

Special Issue

Energy Consumption and Environmental Comfort in Buildings

Message from the Guest Editors

Building energy efficiency, low environmental impact, and individual well-being and health (One Health) will pose significant challenges for the construction industry, engineers, and architects in the upcoming years. The objective of this Special Issue is to compile strategies, methods, tools, and case studies that adopt a challenging, multidisciplinary, and cross-domain approach to achieve these goals. The specific areas of focus within this Special Issue include:

- Behavioral design and the interaction between people and the environment;
- Balancing energy efficiency and occupancy assessment;
- Harmonizing views, comfort, and energy efficiency;
- Digital twins, measurement, and real-time monitoring;
- Lean retrofit strategies and design for circularity.

Finally, we will showcase cutting-edge solutions that leverage advanced technologies and materials to address the challenges of energy efficiency and comfort in building envelopes. Our goal is to disseminate the latest research and best practices related to these topics, contributing to the development of new paradigms for achieving realistic and effective energy efficiency in buildings that are accessible to all.

Guest Editors

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Deadline for manuscript submissions

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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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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).