SESSION 34- Toward a More Reliable Seismic Hazard Estimation in Low-to-Moderate Seismicity Areas: Contributions of Recent and Ongoing Research Projects.

Conveners

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Session Description

Over the past decade, several research programs have contributed to advance seismic hazard assessment methodologies with a specific focus on low-to-moderate seismicity regions (e.g., CASHIMA, CASHIMA2, SIGMA, SINAPS@, SIGMA2, METIS, and more recently CASHIMA3, ALCESTE and SIGMA3). They have been mainly inspired by the needs of a reliable estimation of the seismic hazard and by the development of probabilistic site-specific hazard studies in these regions.

They have led to significant progresses in the compilation of high-quality datasets (e.g., earthquake catalogues, ground-motion database), in the development of cutting-edge ground-motion models for such tectonic contexts, in the proper integration of site-specific conditions in hazard estimates, in the evaluation of hazard results against observations, and more generally, in methods extending the analysis of PSHA products and delivering tailored outputs for earthquake engineering.

This special session calls for contributions related to advances in seismic hazard assessment in low-to-moderate seismicity regions. We are particularly interested in submissions highlighting how methodological innovations and improvement in seismological databases can overcome issues related to data scarcity or large epistemic uncertainties. We also welcome case studies featuring specific developments that cover the full seismic hazard assessment chain, including seismogenic source modelling, ground-motion modelling, wave propagation and site response, and/or the propagation of uncertainties in PSHA. Our aim is to foster interdisciplinary collaboration and promote results leading to more robust, transparent, and consensus-driven seismic hazard evaluations. This session also

provides an opportunity to bring together scientists involved in ongoing projects addressing these challenges.