

SEPT. 21-27, 2023
CHENGDU, CHINA

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



Session 2-4

Disaster Risks and Engineering Solutions in Permafrost Regions

Conveners



Yanhu Mu
NIEER, Chinese Academy of Sciences



Wansheng Pei
NIEER, Chinese Academy of Sciences



Jing Luo
NIEER, Chinese Academy of Sciences



Long Jin
CCCC First Highway Construction CO.,LTD.



Xiaoqing Peng
Lanzhou University



Yandong Hou
Lanzhou University of Technology



Guoan Yin
NIEER, Chinese Academy of Sciences

Brief Introduction of the Session:

The vast permafrost regions play an important role in the world economy for their rich natural resources, including an estimated 25% of the world's undiscovered oil and gas reserves. In recent decades, economic development has brought into permafrost regions an extensive expansion of hydrocarbon extraction, transportation networks, communication lines, industrial projects, civil facilities, and engineering maintenance systems. However, the rapid climate change and pronounced permafrost degradation exert great challenges to construction and maintenance of engineering infrastructures built in permafrost regions. The assessments made by permafrost scientists showed that, by 2050, 33% of the infrastructure built in the Northern Hemisphere's permafrost regions would experience damage from ground subsidence and loss of structural bearing capacity induced by the permafrost degradation. Thus, how to economically maintain the existing infrastructure and scientifically construct the future ones on degrading permafrost is a great engineering challenge.

This topic will discuss the following issues, but not limited to:

- Permafrost changes under climate warming and engineering disturbance
- Thermo-hydro-mechanical performance of permafrost foundation
- Thermokarst and subsidence disaster and impacts to permafrost engineering
- Environment protection and disaster reduction in permafrost regions
- Evaluation method on disaster risks and financial loss under different scenarios of climate warming
- Multi-functions pile foundations and application to permafrost engineering
- New active cooling methods and structures for permafrost engineering
- Freeze resistance materials and application in cold regions engineering
- Adaptive strategy and engineering solutions in permafrost regions

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