



2002 Daniel Drucker Medal

Presented to :
Professor George J. Dvorak

In Recognition of :
Research achievements in plasticity, material fracture and fatigue, and thermal-mechanics of heterogeneous materials, earning him an international reputation

Presented at:
The Daniel Drucker Memorial Symposium
Gainesville, FL



ASME International



GEORGE J. DVORAK, Ph.D., William Howard Hart professor of mechanics, Rensselaer Polytechnic Institute (Troy, N.Y.), for research achievements in plasticity, material fracture and fatigue, and thermal-mechanics of heterogeneous materials, earning him an international reputation.

Dr. Dvorak joined the faculty of RPI (Troy, N.Y.) in 1984 as chairman of civil engineering. He assumed his present position as William Howard Hart professor of mechanics in the department of mechanical engineering, aeronautical engineering and mechanics in 1995.

Previous academic appointments include research associate (1964-65) at Brown University (Providence, R.I.), professor of civil engineering (1974-79) and professor of biomedical engineering (1977-79) at Duke University (Durham, N.C.), and professor and chairman of civil engineering and professor of materials engineering (1979-84) at the University of Utah, Salt Lake City. Dvorak held visiting appointments at Cambridge University, England, and Politecnico de Milano, Italy; and a Fulbright Fellowship at the Technical University of Denmark, Lyngby.

Dvorak is known for his numerous contributions to micromechanics of composite materials and structures. His work includes theoretical and experimental investigations of inelastic behavior, fracture, thermo-mechanical fatigue and shakedown of metal matrix fiber composites; modeling of graded composite materials;

analysis of uniform and transformation fields and residual stresses in heterogeneous media; and damage retardation and control studies by optimized fiber prestress in composite laminates.

For over thirty years, his work has been supported by grants from the Air Force Office of Scientific Research, the Army Research Office, the National Science Foundation and the Office of Naval Research. From 1988 to 1997, Dvorak served as director of two Defense Advanced Research Projects Agency-University Research Initiative programs on mechanism-based design of high temperature composite materials and structures at RPI.

Dvorak is the author of 170 papers and book chapters, and editor of 10 books. He has presented over 350 lectures at technical meetings, and industry and university seminars in the U.S., Europe and Japan.

An ASME Fellow, Dvorak was founding chair (1981-90) of the Applied Mechanics Division's Committee on Composite Materials. He served as associate editor of the ASME Journal of Applied Mechanics (1989-95) and ASME Applied Mechanics Reviews (1985-95), and organized numerous symposia at ASME meetings.

Dvorak was elected to the National Academy of Engineering in 1995. He is also a Fellow of the American Society of Civil Engineers, the American Academy of Mechanics and the Society of Engineering Science (SES).

Other honors include ASME's Nadai Medal (1992), SES's Prager Medal (1994) and the Brown Engineering Alumni Medal (1999).

Dvorak received his C.E. at Czech Technical University, Prague, in 1956 and his C.Sc. at Czechoslovak Academy of Sciences, Prague, in 1964. He earned his doctoral degree at Brown University in 1968. In 1997 he received a doctor honoris causa from the Czech Technical University.

Daniel Drucker Medalists

Past Honorees

- 1998 Daniel C. Drucker
- 1999 Ascher H. Shapiro
- 2000 Philip G. Hodge
- 2001 Bruno A. Boley

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.

