

## Special Issue

# Advances in Materials and Structures for Underground and Transportation Engineering

### Message from the Guest Editors

Underground and transportation infrastructure plays a pivotal role in modern urbanization. However, it faces growing challenges related to sustainability, durability, and resilience against environmental and operational stresses. This Special Issue seeks to highlight cutting-edge advancements in materials science and structural engineering. We invite contributions that explore innovative materials, novel design methodologies, and advanced construction techniques to enhance performance, longevity, and safety. Topics of interest include, but are not limited to, the following areas:

- The development of high-performance materials (e.g., smart composites, geopolymers, self-healing concrete) for tunnels, subways, and roads;
- The structural optimization and modeling for underground spaces and transportation networks;
- Sustainable and eco-friendly materials for reduced environmental impact;
- Durability enhancement against corrosion, fatigue, and extreme loads;
- Innovative monitoring and maintenance technologies (e.g., sensors, AI-driven systems);
- Case studies on material applications in large-scale infrastructure projects;
- Disaster mitigation materials for seismic, fire, or flood resistance.

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### Guest Editors

Prof. Dr. Yixian Wang

Dr. Panpan Guo

Dr. Hui Zhang

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### Deadline for manuscript submissions

20 November 2026



## 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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