



Nondestructive Evaluation (NDE) of Buildings and Civil Infrastructure

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Message from the Guest Editors

Recent advancements in computer vision, image processing, and artificial intelligence created exciting opportunities for non-destructive evaluation (NDE) of buildings and civil infrastructure. The availability of low-cost sensors, UAVs, ground robots, cameras in different spectrums, and open-source computation tools significantly expand our sensing capability to better understand and evaluate various conditions of buildings and infrastructure during their lifespan.

This Special Issue is dedicated to new findings in nondestructive sensing technologies that tap the newly available sensing tools and platforms in the domain of buildings and civil infrastructure. The research scope includes all stages in the lifespan of buildings and civil infrastructure, from **planning, design, construction, operation, and maintenance, to different occupant behaviors**. We especially welcome articles that address prominent practical issues related to critical components of our built environment, including buildings, building occupant behaviors, bridges, utility facilities, superstructures, and underground structures. Research methods can be experimental, numerical, and data-driven in the aimed themes.





Editor-in-Chief

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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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