



DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

CEVE Seminar Series

“System Reliability and Importance Measures”

Dr. Armen Der Kiureghian
Taisei Professor of Civil Engineering
University of California, Berkeley

Methods for representation and reliability assessment of systems are reviewed. An attempt is made to bridge the gap between the notions of classical system reliability and the exigencies of structural system reliability. Addressed are issues related to representation of multi-state systems, computation of system availability and reliability, particularly in the case of systems with statistically dependent component states, updating of system reliability in light of new information, systems subjected to stochastic excitation, and identification of important components within a system. The review is presented with a fresh outlook, hopefully offering new insight and understanding of the difficult system reliability problem. Applications to civil engineering systems demonstrate the main ideas of the presentation.

Biographical Sketch

Armen Der Kiureghian received his B.S. and M.S. in Civil Engineering from the University of Tehran, Iran, and his Ph.D. in Structural Engineering from the University of Illinois at Urbana-Champaign in 1975. After three years at the University of Southern California, he joined the faculty at the University of California at Berkeley, where he has served as Assistant Professor (1978-81), Associate Professor (1981-85), Professor (1985-), Vice Chair (1990-93) and Chair (1997-2001) of the Structural Engineering, Mechanics and Materials Program in the Department of Civil & Environmental Engineering. Since July 1999, he has held the Taisei Chair in Civil Engineering in the College of Engineering at UC Berkeley.

Dr. Der Kiureghian's teaching and research interests are in the areas of structural reliability, risk analysis, random vibrations and earthquake engineering. He has pioneered methods for safety and reliability assessment of complex structures and for stochastic seismic analysis of buildings, bridges and critical equipment. He has more than 300 publications, including 90 in archival journals and as book chapters

Monday, October 9th, 2006
12:00 Noon
Ryon Lab, Room 201
Refreshments will be served at 11:45 AM