Session ID: REC-3

Title
EARTHQUAKE RECONNAISSANCE AND STRUCTURAL EVALUATION WITH LIDAR TECHNOLOGIES

Convenors
J. Berman [1], L. Lowes [1]

Description
The session will present use cases of lidar used in post-earthquake and post-laboratory test investigation of structures. The projects selected here (with space for other abstracts from the general pool of submissions) have gathered lidar data on specific structures either before or after earthquakes or shake table tests and used that data to develop an understanding of building performance. The presenters have excellent expertise in structural and earthquake engineering and are also at the forefront of using lidar in structural evaluation. The session will provide attendees with an understanding of the capabilities and limitations of lidar technology in earthquake performance evaluation and will also highlight opportunities for new advances.

The speakers assembled represent excellent international universities. Their presentations will include lidar used in structural evaluation before and after shake table tests of full-scale buildings at the E-Defense facility in Japan, use of lidar for building evaluation following the 2016 Kaikoura Earthquake in New Zealand and the 2000 Puerto Rico Earthquake. Additionally, a talk focused on new innovations in segmenting and feature identification in lidar point cloud models will be include and a talk on the case-study use of lidar to help evaluate the remaining seismic capacity of deteriorated steel building.

Invited Speakers
P. Calvi [1], E. Fischer [2], M. Koliou [3], A. Hain [4], L. Hogan [5], E. Che [2]

Affiliations
[1] University of Washington, Seattle, USA, [2] Oregon State University, Corvallis, USA, [3] Texas A&M University, College Station, USA, [4] University of Connecticut, Mansfield, USA, [5] University of Auckland, Auckland, New Zealand