

Roop Mahajan Receives Ralph Coats Roe Medal

The Ralph Coats Roe medal and award was presented to Dr. Roop Mahajan, the James S. Tucker Professor Engineering in the College of Engineering at Virginia Tech and the director of the university's Institute for Critical Technology and Applied Science (ICTAS), during the international Mechanical Engineering Congress of the American Society of Mechanical Engineers (ASME) in November 2007. The award is recognized through presentation of a \$10,000 honorarium and a gold medal.



Roop Mahajan, Ralph Coats Roe Medal Recipient, 2007

In Distinguished Company

The Ralph Coats Roe Medal, established in 1972, recognizes an outstanding contribution toward a better public understanding and appreciation of the engineer's worth to contemporary society.

Ralph Coats Roe was a pioneer and innovator in the design and construction of highly efficient power plants and advanced desalting processes. He was an inspiration to his colleagues by his great achievements through self-education in highly sophisticated technologies. The medal was endowed by Burns and Roe, Inc., the corporation founded by Ralph Coats Roe.

The successful candidate is expected to give an authoritative lecture in his/her field at a general session during the International Mechanical Engineering congress. Dr. Roop Mahajan's lecture (abstract is included below for reference) was delivered on November 12, 2007.

Ralph Coats Roe Medal Recipients

1974	Emilio Q. Daddario	1992	Frank Kreith
1975	Walter Sullivan	1993	Mary Lowe Good
1977	Robert C. Seamans, Jr.	1995	John Noble Wilford

1978	David Perlman	1996	Norman R. Augustine
1979	William D. Carey	1997	Cong. George E. Brown, Jr.
1980	Melvin Kranzberg	1998	Paul B. MacCready
1981	Carl Sagan	1999	Edward Wenk, Jr.
1982	Samuel C. Florman	2000	Barry I. Hyman
1983	Tracy Kidder	2001	N. Jan Davis
1984	Lee Iacocca	2002	Dean Kamen
1985	David Dooling, Jr.	2003	Vernon J. Ehlers
1987	T. Lindsay Baker	2004	William A. Wulf
1988	Cong. Donald L. Ritter	2005	Winfred M. Phillips
1989	John H. Lienhard	2006	Bernard Armadei
1990	Jeremy Bernstein	2007	Roop I. Mahajan
1991	Henry J. Petroski		

ABSTRACT - November 12, 2007

BUILDING BRIDGES: ENGINEERING FOR THE PEOPLE

Engineering's impact on the daily lives of people is nothing short of astonishing; yet an ever-widening gulf remains between the engineering profession and the public at large. The disconnect goes beyond public perception or misperception of an engineer as a glorified 'calculator' and strikes at the very core of the profession as a means to enriching human lives. It is time for engineers to step out of their ivory towers and start building bridges again – the bridges to effective communication, mutual understanding, finding common objectives, and reaching for sustainable, holistic solutions to human needs. This has broad implications for the curriculum, methodology and outcome of engineering education and research.

This talk will present a two-pronged approach to advance these ideas. First, engineering research must extend beyond the comfortable limits of analytical tools and the metrics of success related to external research dollars. It must revert to its mission of problem solving for improving human living, with an added emphasis on global reach and sustainability. Second, the curriculum must be liberalized with the goal of producing Humanistic Engineers – 21st century engineers who are able to initiate and engage in effective dialogue with non-technical audiences regarding socio-humanistic critiques of engineering

processes and products, and who are able to adopt multiple perspectives and perform their own socio-humanistic interlocutors. Several examples from our modest efforts in implementing these approaches will be presented.