

**ASCE LOS ANGELES SECTION GEOTECHNICAL GROUP
GEO-INSTITUTE LOS ANGELES CHAPTER**

MEETING NOTICE

Wednesday, January 18th, 2012

Field Testing of Soil-Structure Interaction Effects for Structures with Shallow Foundations

Lisa Star, Ph. D.

California State University at Long Beach

ABSTRACT:

For many years, it was the practice in structural engineering design to ignore the effects of soil conditions on the seismic behavior of buildings by performing seismic response analysis with a fixed-based condition. Today engineering practitioners have available to them many analytical models of soil-foundation flexibility available for design; however, there is a dearth of quality field data available to validate these models. In order to help fill the gap in current knowledge, forced vibration tests were conducted on a steel moment frame model test structure with a reinforced concrete roof and a non-embedded foundation slab. The experiments were repeated in the laboratory and at two soft soil sites. Using updated procedures, frequency-dependent foundation stiffness and damping for horizontal translational and rotational vibration modes were calculated from the measured structure response in its braced and unbraced configurations for low and high levels of shaking. In addition, a simplified frequency domain system identification procedure was developed to evaluate fixed- and flexible-base modal properties.

SPEAKER BIO:

Dr. Star is an Assistant Professor in the Civil Engineering and Construction Engineering Management Department at California State University, Long Beach. Prof. Star's research interests include geotechnical earthquake engineering including soil-structure interaction, dynamic foundation pressure distribution, large scale field testing and the development of ground motions for engineering use.

SOCIAL HOUR: 5.30 p. m.
DINNER: 6.30 p.m.
PROGRAM: 7.30 p.m.
PLACE: Stevens Steak House, 5332 Stevens Place, City of Commerce
PRICE: \$35 with reservation (free with valid student ID); \$40 at the door
RESERVATIONS: Andrew Liu
BY EMAIL TO: ahl_77@yahoo.com

Please make reservations by email prior to 12 noon, Friday January 13th, 2012