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European Safety and Reliability Conference

[esrel2021.org](http://esrel2021.org)

**CALL FOR ABSTRACTS**

**Special session on**  
***Seismic reliability assessment***

**Description**

This special session welcomes papers presenting innovative contributions to the reliability assessment of structures and infrastructure, at different scales in terms of time and space, with respect to seismic actions and combined effects of seismic and other triggered hazards (e.g., landslides, explosions, etc.).

**Motivation**

The quantification of the socio-economic losses due to earthquakes and/or events triggered by seismic events needs a large amount of information that are usually categorized in hazard, vulnerability and exposure models. Consolidated methodologies for seismic reliability assessment are available nowadays, yet recent researches prove the importance of developing models/methodologies able to account for some issues that may affect the results, such as, for example: ground motion characteristics not considered in traditional approaches, time-variability of systems' exposure and vulnerability (e.g., state-dependent

fragility functions), stochastic interaction between multiple hazards or different components at risk.

### Objective

This session encourages those works focusing on the following aspects, among the others:

- Spatially correlated ground motions for reliability assessment of building portfolios or infrastructural systems;
- Time-dependent seismic hazard;
- Time-variant structural vulnerability;
- Dynamic exposure;
- Seismic loss assessment;
- Recovery and resilience assessment for structures and infrastructure interested by seismic events;
- Cost benefit analyses to be used in the seismic emergency management;
- Combined effects of earthquakes and other triggered hazards.

### Organizer

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