

## Special Issue

# Artificial Ground Freezing Technology

### Message from the Guest Editors

Artificial ground freezing (AGF) has been widely used in geotechnical practices for temporary support and waterproofing. However, engineering accidents related to AGF technologies are reported in complex scenarios due to the lack of experience and vague understanding of the mechanism of AGF. Therefore, this Special Issue is intended for the presentation of novel scientific advances in AGF theories, testing methods, numerical simulations as well as case studies, which will shed light on the mechanism of the coupled THM effect on AGF to further narrow the gap between theory and practical use. This Special Issue will publish high-quality, original research papers in the overlapping fields of:

- Artificial ground freezing
- Case histories
- Coupling THM theory and simulation
- Energy conversion, utilization, and saving
- Engineering risk assessment
- Engineering design
- Uncertainty quantification in heat transfer
- Environmental soil freezing
- Frozen and thawed soils
- Heat transfer in porous media
- Multiscale analysis
- Underground construction techniques and applications
- Heat transfer under seepage flow

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### Guest Editors

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### Deadline for manuscript submissions

closed (20 February 2025)



## Applied Sciences

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## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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