

Daniel C. Drucker Medal



ROBERT L. TAYLOR

*Conferral at the Drucker Symposium,
2005 International Mechanical Engineering Congress and Exposition*

THE DANIEL C. DRUCKER MEDAL, established in 1997, is conferred in recognition of distinguished contributions to the field of applied mechanics and mechanical engineering through research, teaching and service to the community over a substantial period of time.

ROBERT L. TAYLOR, Ph.D., professor, University of California at Berkeley, *for pioneering contributions to computational solid mechanics; in particular, for the development of methods and software used throughout the world for the calculation of inelastic response of structures.*

After completing his formal academic training at the University of California at Berkeley (UCB), Dr. Taylor was appointed to the faculty of the department of civil and environmental engineering in 1963. He remained at UCB until 1994, when he retired from full-time service. Since his retirement, he has served as professor in the Graduate School at UCB; consulting professor of applied mechanics at Stanford University, California; and visiting professor at the International Center for Numerical Methods in Engineering at Universitat Politècnica de Catalunya (Barcelona, Spain).

Taylor has more than 40 years experience in the modeling and simulation of structures and solid continua, including two years in industry. Much of this effort has focused on applications of the finite element method, which today is one of the methods commonly employed to analyze, by computer, problems encountered in many fields of engineering, including modeling of buildings and bridges, automotive crashes, aerospace

systems, and behavior of elastic and inelastic materials to name a few. More than 300 publications, of which 39 are related to problems in plasticity, have resulted from this work, many of which are incorporated into the classic three-volume reference, *The Finite Element Method*, co-authored with Dr. O.C. Zienkiewicz. Publication of the sixth edition (Elsevier) will be completed in November 2005.

Taylor has written several computer programs for finite element analysis of structural and non-structural systems, one of which, FEAP, is used worldwide in education and research environments to address non-linear and finite deformation problems.

In 1991, Taylor was elected to membership in the National Academy of Engineering in recognition of his educational and research contributions to the field of computational mechanics. He was elected a Fellow in the U.S. Association for Computational Mechanics and the International Association of Computational Mechanics (IACM) in 1997 and 1998, respectively; and was awarded IACM's John von Neumann Medal (1999) and Gauss-Newton Congress Medal (2001).

Among his other honors, Taylor was named as the T.Y. and Margaret Lin professor of engineering endowed chair at UCB in 1992. He received the Berkeley Citation (1994), the highest honor awarded by UCB; and, he was honored with the Distinguished Engineering Alumni Award of the College of Engineering (2003) for his nearly 50 years of dedicated service at UCB.

Taylor received his bachelor's, master's and Ph.D. in civil engineering at UCB in 1956, 1958 and 1963, respectively. He is an Honorary Fellow at the University of Wales, Swansea (1984); and was awarded an honorary doctoral degree, Dr.-Ingenieur ehrenhalber (2001), by the Technical University of Hannover, Germany.