

Session ID: ASR-12

Title

SEISMIC RETROFIT OF EXISTING BUILDINGS

Convenors

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Description

The vast majority of existing buildings have been built with older provisions, without or with low seismic specifications, with low-quality materials and using unsafe construction practices. What is more, the aging of the framing system, the carbonation of concrete and the corrosion of reinforcing steel further degrade the building's capacity. The scope of this Technical Session is to collect proposals on the different available techniques and methodologies for the seismic retrofit of existing buildings, and on the strategy for the strengthening interventions. Within this context, particular focus will be put on real-world case studies and all the challenges posed by the technical, operational and architectural restrictions of existing buildings.

The Session welcomes contributions from academic staff, researchers, post-graduate students and professional engineers dealing with topics related to:

- New techniques and approaches for the strengthening of existing buildings
- Comparison between different strengthening methods with respect to local and global performance criteria
- In-depth guidelines on the strategy for structural retrofit, and on when and why to select a specific technique for a given building type and/or engineering scenario.
- Guidance on when and under what circumstances to apply a specific strengthening method.
- Actual case studies of real-world seismic assessment and retrofitting projects
- Suggestions on the best retrofit strategies for different building types, and presentation of examples from practice that explain such suggestions.
- The identification of the technical, operational, social and performance criteria involved in the process of finding the optimal solution in every case of seismic retrofit
- Future challenges in seismic retrofitting

Invited Speakers

S. Antoniou ⁴, S. Pantazopoulou ⁵, D. Grant ⁶, D. Petinga ⁷, T. Huff ⁸, M. Castro ³, L. DiSarno ⁹, D. Pietra ¹⁰

Affiliations

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