Special Issue

Innovations and Complexities in Building Envelope Design

Message from the Guest Editors

This Special Issue examines the theoretical and methodological approaches to the executive design of advanced integrated building envelope systems, according to the application of, smart manufacturing and design for assembly and manufacturing (DfMA) processes. The cross-cutting and multidisciplinary research presented in this Special Issue will original and innovative experimental methods for the environmental, energy, and technical evaluation of advanced integrated building envelope systems (compared to traditional façade solutions), through the analysis of:

- The economy and time efficiency of incremental integration procedures;
- The efficiency of physical processes of energy and/or air exchange (between indoor and outdoor environments), through the use of (passive) devices defined by renewable energy sources;
- The analytical observation and simulation of the energy performance of buildings.

For further reading, please follow the link to the Special Issue Website at: https://www.mdpi.com/journal/buildings/special_issues/5A82XAO743

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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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