Gastvortrag

Associate Professor
Carlos Ovalle
Polytechnique Montreal, Canada

„Multi-scale mechanical characterisation of coarse mine waste rock“

INSTITUT FÜR BODENMECHANIK UND FELSMECHANIK

19. September 2023
09:30 Uhr

Anfahrt mit PKW:
A5, Ausfahrt Karlsruhe-Durlach, auf der Durlacher Allee (B10) Richtung Stadtmitte, Wegweiser "KIT Campus Süd" zur Haupteinfahrt folgen, dort Gebäude 40.21/40.22

Anfahrt mit DB/ÖPNV:
ab Hauptbahnhof mit der Straßenbahn 2 (Wolfartsweier), 4 (Waldstadt) oder Stadtbahn S4 (Bretten, Eppingen, Heilbronn) bis zur Haltestelle „Durlacher Tor“, 10 min. Fußweg zum Gebäude 40.21/40.22 (kurzfristige Streckenänderungen durch U-Strab-Baustellen möglich!)

Kontakt:
Karlsruher Institut für Technologie (KIT)
Institut für Bodenmechanik und Felsmechanik
Leitung: Prof. Dr.-Ing. Hans Henning Stutz
Campus Süd, Geb. 40.21
Engler-Bunte-Ring 14
76131 Karlsruhe
Telefon: 0721-608-42220
E-Mail: institut@ibf.kit.edu
www.ibf.kit.edu
Einladung

Wir möchten Sie herzlich zu einem Gastvortrag von Herrn Professor Carlos OVALLE von der Polytechnique Montreal, Kanada, einladen.

Resume

Carlos Ovalle is a professor at Polytechnique Montréal, Canada, since December 2018 and a member of RIME UQAT-Polytechnique, a joint research program comprising six major industrial partners, developing innovative solutions to address environmental challenges in the mining sector.

He graduated in civil engineering in Chile, he obtained his Master degree at École Centrale Paris, and in 2013 he defended his doctoral thesis at École Centrale de Nantes, France. Prior to his PhD, Carlos worked 9 years for engineering consulting companies involved in environmental geotechnics for mining operations in South America. Since 2010, he continues in the same field but with an academic approach.

His research interests include experimental and numerical developments for the characterization and modelling of geotechnical problems, with a particular focus on mining waste storage facilities.

Der Vortrag „Multi-scale mechanical characterisation of coarse mine waste rock“ mit anschließender Diskussion findet am 19. September 2023, 09:30 Uhr, im Seminarraum des Instituts, Geb. 40.21/40.22, Raum 112 (1. OG) statt. Der Vortrag wird in englischer Sprache gehalten.

Abstract

Mine waste rocks are coarse granular materials without economic interest that must be blasted and extracted in order to access the ore. Mining production volumes are significant, and rock waste material is stocked in piles that can reach several hundred meters in height, where their physical stability must be analysed. The material is composed of rock particles of different sizes, ranging from grains of sand and silt to rocks approximately 1 m in diameter. The presence of oversized particles does not allow the full-size material to be tested in the laboratory, so it is necessary to work with samples on a reduced scale. However, scaling methods can be affected by size effects, which are not yet fully understood by the geotechnical community.

In this seminar, multi-scale approaches are presented to understand the mechanical behavior of coarse waste rocks, including laboratory experiences, in-situ tests and numerical modeling through continuous and discrete methods. Understanding the physical sources of size effects on the mechanical behavior allow us to propose representative scaling laws to be used in practice.

Rückfragen bitte an Herrn Prof. Stutz unter Email: institut@ibf.kit.edu bzw. telefonisch unter 0721-608-42220.

Wir freuen uns über ihr Kommen und eine rege Teilnahme.