

**ITR PI Meeting
Speaker Biographies**

**Dr. Joseph Bordogna
Deputy Director
National Science Foundation**

Joseph Bordogna is Deputy Director and Chief Operating Officer of the National Science Foundation (NSF). Complementing his NSF duties, he has chaired Committees on Manufacturing and Environmental Technologies within the President's National Science and Technology Council, he was a member of the Federal Government's Technology Reinvestment Project team (TRP), and he serves on the Partnership for a New Generation of Vehicles (PNGV) Committee and the U.S.-Japan Joint Optoelectronics Project.

Prior to his appointment at NSF, he served at the University of Pennsylvania as Alfred Fitler Moore Professor of Engineering, Director of The Moore School of Electrical Engineering, Dean of the School of Engineering and Applied Science, and Faculty Master of Stouffer College House, a living-learning student residence at the University.

He has made contributions to the engineering profession in a variety of areas including early laser communications systems, electro-optic recording materials, and holographic television playback systems. He was a founder of PRIME (Philadelphia Regional Introduction for Minorities to Engineering) and served on the Board of The Philadelphia Partnership for Education, community coalitions providing, respectively, supportive academic programs for K-12 students and teachers.

He is a Fellow of the American Association for the Advancement of Science (AAAS), the American Society for Engineering Education (ASEE), and the Institute of Electrical and Electronics Engineers (IEEE).

He received the B.S.E.E. and Ph.D. degrees from the University of Pennsylvania and the S.M. degree from the Massachusetts Institute of Technology.

**Dr. Peter A. Freeman
Assistant Director
Directorate for Computer and Information Science and Engineering**

Peter A. Freeman became Assistant Director for the Computer and Information Science and Engineering Directorate (CISE) on May 6, 2002. Dr. Freeman was previously at Georgia Institute of Technology as professor and founding Dean of the College of Computing. Prior to his tenure at Georgia Tech, he served for almost twenty years on the faculty of the Department of Information and Computer Science at the University of California. He has been Visiting Distinguished Professor of Information Technology at George Mason University in Fairfax, Virginia, and served as Division Director for Computer and Computation Research at the National Science Foundation.

His research and technical expertise has focused on software systems and their creation. He designed and built one of the earliest interactive time-sharing operating systems in 1964, and applied artificial intelligence to the design process for software (1965-75). He has published his research in several books and numerous technical papers.

Dr. Freeman is a Fellow of the IEEE (Institute for Electrical and Electronics Engineers), AAAS (American Association for the Advancement of Science), and the ACM (Association for Computing Machinery). He was a member of the Board of Directors of the Computing Research Association (1988-2002), serving as Vice-Chair and Chair of the Government Affairs Committee. He has been a member of select review committees of the IRS and FAA Air-traffic Control modernization efforts, and has served on a variety of national and regional committees.

Dr. Freeman received his Ph.D. in computer science from Carnegie-Mellon University in 1970, his M.A. in mathematics and psychology from the University of Texas at Austin in 1965, and his B.S. in physics from Rice University in 1963.

Dr. John A. Brighton
Assistant Director
Engineering

John A. Brighton began his tenure as Assistant Director for Engineering at the National Science Foundation on April 30, 2003. Immediately prior to this appointment he served as Provost of National-Louis University. He previously served the Pennsylvania University as Chair of the Teaching and Learning Consortium, Penn State as Executive Vice President and Provost, the Georgia Institute of Technology as Dean of the College of Engineering and Director of the School of Mechanical Engineering, Michigan State University as Chairman of the Department of Mechanical Engineering, and, early in his career, Carnegie Mellon University first as assistant professor then as professor of Mechanical Engineering.

Dr. Brighton made valuing diversity a priority for Penn State. In 1994 he established the Women in Sciences and Engineering Institute to enhance recruitment and retention of women students and faculty in these disciplines and to identify ways to create a more supportive climate for women at Penn State. He also introduced the concept of diversity planning into the university-wide strategic planning process. Under his leadership, Penn State produced a comprehensive diversity strategic plan for the period 1997-2002, which built upon the university's strengths and improved diversity outcomes.

Continually improving the quality of education is an important academic goal for which Dr. Brighton is an active proponent. In 1992 he established the Provost's Collaborative Instructional and Curricular Innovation Award at Penn State, which is intended to recognize outstanding collaborative teaching efforts of faculty who have also demonstrated strengths as scholars and researchers. He also established the Schreyer Institute for Innovation in Learning in 1995, which assists faculty and students in developing effective practices for active and collaborative learning.

Born in Gosport, Indiana, Dr. Brighton received his B.S., M.S. and Ph.D. in Mechanical Engineering from Purdue University.

Dr. Karl A. Erb
Director
Office of Polar Programs

Physicist Karl A. Erb, who has served as Senior Science Advisor at NSF since 1993, became Head of the Office of Polar Programs on November 2, 1998. As part of the senior NSF management team, he gained considerable familiarity with the management of polar programs. His experience has included representing NSF in the National Science and Technology Council review of the U.S. Antarctic Program that resulted in the 1996 White House affirmation of the importance of the program to the nation. He also coordinated preparations for the subsequent review by the U.S. Antarctic Program External Panel (known as the Augustine Panel after its chair, Norman Augustine). In addition, he has assisted in developing an agency-wide approach to supporting research in the Arctic. He is the senior federal science official in the Federal

and education at Yale University, Oak Ridge National Laboratory and the University of Pittsburgh. From 1989 to 1993, under two presidential science advisors, he oversaw the area of basic research in science and engineering at the White House Office of Science and Technology Policy.

Erb is recognized for his research in experimental nuclear physics, particularly in the areas of heavy-ion science and nuclear molecular phenomena. He received his masters and doctoral degrees from the University of Michigan, and his Bachelor of Arts degree from New York University. He is a Fellow of the American Physical Society and the American Association for the Advancement of Science. He was recently recognized for his work in the public sector with the Presidential Meritorious Rank award.