



MILAN, ITALY  
30<sup>TH</sup> JUNE - 5<sup>TH</sup> JULY 2024

[www.wcee2024.it](http://www.wcee2024.it)

**Session ID:** ASR-14

**Title**

SEISMIC RESILIENCE OF AGING COMMUNITIES

**Convenors**

G. Faraone <sup>1</sup>

**Description**

This technical session will explore the effects of aging buildings and infrastructure on the seismic resilience of our communities. Earthquakes significantly threaten the serviceability, functionality and safety of the built environment, inducing different levels of damage states according to the structures pre-event state. In addition, communities may suffer different levels of functionality loss/recovery processes correspondingly. The session will delve into the challenges posed by modeling and assessing the performance of older buildings and infrastructure, as well as presenting case studies of damage evaluation and risk and resilience assessment. Attendees will learn about the recent advancements on methods and strategies, and accomplishments in the field of life-cycle reliability and gain a better understanding of the importance of identifying, modeling, and including vulnerable structures in risk calculators and seismic vulnerability assessment. Overall, this session will provide a valuable insight into the critical role that aging infrastructure plays in community resilience and offer solutions for reducing downtime and post-disaster recovery costs.

**Invited Speakers**

M. Kashani <sup>1</sup>, Z. Rinaldi <sup>2</sup>, Y. Li <sup>3</sup>, X. Wang <sup>4</sup>

**Affiliations**

<sup>1</sup> University of Southampton, Southampton, United Kingdom, <sup>2</sup> University of Roma Tor Vergata, Rome, Italy, <sup>3</sup> University of Alberta, Edmonton, Canada, <sup>4</sup> Sun Yat-Sen University, Guangzhou, China