep Hambirao, Gottimukkala Sandeep, Basarkar Sunil*	
Theme-G: Deep Underground Mining Method: Poster Presentations (PP)		

PP-16: 003	Optimal selection of panel parameters for room and pillar retreat mining with three coal seams: *Un Chol Han, Kum Il Pak, Chung Song Choe, Chung Il Kim, Kun Ui Hong*
PP-17: 004	Surface subsidence analysis by using measuring data of cavity and detailed block model in sublevel mining: *Chung Song Choe, Song Il Pak, Un Chol Han, Yong Jin Mun*
PP-18: 021	Dynamic response behavior of deep tunnel across double faults: *Xingda Wang, Zhang Xuepeng, Yujing Jiang*
PP-19: 167	Developing the unplanned dilution index as a tool for open stope design in underground mines: *Adil Bolegenov , Amoussou Adoko*
Theme-H: Monitoring and Applications of SMART devices: Poster Presentations (PP)	
PP-20: 074	Tunnel Defect Assessment Using 3D-Point Cloud: *Rini Abdullah, Izni Syahrizal Ibrahim, Afikah Rahim, Mohd Nur Asmawisham Alel, Muhammad Irfan Shahrin, Rohayu Che Omar, Intan Nor Zuliana Baharuddin, Rasyikin Roslan, Mohd Nordin Mohd Mustaqim*
PP-21: 090	Proposal of remote measurement system for groundwater leaking from tunnel face by image processing: *Taichi Sasaki, Narihiro Owada, Yoko Ohtomo, Youhei Kawamura*
PP-22: 110	Application of Diffused Ultrasound to Evaluate Damage in Agaria Marble Rock Specimens: *Anita Verma, Deepanshu Shirole*
PP-23: 164	A Scientific Study of Excavation Damage on Hard Rock Pillar Strength and its implication on support design: *Satyam Choudhury, Shantanu Patel, Bibhuti Bhusan Mandal*
PP-24: 165	Introducing a Novel AI-aided Approach for 3D Joint Mapping and Discontinuity Characterization: *Seyedahmad Mehrishal, Jineon Kim, Jae-Joon Song*
PP-25: 197	Innovations in Seismic Event Source Location Accuracy for Rockburst Hazards Management in Underground Mining: *Z.M. Mukhamedyarova, F.T. Suorineni*
Theme-J: Case Studies in Rock Engineering Projects: Poster Presentations (PP)	
PP-26: 029	Parametric Study for Water Pressure Effect on Stability of Mega Tunnel in Himalayan Region: *Shilpa Deshpande, Namdeo Hedaoo*
PP-27: 035	Innovative Probe Drilling Technique for Ground Condition Evaluation in the Himalayas- Case study Rishikesh - Karanprayag tunnel project: *Manoj Kumar, Sandeep Potnis*
PP-28: 073	Shield Tunnel Abnormal State Fast Sensing Based on Dynamic Response of Metro in Service: *Qi Li, Kun Zeng, Xiongyao Xie*
PP-29: 077	Applicability of Rock Mass Classification Systems in Siwalik Rock Mass: A Case Study at Siddhababa in Palpa, Western Nepal: *Bidhan Nepal, Bikash Khanal*

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VENUE: EROS HOTEL, NEHRU PLACE, NEW DELHI	
Day 5: 26 SEPTEMBER 2024, THURSDAY	
Plenary session-3 Venue: RBR -1	
09:00-09:30 hrs	**Keynote Lecture 5 -** Anisotropic Rock Mechanics: The State of the Art. by ***Dr. Ki-Bok Min***
09:30-10:00 hrs	**Keynote Lecture 6 -** Norwegian Method of Tunnelling for a Sustainable and Cost-Effective Tunnelling in the Himalaya. by ***Prof. Krishna Kanta Panthi***
10:00-10:30 hrs	Corporate Presentations
10:30-11:00 hrs	Tea
Plenary session-4 Venue: RBR -1	
11:00-11:30 hrs	**Keynote Lecture 7 -** Geotechnical Characterisation and Stability Assessment of Mine Dumps. by ***Prof. K S Rao***
11:30-12:00 hrs	**Keynote Lecture 8 -** Rock Fall Prediction and Prevention in Hilly Terrain.by ***Prof. T.N. Singh***
12:00-12:30 hrs	**Keynote Lecture 9 -** Beneath the Mountains: The Hidden Perils of Himalayan Tunnels. by ***Dr. Manoj Verman***
12:30-13:00 hrs	Corporate Presentations
13:00-14:00 hrs	Lunch

Day-5; TECHNICAL SESSION - 5A (TS-5A): Oral Presentations (OP)		
Theme-B3: Analytical, Numerical and Constitutive Modelling		
Date: 26.09.2024	**Time: 14:00-15:45**	**Venue: RBR-1**
OP-1-126	Stability Analysis of Different Tunnel Shapes and Sizes under Static and Dynamic Loading Conditions: *Abhishek Mohapatra, Sunita Mishra*	
OP-2-127	Discrete Element Modeling of Dump Slope Stability in Complex Geology: *Akash Dwivedi, Akashdeep Mehta, Rohan Paul, Swapnil Mishra*	
OP-3-128	Understanding the scale effect on the shear behavior of rock joints using Discrete Element Modeling: *Suryajyoti Nanda, Anirudh Yadav, Utkarsh Kumar, Shantanu Patel*	
OP-4-133	Influence of mineral composition and grain size on fracture and mechanical properties of Jalore Granite using Digital Image-Based Discrete element Modelling: *Binu Kumar, A. K. Verma, R. K. Bajpai, T. N. Singh*	
OP-5-170	Numerical prediction of transport characteristics of cemented paste backfills using computational fluid dynamics: *Sumedha Koul, Mehdi Serati, Ian van Wijk, Niki Jackson*	
OP-6-183	A DEM-based Simulation of Fracture Growth in Rocks with pre-existing flaws: *Yogeshwar Murugesan, V.B. Maji*	
OP-7-188	Effect of Particle Shape on Granular Flow Dynamics and Runout Behaviour in DEM Simulations: *Anup Tiwari, Monika Tewari, Bibhuti Bhusan Mandal*	

Day-5; TECHNICAL SESSION - 5B (TS-5B): Oral Presentations (OP)		
Theme-C4: Advancement in Laboratory Testing Techniques		
Date: 26.09.2024	**Time: 14:00-15:45**	**Venue: RBR-2**
OP-1-173	Physical modelling of cylindrical borehole under true tri-axial stress state: *Ravindra Burnwal, Aditya Singh*	
OP-2-175	Influence of Footing Position on the Bearing Capacity and Load Settlement Behavior of a Foundation on a Jointed Rock Mass with Vertical Cut: *Argha Biswas, Mahendra Singh, Aditya Singh*	
OP-3-147	Study of scale effect on in-situ peak shear stress of overburden material and comparison with laboratory direct shear test: *Janardhana Prasanth Gunupuram, Rakesh Kumar*	
OP-4-186	A study of behavior on resilient modulus of jointed rocks under cyclic loading: *GY Raju, Mahendra Singh, Priti Maheshwari*	
OP-5-155	Correlations of Porosity and Rebound Hammer Values with Various Chemical Weathering Indices and Mineralogical Alteration of Himachal Gneiss Due to Weathering: *Honey Kaushal, Aditya Singh, Narendra Kumar Samadhiya*	
OP-6-075	Effect of joint orientation on the non-dimensional uplift pressure coefficient based on spillway model tests: *Vineeth Reddy Karnati, Ali Saeidi, Alain Rouleau, Marco Quirion*	
OP-7-129	Predicted vs Measured In-Situ Rock Stress Condition at Røldal Hydroelectric Plant of Norway: *Bikash Chaudhary, Nghia Quoc Trinh, Krishna Kanta Panthi*	

Day-5; TECHNICAL SESSION - 5C (TS-5C): Oral Presentations (OP)		
Theme-I: Geo-Hazards, Risk Management and Sustainability		
Date: 26.09.2024	**Time: 14:00-15:45**	**Venue: RBR-3**
OP-1-054	Transformer-based surrogate model for the optimization of geological carbon sequestration: *Zhao Feng, Weiquan Ouyang, Zeeshan Tariq, Zhilei Han, Xianda Shen, Bicheng Yan, Fengshou Zhang*	
OP-2-092	Application Of ℓ1 Trend Filtering Technique To Satellite Sensing Data: *Li Cunlai, Takayuki Shuku, Kensuke Date, Yasuhiro Yokota*	
OP-3-121	Securing Tunnels – Navigating the Interplay of Blast Loads and Seismic Effects in Global Infrastructure: *Rohan Paul, Swapnil Mishra*	
OP-4-143	An Innovative Alert System for Rockfall Protection Systems and Events: *Ratnakat R Mahajan, Luca Gobbin, Rudra Budhbhatti*	
OP-5-176	Impact of Rock Mass Conditions in Rock Tunnels Damaged Due to Earthquakes *Dinesh Reddy Ainala, Aditya Singh*	
OP-6-159	Mitigating Geohazards through Advanced Engineering Solutions-A Case Study: *Geethanjali Koppolu, Sampat Raj, Mriganabh Choudhury, Vijay Kumar Panwar*	
OP-7-178	Seismic Behaviour of Tunnels in the Indian Himalayas: *Sai Srujan Kumar Chalavadi, Yogendra Singh, Mahendra Singh*	

Day-5; TECHNICAL SESSION - 5D (TS-5D): Oral Presentations (OP)		
Theme-J2: Case-Studies in Rock Engineering Projects		
Date: 26.09.2024	**Time: 14:00-15:45**	**Venue: Viceroy**
OP-1-107	Engineering Geological and Geotechnical Characteristics of 12 Numbers of Parallel Pressure Tunnels of Polavaram Hydroelectric Project (80 x 12 MW), Andhra Pradesh, India: *Dr. L. G Singh, Ajay Kumar Naithani, Prasnna Jain, Devendra Rawat*	
OP-2-116	Successful Case Studies on Rockfall Mitigation Measures Implemented at Vulnerable Stretches of Western Ghats: *Rudra Budhbhatti, Roshan R.S.V, Fabien Gazado, Ashish Juneja*	
OP-3-132	3D Numerical Analysis of Rockburst Potential Along the Head Race Tunnel of Parbati Hydroelectric Project (Stage – II), India: *Arpan Nandy, K. Seshagiri Rao, Tanusree Chakraborty*	
OP-4-152	Strength Characterization of Sedimentary Rocks from Chotanagpur Plateau in India - A Case Study: *Lal Bahadur Roy, Sufi Md. Gulzar*	
OP-5-184	Overcoming Geological Challenges for the Successful Daylighting of Head Race Tunnel of Parbati Hydroelectric Project, Stage-II: *Dr Rahul Khanna*	
OP-6-193	Construction of Tunnel T-49A on Dharam – Qazigund Section of Udhampur-Srinagar-Baramulla New BG Railway Line Project in Highly Adverse Geological Conditions- A Case Study: *Rakesh Kumar Khali, Sharanappa Yalal*	
OP-7-087	Stress-Induced Instabilities at the Hydropower Caverns in Lower Boundary of the Higher Himalayas: *Sailesh Adhikari, Chhatra Bahadur Basnet, Tek Bahadur Katuwal, Krishna Kanta Panthi*	

Day-5; POSTER SESSION – 3: Poster Presentations (PP)		
Date: 26.09.2024	**Time: 14:00-15:45**	**Venue: Lutyens Lounge**
Theme-B: Analytical, Numerical and Constitutive Modelling: Poster Presentations (PP)		
PP-01: 096	Scaled Model Tests and Numerical Simulation for Rock Cutting-Splitting Method: *Jung-Woo Cho, Won-Jun Lee, Yeon-Hui Shim, Ho-Young Jeong, Sang-Hwa Yu*	
PP-02: 106	Research on water/gas permeability in low-permeability media considering gas breakthrough effect: *Jiangfeng Liu, Zhipeng Wang, Shijia Ma, Yixu Zhao, Zhijie Jian*	
PP-03: 109	Stability and Displacement Analysis of Active Dump Slope Using Micromechanical Modelling: *Kapoor Chand, Radhakanta Koner*	
PP-04: 114	Numerical simulation analysis for the selection of suitable mining method in consideration of the surface subsidence and the safety of stope and the mining recovery rate: *Kun Ui Hong, Ju Hyon Kim, Dae Song Pak, Chung Il Kim, Un Chol Han*	
PP-05: 131	Non-Probabilistic Reliability based Stability Analysis of Rock Tunnel with Random and Limited Data Modelled within Mixed Uncertainty Framework: *Surabhi Maurya, Gaurav Tiwari*	
PP-06: 162	Numerical Study on the Failure Behaviour of Rocks Using Mohr-Coulomb and Drucker-Prager Failure Criteria: *Aryaman Biswal, Rabin Kumar Samal, Sunita Mishra, Amit Kumar Gorai*	
Theme-C: Advancement in Laboratory Testing Techniques: Poster Presentations (PP)		
PP-07: 125	Effects of Cyclic Heating-LN2 Cooling Treatments on Physico-Mechanical Properties of Basalt: *Bikash Kumar Ram, Deepak Amban Mishra, Rajeswar Das*	
PP-08: 144	Exploring dynamic properties of frictional jointed rocks: The impact of joint roughness: *Sakshi Rohilla, Resmi Sebastian*	
PP-09: 158	Determination of fragment ejection velocity of rock fragment under uniaxial compression loading before rockburst using infrared thermography: *Mrityunjay Jaiswal, Resmi Sebastian, Ravibabu Mulaveesala*	
PP-10: 187	Heat impact on the mechanical attributes of a variety of sandstones: *Vikram Vishal, Amulya Ratna Roul*	
Theme-I: Geo-hazards, Risk Management and Sustainability: Poster Presentations (PP)		
PP-11: 079	Newly insights into the effect of high ground temperature on granite rockburst proneness: experimental study: *Houyu Wang, Zaobao Liu, Ming Wu, Feng Tian*	
PP-12: 080	Experimental study on the acoustic emission characteristics of impact rockbursts in deeply buried tunnels with large inclination angle of laminated slates: *Xiaoming Sun, Ming Jiang, Chengyu Miao*	
PP-13: 112	Analysis of Hydraulic Backfilling Properties of Fly Ash Based on its Size and Shape Properties: *Manohar Munipala*	
PP-14: 118	Investigation into reinforcing effect of polypropylene fibre on mechanical and microstructural characteristics of coal ash-based paste backfill: *Kanhaiya Mishra, S. K. Behera, S. K. Patel, Prashant Singh, S. K. Mandal*	
PP-15: 120	The Influence of Model State in Data Assimilation on Monitoring and Early Warning of Natural Disaster Based on Crustal-stress Fields: *Jiayong Tian, Cheng Jiang, Xiaowen Lan*	
PP-16: 122	High-Altitude Tunnel Illumination Optimization using Simulation: Risk Management & Sustainable Development of Atal Tunnel in the Himalayas: *Siddharth Agarwal, Rajul Dwivedi, Anuranjeet Ranjan, Atul Rajput*	
PP-17: 174	Quantitative risk assessment of fault slip in response to CO2 injection in hydrocarbon reservoir: *Mohd Sharique Siddiqui, Pranay Vilas Bhapkar, Sarada Prasad Pradhan, Krishna Chandra Sundli*	
PP-18: 179	The properties of Fracture Induced Electromagnetic Radiation (FEMR) during earthquakes: A rock mechanics insight on the tectonic activity along the Dead Sea Transform (DST) Fault System: *Shreeja Das, Vladimir Frid*	
PP-19: 182	GUARD - making flexible geohazard protection systems SMART: *Sumit Sharma, Jitin Mukheja, Sascha Schultes, Helene Lanter, Tim Shevlin*	
Theme-J: Case Studies in Rock Engineering Projects: Poster Presentations (PP)		
PP-20: 134	Rock Mass Characterization For Underground Power House Cavern: A Case Study of Dulhasti Stage-II HE Project: *Sumit Dabral, Ajay Kumar Verma, Ajay Singh*	
PP-21: -171	Reinforced Soil Technology in Sustainable Tunnel Portal Platform Construction in Complex Himalayan Geological Setting: *Apoorva Agarwal, Deepak Manjunath, Atanu Adhikari*	
PP-22: 177	Laying aggregate quarries along a dam axis in Himalayan terrain - Equipment selection and slope stability investigation: *Dr Aditya Rana, Arvind Kumar Gond, Santosh Kumar, Chhangte Sawmliana, R.K. Singh, Gajendra Jadaun, Chiranjeet Rakshit*	
PP-23: 198	Construction Practice of Tunnel in Weak Geology of Nepal Himalayan- A Case Study of KU Research Tunnel: *Sudip Bajgain, Shyam Sundar Khadka*	

PP-24: 201	Slope stability analysis and design of deep cut sections - Challenges, Mitigation measures and Construction: *Parihar Vipin, Neelimadas M, Gottimukkala Sandeep, Basarkar Sunil*
PP-25: 202	Characterization of weak rocks, rock masses & its resistances.: *Renu Verma, Alok Bhargava*