



Professor Emeritus Edward L. Wilson

See:

<http://www.edwilson.org/>

http://en.wikipedia.org/wiki/Edward_L._Wilson

<http://www.ce.berkeley.edu/people/faculty/wilson?destination=people%2Ffaculty%2Fwilson>

<http://www.csiberkeley.com/news/whats-new/professor-wilsons-80th-birthday>

<http://www.youtube.com/watch?v=Uez9zaVKPdc>

<http://www.worldcat.org/identities/lccn-n88-601178>

Structural Engineering, Mechanics and Materials
Department of Civil and Environmental Engineering
University of California, Berkeley

Research Summary: Analysis and design of large structural systems, field testing of structures, computational mechanics, numerical methods

Biography:

Edward L. Wilson is a Professor Emeritus of Structural Engineering at the University of California at 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 methods of analysis and computer programs in the general area of structural engineering. He is currently a member of the Seismic Review Committee for the Berkeley Campus.

At the University he taught courses and conducted research on structural analysis, computer analysis, dynamics and finite element methods. He has published over 180 technical papers and reports. During his 30 years of teaching at the University, 29 doctoral students completed their dissertations under his supervision.

He received his D. Eng. Degree from the University of California in 1963. From 1963 to 1965 he was a senior research engineer at Aerojet General Corporation, Sacramento, California. At Aerojet he developed numerical methods and computer programs for the thermal and stress analysis of the MINUTEMAN missile and the APOLLO space capsule. He has been responsible for the development of several computer programs that are extensively used by professionals in the Civil, Mechanical and Aerospace engineering. The general three-dimensional finite element analysis program SAP and the TABS series of programs for the static and dynamic analysis of three-dimensional building systems are examples of programs initially developed by Professor Wilson.

He was the first to develop computational methods and practical computer programs for the analysis of tall buildings and hydroelectric structures. These special purpose programs include heat transfer analysis and the effects of creep, incremental construction, soil-structure-fluid interaction, and flow in porous media. Since these programs have been extensively adopted by a large number of firms throughout the world he has been involved directly and indirectly as a consultant on a very large number of engineering projects.

In 1985 he 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 Building Design Council. In 2003 he received Von Neumann Medal from the United States Association of Computational Mechanics for the development of the SAP series of programs. In 2008, he received an Outstanding Contribution to Engineering Award from ASME and he was made an Honorary Member of the Structural Engineering Association of Northern California.

Education:

D. Eng. University of California, Berkeley, 1963

M.S. University of California, Berkeley, 1959

B.S. University of California, Berkeley, 1955

Professional Societies:

Member, ASCE, American Society of Civil Engineers

Member, EERI, Earthquake Engineering Research Institute

Member, USCOLD, United States Committee on Large Dams

Member, SEAONC, Structural Engineers Association of Northern California

Biographic Details:

1. Over fifty years of professional experience in Civil, Mechanical and Aerospace Engineering.
2. Former Professor and Vice Chairman of the Civil Engineering Department at University of California at Berkeley (1965-1991).
3. Published over 180 papers, reports and books. Supervised 29 Doctor's Degree Students
4. Appointed as the T.Y. and Margaret Lin Professor in Engineering, 1990.
5. Received Berkeley Citation, 1991
6. Elected to the National Academy of Engineering, 1985
7. Received the Huber, 1974, and Howard, 1995 awards by ASCE for his contributions to the Structural Engineering Profession.

Currently Member of:

1. Engineering Criteria Review Board for BCDC
2. Seismic Review Committee for the UC Berkeley Campus
3. Member of the Seismic Instrumentation Advisory Committee for the Golden Gate Bridge.
4. President of the T. Y. Lin Foundation

Selected Projects:

1. Field Engineer Ten Mile River Bridge on State Highway 1, 1953
2. Project Engineer for the Model Analysis and Material Studies of Oroville Dam, 1958-60
3. Wrote the first automated finite element analysis computer program and analyzed Norfolk Dam, 1960-62
4. Developed numerical methods and computer programs for the stress analysis of the Minuteman missile and the APOLLO space capsule 1963-65
5. Developed the original three-dimensional earthquake analysis programs SAP, 1969, ETABS, 1973, SAP80 1980 and SAP2000.
6. Developed the computer programs SMIS, 1963, and CAL, 1976, for the Computer Assisted Learning of static and earthquake analysis of structural systems. Various versions of these programs have been used worldwide.
7. Consultant on the new Bay Bridge, retrofit of the Richmond-San Rafael and Golden Gate Bridges and many other major projects.