

Special Issue

Research on Rate-Dependent Mechanical Properties of Ultra-High Strength Concrete

Message from the Guest Editors

Because of the ultra-high strength, excellent ductility and good durability, Ultra-high Performance Concrete (UHPC) is considered as the promising structure material for building vulnerable to dynamic loadings, i.e., earthquake, explosion and crushing, etc.. It has been widely acknowledged that the damage and failure of concrete structure can be attributed to the propagation and cumulation of cracking. From a multiscale point of view, the cracking of UHPC containing aggregates can be assigned to the fracture of aggregate, ITZ, and paste matrix. So, understanding the rate-dependent mechanical properties of UHPC from a multisacle perspective is of vital importance to the design and safety assurance of structure exposed to dynamic loading.

Guest Editors

Dr. Shaohua Li

Research Group of Advanced Concrete Structural Materials, Wuhan University, Wuhan 430072, China

Dr. Weitan Zhuang

School of Architectural Engineering, Anhui Polytechnic University, Wuhu 243032, China

Deadline for manuscript submissions

closed (31 December 2024)



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4

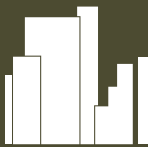


mdpi.com/si/201244

Buildings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
buildings@mdpi.com

[mdpi.com/journal/
buildings](https://mdpi.com/journal/buildings)





Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



[mdpi.com/journal/
buildings](https://mdpi.com/journal/buildings)



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

Prof. Dr. David Arditi

Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

Author Benefits

High Visibility:

indexed within SCIE (Web of Science), Scopus, Ei Compendex, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Construction and Building Technology) /
CiteScore - Q1 (Architecture)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).