

## **BIOGRAPHICAL SKETCH: JAMES L. BECK**

James L. Beck is Professor of Engineering and Applied Science at Caltech. He has been on the faculty at Caltech since 1981 and served as Executive Officer (Chair) for Applied Mechanics and Civil Engineering from 1993 to 1998. He has a Ph.D. in Civil Engineering from Caltech in 1978 and BS and MS degrees in Mathematics from the University of Auckland in New Zealand. His research career in earthquake engineering, structural dynamics and system analysis spans more than 30 years. He has over 250 technical publications in these areas covering topics in system identification, structural health monitoring, structural control, seismic risk and loss estimation, reliability, probability logic, Bayesian updating, and stochastic analysis. He has supervised 22 doctoral students at Caltech doing research on a broad range of topics in these areas.

Beck has served on many professional society committees. From 1995 to 1999, he served on the Board of the Consortium of Universities for Research in Earthquake Engineering, including officer positions of Vice-President, President and Past-President. He is currently Vice-Chair of the Executive Committee of the ASCE Engineering Mechanics Division and will serve as an inaugural member of the Board of Governors of the newly-formed ASCE Engineering Mechanics Institute. He is a former Chair of the ASCE EMD Dynamics Committee, a former Control Member of its Probabilistic Methods Committee and he was the founding Chair of the ASCE Task Group on Structural Health Monitoring, which established a series of benchmarks on this topic. He is active in the International Association of Structural Safety and Reliability (IASSAR), serving as Chair of the IASSAR Subcommittee on System Identification and Structural Control, as a member of the Subcommittee on Computational Stochastic Mechanics and on the Scientific Committees for ICOSSAR01 in Newport Beach and ICOSSAR05 in Rome.

Beck was awarded the IASSAR Senior Research Prize in Computational Stochastic Mechanics in Rome in June 2005. He was an invited speaker for a keynote lecture on Reliability of Dynamical Systems by Stochastic Simulation at EUROODYN05 in Paris and an invited semi-plenary speaker on Bayesian Updating and Model Class selection of Deteriorating Hysteretic Structural Models using Seismic Response Data at COMPDYN07 in Rethymno, Crete. He is on the Editorial Board of several international journals and he served as an Associate Editor of the Journal of Engineering Mechanics for three years. He organized the January 2004 issue of the Journal of Engineering Mechanics which published eight papers on various studies of the ASCE Structural Health Monitoring Benchmarks. He also served as a Guest Editor for two special issues on Structural Health Monitoring for the Journal of Computer-Aided Civil and Infrastructure Engineering, one issue published in April 2006 and the other scheduled for 2008.

Beck currently teaches two classes at Caltech: a graduate engineering math class on linear spaces and operator theory, and a graduate class on stochastic system analysis and Bayesian updating. In 1997, he was awarded the Graduate Student Council Award for Excellence in Teaching.