

## Biographical Sketch

Dr. Wulf is on leave from the University of Virginia to serve as President of the National Academy of Engineering. Together with the National Academy of Sciences, the NAE operates under a Congressional Charter to provide advice to the government on issues of science and technology. Much of this advice is provided through the National Research Council, the operating arm of the two Academics; Dr. Wulf serves as Vice Chair of the NRC.

At Virginia, Dr. Wulf is a University Professor and holds the AT&T Chair in Engineering and Applied Science; among his activities at the university are a complete revision of the undergraduate Computer Science curriculum; research on computer architecture and computer security; and an effort to assist humanities scholars exploit information technology.

Prior to joining Virginia, Dr. Wulf founded Tartan Laboratories and served as its Chairman and Chief Executive Officer. Before returning to academe, Dr. Wulf grew the company to about a hundred employees. Tartan developed and marketed optimizing compilers — programs that translate high-level languages such as FORTRAN or C into highly efficient computer codes. The technical basis for Tartan was research by Dr. Wulf while he was a Professor of Computer Science at Carnegie-Mellon University.

While at Carnegie-Mellon and Tartan, Dr. Wulf was active in the "high tech" community in Pittsburgh. He helped found the Pittsburgh High Technology Council and served as Vice President and Director from its creation. In 1983 he was awarded the Enterprise "Man of the Year" Award.

Dr. Wulf has been a consultant to numerous computing and telecommunications companies. Dr. Wulf is a member of the National Academy of Engineering and a Fellow of the American Academy of Arts and Sciences. He is also a Fellow of three professional societies: the ACM, the IEEE, and the AAAS. He is the author of over 80 papers and technical reports, has written three books, holds one U. S. Patent, and has supervised over 25 Ph.D.'s in Computer Science.

Dr. Wulf received his bachelor's degree in engineering physics in 1961 and his M. S. in electrical engineering in 1963, both from the University of Illinois. He received his Ph.D. in computer science from the University of Virginia in 1968. He was born in Chicago, Illinois in 1939.



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## The George W. Woodruff School of Mechanical Engineering Annual Distinguished Lecture

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### *The Societal Responsibility of Engineers (And Its Implications for Engineering Education)*

**Dr. William A. Wulf**

President  
National Academy of Engineering

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Tuesday, April 25, 2000

3:30 p.m.

Van Leer Auditorium  
Georgia Institute of Technology

## Program

### Synopsis of the Lecture

Engineering has a strong tradition of ethics, rooted in its responsibility to the public to produce effective, safe, and reliable products and infrastructure.

However, the responsibility of engineers to society is now much broader. Engineering and its product, technology, have had a profound impact on society; one has only to compare the life of the average citizen of 1900 with that of the average citizen of 2000 to realize that virtually all of the differences are the result of engineering. Moreover, the impact in the 21st century will undoubtedly be even greater than in the 20th century, and will be felt in every aspect of our lives, from our personal health to our collective governance. Engineers must no longer limit their sense of responsibility to the products and infrastructure we design, but must include the larger effects they have. Doing that implies assuming roles in society, such as public servants, we have not traditionally filled.

There are interesting implications of this for engineering education, or at least there are interesting questions we can ask based on this premise. Should engineering education include some preparation for these other roles, and if so, how can they be fit into an already overcrowded curriculum? Alternatively, should engineering schools provide the means for liberal arts majors to acquire some minimal understanding of the engineering process?

Introduction

Dr. Ward O. Winer  
Woodruff School Chair

Distinguished Lecture

Dr. William A. Wulf  
President  
National Academy  
of Engineering

Question and  
Answer Session

Drs. Winer and Wulf

Presentation of the  
Woodruff Medallion

Dr. Ward O. Winer

Reception

Courtyard of the  
Joseph M. Petit  
Microelectronics Research  
Center

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*The George W. Woodruff School of Mechanical Engineering 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 (class of 1917). 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.*