

**Science * Engineering * Technology
Working Group**

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Science , Engineering and Technology: Fueling America's Innovation



SPEAKERS' BIO

Congressional Visits Day Briefing

**AAAS Auditorium
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Washington, D.C.**

28 - 29 March 2006

WILLIAM JEFFREY
Director
National Institute of Standards and Technology

William Jeffrey is the 13th Director of the National Institute of Standards and Technology (NIST), sworn into the office on July 26, 2005. He was nominated by President Bush on May 25, 2005, and confirmed by the U.S. Senate on July 22, 2005.

As director of NIST, Dr. Jeffrey oversees an array of programs that promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve quality of life. Operating in fiscal year 2006 on a budget of about \$930 million, NIST is headquartered in Gaithersburg, Md., and has additional laboratories in Boulder, Colo. NIST also jointly operates research organizations in three locations, which support world-class physics, cutting-edge biotechnology, and environmental research. NIST employs about 2,800 scientists, engineers, technicians, and support personnel. An agency of the U.S. Commerce Department's Technology Administration, NIST has extensive cooperative research programs with industry, academia, and other government agencies. Its staff is augmented by about 1,600 visiting researchers.

Dr. Jeffrey has been involved in federal science and technology programs and policy since 1988. Previous to his appointment to NIST he served as senior director for homeland and national security and the assistant director for space and aeronautics at the Office of Science and Technology Policy (OSTP) within the Executive Office of the President. Earlier, he was the deputy director for the Advanced Technology Office and chief scientist for the Tactical Technology Office with the Defense Advanced Research Projects Agency (DARPA). While at DARPA, Dr. Jeffrey advanced research programs in communications, computer network security, novel sensor development, and space operations.

Prior to joining DARPA, Dr. Jeffrey was the assistant deputy for technology at the Defense Airborne Reconnaissance Office, where he supervised sensor development for the Predator and Global Hawk Unmanned Aerial Vehicles and the development of common standards that allow for cross-service and cross-agency transfer of imagery and intelligence products. He also spent several years working at the Institute for Defense Analyses performing technical analyses in support of the Department of Defense.

Dr. Jeffrey received his Ph.D. in astronomy from Harvard University and his B.Sc. in physics from the Massachusetts Institute of Technology.

RICHARD O. BUCKIUS
Interim Assistant Director for Engineering
National Science Foundation

Dr. Richard O. Buckius became the National Science Foundation's acting assistant director for engineering on September 1, 2005. Immediately prior to this, he served as the director for the Engineering Directorate's Division of Chemical and Transport Systems.

While at the NSF, Buckius is on leave from the University of Illinois at Urbana-Champaign where he serves as professor of mechanical engineering and was head of the department of mechanical and industrial engineering. He joined the university in 1975, and was promoted to professor in 1984. He also served as the associate head of the department of mechanical and industrial engineering from 1985 to 1987. Additionally, he served as associate vice chancellor for research from 1988 to 1991.

Buckius received his bachelor's, master's, doctorate of science degrees in mechanical engineering from the University of California, Berkeley, in 1972, 1973, and 1975 respectively. Throughout his professional career, Buckius has gained an international reputation for leadership in the field of thermal sciences. Much of his research is fundamental in nature, but it has vital implications for the engineering profession and society. This research covers radiative heat transfer, Monte Carlo methods in scattering media, and scattering from rough interfaces.

Buckius is a Fellow of American Society of Mechanical Engineers and an Associate Fellow of American Institute of Aeronautics and Astronautics. He is a member of the editorial board of *Microscale Thermophysical Engineering*, *Heat Transfer Research*, and *Heat Transfer-Japanese Research*. He is author or coauthor of over 80 papers in archival journals and a textbook on thermodynamics.

Buckius previously served the National Science Foundation as program director of the Thermal Systems and Engineering Program (1987-88).

DAVID J. GOLDSTON

Chief of Staff

David Goldston was appointed to run the House Committee on Science in January 2001. As chief of staff, he oversees a committee with jurisdiction over most of the federal civilian research and development budget, including programs run by NASA, the National Science Foundation, the Department of Energy, the Department of Commerce and the Environmental Protection Agency.

Prior to becoming chief of staff, Mr. Goldston was legislative director for Congressman Sherwood Boehlert (R-NY), who became chairman of the Science Committee in January 2001. As legislative director, Mr. Goldston was Boehlert's top environmental aide and also oversaw the legislative and press operations of the office.

Mr. Goldston came to Capitol Hill in 1983 as Boehlert's press secretary. From 1985 to 1994, he served on the Science Committee as the special assistant on the Subcommittee on Science, Research and Technology. In that role, Mr. Goldston oversaw the programs of the National Science Foundation and the National Institute of Standards and Technology and issues related to academic research and economic competitiveness.

In 1994 and 1995, Mr. Goldston was project director at the Council on Competitiveness, a private sector group with members from industry, labor and academia. Mr. Goldston directed work on the report, "Endless Frontier, Limited Resources: U.S. R&D Policy for Competitiveness."

Mr. Goldston was graduated magna cum laude with a B.A. in American history from Cornell University in 1978. He has completed the course work for a Ph.D. in American history at the University of Pennsylvania.

JONATHAN S. EPSTEIN
Legislative Fellow
Office of Senator Jeff Bingaman

Dr. Epstein is on the staff of Senator Jeff Bingaman on loan from the Department of Energy's Idaho National Engineering Laboratory. Dr. Epstein has a Ph.D. in Engineering Science and Applied Mechanics from Virginia Polytechnic Institute. He was a post doctorate fellow at Oxford University in the area of material failure. Dr. Epstein has a law degree from the University of Idaho in Intellectual Property and a LL.M. from Georgetown University Law Center in Securities and Financial Regulation. Dr. Epstein performs oversight of energy research and development and Department of Energy matters on the Senate Energy and Natural Resources Committee, and technology issues for the personal staff of Senator Bingaman. Dr. Epstein has published over 100 referred articles in the areas of materials, optics and fracture and was an editor-in-chief of Optics and Lasers in Engineering.

IRVING WLADAWSKY-BERGER
Vice President, Technical Strategy and Innovation
IBM Corporation

Dr. Irving Wladawsky-Berger is responsible for identifying emerging technologies and marketplace developments critical to the future of the IT industry, and organizing appropriate activities in and outside IBM in order to capitalize on them. In conjunction with that, he leads a number of key innovation-oriented activities and formulates technology strategy and public policy positions in support of them. As part of this effort, he is also responsible for the IBM Academy of Technology and the company's university relations office.

Dr. Wladawsky-Berger's role in IBM's response to emerging technologies began in December 1995 when he was charged with formulating IBM's strategy in the then emerging Internet opportunity, and developing and bringing to market leading-edge Internet technologies that could be integrated into IBM's mainstream business. He has led a number of IBM's companywide initiatives including Linux, IBM's Next Generation Internet efforts and its work on Grid computing. Most recently, he led IBM's On Demand business initiative.

He began his IBM career in 1970 at the Company's Thomas J. Watson Research Center where he started technology transfer programs to move the innovations of computer science from IBM's research labs into its product divisions. After joining IBM's product development organization in 1985, he continued his efforts to bring advanced technologies to the marketplace, leading IBM's initiatives in supercomputing and parallel computing including the transformation of IBM's large commercial systems to parallel architectures. He has managed a number of IBM's businesses, including the large systems software and the UNIX systems divisions.

Dr. Wladawsky-Berger is a member of the University of Chicago Board of Governors for Argonne National Laboratories and of the Technology Advisory Council for BP International. He was co-chair of the President's Information Technology Advisory Committee, as well as a founding member of the Computer Sciences and Telecommunications Board of the National Research Council. He is a Fellow of the American Academy of Arts and Sciences. A native of Cuba, he was named the 2001 Hispanic Engineer of the Year.

Dr. Wladawsky-Berger received an M.S. and a Ph. D. in physics from the University of Chicago.

WILLIAM BOONE BONVILLIAN
Director of Federal Relations
Massachusetts Institute of Technology
Washington Office

William Bonvillian is an attorney with experience in the legislative and executive branches of national government, expertise in science and technology policy and knowledge of the university community. He has been appointed director of federal relations for Massachusetts Institute of Technology and will head MIT's Washington, D.C. office, which works with Congress and the executive branch to raise understanding of the contributions of higher education and research to the national welfare.

Bonvillian served as legislative director and chief counsel to Sen. Joseph Lieberman (D-Conn.) from 1989 to 2006. In that senior role, he directed the senator's legislative staff and drafted and managed action on the senator's legislative policy initiatives, including initiatives in science and technology, economic growth and defense research and development.

Bonvillian served in the executive branch as deputy assistant secretary for the U.S. Department of Transportation, from 1977 to 1980. There he worked on major legislation covering transportation deregulation and funding.

Bonvillian has also managed an innovative fellows program, and supported Lieberman's 2002 legislation establishing the Department of Homeland Security as well as the senator's current major effort to implement a national innovation initiative.

Before joining Lieberman's staff, Bonvillian was a partner in the Washington, D.C., office of the law firm of Jenner & Block, where he worked on general corporate, real estate, transportation and administrative law matters.

Bonvillian's knowledge of the university community arises from personal experience as well as legislative and policy work. He has taught a seminar, "Innovation Systems for Science, Technology and Health," as an adjunct assistant professor at Georgetown University and a class, "The Federal Innovation System," as a lecturer at George Washington University in Washington.

Bonvillian writes and speaks extensively on science policy issues. Recently, these have included "Meeting the New Challenges to U.S. Economic Competitiveness," published in *Issues in Science and Technology*; "Organizing Science and Technology: Lessons From Menlo Park, the Rad Lab, Bell Labs' Transistor Team and the DARPA Model," presented to the Board of the Federation of American Scientists; and "Growing the Science Talent Base," presented to the National Academy of Science Board on Science Education. He is currently at work on an extended article on U.S. R&D organization.

Bonvillian received the B.A., with honors, from Columbia University in 1969, the M.A. from Yale University in 1972 and the J.D. from Columbia University School of Law in 1974. He has been admitted to the Connecticut Bar, the District of Columbia Bar and the U.S. Supreme Court Bar.

He and his wife live in Great Falls, Va.; they have two children.

JOANNE PADRÓN CARNEY
Director for the Center for Science, Technology, and Congress
American Association for the Advancement of Science (AAAS)

JOANNE PADRÓN CARNEY joined the American Association for the Advancement of Science (AAAS) in 1997 as the Director for the Center for Science, Technology, and Congress. She manages all activities of the Center, including production of the newsletter Science and Technology in Congress; tracking legislation related to a wide range of policy issues such as human embryonic stem cell research, information quality, and national security; organizing workshops and briefings for congressional leaders and their staff; and representing AAAS in intersociety coalitions. Prior to joining the AAAS staff, Ms. Carney was the head of Government Relations for the American Institute of Aeronautics and Astronautics (AIAA) where she followed civil space, civil aeronautics and defense issues for almost ten years. Ms. Carney holds a Bachelor of Arts in Spanish Language and Literature from the University of Maryland at College Park and a Master of Arts in Science, Technology, and Public Policy from the Elliott School of International Affairs at George Washington University.

REPRESENTATIVE FRANK R. WOLF

Congressional District 10 of Virginia

Congressman Wolf is serving in his 13th term in the U.S. House of Representatives. He represents the 10th District of Virginia, which stretches from McLean to Winchester. Congressman Wolf is the most senior of the 11 members of the House of Representatives from Virginia. Congressman Wolf sits on the powerful House Appropriations Committee, which oversees the budgets of all federal agencies. He serves on two subcommittees:

- Science-State-Justice-Commerce, which he chairs
- Transportation-Treasury-HUD

Congressman Wolf's committee assignments provide him with an ideal vantage point from which to address the varying needs of the 10th District. The 10th District is extremely diverse. In addition to being the home of some of the world's leading Internet and high-tech companies, thousands of federal employees and other professionals, agriculture and manufacturing are very much a part of the 10th District's economy. Clarke and Frederick counties in the western end of the District produce about half of Virginia's apples and peaches; Henkel-Harris furniture and Rubbermaid have large manufacturing plants in the District. Tourism is important, too. Several Civil War battlefields, including Manassas National Battlefield Park, are in the 10th District. Skyline Drive in the Blue Ridge Mountains and the Shenandoah River also are major draws.

Congressman Wolf became chairman of what is now the Science-State-Justice-Commerce (SSJC) Appropriations subcommittee at the beginning of the 107th Congress in January 2001. The subcommittee has jurisdiction over the Commerce Department, the State Department, the Justice Department, NASA, NIST, and the National Science Foundation. The FBI, DEA, U.S. Marshals Service, Federal Communications Commission, Federal Trade Commission, the Securities and Exchange Commission and the Small Business Administration also are under the jurisdiction of the SSJC subcommittee. Whether it is Department of Commerce policies that directly affect the Dulles high-tech corridor, or Justice Department funding that can combat methamphetamine production in the Shenandoah Valley, the chairmanship of the SSJC subcommittee enables Congressman Wolf to serve the 10th District in a broader capacity.

Congressman Wolf is one of the House's leading crusaders for human rights. He is the co-chairman of the Congressional Human Rights Caucus, a bipartisan organization of nearly 200 House members that identifies and works to alleviate human rights abuses worldwide.

Congressman Wolf was born in 1939 in Philadelphia, Pennsylvania. He received his B.A. degree from Penn State University in 1961 and his law degree from Georgetown University in 1965. He lives in Vienna with his wife, Carolyn. They have five grown children and 10 grandchildren.

REPRESENTATIVE BOB INGLIS

Congressional District 4 of South Carolina

Congressman Bob Inglis, 46, grew up in Bluffton, South Carolina. Inglis went to Duke University (Class of 1981) where he met his wife, Mary Anne (Class of 1982). They got married after his first year at the University of Virginia School of Law and lived in Charlottesville until his graduation in 1984. They have five children ages 20 to 9 (Robert, 20; Mary Ashton, 17; McCullough, 15; Andrews, 11; Meade, 9).

From 1993-1998, Inglis represented the Fourth District of South Carolina (Greenville, Spartanburg, Union and a portion of Laurens County) in the U.S. House of Representatives. After an unsuccessful challenge to U.S. Senator Fritz Hollings in 1998, Inglis rejoined the law firm of Leatherwood Walker Todd & Mann, P.C. where he practiced commercial real estate and corporate law.

Inglis was elected again to Congress in 2004. He chairs the Research Subcommittee of the Science Committee and serves on the Judiciary Committee and on the Education and Workforce Committee. He co-chairs the House Hydrogen and Fuel Cell Caucus.

Inglis enjoys working on the Northern Greenville County farm where he lives; hiking, paddling kayaks and canoes with his wife and children; running and working out at his home gym; and sailing and skiing during occasional trips to his hometown of Bluffton. He and his family are members of Redeemer Presbyterian Church of Travelers Rest.

REPRESENTATIVE JOHN CULBERSON

Congressional District 7 of Texas

John Culberson is the third Congressman to represent District Seven. The Texas Legislature created District Seven in 1965, and George H. W. Bush was elected as our first Congressman in 1966. Bill Archer succeeded him in 1970, and John Culberson was elected in 2000.

John Culberson is a native Houstonian and a lifelong resident of District Seven. He and his wife, Belinda, were married in 1989, and their daughter is nine years old. They are members of Memorial Drive United Methodist Church. Congressman Culberson grew up in West University Place, where he attended West University Elementary School. He graduated from Lamar High School, and earned his Bachelor of Arts degree in History from Southern Methodist University in Dallas in 1981. After college, he worked with his father, Jim Culberson, at his political consulting and advertising agency helping dozens of local and state Republican candidates win their elections. He earned his Juris Doctorate degree from South Texas College of Law in Houston, and until his election to Congress, he practiced law as a civil defense attorney with Lorange and Thompson.

In 1986, John Culberson was elected to the Texas House of Representatives while he was a law student. His principal committee assignments over his fourteen years in the Texas House were the Public Education Committee and the Corrections Committee. Beginning with his first term in 1987, he was a member of the Republican Whip team in the Texas House, and in his last term in 1999, his colleagues selected him to be the Minority Whip.

In Austin, his most significant achievement was his successful eleven year effort to take back control of Texas' prison system from federal District Judge William Wayne Justice. That experience taught him how to truly restore the 10th Amendment and let Texans run Texas. He did the legal research to design and pass a state law, HB 124 in 1991 to lay the proper legal foundation, and then helped draft key pieces of a federal law, the Prison Litigation Reform Act in 1997, to ensure that the effort would succeed. He then sued Judge Justice in his own courtroom in his official capacity as state representative using these two new laws.

As the Austin American Statesman reported on February 15, 1999, "when Culberson launched his campaign [to take back Texas prisons], most of his fellow lawmakers ignored him. 'Culberson's crusade,' some called it...But few are underestimating Culberson now..." On June 17, 2002, in the landmark prison reform case now known as Ruiz vs. Johnson, et al., and Culberson, et al., Judge Justice signed the final order ending his 30 year reign and returning full authority over state prisons to the Texas Legislature.