



Experiment and Analysis of Building Structures

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Message from the Guest Editors

Dear Colleagues,

Experimental testing and analysis of building structures are large, interesting fields of human scientific activity. This Special Issue is focused on the problems and defects of existing building structures, whether industrial or civil. This issue includes the assessment of their condition, either by advanced methods of in situ diagnostics or laboratory experimental testing of physical and mechanical properties.

This new Special Issue—hosted by the scientific journal Buildings, the main topics covered in this Special Issue are (but not limited to) the following:

- Experimental testing of materials and structure elements in civil engineering;
- Testing and diagnostics of structures in situ;
- Advanced measuring procedures for measuring the properties of building structures;
- Condition assessment of building materials and structure elements;
- Defectoscopy of building structures;
- Diagnostics of cultural heritage monuments;
- Structural health monitoring systems;
- Modeling and numerical analyses;
- Non-destructive techniques and monitoring;
- Fire and explosion experiments on building structures.



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Special Issue



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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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