

The George W. Woodruff School of Mechanical Engineering

Annual Distinguished Lecture

INVITATION

*From POTS to
PANS.com*

*Transitions in the World of
Telecommunications for the
Late 20th Century and Beyond*



George H. Heilmeier
Chairman Emeritus
Bellcore

Tuesday, April 20, 1999
3:30 p.m.
Auditorium in the Van Leer
(Electrical Engineering) Building

Georgia Institute of Technology



BIOGRAPHY

George H. Heilmeier is Chairman Emeritus of Bellcore, a leading provider of communications software and professional services. Prior to announcing his retirement in November 1997, he was Chairman and Chief Executive Officer. Dr. Heilmeier joined Bellcore in March 1991 as President and CEO, and he transformed the company from a narrowly focused consortium to a global commercial business. Dr. Heilmeier, a native of Philadelphia, holds a B.S. in electrical engineering from the University of Pennsylvania, and M.A., M.S.E., and Ph.D. degrees in solid-state electronics from Princeton University. He has also been awarded honorary degrees by Stevens Institute and the Israel Institute of Technology (The Technion).

He joined RCA Laboratories in 1958, working on various electronic and electro-optic devices, and became Head of Solid State Device Research in 1966. His work with electro-optic effects in liquid crystals led to the first liquid-crystal displays for calculators, watches, computers, and instrumentation. In 1968, that effort earned him RCA's prestigious David Sarnoff Award, the IR-100 Award for the most outstanding technical product of the year, and the Eta Kappa Nu Award as the Outstanding Young Electrical Engineer in the United States.

In 1970, he was chosen as a White House Fellow to work on long-range research and development planning and technology assessment as a Special Assistant to the Secretary of Defense. He became Director of the Defense Advanced Research Projects Agency (DARPA) in 1975; he was twice awarded the Department of Defense Distinguished Civilian Service Medal, the highest civilian award given by the Department and one that is rarely given twice.

Dr. Heilmeyer left government in late 1977 to join Texas Instruments as Vice President responsible for R&D in petroleum exploration, systems technology, microelectronics, and software for TI's equipment businesses.

He has received numerous awards, including the prestigious Japanese Communications and Computers Prize (1990) and three major IEEE awards. In 1991, he was awarded the National Medal of Science by President Bush for contributions to national security and competitiveness. He received the National Academy of Engineering Founders Award in 1992. In 1996, he received the John Scott Award for Scientific Achievements from the City of Philadelphia for his pioneering work in the development of liquid-crystal displays. Previous winners of the Scott Award included Albert Einstein, G. Marconi, Madame Curie, the Wright Brothers, and Thomas Edison.

Dr. Heilmeyer is a member of the Defense Science Board, the National Security Agency Scientific Advisory Board, the National Academy of Engineering, the General Motors Science Advisory Committee, the MIT Visiting Committee, the Board of Overseers of the School of Engineering and Applied Science of the University of Pennsylvania, and he is a Fellow of the IEEE and the American Academy of Arts and Sciences.

SYNOPSIS

What are the forces that are driving us from the limited world of POTS (Plain Old Telephone Service) into the brave new world of PANS (Pretty Awesome New Services)? And what are the implications?

The presentation will discuss:

The technical, competitive, and customer driven changes in the structure, networks, and services of the telecommunications industry;

The business of the *next* Internet;

Technology driven *Golden Ages*; and

Implications for the training and practice of engineering.

THE WOODRUFF SCHOOL

The George W. Woodruff School of Mechanical Engineering Annual Distinguished Lecture was established in 1990 to honor an engineer who has made a significant contribution to society and to provide a forum for that person to interact with the Georgia Tech community.

Support for the lecture is made possible by the generosity of the late George W. Woodruff, an alumnus and influential Atlanta businessman, civic leader, and philanthropist. In September 1985, at the age of 90, Mr. Woodruff attended the ceremonies to rename the School of Mechanical Engineering in his honor. Today, the Woodruff benevolence continues to benefit Georgia Tech through the support of two major scholarship funds and a significant, unrestricted endowment. The Woodruff bequest to the School of Mechanical Engineering underwrites a faculty chair - the George W. Woodruff Chair in Mechanical Systems - and activities such as the Woodruff Faculty Fellows Program, the Woodruff Graduate Fellowship Program, the Woodruff Teaching Intern Program, and research and teaching assistantships for graduate students.

The Woodruff School of Mechanical Engineering is the oldest and second largest of eight divisions in the College of Engineering at Georgia Tech. The School offers academic and research programs in mechanical engineering, nuclear and radiological engineering, and health physics. The enrollment includes 1200 undergraduates (excluding co-ops at work) and more than 500 graduate students. Studies are directed by a full-time faculty of 65 professors, 18 research faculty, and one academic professional, who are supported by 45 staff members.

For additional information, contact Ward O. Winer, Eugene C. Gwaltney, Jr. Chair in Manufacturing Systems and Chair of the Woodruff School at:

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Distinguished Lecturers

1990 Donald E. Petersen, Chairman and CEO, Ford Motor Company

- 1991 Samuel C. Florman, Author and Professional Engineer
- 1992 Chang-Lin Tien, Chancellor and A. Martin Berlin Professor of Mechanical Engineering, University of California, Berkeley
- 1993 Sheila E. Widnall, Associate Provost and Abby Rockefeller Mauze Professor of Aeronautics and Astronautics, Massachusetts Institute of Technology
- 1994 Roberto C. Goizueta, Chairman of the Board and CEO, The Coca-Cola Company
- 1995 James J. Duderstadt, President, The University of Michigan
- 1996 Norman R. Augustine, Chairman and CEO, Lockheed Martin Corporation
- 1997 Charles M. Vest, President and Professor of Mechanical Engineering, Massachusetts Institute of Technology
- 1998 Robert A. Lutz, Vice Chairman, Chrysler Corporation
- 1999 George H. Heilmeier, Chairman Emeritus, Bellcore

Lecture

Tuesday, April 20, 1999, 3:30 p.m.

**in the Auditorium of the Van Leer (Electrical Engineering)
Building,**

Georgia Institute of Technology

Reception

After the lecture, guests are invited to a reception (under the yellow tents) in the courtyard of the Joseph M. Pettit Microelectronics Research Center (MiRC). Free parking will be available in the Visitor Parking Lot. A shuttle van will operate between the parking lot and the auditorium (see the map for locations). Signs will be posted.

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GWW/RG9902-01