Special Issue

Emerging Methodologies and Technologies for Assessing the Impact of Air Quality and Thermal, Visual, and Acoustic Comfort on Indoor Environmental Quality

Message from the Guest Editors

Indoor Environmental Quality (IEQ) is increasing in importance in the design of contemporary buildings, particularly in low-energy buildings and smart and intelligent buildings. Indeed, IEQ is able to impact on the well-being, productivity, and health and safety of building occupants. The concept of IEQ is very broad and depends on many aspects, among which air quality and thermal, visual, and acoustic comfort are undoubtedly recognized as significant. Although the methodologies and techniques for separately assessing the different aspects are well known, to date there are no standardized methodologies and techniques for global IEQ assessment. In this context, it seems appropriate to move forward the knowledge, sharing studies that deal, in particular, with the evaluation of the combined effects of multiple factors on the IEQ. We would like to give the different groups working in these research fields the opportunity to publish their latest research in a Special Issue focused on, but not limited to, the following topics

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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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