

Special Issue

Evaluating the Impact of Sample Preparation and Curing Methods on the Freeze - Thaw Resistance of Concrete

Message from the Guest Editor

Dear colleagues, Concrete is the most used and versatile construction material. The freeze-thaw (F/T) resistance of concrete is crucial for the durability of structures being exposed to freezing conditions. Generally distinguish two types of freeze-thaw degradations: 1) internal structural damage and 2) scaling caused by F/T in the presence of de-icing agents. These test methods and related sample preparation and curing procedures are based on long-term practical experience with Portland cement concrete. This Special Issue aims to gather knowledge and discuss the impact of sample preparation and curing methods on the freeze-thaw resistance of concrete, cast from fresh concrete or obtained from existing structures. Topics of interest include:

- Influence of sample preparation and curing on F/T resistance of concrete;
- Influence of sample extraction on F/T resistance of concrete;
- Influence of sample size and geometry on F/T resistance of concrete;
- Influence of freeze-thaw protocols;
- Precision and reliability of test procedures.

Guest Editor

Dr. Aljoša Šajna

Slovenian National Building and Civil Engineering Institute, Dimičeva 12,
SI-1000 Ljubljana, Slovenia

Deadline for manuscript submissions

closed (20 February 2024)



Buildings

an Open Access Journal
by MDPI

Impact Factor 3.1
CiteScore 4.4



mdpi.com/si/181235

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 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).