WORKSHOPS AND SHORT COURSES

Title: Microstructural characterization of rocks

Duration: Morning short course/9:00-12:00

Description:

This course aims to quantify the pore structure of rocks using the most common and accessible techniques, which include scanning electron microscopy, mercury porosimetry, gas adsorption, and image analysis. The course will be divided into three sections. The first section will briefly introduce the main features of the rock texture and present the basic concepts of each technique. The second part deals with the application of these techniques to the characterization of different rocks used in a wide range of real rock mechanics problems.

The course will finish with a visit to the Applied Petrology lab and the Research Technical Services at the University of Alicante, where we will learn the preparation of core samples and thin sections and how the mercury porosimetry and gas adsorption equipment works. Finally, we will analyse under scanning electronic microscopy the microstructure of rocks studied in the course during a practical session.

Target Audience:

This short course is specifically designed for both undergraduate and post-graduate students and researchers related to geotechnical, geological, mining and petroleum engineering.

Lecturers Biography:

Dr D. Benavente is head of the Applied Petrology Group and a member of the Department of Earth and Environmental Sciences, at the University of Alicante. He is Associate Professor in Petrology and Geochemistry and his teaching includes Applied Petrology and Geochemistry and Prospecting Geochemistry. His research involves petrophysics and durability of building rocks; and conservation of historical and cultural heritage built in stone; transport of fluids in porous soils ad rocks; and low temperature geochemistry processes. For more info: https://personal.ua.es/en/david-benavente/personal-page-of-david-benavente.html

Program:

Section I. Introduction to the course and background.

Section II. Practical applications

Section III. Visit to Applied Petrology lab and the Research Technical Services at the University of Alicante and scanning electronic microscopy session.

Maximum number of attendees: 10