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Advances in Building Performance Simulation and Building Energy Consumption Analysis

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Deadline for manuscript submissions:
closed (31 August 2024)

Message from the Guest Editors

Dear Colleagues,

As we stride deeper into an era of sustainability and energy efficiency, the focus on building performance simulation and energy consumption analysis becomes increasingly critical. The primary objective of this Special Issue, "Advances in Building Performance Simulation and Building Energy Consumption Analysis ", is to highlight the most recent, cutting-edge innovations and emerging trends within these pivotal disciplines. It's a platform to explore advances in technology, theory, and application that underpin the evolving landscape of building performance and energy management. We invite contributions that delve into a wide spectrum of topics, including but not limited to:

1) Novel methodologies for building performance simulation,

2) Technological advancements in energy consumption analysis,

3) Energy-efficient design and retrofitting strategies,

4) Insights from data-driven and AI-based approaches,

5) Impact of climate change on building performance and energy consumption,

6) Case studies illustrating successful applications.

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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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