

**Session ID:** SHR-11

**Title**

ADVANCES IN THE SEISMIC HAZARD AND RISK ASSESSMENT OF NUCLEAR POWER PLANTS

**Convenors**

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**Description**

Following the Fukushima 2011 accident, there has been increasing concern to improve nuclear safety and identify solutions for safe long-term operation of existing and new nuclear power plants. The goal of the session is to share and exchange on recent work related to seismic probabilistic safety assessment and risk quantification, advanced computational models and tools, soil-structure-interaction, validation and verification strategies, probabilistic seismic hazard analysis, seismic fragility assessment and uncertainty propagation, as these apply to nuclear power plant safety.

One key issue in the refinement of seismic risk assessment approaches is the development of site-specific and hazard consistent approaches. Papers developing best practices for quantification, propagation and eventually reduction of epistemic uncertainties in order to increase accuracy and fidelity in hazard, fragility and safety margin evaluations are very welcome. Another focus topic for improving hazard and risk assessments is the confrontation, testing and updating of models with experimental and in-situ data, and combining different sources of information including expert judgement.

This session presents recent findings from EURATOM METIS project and welcomes contributions related to seismic risk assessment of critical industrial installations such as nuclear power plants.

**Invited Speakers**

M. Pagani <sup>4</sup>, A. Gerontati <sup>1</sup>, H. Sadegh-Azar <sup>5</sup>, A. Gupta <sup>6</sup>, L. Alvarez <sup>2</sup>

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