FUNDAMENTALS OF EXPERIMENTAL ROCK MECHANICS

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Date and time: Sunday, 23 June 2024, 1:00 pm - 5:00 pm
Cost: Free

OVERVIEW

The goal of this workshop is to help accelerate experimental rock mechanics research and to improve technical literacy on experimental data within the community, by providing a place to freely share knowledge on experimental techniques and technology. This workshop is designed for students and practitioners (both from academia and industry) involved in laboratory experiments. It will include discussion of technical issues among workshop participants.

AGENDA

1-3 PM Session 1: TUTORIAL ON ROCK DEFORMATION APPARATUSES

The first half of this session will be a tutorial for students and practitioners who are learning how to conduct experiments and/or to interpret laboratory data. We will cover topics to help students and practitioners climb the learning curve of experimental rock mechanics, which often requires specific technical knowledge about the construction of equipment. Topics include:

- Triaxial Apparatus Construction (load frame, pressure vessel, servo control)
- Instrumentation and Data Acquisition (how measurements work, external vs internal instrumentation)
- Pore Pressure (saturating pore space, interpretation)
- Sample preparation (ISRM Suggested Methods, ASTM standards, shape effects)
3-5 PM Session 2: DISCUSSION FORUM

The second half of the session will be dedicated to an interactive discussion of various technical issues brought up by the organizer and the participants. Participation of veteran experimentalists and sharing of their experiences are very welcome. Below is a list of potential topics for this year’s discussion, but we also welcome suggestions from the symposium attendees. Please submit your suggestions at: https://forms.gle/hgLDe7fUGybcqVvKA

- High temperature instrumentation/seals
- Large true triaxial apparatuses
- Shear testing
- Synchronizing DAQ systems