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



Session 1-4

Rock Mass Engineering Geomechanics

Conveners



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Brief Introduction of the Session:

Rock mass engineering geomechanics is a scientific discipline encompassing Engineering Geology and Rock Mechanics to study the formation, evolution, and engineering behavior of rock masses using geomechanical theories and methods. Its primary focuses on the influence of various types of discontinuous structures, such as joints and faults, which greatly affect the deformation and failure characteristics of rock masses under specific conditions. Notable advancements in this field include rock mass classification systems such as RMR, Q, GSI, Z system, ARMR, and A-BQ, as well as rock mass failure criteria like the Hoek and Brown empirical criteria and Barton's approach that account for these discontinuous structures. Recent trends in rock mass engineering involve deep underground applications, like hydraulic fracturing for shale gas and oil extraction, waste disposal, and energy storage; characterization of rock masses with regards to the coupled effects of thermal, fluid, and mechanical fields; investigation of dynamic mechanical behaviors during catastrophic earthquakes; and the utilization of numerical simulation methods and artificial intelligence technology. Furthermore, advancements in laboratory instruments have facilitated comprehensive studies of geometric and mechanical aspects of rock masses from a multi-scale perspective.

It is important to organize a session in IAEG2023 to focus on the topic of the new development and applications of rock mass engineering geomechanics, including:

- New and advanced apparatus and methods for characterization of mechanical behaviors of rock/rock mass.
- New and advanced numerical simulation developments for analysis of rock mass behaviors considering multiscale effects.
- Advanced geophysical prospecting applications.
- Advancement in geological engineering.
- Applications of rock-mass engineering geomechanics in energy-related engineering (e.g., shale gas extraction, geothermal reservoirs etc.)
- Applications of rock-mass engineering geomechanics in waste disposal (e.g., carbon sequestration, nuclear waste disposal etc.)

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 May 31, 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>



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