Session ID: CMS-4

Title
SEISMIC FRAGILITY CURVES OF CORRODED STRUCTURES AND INFRASTRUCTURES

Convenors
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Description
This session aims at investigating the effect of reinforcement corrosion on the seismic risk assessment of reinforced concrete structures and infrastructures. Seismic risk maps are nowadays plotted by considering the date of the design and erection of structures; however, they only account for the adoption of codes based on gravity loads and non-seismic detailing rules. Therefore, the dependency of seismic fragility curves on aging and degradation effects caused by environmental actions is neglected.

This session welcomes papers able to illustrate the corrosion effects on the seismic vulnerability of reinforced and prestressed concrete structures and infrastructures from the perspective of the assessment of time-dependent fragility curves.

The final goal of the session is to create a community of experts working on evolutive seismic risk maps, which could be a very useful predictive tool for the management of affected structures and infrastructures. Indeed, the knowledge of the risk evolution over time allows the prioritisation of proactive and reactive interventions.

Finally, concerning the main purpose of Civil Protection, as pursued in Italy by ReLUIS, the knowledge of environmental effects on evolutive seismic risk maps could be useful not only for the management of structural heritage, but also for urban planning of new construction.

Invited Speakers
J. Gong [4], C. Nuti [5], S. Pantazopoulou [6]

Affiliations
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