Special Issue

Innovative Approaches to Climate-Responsive Building Design: Advancing Resilience and Sustainability in the Built Environment

Message from the Guest Editors

This Special Issue aims to offer a thorough exploration of current trends and future advancements in environmentally adaptive building design. Through the analysis of state-of-the-art practices, case studies, and innovative methodologies, it seeks to equip professionals and researchers in the construction sector with insights into solutions that address both present and future challenges, ultimately contributing to the development of sustainable cities and communities. This Special Issue welcomes review articles, research papers, and case studies. Topics of interest include, but are not limited to, the following:

- Responsive architecture;
- Biodesign and adaptive technologies;
- Innovative and advanced design approaches;
- Sustainable materials for carbon footprint reduction;
- Adaptation and mitigation strategies for environmental hazards;
- Physical analysis of buildings for energy efficiency

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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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