Special Issue

Advances in Tunnel and Shield Engineering

Message from the Guest Editors

We are inviting submissions to this Special Issue. Shield tunneling technology is a vital method in tunnel construction that makes efficient use of underground space, and its importance continues to grow. This trend requires smarter upgrades to shield equipment and construction management techniques to ensure both safety and reasonable efficiency during tunneling. As extra-long, large-diameter, deep-buried shield tunnel projects rapidly expand, many challenges have emerged. Digital approaches that combine methods from different fields are opening new research paths, especially through machine learning, computer vision, and human–machine collaborative learning. Current technological advances mainly focus on using smart construction technologies to solve the various challenges in shield tunneling.

In this Special Issue, we invite submissions exploring cutting-edge research and recent advances in the fields of tunnel and shield engineering. Both theoretical and experimental studies are welcome, as well as comprehensive review and survey papers.

Guest Editors

Dr. Xiangxun Kong

School of Civil Engineering, Harbin Institute of Technology, Harbin 150090, China

Dr. Jiabing Zhang

School of Civil Engineering and Architecture, Guangxi University, Nanning 530004, China

Deadline for manuscript submissions

31 January 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/246986

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

mdpi.com/journal/applsci

MDPI

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)