

CE 295 - RESEARCH SEMINARS in STRUCTURAL & GEOTECHNICAL ENGINEERING

NEW DIRECTIONS IN PERFORMANCE BASED EARTHQUAKE ENGINEERING

Date: Thursday, January 23rd, 2014

Time: 4:00 – 4:50 pm

Room: EH - 2430 (Colloquia Room)

Guest Speaker: Farzad Naeim, Ph.D., S.E, J.D

Abstract:

Performance-based earthquake engineering (PBEE) has made large strides while also embracing its multidisciplinary nature. Concurrently, PBEE is also transitioning rapidly from an academic to a professional realm. As an example of this transition, for the first time now, a majority of tall buildings in California are being designed based on PBEE rather than prescriptive code procedures. To maintain its desirability as a design approach, several aspects of PBEE require continuous improvement; these include : (a) further development of meaningful probabilistic definitions of demands and capacities; (b) guidance on utilization of advanced systems for seismic resistance such as seismic isolation and energy dissipation devices; (c) incorporation of smart sensors for improved monitoring and characterization of component and system behavior; and (d) development of computing technologies and modeling approaches essential to successful execution of PBEE. This presentation will briefly discuss these issues and provide examples of problems and solutions that the speaker has encountered in dealing with these new needs and anticipated directions of PBEE.

Bio:

Dr. Farzad Naeim is the Vice President and General Counsel at John A. Martin & Associates, Inc. in Los Angeles, California and also teaches at USC and European School for Advanced Studies in Reduction of Seismic Risk (ROSE). He received his Ph.D. in Civil Engineering in 1982 and his J.D. with highest honors in 2002. In 2007, he received the Fazlur Khan Medal for lifetime achievements from Council on Tall Buildings and Urban Habitat. He has served two terms (1995 and 2011) as the President of the Los Angeles Tall Buildings Structural Design Council. Dr. Naeim is a Past-President and an honorary member of the Earthquake Engineering Research Institute (EERI). He is currently serving on the Seismic Advisory Board of Caltrans and Advisory Council of SCEC. Farzad has published four textbooks, more than 140 peer-reviewed papers, and has developed 45 different software systems for earthquake engineering design and education. Dr. Naeim has served as Technical Director for many landmark structures in California and across the United States and has collaborated with researchers from Stanford, UCB, UCLA, USC, UCSD, UCI and University of British Columbia on various research projects.

