Special Issue

The Dynamic In Situ Characterisation of Buildings

Message from the Guest Editors

The decarbonisation of the built environment is a critical component of our path to net zero. Conventional approaches to understanding the performance of buildings are mostly static, addressing average conditions and thermal performance. However, real buildings are subject to varying external conditions, including temperatures, wind and solar gains and internal factors, which can all be highly variable, involving factors such as heating system use, ventilation and occupancy. There is increasing interest in the dynamic performance and conditions in buildings, relating both to the conditions experienced and the demands on the energy system, with implications for the integration of less flexible generation and requirements for demand side response.

This Special Issue will bring together research that characterises the in situ dynamic performance of buildings (both domestic and non-domestic) and the systems within them that provide heating, cooling and ventilation. It aims to include research which supports our transition to net zero by including a range of perspectives and complementary topics.

Guest Editors

Dr. Virginia Gori
Prof. Dr. Cliff Elwell
Dr. Frances Hollick

Deadline for manuscript submissions

31 July 2026

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/157182

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

mdpi.com/journal/buildings

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/journal/buildings

MDPI

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).