

Special Issue

Study on Mechanical Properties of Civil Engineering Materials

Message from the Guest Editors

Civil engineering materials play a pivotal role in ensuring the functionality and longevity of structures. These materials are subjected to a wide array of influential forces that can significantly impact their mechanical properties, leading to deterioration in stiffness, strength, and even the potential for extensive damage to critical structural components. In this context, this Special Issue welcomes authors to contribute their scholarly work, featuring original research papers that delve into novel advancements, ongoing project case studies, and comprehensive reviews pertaining to the mechanical behavior of civil engineering materials under diverse scenarios. Whether the focus is on environmental actions, dynamic loads, or extreme conditions such as fire, explosion, or earthquake, these papers may introduce innovative design methodologies aimed at minimizing structural vulnerabilities, propose inventive rehabilitation strategies, introduce cutting-edge assessment and upgrading techniques, and elucidate controlled demolition protocols tailored for severely compromised structures.

Guest Editors

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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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