

Session ID: ASR-7

Title

SEISMIC ASSESSMENT AND RETROFITTING OF EXISTING STEEL CONSTRUCTIONS OR ADOPTING NOVEL STEEL SOLUTIONS

Convenors

R. Landolfo ¹, A. Sato ², G.A. Rassati ³

Description

This technical session has been conceived to discuss the main issues that are currently under investigation within an ongoing Italian research project (Reluis WP5), which is aimed at developing design strategies of different seismic retrofitting interventions on existing non-code conforming structures as well as verifying their effectiveness.

Therefore, this technical session intends to discuss recent advances and future challenges for the accurate seismic assessment and retrofit of existing steel constructions. It is envisaged that International Researchers will share novel materials, technologies, and methodologies for the local and/or global seismic retrofitting of existing steel-deficient structures. Proposals for the implementation in the next generation of seismic European standards for the seismic assessment of retrofitting of existing structures will also be highly appreciated. The main objectives are summarized as follows:

- Existing and novel approaches for seismic assessment of existing steel structures;
- Characterization of seismic input for existing structures;
- Advanced modelling for seismic performance assessment;
- Performance criteria characterization;
- Local and global response analysis;
- Novel steel solutions
- Seismic fragility curves;
- Seismic retrofitting methods;
- Loss assessment and risk analysis of existing steel structures;
- Experimental tests for response analysis;
- Shake table and pseudo-dynamic tests for steel components and systems;
- Hybrid testing;
- Hybrid simulations;
- Existing steel buildings and non-building structures;
- Standards for seismic assessment and retrofitting.

Invited Speakers

M. Latour ⁴, L. Di Sarno ⁵, F. Freddi ⁶, M. Bosco ⁷, E. Marino ⁸, R. Tartaglia ⁸

Affiliations

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