

Session ID: SHR-2

Title

ADVANCES IN SEISMIC HAZARD ANALYSIS

Convenors

M. Pagani ¹, M.D. Petersen ², M.C. Gerstenberger ³

Description

Seismic hazard analysis provides essential information for the design of buildings, the update of national building codes and the assessment of various risk metrics. The methodologies used for assessing the hazard are constantly evolving to account for the progress made in several related disciplines, including but not limited to earthquake geology, geophysics and particularly seismology, geodesy, engineering seismology and earthquake engineering. Recently published hazard analyses show, for example, an increasing preference to model fault sources as a system without any a-priori assumption on segmentation and a more widespread use of methods inherited from statistical seismology to test the consistency between the forecasted seismicity and the one included in seismicity catalogues. On the ground-motion modelling side, emerging methodologies include modelling epistemic uncertainties based on backbone approaches and more extensive use of fully and partially non-ergodic ground motion models. Using many of these new approaches, primarily when the analyses cover large areas, remains challenging.

We invite contributions describing novel approaches for developing components of hazard input models or presenting hazard analyses performed for various applications and scales, from site-specific studies to national and regional hazard analyses.

Invited Speakers

N. Abrahamson ⁴, E.H. Field ², T. Allen ⁵, H. Fujiwara ⁶, M. Irsyam ⁷, C.-H. Chan ⁸, M. Kolaj ⁹

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