



Seismic Impact on Building Structures: Assessment, Design, and Strengthening

Guest Editors:

Prof. Dr. Rajesh Rupakhety

Earthquake Engineering
Research Center, Faculty of Civil
and Environmental Engineering,
University of Iceland, Selfoss,
Iceland

Dipendra Gautam

Department of Civil Engineering,
Institute of Engineering,
Thapathali Campus, Tribhuvan
University, Kathmandu, Nepal

Message from the Guest Editors

As the late Professor Nick Ambraseys famously said, “Earthquakes do not kill people—buildings do”. Damage to buildings is one of the most serious physical impacts of earthquakes. Damaged buildings result not only in economic losses but also in human casualties and injuries, lack of housing, and lost incomes. The seismic resilience of buildings is dictated by a multitude of factors associated with the buildings themselves and their complex interactions with the characteristics of ground shaking.

This Special Issue will focus on the **structural impact of earthquakes on buildings**. Original research and reviews covering:

- Seismic vulnerability
- Structural damage
- Loss assessment
- Vibration control
- Supplemental damping
- Repair and strengthening
- Forensic structural engineering
- Artificial intelligence in structural earthquake engineering
- Material characterization for repair and retrofitting
- Performance based design

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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.

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Buildings Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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