Special Issue

Transportation Infrastructures in Cold Regions

Message from the Guest Editors

In cold regions, design, construction, and maintenance of transportation infrastructure face severe challenges due to harsh climate and freezing and thawing processes within the foundation soils. The coupled hydro-thermomechanical process in freezing and thawing foundation soils can result in severe damage to roadway and railway structures, including embankments, culverts, slopes, tunnels, and bridges, which significantly increases their maintenance costs and decreases their service life. In recent years, an increasing amount of research focusing on the hydrothermomechanical process in roadways and railways has been conducted with the quick development of transportation infrastructure in cold regions. The proposed Special Issue will cover all areas related to the hydro-thermomechanical process of transportation infrastructure in cold regions, e.g., heat transfer, moisture migration, deformations, and damages of embankment, culverts, slopes, linings, and pile foundations, as well as adoption methods. Research methods including field observations, numerical simulations, and theoretical analyses are all welcome.

Guest Editors

Prof. Dr. Yanhu Mu

State Key Laboratory of Frozen Soil Engineering, Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Lanzhou 730000, China

Dr. Pengfei He

School of Civil Engineering, Lanzhou University of Technology, 287# Langongping Rd. Qilihe District, Lanzhou, China

Deadline for manuscript submissions

closed (20 July 2022)



Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/104285

Applied Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 applsci@mdpi.com

mdpi.com/journal/applsci





Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

