

Session ID: EXP-2

Title

LARGE-SCALE STRUCTURAL TESTING WITH EMPHASIS ON SYSTEMS: ACCOMPLISHMENTS AND CHALLENGES

Convenors

D. Lignos ¹, T. Nagae ²

Description

With the advent of large-scale experimental facilities over the past three decades considerable knowledge has been produced on the system-level seismic response of structures including building content and interactive effects with the soil. At the same time, monitoring and advanced instrumentation systems have contributed into the robust structural identification of dynamic properties of complex structures; and the acquisition of valuable data that offer the possibility to further comprehend the complex interactions between structural and non-structural components within a system along with soil-structure interaction. Moreover, large-scale structural system tests have contributed to the further development of computational models that enhance our predictive capabilities and our physical understanding on deterioration processes from the onset of structural damage through complete earthquake-induced collapse. Not to mention the advancement and further implementation of advanced technologies for minimizing earthquake damage over the lifecycle of a structure, which is a strong constituent of earthquake resilience for our built environment. The objective of this session is to bring together recognized experts to present and discuss the latest research accomplishments on large- or full-scale experiments with emphasis on actual system- and/or sub-system level seismic response. Most of the projects fostered strong international collaborations for the advancement of research in earthquake engineering. It is anticipated that the session will act as a forum and will highlight future challenges related to the field.

Invited Speakers

G.M. Calvi ³, M. Nakashima ⁴, J. Ricles ⁵, Y. Kawamata ⁶, J. Van De Lindt ⁷, M. Kurata ⁸, A. Filiatrault ⁹, T. Nagae ², C.-C. Chou ¹⁰, K. Kusunoki ¹¹

Affiliations

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