

2009-2010 Graduate Seminar Series

The Department of Mechanical Engineering – Engineering Mechanics

Proudly Presents

Dr. Roop L. Mahajan

Tucker Chair Professor

Virginia Tech, Blacksburg, Virginia

Roop Mahajan serves as Director of the Institute for Critical Technology and Applied Science (ICTAS) at Virginia Tech where he also holds a joint appointment as tenured professor in the departments of Mechanical Engineering and Engineering Science Mechanics. His research interests include Bio-MEMS as sensors and actuators, Micro-fluidics, Thermal sciences, Artificial neural networks, Nanotechnology, Humanistic and Sustainable Engineering. He has published over 180 archival publications in these fields and has received national and international recognition world-wide recognition for his research. He is the recipient of many awards and honors including Bell Labs Fellow, ASME Heat Transfer Memorial Award, ASME Charles Richards Memorial Award and ASME Ralph Coats Gold Medal. He received the Ph.D. degree in mechanical engineering from Cornell University, Ithaca, NY in 1977 and B.S. and M.S. degrees in mechanical engineering from Punjab University, India.



Thursday, Oct. 1, 2009

3:00 – 4:00 p.m.

Room 112, ME-EM Bldg.

Beyond Silos: Integrating interdisciplinary research and education in the academe

The world stands at the threshold of an era of unprecedented and revolutionary advances in a few converging technologies which can create opportunities for new industries, robust job growth and enhanced human abilities. These technologies, identified by National Science Foundation as nanotechnology, biotechnology, information technology and cognitive science, are poised to unleash new understanding of matter from atomic scale to the complex working of human brain. However, the inherent complexity and power of these technologies require engineers and scientists to adopt multiple perspectives that are not confined to a single discipline. To this end, the academe must look beyond the conventional silo-based education and research and move to integrate interdisciplinary inquiry and approach in both the discovery and the learning domains. This talk will address some of these issues and make a case for interdisciplinary work as a source of innovative solutions to society's intractable problems. The talk will draw heavily from my personal journey in conducting and leading interdisciplinary research at AT&T-Bell Laboratories, the University of Colorado at Boulder and Virginia Tech.