



Dr. Farzad Naeim

**Farzad Naeim** is Vice President and General Counsel for John A. Martin & Associates, Inc., in Los Angeles, one of the premier structural consulting firms in the United States. He obtained his B.S. in Civil Engineering from the University of Tehran (1977) and his M.S. and Ph.D. in Structural Engineering from the University of Southern California (1980 and 1982). In 2007, he received the prestigious Fazlur Khan Medal for life-time achievement from the Council on Tall Buildings and Urban Habitat and has received numerous other awards including the Outstanding Journal Paper Award six times in the past twelve years from the Los Angeles Tall Buildings Structural Design Council.

Dr. Naeim has served as Technical Director for many landmark structures. In 2007, he finished a five-year term as the Editor-in-Chief of Earthquake Spectra, the professional journal of the Earthquake Engineering Research Institute (EERI).

Dr. Naeim is currently the President of EERI and Chair of the Board of Governance of George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES), a National Science Foundation funded network of 16 universities.

Dr. Naeim is an advisor to a number of national and state organizations and major universities. He is the editor of The Seismic Design Handbook, now in its second edition, and the coauthor of Design of Seismic Isolated Structures and has published more than 120 papers on various aspects of earthquake engineering. He has developed more than 45 different software systems for earthquake engineering design and education. Three of his software systems have been funded and distributed by public agencies. Dr. Naeim is currently developing a FEMA-funded software system for a new generation of performance-based seismic design as a part of a large effort (ATC-58) managed by the Applied Technology Council (ATC).

Dr. Naeim is a licensed civil and structural engineer in California. In 2002, twenty years after receiving his Ph.D., he obtained his J.D. with highest honors and was admitted to practice law in California. In addition, he is a licensed patent attorney.



Dr. Edward L. Wilson

**Edward L. Wilson** is a Professor Emeritus of Structural Engineering at the University of California, Berkeley, where he was a faculty member from 1965 to 1991. From 1973 to 1976, he served as Chairman of the Division of Structural Engineering and Structural Mechanics. From 1987 to 1990, he was Vice Chairman of the Department of Civil Engineering. At the present time he is a consultant on the structural analysis of complex structures and is engaged in the development of new nonlinear methods of analysis and computer programs in the general area of earthquake engineering. He is currently a member of the Seismic Review Committee for the University of California, Berkeley.

Dr. Wilson was responsible for the development of several computer programs extensively used by professionals in civil, mechanical and aerospace engineering. The general three-dimensional finite element Structural Analysis Program (SAP), is an example of a software application initially developed by Dr. Wilson.

In 1985, Dr. Wilson was elected to the National Academy of Engineering. He was appointed as the T. Y. and Margaret Lin Professor in Engineering in 1990. He received the Berkeley Citation at the time of his retirement from teaching in 1991. For his contributions to the profession he received the Huber (1974) and the Howard (1995) medals by ASCE. In 1998, he received the Lifetime Achievement Award from the Los Angeles Tall Buildings Structural Design Council. In 2003 he received the Von Neumann Medal from the United States Association of Computational Mechanics for the development of the SAP series of programs. In 2008, he received the Outstanding Contribution to Engineering Award from ASME and was made an Honorary Member of the Structural Engineering Association of Northern California.

## CALTRANS SEISMIC ADVISORY BOARD

### *Purpose:*

*The Seismic Advisory Board is an independent body whose role is to advise Caltrans on seismic policy and technical practices to enhance the seismic safety and functionality of California's transportation structures.*

### *Mission:*

*The mission of the Seismic Advisory Board is to assist Caltrans in its role and obligation to provide seismic safety of California's transportation structures through:*

1. Continued review of earthquake engineering and seismic design as practiced by Caltrans.
2. Formulation of recommendations for improvements in Caltrans earthquake engineering and seismic design practices.
3. Policy review of seismic hazard definition and mitigation directives.
4. Technical review of seismic design guidelines and standards for transportation structures.
5. Review and comment on Caltrans seismic research agenda and priorities.
6. Being available to provide the general public with explanations regarding Caltrans' seismic safety policies and procedures for maintaining safety and functionality of California's transportation structures.

### *Publications:*

*Caltrans Seismic Advisory Board publications include:*

- The Race to Seismic Safety December 2003*
- The Continuing Challenge October 1994*
- Competing Against Time May 1990*
- Closing the Gap in the Race to Seismic Safety May 2010*

# CALTRANS



## Seismic Advisory Board

February 2011

“ Earthquakes measure our actions, not our words.”

- Caltrans Seismic Advisory Board



# Seismic Advisory Board Members



*Chair*  
*Dr. Frieder Seible*

**Frieder Seible** is the Dean of the Jacobs School of Engineering at the University of California, San Diego (UCSD). His responsibilities include strategic planning and operations, school-wide research and education initiatives, academic affairs, and UCSD-wide cooperative programs. He is a member of the National Academy of Engineering and is the Walter J. Zable Professor of Engineering and the Eric and Johanna Reissner Professor of Applied Mechanics and Structural Engineering.

Dr. Seible's research achievements include the development of large-scale structural testing techniques, seismic assessment and retrofit of bridges, and the application of Polymer Matrix Composites (PMC) in civil engineering structures. He was the founding director of the Charles Lee Powell Structural Research Laboratories, which serve as a worldwide resource for full-scale testing and analysis of structures. Dr. Seible is the chair of the California Department of Transportation (Caltrans) Seismic Advisory Board and has contributed to the Caltrans Bridge Seismic Safety Program through his large-scale testing and retrofit research. He has served on or led many national and international committees on bridge reconstruction and retrofit. Dr. Seible has received numerous awards for his research, including the 2006 Humboldt Research Award, and has published more than 600 papers and technical reports mainly related to seismic design of bridges and buildings, as well as blast resistant design of critical structures.

Dr. Seible joined the UCSD faculty in 1983, and served as the founding Chair of the Department of Structural Engineering from 1995 to 2001. As chair, he oversaw the development of the first nationally accredited program in structural engineering. Dr. Seible received a Dpl. Ing. from the University of Stuttgart, a M.Sc. from the University of Calgary, and a Ph.D. from the University of California, Berkeley, all in civil engineering.



*Vice - Chair*  
*Dr. Ian Buckle*

**Ian Buckle** is the Director of the Center for Civil Engineering Earthquake Research and Professor of Civil Engineering at the University of Nevada, Reno. Previously, he served as Deputy Vice-Chancellor of Research at the University of Auckland, New Zealand and as Deputy Director of the National Center for Earthquake Engineering Research, University at Buffalo, New York (now the Multidisciplinary Center). He earned his B.E. (Honours) and Ph.D. degrees from the University of Auckland, New Zealand.

Dr. Buckle's research interests include seismic performance of bridges, lifelines and buildings; design and retrofit criteria for bridges; earthquake protective systems for structures including the theory, hardware, and engineering applications of seismic isolation; non-seismic bridge performance for extreme loads such as thermal effects and overloads; and linear and nonlinear analytical techniques for structures subject to dynamic loads. He has conducted short courses in bridge engineering, seismic retrofitting, and the seismic isolation of highway bridges; conducted full-scale field testing and large-scale laboratory testing of structures using static and dynamic loads; and has been a member of reconnaissance teams to earthquakes in California, Japan, Taiwan, and Chile.

He is the lead author of the seismic provisions in the AASHTO LRFD Comprehensive Bridge Specifications, the AASHTO Standard Specifications Division I-A (Seismic Design), and the FHWA Seismic Retrofitting Manual for Highway Bridges.

Dr. Buckle is past chair of the Transportation Research Board (TRB) Committee AFF50 on Seismic Design and Performance of Bridges, immediate past president Board of Directors NEES Consortium, and past chair ASCE Technical Council on Lifeline Earthquake Engineering. Current appointments also include being a member of the board of directors of the Consortium of Universities for Research in Earthquake Engineering, and the Nevada Earthquake Safety Council.

He is a member of the ASCE, the Earthquake Engineering Research Institute, and the New Zealand Society of Earthquake Engineering.



*Dr. Norman Abrahamson*

**Norman Abrahamson** is an internationally recognized expert in engineering seismology. Dr. Abrahamson has extensive experience in the practical application of seismology to the development of deterministic and probabilistic seismic criteria for engineering design and analyses. He has been involved in developing or reviewing design ground motions for hundreds of projects including dams, bridges, nuclear power plants, nuclear waste repositories, water and gas pipelines, rail lines, ports, landfills, hospitals, electric substations, and office buildings.

At PG&E, Dr. Abrahamson is responsible for developing ground motions for seismic evaluations of PG&E facilities including nuclear power plants, nuclear waste storage, dams, penstocks, electric substations, office buildings, and gas pipelines. He is also responsible for the technical management of the PG&E seismic research program funded through the Pacific Earthquake Engineering Research Center. He also directs the seismic studies in a cooperative agreement between PG&E and the U.S. Department of Energy.

As an adjunct professor at both the University of California, Berkeley and the University of California, Davis, Dr. Abrahamson teaches a graduate class on seismic hazard analysis and directs students in their Ph.D. research.

As a consultant, Dr. Abrahamson has been involved in the development and review of the ground motions for all of the major toll bridges in California. He also served as the leader of the ground motion characterization study for two major seismic hazard studies: the proposed nuclear waste repository at Yucca Mountain and a major update of the seismic hazard for Swiss nuclear power plants (PEGASOS project). He is currently leading a study by Electric Power Research Institute (EPRI) to update the models of the variability of ground motions in the eastern United States for application to new nuclear plants.

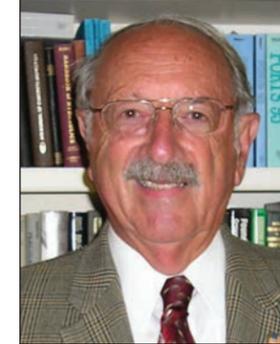


*Jack Boda*

**Jack Boda, P.E.** has over 30 years of transportation engineering experience including planning, design, construction, maintenance, and operations of the state highway transportation system within the public sector and more recently consulting in the private sector. He currently works for Kimley-Horn and Associates, Inc., as a team leader helping to advance transportation projects within California.

Before joining Kimley-Horn and Associates, Inc., Mr. Boda was in the public sector as the Director of Capital Projects and Mobility Management for the San Diego Association of Governments (SANDAG). His responsibilities involved working with Caltrans, in-house engineering staff, and consultants to design and construct major highway and transit projects using a 14-billion dollar local sales tax program. He also directed the SANDAG overall transportation program project office and the development and operation of the region's Intelligent Transportation System Network, including Managed Lanes (HOT) and Traveler Information system (511).

Before coming to SANDAG, Mr. Boda worked for the California Department of Transportation (Caltrans) and held several key management positions including State Traffic Engineer, Capital Project Program Manager, San Francisco Bay Area Chief Deputy Director, and served as the interim San Diego District 11 Director. Mr. Boda worked for James E. Roberts, the State Bridge Engineer as his executive assistant during the 1994 Northridge Earthquake and helped manage the seismic reconstruction effort. Mr. Boda holds multiple degrees in transportation and civil engineering from California Polytechnic State University, San Luis Obispo, is a registered civil engineer, and served as a member of the California Transportation Commission Statewide Project Delivery Council.



*George Fotinos*

**George Fotinos** is an experienced structural engineer. He has extensive experience in the design and construction of bridges, waterfront structures, tunnels, deep foundations and offshore structures.

He attended Santa Clara University where he obtained his B.S. in Civil Engineering. He started his career with the bridge department of Caltrans in Sacramento. He designed bridge structures for the new interstate highway system in Northern California. Following his assignment in Sacramento, he served two years in military service where he was assigned to administer the construction of radar bases in Iceland and Canada. Following discharge from the Army, he returned to school at the University of California, Berkeley, where he earned his M.S. in Civil Engineering.

Upon receiving his M.S., he was employed at the Ben C. Gerwick Company in San Francisco. The Gerwick Company specialized in waterfront structures and bridge foundations. He worked on several major bridges including the foundations of the Richmond-San Rafael Bridge, San Mateo-Hayward Bridge, Benicia-Martinez Bridge and waterfront structures throughout the San Francisco Bay.

The company was purchased by Santa Fe International Corporation and Mr. Fotinos served as the Chief Engineer of the engineering division of the corporation. He worked on many offshore and marine structures and bridges throughout the world, including the Northumberland Crossing in eastern Canada, Jamuna Bridge in Bangladesh, Bahrain Crossing in the Persian Gulf, and the Seven Mile Bridge in Florida.

Mr. Fotinos is a registered structural engineer in California, and a registered civil engineer in Washington, Nevada and Colorado. He has written many papers on the subject of marine foundations and bridges. He currently serves as a consultant to engineering and construction companies where he helps to solve difficult engineering and construction problems.



*Dr. Geoffrey Martin*

**Geoffrey Martin** has more than 40 years of experience in civil and geotechnical engineering. He is nationally and internationally recognized for his expertise in the field of geotechnical and earthquake engineering, particularly as related to the stability of earth structures, liquefaction, ground improvement, and the seismic design of foundations. He has authored or coauthored over 100 papers on these topics.

Dr. Martin received his M.S. in Civil Engineering from the University of Auckland, New Zealand in 1962 and his Ph.D. in Geotechnical Engineering from the University of California, Berkeley, in 1965. Following a 12-year career as a Professor of Civil Engineering at the University of Auckland, New Zealand, he joined the Earth Technology Corporation, Long Beach in 1977, as manager of Earthquake Engineering. Subsequently, as Vice President for Engineering, he was responsible for technical direction of major geotechnical projects particularly those related to earth dams, port facilities, offshore structures and bridges. He also directed the company's research activities in earthquake engineering.

In 1990, he returned to academia as a Professor in the Department of Civil Engineering at the University of Southern California where he is focusing his research interests on liquefaction-related ground stability studies and the seismic design of foundations and retaining structures. He is a contributing author to the "Recommended LRFD Guidelines for the Seismic Design of Highway Bridges" (2001), the "FEMA 273/274 Guidelines for the Seismic Rehabilitation of Buildings," and the Port of Los Angeles Seismic Code for Container Wharves.

He is active as an independent consultant and is currently a Technical Advisory Panel Member for the Los Angeles Metropolitan Transportation Agency Tunnel Projects, the Port of Los Angeles, the Los Angeles County Sanitation Districts Ocean Outfall Tunnel Project, and the Port of Long Beach Gerald Desmond Bridge.