Prediction and Monitoring of Building Energy Consumption

Guest Editors:

Prof. Dr. Sergio Vega-Sánchez
Escuela Técnica Superior de
Arquitectura, Universidad
Politécnica de Madrid, Madrid,
Spain

Prof. Dr. Beatriz Arranz
Building Construction
Department, Technical University
of Madrid (UPM), 28004 Madrid,
Spain

Deadline for manuscript
submissions:
closed (30 March 2023)

Message from the Guest Editors

Dear Colleagues,

The goal of this Special Issue is to publish original contributions on technical, experimental, numerical research, as well as experiences in daily building operations aiming at reducing the gap between prediction and reality and at improving building energy management systems. Topics may include, but are not limited to, the following:

- Experimental modelling techniques
- Innovative modelling procedures and tools
- Simplified simulation models
- Building operation models
- Short-term (daily and weekly) and medium-term (monthly annual) energy use forecasting for building operations
- Innovative non-intrusive monitoring techniques for energy efficiency: consumption, contribution of renewables, and hydrothermal comfort
- Building operation monitoring
- Living lab monitoring
- Building component monitoring/test cell monitoring
- Gaps between predictions and real monitoring
- Adjustment and validation of simulation models based on real data on building performance

Prof. Dr. Sergio Vega-Sánchez
Prof. Dr. Beatriz Arranz
Guest Editors

Special Issue

Editor-in-Chief

Prof. Dr. David Arditi
Construction Engineering and
Management Program,
Department of Civil,
Architectural, and Environmental
Engineering, Illinois Institute of
Technology, 3201 South
Dearborn Street, Chicago, IL
60616, USA

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, and other databases.
Journal Rank: JCR - Q2 (*Engineering, Civil*) / CiteScore - Q1 (Architecture)

Contact Us