

Session ID: GEO-6

Title

RESILIENT APPLICATIONS AND SOIL STRUCTURE INTERACTION (SSI) MODELLING FOR BUILDINGS AND BRIDGES

Convenors

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Description

The assessment of community resilience is extremely important for decision-making sciences since it may be considered the ability to maintain the functionality to deliver services during and after hazard events. In this regard, the role of structural systems is fundamental and considering the role of their components, and subcomponents becomes an important issue especially when subjected to earthquake hazards. In particular, assessing the seismic resilience of strategic structures defines the degree to which the social system is capable of organizing itself, learning from past disasters and improving risk reduction measures. In this regard, the study of the interaction with the soil becomes an integral part of the seismic evaluation, especially for rigid structures that are particularly sensitive to the Soil Structure Interaction (SSI) effects such as rocking component, settlements and lateral spreading. Moving from this background, this technical section aims to consider applications and advanced modeling techniques which particularly focus on the assessment of the seismic resilience for buildings and bridges, aiming at presenting the state-of-the-art methodologies and the most advanced case studies.

Invited Speakers

F. Fraternali ⁴, R.S. Jangid ⁵, A. Tessari ⁶, K. Wijesundara ⁷, K. Kalfas ⁸, S. Alazabeebe ⁹, I. Oz ¹², S. Piras ¹⁰

Affiliations

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