

Session ID: CMS-6

Title

RECENT ADVANCEMENTS IN SEISMIC DESIGN AND EVALUATION OF NEW AND EXISTING STEEL STRUCTURES

Convenors

D. Lignos ¹, T. Okazaki ²

Description

Steel structures are well suited for use in seismic prone areas. Our current state of knowledge on seismic design of steel structures owes the intensive research effort that was originally triggered by the 1994 Northridge earthquake and 1995 Kobe earthquake. With the advent of performance-based design, structural steel systems have been further developed and benchmarked to limit the earthquake-induced collapse risk. This has led to the further development of our seismic design standards worldwide. At the same time, concerted efforts have been put to improve the current state of practice in seismic assessment for retrofitting of existing steel structures. The objective of this session is to provide a platform to exchange the latest research advances in seismic design and evaluation of new and existing steel structures that is ongoing worldwide. Specific topics will include (a) the current state of knowledge on dissipative structural elements to advance the seismic design of new structures; (b) existing structures with a primary emphasis on research needs to advance the state-of-practice for effectively retrofitting these structures; (c) lessons learnt from the seismic behavior of actual steel structures as monitored during actual earthquakes. The session will be a blend of technical presentations and an interactive discussion to discuss current developments and research needs related to the topic.

Invited Speakers

A. Kanvinde ³, C. Clifton ⁴, J. Malley ⁵, R. Landolfo ⁶, D. Sahoo ⁷, G. Shi ⁸, C. Topkaya ⁹

Affiliations

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