



Thursday, 16 NOVEMBER 2023

11:00-13:00 | HALL 3

SESSION 4.5

ROCKFALL DATA: COLLECTION METHODS, ANALYSIS AND USE FOR HAZARD AND RISK ASSESSMENTS (part I)

Chairs: **Mauro Rossi (Italy), Sandra Melzner (Austria)**

- 11:00 Data collection and 3D modeling approaches to support rockfall risk management along roadways in complex geological settings: Yosemite National Park (USA)
Federico Agliardi¹, Paolo Frattini¹, Greg Stock², Simone Demonti¹, Federico Franzosi¹, Camilla Lanfranconi¹, Brian Collins² (¹Italy, ²USA)
- 11:10 Correlation of rockfall frequency with overhang dimensions at flysch rocky walls
Olga Mavrouli¹, Amparo Núñez-Andrés², Felipe Buill², Nieves Lantada², Jordi Corominas² (¹Greece, ²Spain)
- 11:20 Rock-toppling and rockfall risk assessment in areas of canyons: the fatal event of January 2022 in Capitólio, Brazil
Victor Cabral¹, Fábio Reis², Joana Sanchez² (¹Germany, ²Brazil)
- 11:30 Rockfall characterization and risk evaluation before and after applying mitigation measures along a man-made trench of the Bari-Taranto railway (Apulia, Italy).
Andrea Mastrangelo, Roberto Murtas, Fausto Bianchi, Gianluca Benedetti, Nicola Carretta, Rosa Paciolla, Filippo Marchi, Francesco Moruzzi, Gianluca Cutrera, Lisa Borgatti, Davide Donati (Italy)
- 11:40 Rockfall hazard evaluation of a Himalayan road-cut slope in India
Neeraj Dahiya, Koushik Pandit, Shantanu Sarkar, Anindya Pain (India)
- 11:50 Rockfall susceptibility assessment on rock wall equipped for sport climbing: a case study from Italy
Tommaso Beni, Giovanni Gigli, Luca Lombardi, Tommaso Carlà, Nicola Casagli (Italy)
- 12:00 Automatization of kinematic analysis: a case study
Battista Taboni, Davide Vianello, Gessica Umili, Pietro Mosca, Sabrina Bonetto (Italy)
- 12:10 Discussion



Thursday, 16 NOVEMBER 2023

14:30-16:00 | HALL 3

SESSION 4.5

ROCKFALL DATA: COLLECTION METHODS, ANALYSIS AND USE FOR HAZARD AND RISK ASSESSMENTS (part II)

Chairs: **Sandra Melzner (Austria), Mauro Rossi (Italy)**

- 14:30** A combination of a continuos multi-parameter monitoring and a periodic LiDAR survey: Bonifacio coastal cliff case study
Stella Coccia, Klein Emmanuelle, Thoraval Alain, Franck Christian (France)
- 14:40** Multitemporal monitoring of rock walls using topographic methodologies and persistent scatterers interferometry
Andrea Rindinella, Luisa Beltramone, Riccardo Salvini (Italy)
- 14:50** A copula based statistical learning model to study the impact of rainfall on rockfall volume
Farshad Bahootoroody¹, Davide Guccione¹, Klaus Thoeni¹, Vaughan Griffiths², Anna Giacomini¹ (¹Australia, ²USA)
- 15:00** Tools for rockfall hazard assessment in Carinthia, Austria - and lessons learned
Franz Goldschmidt, Tanner Dieter (Austria)
- 15:10** Salzburg risk analysis for subordinate traffic routes: development of a software tool for probabilistic modelling of rockfall risks
Stefan Oberndorfer, Gerald Valentin, Ludwig Fegerl, Kevin Lundberg (Austria)
- 15:20** Rockfall risk and lifelines mitigation performance following the 2016 Kaikoura earthquake
Sarah Mabin, Tom Robinson, Liam Wotherspoon, Doug Mason (New Zealand)
- 15:30** Regional assessment of rockfall susceptibility and hazard in the East Macedonia and Thrace, Greece
Maria Taftsgoglou, Sotiris Valkaniotis, George Papathanassiou, Sotirios Argyroudis, Nikolaos Klimis, Ioannis Dokas (Greece)
- 15:40** From experimental quantification of the deadwood influece on rockfall dynamics towards rockfall risk assessments, including naturally disturbed forests
Adrian Ringenbach, Marc Christen, Kevin Helzel, Linda Zaugg-Ettlin, Alexander Bast, Peter Bebi, Andrin Caviezel (Switzerland)
- 15:50** Discussion

E-POSTER SESSION

- P4.26** Data-driven susceptibility assessment integrating predisposing factors derived from engineering geological mapping
Enrico D'Addario¹, Eduardo Oliveira², Emanuel D'Eramo¹, Lorenzo Marzini¹, Michele Amaddii¹, Riccardo Giusti¹, Francesco Manetti¹, Leonardo Disperati¹ (¹Italy, ²Portugal)
- P4.27** Release areas for shallow landslides on open slope in Norwegian Landscape: method development for landslide risk assessment
Jose Santiago Pullarello, Raymond Eilertsen, Knut Stalsberg, Kari Sletten (Norway)
- P4.28** The use of rockfall data in statistical analysis and for the validation of rockfall hazard zoning
Sandra Melzner¹, Johannes Hüb¹, Marco Conedera², Mauro Rossi³ (¹Austria, ²Switzerland, ⁴Italy)
- P4.29** Importance of discontinuity trace mapping in rockfall susceptibility assessments using high-resolution 3D point cloud analysis
Hrvoje Lukačić¹, Franćois Noël², Snježana Mihalić Arbanas¹, Michel Jaboyedoff³, Martin Krkač¹ (¹Croatia, ²Norway, ³Switzerland)
- P4.30** Investigation of the rockfall triggering mechanisms in Slovenia, Europe
Nejc Bezak, Mateja Jemec Auflic, Ula Segina, Matjaz Mikos, Jost Sodnik (Slovenia)
- P4.31** Source area definition and rockfall modelling in El Hierro (Canary Islands, Spain)
Roberto Sarro¹, Mauro Rossi², Paola Reichenbach², Rosa María Mateos¹ (¹Spain, ²Italy)
- P4.32** Using multi-temporal digital twins of Navagio beach (Zakynthos Island, Greece) for the detection of rock displacements after the 8.9.2022 earthquake
Aliki Konsolaki¹, Emmanuel Vassilakis¹, Stratis Karantanellis², Konstantina Asimakopoulou¹, Efthimios Lekkas¹ (¹Greece, ²USA)
- P4.33** Technical-economic feasibility study for the reduction of rockfall risk in the locality of St. Magdalena, municipality of Bolzano (Autonomous Province of Bolzano - South Tyrol)
Daniel Costantini, Volkmar Mair, David Mosna (Italy)
- P4.34** Active landslide mapping in urban mountainous settings through advanced-differential interferometry synthetic-aperture radar time series
Davide Caliò, Simone Mineo, Diego Di Martire, Domenico Calcaterra, Giovanna Pappalardo (Italy)
- P4.35** Debris flows in urban environments: combining hazard and exposure toward a tailored emergency evacuation response
Raquel Melo¹, José Luís Zêzere¹, Sérgio C. Oliveira¹, Ricardo A.C. Garcia¹, Sandra Oliveira¹, Susana Pereira¹, Aldina Piedade¹, Pedro P. Santos¹, Theo van Asch^{2,3} (¹Portugal, ²The Netherlands, ³China)
- P4.36** Qualitative hazard assessment as first step for landslide consideration in urban planning
Jordi Martínez, Pere Ruvió, Marc Janero, Marcel Barberà, Jordi Ríos (Spain)