Session ID: CMS-7

Title
SEISMIC PERFORMANCE OF INFILLED BUILDINGS - RECENT DEVELOPMENTS AND FUTURE CHALLENGES

Convenors
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Description
Past earthquake evidence demonstrated the critical role of masonry infills in the seismic response of numerous building typologies, leading to structural damage, collapse, and loss of life. In fact, even though infills are still often overlooked in the seismic design of structures by many seismic codes, their repair and replacement costs can be substantial, adding to the economic impact of seismic events. As such, the seismic assessment of existing masonry-infilled buildings is a highly relevant issue in many countries. At the same time, given the ambitious carbon emission reduction targets, new buildings are beginning to be designed using innovative products that can replace traditional masonry infill panels with materials that offer improved performance, durability, and sustainability. With the above in mind, this Technical Session aims to showcase and discuss analysis methods, modelling techniques and seismic loss assessment approaches for infilled buildings, at both single or building portfolio levels, design of new infilled buildings, future perspectives and innovative solutions for infill walls, experimental works on the evaluation or design of infills. The session will interest any research or industry stakeholder involved in infilled-building assessment, design and maintenance, as well as policy-makers and regulators interested in promoting sustainable, resilient and innovative building practices. The session welcomes original contributions on novel research proposals, case studies or advanced discussions on the seismic performance of infilled buildings, such as:
- Simplified or detailed modelling techniques and tools
- Seismic design and/or loss assessment of case-study infilled buildings
- Suggestions for pre-code guidelines to include infills in structural analyses
- Innovative infill solutions
- Experimental testing of infills or infilled frames or buildings
- Numerical versus experimental comparisons
- Large scale analysis of infilled building stocks

Invited Speakers
R. Milanesi [3], D. Penava [4], M. Donà [5], A. Stavridis [6]

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