The George W. Woodruff

School of Mechanical Engineering

Annual Distinguished Lecture

What We Don't Know:

Challenges for the Next Generation

Charles M. Vest

President,
Massachusetts Institute of Technology

Thursday, April 24, 1997
Van Leer (EE) Auditorium
Georgia Institute of Technology

The George W. Woodruff Annual Distinguished Lecture was established in 1990 to honor an engineer who has made an outstanding contribution to society and to provide a forum for that person to address the Georgia Tech community. The lecture is made possible by an endowment established for the Woodruff School of Mechanical Engineering by the late George W. Woodruff. Thus, the occasion is also an opportunity to remember and honor Mr. Woodruff's own contributions as a distinguished alumnus, and as a benevolent and generous citizen of Atlanta and the State of Georgia.

Synopsis

What We Don't Know:
Challenges for the Next Generation

No one can foretell the discoveries and advances by which science and technology will transform our society and planet in the new millennium. The rate at which these transformations come, and the effects they may have for good or ill, will depend on our recognition that, despite our current achievements, we have a very great deal left to learn.

Complex systems, from global climate patterns to national economies, are still but little understood. Fundamental aspects of scientific knowledge, from the nature of matter to the biology of cellular and viral growth, remain unresolved mysteries. For billions of the world's citizens, misery and poverty are as pervasive today as they were a thousand years ago. In all these areas of our experience, useful-even transforming-knowledge will come from our efforts which cross interdisciplinary boundaries and mix applied research with theoretical study.

Given the potential benefits of this new knowledge (and the proven perils of ignorance), our challenge as a society is to construct a fertile and supportive climate for research and innovation of all kinds and at all levels. In this way, we can continue to delve into the mysteries we have already encountered-and we can begin to frame the next generation of questions that will ultimately lead to a better world.

Program

Introduction	Ward O. Winer Woodruff School Chair
Distinguished Lecturer	Charles M. Vest President, Massachusetts Institute of Technology
Question and Answer Session	
Presentation of the Woodruff Medallion	Ward O. Winer
Reception	Joseph M. Pettit Microelectronics Research Center Courtyard

1997 George W. Woodruff Distinguished Lecture Committee

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Biographical Sketch

Charles M. Vest is the fifteenth President of the Massachusetts Institute of Technology and Professor of Mechanical Engineering.

Dr. Vest has set three strategies for maintaining and enhancing the excellence of MIT: identifying the most critical emerging directions in education and research, providing a strong financial base for MIT's programs, and improving the value and efficiency of services in support of these programs. In recognition of the increasing interdependence of economic, technological, environmental, and political systems, both in the U.S. and throughout the world, his priorities include building a stronger international dimension into education and research programs, developing stronger relations with industry, enhancing racial and cultural diversity within MIT, and rebuilding public understanding and support of higher education and research.

In this latter capacity, Dr. Vest serves as a member of the President's Committee of Advisors on Science and Technology, the Massachusetts Governor's Task Force on Economic Growth and Technology, the National Research Council Board on Engineering Education, and is vice chair of the Council on Competitiveness. He is president of the National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM), and a director of IBM and the E.I. du Pont de Nemours & Company. In addition, he was chairman of the President's Advisory Committee on the Redesign of the Space Station.

Dr. Vest earned his B.S.E. degree in mechanical engineering in 1963 from West Virginia University, and both his M.S.E. and Ph.D. degrees from the University of Michigan in 1964 and 1967, respectively. As a member of the faculty at MIT, his research interests are in the thermal sciences and in the engineering applications of lasers and coherent optics.

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