Special Issue

Study on Building Energy Efficiency Related to Simulation Models

Message from the Guest Editors

Since the building sector accounts for a significant share of energy-related carbon emissions globally, research on improvements in building energy efficiency has received increasing interest in the past decades..... The goal of this Special Issue is to call for contributions that research opportunities in building energy saving and efficiency improvement by adopting various simulation techniques, including either analytical, empirical, or numerical models. Topics may include but are not limited to the following:

- Energy-efficient building design based on performance simulation;
- High-efficiency building energy system and its modeling;
- Modeling and simulation of district energy systems;
- Onsite building renewable-energy system modeling and simulation;
- Simulation-based optimization problems related to building energy efficiency;
- Model predictive control for building system;
- Energy-efficient building design based on performance simulation;
- building/district energy system and its modeling;
- .....

For further reading, please follow the link to the Special Issue Website at:
https://www.mdpi.com/journal/buildings/special_issues/ P8JFSBW089

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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).