

Special Issue

Smart Technology for Indoor and Built Environments: Thermal Comfort, Ventilation, Acoustics, Energy Systems, and Structural Performance

Message from the Guest Editors

This Special Issue “Smart Technology for Indoor and Built Environments: Thermal Comfort, Ventilation, Acoustics, Energy Systems, and Structural Performance,” aims to explore cutting-edge research and innovative applications that enhance the quality, efficiency, and sustainability of our living and working spaces in an era of rapid urbanization and climate change. We invite original research contributions addressing the integration of intelligent systems that improve thermal comfort, indoor air quality, acoustic performance, energy efficiency, and structural reliability. Topics of interest include, but are not limited to, indoor environmental quality enhancement through IoT sensors and adaptive controls; ventilation strategies for pollutant dispersion; the interplay between temperature, humidity, and human comfort; acoustic design in modern interiors; smart building automation systems; urban heat island mitigation; passive solar design strategies; energy consumption optimization; and smart management systems that maintain structural safety and integrity.

Guest Editors

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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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