

## Thomas K. Caughey Dynamics Award



**Stephen H. Crandall**

*Ford Professor of Engineering, Emeritus  
Department of Mechanical Engineering  
Massachusetts Institute of Technology*

***For sustained and original major contributions to the field of dynamics,  
particularly in the area of random vibration***

**Professor Stephen H. Crandall**, Ford Professor of Engineering, Emeritus, at the Massachusetts Institute of Technology, has had a long and distinguished career of research, teaching, and consulting in the field of vibration. He specializes in random vibration and rotordynamics.

Professor Crandall was born in the Philippine Islands in 1920. Graduating with an M.E. degree from Stevens Institute of Technology in the early days of World War II, he joined M.I.T. as a staff member of the Radiation Laboratory in 1942. He became an Instructor of Mathematics in 1944, teaching in a naval officers' training program. After earning a Ph.D. degree in Mathematics in 1946, he transferred to the Mechanical Engineering Department. He was appointed Assistant Professor of Mechanical Engineering in 1947, then promoted to Associate Professor in 1951, to Professor in 1958, to Ford Professor of Engineering in 1975, and became Emeritus in 1991.

An outstanding teacher and scholar, Professor Crandall was noted for the clarity of his lectures. He spoke slowly, but somehow managed to cover plenty of material. Owing to his interest in learning foreign languages, he has lectured in Spanish in Mexico City, in French in Paris, and in Russian in Kiev, Moscow, Leningrad, and Novosibirsk. He led the transformation of mechanics into an engineering science, acting as editor of the groundbreaking texts *Mechanics of Solids* in 1959 and *Dynamics of Mechanical and Electromechanical Systems* in 1968. A pioneer in random vibration research, he gave the first academic course on the subject in 1958. He has published a total of eight books and more than 160 technical papers.

Professor Crandall has been professionally active as an engineering consultant and as a member of many technical societies. He served on the Executive Committee of the Applied Mechanics Division and as Vice President for Basic Engineering of the American Society of Mechanical Engineers. He is a past Chairman of the U.S. National Committee for Theoretical and Applied Mechanics and a former member of the International Union of Theoretical and Applied Mechanics. He served as President of the American Academy of Mechanics for the 1997–98 year.

The professional contributions of Professor Crandall have been widely recognized. He was elected a Fellow of the American Academy of Arts & Sciences in 1961 and was subsequently elected to membership in both the National Academy of Engineering (1977) and the National Academy of Science (1993). He has received many awards, including the Trent-Crede Medal (1978) from the Acoustical Society of America, the Theodore von Karman Medal (1984) and the Alfred M. Freudenthal Medal (1996) from the American Society of Civil Engineers, and the Worcester Reed Warner Medal (1971), the Timoshenko Medal (1990), and the Den Hartog Award (1991) from the American Society of Mechanical Engineers. In 1989 he was elected to the level of *Honorary Member* of ASME.

**The Thomas K. Caughey Dynamics Award was established in 2008 and is conferred in recognition of an individual who has made significant contributions to the field of nonlinear dynamics through practice, research, teaching, and/or outstanding leadership.**

