

**Session ID:** SHR-12

**Title**

WHE - CONTRIBUTIONS TO GAIN INSIGHT IN BUILDING TAXONOMIES AND TO SUPPORT RELIABLE RISK SCENARIOS

**Convenors**

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**Description**

Recent earthquake events have repetitively shown in a dramatic way that still too many people around the world live in unsafe housing. Too often, houses are still built without the help of qualified personnel, using low-quality construction materials, and afterwards often lack maintenance. Today, the expert earthquake engineering community understands how to design, build and strengthen dwellings to resist earthquake shaking. Nonetheless, most dwellings in areas of high seismic hazard in developing countries do not utilize this knowledge. Even immediately after an earthquake, many dwellings are rebuilt following the same unsafe practices that existed prior to their collapse.

The proposed session will comprise an overview of the recent developments of the WHE incl. the potential of updating and refinement of existing reports based on current earthquake damage observation, mitigation databases and tools/ platforms incl. discussion of required building types and the level of really needed refinement and its regional adaptation (referencing recent developments from EMS to an IMS), as well as how to improve the earthquake performance of informal buildings and settlements.

This technical session welcomes papers that respond to one or more of the issues outlined above including:

- 1) documenting global housing construction practices through online reports: case studies, current status, and proposed improvements;
- 2) recent developments in knowledge-based exposure modelling incl. taxonomies, vulnerability assignments and fragility functions;
- 3) education, training and registration of personnel in the construction industry,
- 4) assessment of existing housing stock, including informal buildings and settlements regarding risk mitigation,
- 5) mitigation databases/ sources / tools linked to and contribution from the WHE

**Invited Speakers**

S. Brzev <sup>4</sup>, C.M. Genes <sup>5</sup>, J. Schwarz <sup>1</sup>, P. Murray <sup>6</sup>, D. Penava <sup>7</sup>

**Affiliations**

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