

Special Issue on
**Robustness and Resilience of Infrastructures under
Extreme Loads**

CALL FOR PAPERS

The catastrophic consequences observed after extreme events (flooding, earthquakes, vehicle impact, explosions, and fire) in transport and energy networks, as well as commercial and residential buildings, have significantly changed the public perception of risk regarding structures and infrastructure. Materials and structures are pushed to the limit in these conditions and given the fact that it is not always possible to provide an elastic response damage development must be considered and robustness becomes a precious characteristic. Robustness of a system has been often described as the capacity to resist local failure without causing disproportionate collapse. Though quite simple from a qualitative point of view the quantification of this concept represents a current open problem for engineers. Indeed, several different approaches have been proposed but there is not an ultimate solution. After an extreme event refurbishments and restoration are often compared to the complete reconstruction of the damaged structures. The resilience of built infrastructure represents the ability to recover from an extreme event in terms of both safety and serviceability. A quantitative definition of resilience represents another important problem for civil engineers and urban planners.

We invite authors to submit original research and review articles that investigate the robustness and resilience of infrastructure from a quantitative point of view.

Potential topics include but are not limited to the following:

- ▶ Structural and nonstructural robustness
- ▶ Resilience design
- ▶ Structural response under extreme loads
- ▶ Earthquake and seismic loads on structures
- ▶ Blast and impact loads on structures
- ▶ Fire design and fire structural response

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ace/rrie/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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