The XIV Congress of the International Association for Engineering Geology and the Environment

XIV IAEG CONGRESS 2023 CHENGDU

Session 12-4

Rock Joint Detection and Characterization from 3D Point Clouds

Conveners

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Brief Introduction of the Session:

Rock joints fundamentally impact the mechanical and hydraulic behaviors of a rock mass, and thus it is a critically-important task to characterize the geometrical parameters of these rock discontinuities. The limitations of the traditional surveys highlighted the advent of remote sensing techniques, which mainly include two categories: photogrammetry and laser scanning. There was an increasing interest in an automated approach for measuring the geometrical parameters of the rock joints, and several algorithms have been developed to automatically detect and map the rock joints from point clouds and/or images generated by the remote sensing techniques.

This session aims to gather scientists and engineers to discuss the current state of research. The advanced topics in focus for the discussions include:

- Application of modern remote sensing technologies to the 3D reconstruction of the outcrops;
- Application of artificial intelligence algorithms like machine learning for rock joint detection and characterization;
- Automated detection of rock joints from 3D point clouds and/or 2D images;
- Rapid estimation of rockmass quality based on the automated detection of the rock joints;
- Rapid evaluation of the rockmass stability based on the automated detection of the rock joints.

IMPORTANT DATES

Abstract for Oral Presentation and Poster Submission Deadline
Jun. 30, 2023

Early Bird Registration Deadline
Aug. 10, 2023

Online Registration Deadline
Sept. 21, 2023

SUBMISSION

For the full-length submission

The submission system is now open for full-length papers. The deadline for submission of full-length paper has been extended to after June 30, 2023. Please read the guidelines for paper submittal prior to submitting your full-length paper.

Please read the guidelines prior to submitting your full-length paper or long abstract at https://www.iaeg2023.org/cfp.html

For the abstract submission

The abstract submission system for oral presentations and posters is open! If you would rather prepare an abstract for an oral or poster presentation, rather than submitting a full paper, please submit your abstract for consideration by June 30, 2023.

Please read the guidelines prior to submitting your abstract at https://www.iaeg2023.org/cfa.html