Special Issue

New Technologies for the Preservation and Restoration of Historic Buildings

Message from the Guest Editors

New technologies are transforming the field of historic building conservation and restoration, offering advanced tools for the preservation of architectural heritage in a sustainable manner that respects original integrity. Digital techniques, such as 3D laser scanning and photogrammetry, enable the creation of high-precision models for monitoring and planning interventions, integrating historical and structural data for more efficient restoration management (H-BIM). Innovative materials ensure more durable and less invasive interventions (Green BIM). Nanotechnology, on the other hand, offers advanced solutions for surface consolidation and weathering protection. IoT sensing and artificial intelligence are revolutionising building management, detecting structural and environmental changes in real time to monitor and prevent future damage. This Special Issue aims to bring together studies, research, and concrete applications of new technologies, promoting an interdisciplinary dialogue to innovate the conservation of our historic heritage. For more details:
https://www.mdpi.com/journal/buildings/special_issues/86NAM3976Q

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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.

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