

**Session ID:** NSE-2

**Title**

NONSTRUCTURAL COMPONENT PERFORMANCE AND FUNCTIONAL RECOVERY

**Convenors**

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**Description**

The performance of nonstructural components within a building plays a crucial role in maintaining building function and mitigating downtime after earthquakes. As engineers and policymakers consider new design standards for functional recovery, the use of new performance-based methods to probabilistically quantify the functional recovery of a building, explicitly considering the performance of nonstructural components, instead of just structural performance, is becoming more prevalent. However, the current state of knowledge on component vulnerability and damage consequences is sparse compared to the actual variation in nonstructural components. An improved understanding of nonstructural seismic performance will result in a more accurate and precise quantification of building performance in terms of economic loss, post-earthquake function, and recovery.

This session presents recent and ongoing developments in experimental and analytical research on nonstructural seismic performance, specifically focused on architectural, mechanical, electrical, and plumbing systems that impact building function and recovery. The session will highlight recent results from an experimental and analytical assessment of a fire suppression system, which are susceptible to damage and flooding consequences based on experiences from past earthquakes. This technical session welcomes papers that respond to one or more of the issues listed above, including: fragility quantification of nonstructural components, the assessment of nonstructural damage consequences, or the design of nonstructural components for improved seismic performance.

**Invited Speakers**

J. Bhatta <sup>2</sup>, T. Hutchinson <sup>3</sup>, E. Miranda <sup>4</sup>, K. Ryan <sup>5</sup>

**Affiliations**

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