

FUNDAMENTALS OF EXPERIMENTAL ROCK MECHANICS

Organizer: Hiroki Sone, *University of Wisconsin-Madison*

Date and time: Sunday, 23 June 2024, 1:00 pm – 5:00 pm

Cost: Free

This workshop is designed for students and practitioners involved in laboratory experiments. It will include discussion of technical issues among workshop participants.

Overview

The first half of this session will be a tutorial for students and practitioners who are starting 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; such as:

- Apparatus construction (load frame, pressure vessel, servo control)
- Instrumentation (how measurements work, external vs internal instrumentation)
- Sample preparation (ISRM Suggested Methods, ASTM standards, shape effects)

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. We also welcome participation of veteran experimentalists to share their experiences and suggest for discussion current topics in the field. Examples of topics discussed in the past include:

- Hydraulic pump repair: Heat exchanger failure
- Noise in AE record caused by servo valves
- Post-peak load control
- High temperature LVDT and load cells
- Jackets