

SEPT. 21-27, 2023
CHENGDU, CHINA

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

Session 10-9

Physical Modeling for Geological and Geotechnical Engineering



Conveners



Yan-Guo Zhou

Zhejiang University



Bruce L. Kutter

University of California, Davis, USA



Wenjie Xu

Zhejiang University



Duanyang Zhuang

Zhejiang University



Jinlong Li

Zhejiang University



Kyohei Ueda

Kyoto University, Japan



Yan Zhang

Chengdu University of Technology

Brief Introduction of the Session:

Major engineering projects are large-scale with complicated hazard mechanism of engineering geological bodies and geo-materials subjected to static/dynamic loads in the engineering lifecycle. Physical modeling typically involves the interaction of many elements and multiple coupled physical processes, which plays very important role in understanding the fundamentals of geological & geotechnical body response and validating the efficacy of design methods, hazard mitigation countermeasures, etc.. This session will focus on physical modeling and the related numerical analysis for major geological and geotechnical engineering problems, such as geological structure deformation, geotechnical earthquake engineering, hydropower geotechnical foundations, transportation and energy storage, geological solutions for energy and resources including geological disposal of nuclear wastes and sequestration of carbon dioxide. The themes of this session are: (1) to identify the challenges for physical modeling posed by scientific problems behind major engineering projects; (2) to find the needs for new theory, methods, facilities and instrumentations for major geological and geotechnical engineering problems.

This session will discuss the following topics, but not limited to:

- Scaling laws for geological and geotechnical model tests
- Physical modeling for geotechnical earthquake engineering
- Physical modeling of hydropower geotechnical foundations
- Centrifuge modeling to explore energy geotechnology problems
- Geological disposal of nuclear wastes and sequestration of carbon dioxide
- Physical analogue and hypergravity experiments of tectonic deformation
- Combined use of physical modeling and numerical simulation in geological and geotechnical engineering system

Session contact: Dr. Duanyang Zhuang, E-mail: zhuangdy@zju.edu.cn

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>



www.iaeg2023.org

Tel: +86-28-84073193 / +86-135 4003 2551

E-mail: info@iaeg2023.org; IAEG2022@cdut.edu.cn