Special Issue

Data Analysis and Energy Modeling in Smart and Zero-Energy Buildings and Communities

Message from the Guest Editor

Considering the increased smartness of buildings and the rapid development of monitoring technologies, the mitigation of climate change through renewable energy integration and efficient energy management is expected. The usage of the IoT, sensors, data analysis, and energy modeling can be substantial to achieve the goal of Zero-Energy Buildings and Communities. Papers submitted for consideration for publication in this Special Issue should advance and disseminate information related to sensing technologies and energy modeling approaches integrated with smart buildings in order to help achieve very high performance. Acceptable topics include original reviews, advanced research, or explorations of new concepts pertinent to monitoring, data analysis, and energy modeling of smart buildings and cities. Cutting-edge energy data collection and modeling in realizing a zero-energy balance and carbon neutrality for buildings are highly encouraged to contribute to the sustainable development of the building sector.
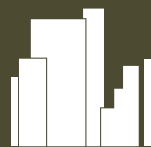
Guest Editor

Dr. Marilena De Simone

Department of Environmental Engineering (DIAm), University of Calabria, 87036 Rende, Italy

Deadline for manuscript submissions

20 April 2025

Buildings

mdpi.com/si/189735

mdpi.com/journal/buildings

MDPI

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 Scopus, SCIE (Web of Science), Inspec, and other databases.

Journal Rank:
JCR - Q2 (Engineering, Civil) / CiteScore - Q1 (Architecture)

Rapid Publication:
manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.2 days after submission; acceptance to publication is undertaken in 3.6 days (median values for papers published in this journal in the first half of 2024).