Special Issue

Computational Fluid Dynamics Modeling for Smart Buildings Design

Message from the Guest Editor

The development of intelligent buildings makes it possible to provide answers to multiple and intersecting challenges: new professions, low and more flexible energy consumption, user services, digitization, digital model, artificial intelligence, increased integration of renewable energies, quality of air and interoperability. A smart building must be able to ensure a healthy environment and better management of energy consumption. Today, any building, residential or tertiary, new or existing, is likely to be intelligent. This Special Issue focuses on the solutions to be implemented for the development of intelligent buildings. In the design of buildings, the use of CFD is imperative to model the temperature and air quality in spaces. This allows designers to study internal conditions prior to building construction. The scope of this Special Issue covers a wide range of related topics, but is not limited to: Modeling of airflows in buildings... For more information, please view the following link: https://www.mdpi.com/journal/buildings/special_issues/CFDMSMD

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Deadline for manuscript submissions

closed (30 April 2023)

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/112343

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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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