



Sensing the Built Environment: Measurements, Correlations, and Implications

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Message from the Guest Editors

The emergence of new data and the machine learning approach provide great opportunities to generate theoretical and empirical insights for built environment research. Accordingly, it is hoped that the Special Issue on Sensing the Built Environment: Measurements, Correlations, and Implications, can advance an interdisciplinary dialogue between architecture, urban planning, social science, and computer science. The Special Issue not only invites manuscripts on literature reviews, but also theoretical, methodological, and empirical work. The topics may include, but are not limited to, the following areas:

- (1) Measuring the built environment with new data and sensing technologies (e.g., street view images, wearable device);
- (2) Understanding the complex interactions between the built environment, psychological perception (e.g., safety, lively), and well-being (e.g., emotion);
- (3) Implications for urban planning and policy intervention (e.g., pathways, optimization).



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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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