

*The George W. Woodruff School of Mechanical Engineering
at Georgia Tech Presents the Annual*

*Harold W. Gegenheimer
Lecture Series on Innovation*

**JIM ADAMS
STANFORD UNIVERSITY**

Speaking About

**CREATIVITY VERSUS CONTROL:
THEIR IMPACT ON INNOVATION**

Thursday, November 6, 1997
3:00 P.M.

Manufacturing Research Center Auditorium
Georgia Tech Campus, 811 Ferst Drive

A Reception will be held immediately after the lecture in the MARC Atrium

Synopsis of the Gegenheimer Lecture

Creativity Versus Control:

Their Impact on Innovation

The control necessary to individuals, groups, and organizations can be in conflict with the creativity needed in innovation. This is especially true in large organizations. There are a number of commonly accepted methods of increasing creativity, such as:

- The use of *idea* techniques,
- Promotion of intellectual diversity,
- Reallocation of resources,

- Changes in the reward system,
- Alterations of group behavior,
- Attempts to modify organizational culture.

Dr. Adams will discuss these methods and their pros and cons. The successful employment of these methods, however, demands a good understanding of the creative process. He will outline the present state of this understanding and talk about his personal experience in attempting to apply it as an engineer, a teacher, and a consultant. He will use short exercises and examples throughout his lecture to help members of the audience better apply general beliefs about increasing creativity to their own lives.

Biographical Sketch

James L. Adams is a professor in the Department of Mechanical Engineering, the Department of Industrial Engineering and Engineering Management, and the Program in Science, Technology, and Society at Stanford University. He has held many administrative posts at Stanford, including Director of the Design Division, Chairman of the Department of Industrial Engineering and Engineering Management and the program in Science, Technology, and Society, Chairman of the Faculty Advisory Board, Associate Dean for Special Projects, and Associate Dean for Academic Affairs of the School of Engineering, and is considered one of Stanford's outstanding and most innovative teachers. He has won both the Dinkelspiel and Lyman Awards, Stanford's highest citations for service to undergraduates and alumni, respectively.

Dr. Adams received his B.S. degree from the California Institute of Technology and his graduate degrees in engineering from Stanford University. He also spent some time as an art student at UCLA, served a tour in the Air Force, and held several jobs in design and development in industry before receiving his Ph.D.

Before returning to Stanford as a faculty member, Dr. Adams was employed by the Jet Propulsion Laboratory in Pasadena, California, where he was involved in the design of the first spacecraft to explore the Moon, Venus, and Mars. The courses he has taught at Stanford range from mechanical and product design through creativity and the emotional aspects of technology. He is particularly interested in innovation and issues having to do with the management of creativity and change in technology-based organizations.

He has consulted and conducted seminars on the topics of innovation, creativity, general problem solving, organizational change, management of R&D, planning, and design for approximately 100 commercial clients, ranging from large to small and technical to financial. He has also been a consultant and lecturer to a large number of governmental, educational, and professional groups, and coordinator and faculty member in many executive programs at Stanford.

Dr. Adams' activities include serving as technical director and board member of Mast Immunosem-a successful start-up company, president and board member of the San Jose Technology Center-a successful start-up museum, membership on the California Governor's Panel on Toxic Wastes, and a Sigma Xi Lecturer. He is the author of *Conceptual Blockbusting*, a popular book on creative thinking, *The Care and Feeding of Ideas*, a book directed toward the management of creativity and change, and *Flying Buttresses, Entropy, and O-Rings*, a book on the nature of engineering. He is presently working on a book on the characteristics of outstanding products.

About the Lecture Series

The Lecture Series on Innovation was established in 1995 through an endowment from Mr. Harold W. Gegenheimer (Class of 1933) to support student programs that encourage creativity, innovation, and design. Through the lecture series and support of capstone design projects, students are exposed to processes that stimulate creativity and lead to inventions and patents. The previous Gegenheimer lecturers were:

1995 - Dr. Jerry M. Woodall, Distinguished Professor of Microelectronics, Purdue University, "Necessity Is the Mother of Invention, But Curiosity and Persistence Make It Happen"

1996 - Mr. Burt Rutan, President and CEO, Scaled Composites, Inc. "Innovation: Use It or Lost It"

About the Woodruff School

The Woodruff School of Mechanical Engineering is the oldest and second largest of the 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 approximately 1100 undergraduates and 450 graduate students. Studies are directed by a full-time staff of 60 professors and 15 research faculty, who are supported by 39 staff members. For more information about the Woodruff School contact:

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