Special Issue

Built Environment Physics: The Impact of Acoustic, Thermal, and Spatial Factors on Occupant Well-Being

Message from the Guest Editors

We welcome original research (laboratory, field, and simulation studies), theoretical frameworks, and comprehensive reviews that address these critical areas. Relevant topics for submission include the following:

Acoustic Design Strategies: Innovations in soundproofing and noise reduction techniques to improve occupant comfort and well-being.

Thermal Comfort Solutions: Approaches to enhance indoor thermal comfort, including passive and active systems that promote occupants' comfort, health, and performance.

Spatial Configuration: The impact of spatial design on social interaction, privacy, and overall user experience.

Integrated Performance Assessment: Evaluating the combined effects of acoustic, thermal, and spatial factors on occupant health and well-being.

Personalized Control Technologies: Enabling individual control to enhance comfort and well-being while promoting energy efficiency.

By fostering a multidisciplinary research, this Special Issue aims to advance our understanding of how built environment physics can optimize occupant well-being. Together, we can contribute to the creation of healthier, more sustainable, and more enjoyable living and working spaces.

Guest Editors

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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.

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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).