Special Issue

Advanced Seismic Technologies in Underground Structures

Message from the Guest Editor

Underground structures (e.g. tunnels, powerhouses, pipes) play an important role in fields of transportation and energy. Moreover, the number and scale of underground structures are constantly increasing. During the past few major earthquakes, many underground structures have been severely damaged. Therefore, it is crucial to better understand the seismic behavior of underground structures and to propose targeted controls. In recent decades, a large number of studies have been conducted on seismic hazard analyses, monitoring techniques, and disaster controls. The main objective of this Special issue is to present current research on seismic analysis and design of underground structures. Origin contributions in numerical and experimental investigations, monitoring techniques, innovative support materials, and case studies are welcome.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

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