

Session 10

Recent advances in Archeoseismology: historical monuments as "stone" seismometers

Conveners:

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Historical buildings and archaeological remains are witnesses of natural catastrophes recorded in their walls (structural disorders, repairs, restorations, ...). The ambition of quantitative archaeoseismology is to discriminate the disorders left by past earthquakes on man-made structures, and to link such disorders with the characteristics of the past ground motions causing them. In this framework, the man-made structures can be considered as "stone seismometers" to study the historical ground motion. To reach such a degree of knowledge is fundamental to gather all the disciplines involved in the study of past earthquakes and their impact on man-made structures. With this aim we propose to open this session to all contributions on built heritage facing historical catastrophic events.

We invite contributions from disciplines spanning from history to earthquake engineering and seismology. Among the proposed topics, we find: historical/archaeological works on the impact of past earthquakes on structure and society, evolution of building history and their vulnerability through the centuries, petrological/mineralogical characterization of (ancient) building materials, architectural and structural engineering analysis, modelling masonry behavior under seismic loading, and ground motion seismology including site effects and soil-structure interaction in archaeological sites. Experimental, analytical, and numerical modelling approaches are naturally expected. Running case-studies and/or foreseen archaeological sites are also welcome.