

## Special Issue

# The Development of Underground Projects in Urban Areas—2nd Edition

### Message from the Guest Editors

Despite the rapid developments of techniques in underground projects, tunneling through heterogeneous and discontinuous geo-materials is still rather complicated and problematic, especially for urban areas. For instance, irregular inclusions and complex joint morphology are hard to quantify and replicate in numerical and physical analysis, which may lead to a rough estimation of mechanical properties of geo-materials. In addition, underground projects in urban areas usually cross stratum with adverse geological conditions, excessive settlement, structure damage or water leakage, all of which occur frequently, greatly weakening the safety and durability of underground projects. Therefore, appropriate treatments are urgently needed to improve the mechanical properties of surrounding rocks and control the deformations and damages of underground structures. The aim of this Special Issue, entitled “The Development of Underground Projects in Urban Areas” is to gather original fundamental and applied research related to the numerical models and advanced treatments of heterogeneous and discontinuous geo-materials and underground structures.

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### Guest Editors

Dr. Jianjun Ma

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### Deadline for manuscript submissions

closed (21 May 2024)



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## Editor-in-Chief

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