



## Life Cycle Safety and Performance Improvement for Sustainable Engineering Structures

Guest Editors:

**Prof. Dr. Hongfei Chang**

**Dr. Bo Xu**

**Dr. Yuner Huang**

Deadline for manuscript  
submissions:

**closed (30 April 2023)**

### Message from the Guest Editors

Life cycle safety and performance improvement for engineering structures is critical for the sustainability of buildings and infrastructures. The present Special Issue aims to explore the development of life cycle safety evaluation and performance improvement for engineering structures, including the development of degradation and durability of material, damage detection and evaluation, structural safety analysis, and structural design and methods for the structure reinforcement. The thematic scope includes experimental research, numerical analysis, and theoretical analysis of materials and structures. Studies on methods for parametric modeling, design, and performance improvement for engineering structures are also welcomed.

Potential topics include but are not limited to the following:

- Durability of concrete and steel structures;
- Damage detection and evaluation of engineering material or structure;
- Repairing methods for aged engineering structures;
- Methods for parametric modeling of aged engineering structures;
- Resilience development of buildings and highway infrastructure;
- Resilience development of marine structures.





## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within SCIE (Web of Science), Scopus, Ei Compendex, Inspec, and other databases.

**Journal Rank:** JCR - Q2 (Construction and Building Technology) / CiteScore - Q1 (Architecture)

## Contact Us

---

Buildings Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/buildings  
buildings@mdpi.com  
X@Buildings\_MDPI