Special Issue

Building Structure Health Monitoring and Damage Detection

Message from the Guest Editors

Structural health monitoring and damage detection are crucial to ensure the safety and durability of buildings. This Special Issue gathers innovative research on the behavior of structures under various conditions, aiming to improve damage prevention and mitigation. Topics of interest include the analysis of dynamic structural response and the application of artificial intelligence in damage detection, real-time monitoring, and structural integrity assessment. Advanced methods for fault identification and the prediction of structural behavior under extreme events like earthquakes and vibrations are also explored. This Special Issue welcomes original research and review studies that provide innovative and practical solutions for structural monitoring and damage detection, promoting safety and sustainability in the construction field.

Guest Editors

Dr. Fidel Lozano

Department of Civil Engineering, Universidad of Castilla-La Mancha (UCLM), 13071 Ciudad Real, Spain

Dr. Edison Atencio

School of Civil Engineering, Pontificia Universidad Católica de Valparaíso (PUCV), 2340000 Valparaíso, Chile

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Buildings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
buildings@mdpi.com

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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

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

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