



National Science Foundation Awards Ceremony

May 5, 2015

U.S. Department of State Washington, D.C.

THE WHITE HOUSE

WASHINGTON

April 30, 2015

I am pleased to once again send greetings to all those attending the National Science Foundation (NSF) and National Science Board (NSB) Annual Awards Ceremony.

Since our Nation's founding, the ingenuity of our people has helped uncover new frontiers and contribute to America's progress and global leadership. Using reason and inquiry to address our greatest challenges, our scientists and engineers help us reimagine the world around us and open our eyes to a future of limitless possibilities.

Reflecting the innovative spirit that has fueled our country's progress, the NSF and NSB have advanced America's scientific journey, encouraged growth in the fields of engineering and technology, and helped spark the curiosity of our next generation. By upholding an unwavering commitment to discovery and public service, the recipients of the NSF and NSB awards are doing their part to help Americans understand the world we live in today and shape the path we will take tomorrow.

As you come together in our Nation's capital to recognize outstanding achievements in science and engineering, I wish you all the best for an enjoyable ceremony.



MENU

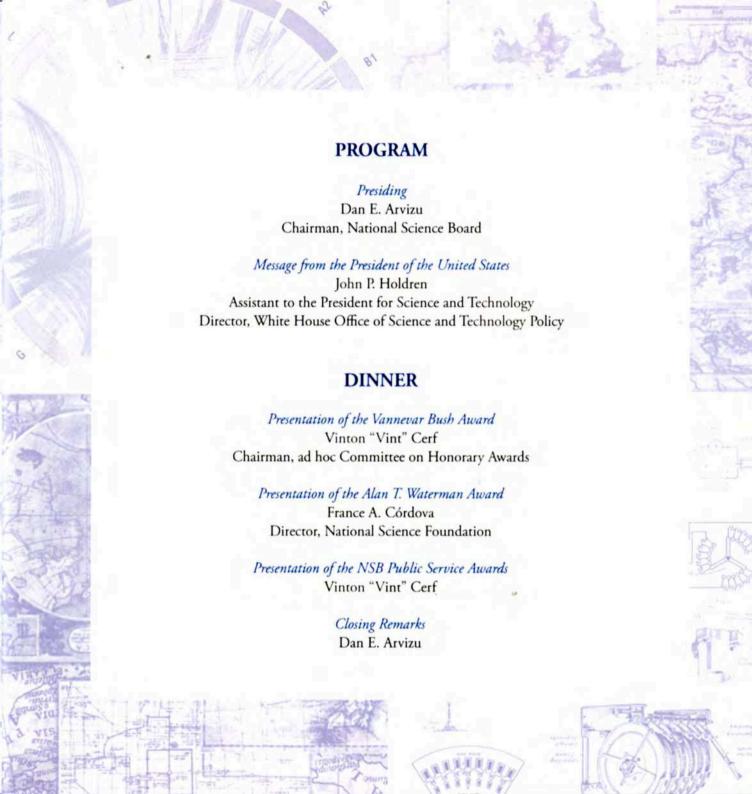
Radish, Apple and Meyer Lemon Salad accompanied by Assorted Dinner Breads

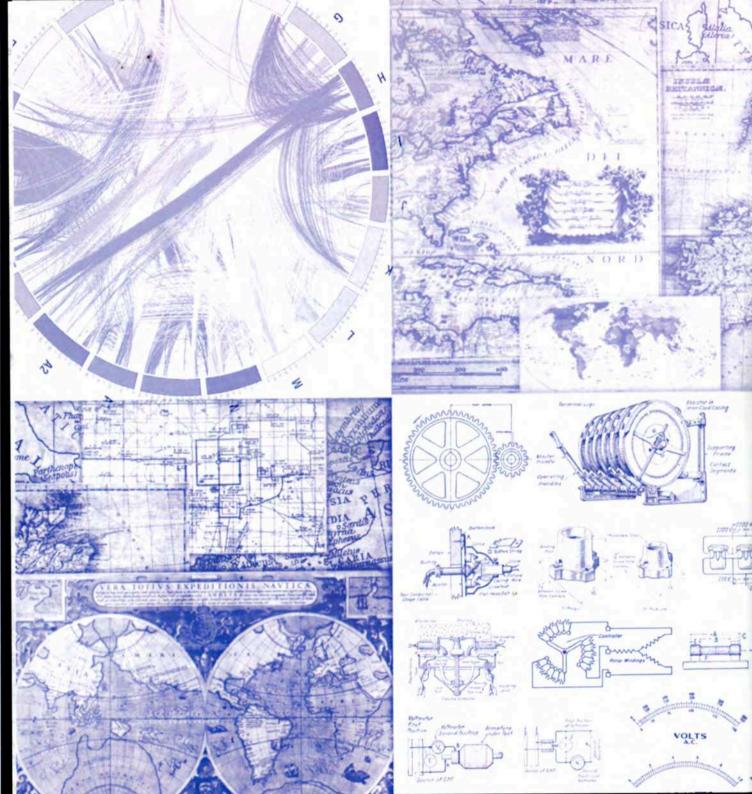
Merlot Beef Tenderloin rubbed with Garlic and Fresh Rosemary and Filet of Halibut crusted with Yellow Beets and Horseradish accompanied by Silver Queen Corn Soufflé Timbale Multicolored Carrots and Spring Vegetables

> Vegetarian Option Vegan Shepherd's Pie

Steamed Lemon Pudding with Raspberry Coulis

Coffee







Vannevar Bush Award

The Vannevar Bush Award honors truly exceptional lifelong leaders in science and technology who have made substantial contributions to the welfare of the Nation through public service activities in science, technology, and public policy. The award was established in 1980 in memory of Vannevar Bush, who served as a science advisor to President Franklin Roosevelt during World War II, helped to establish Federal funding for science and engineering as a national priority during peacetime, and was behind the creation of the National Science Foundation

2015 Selection Committee

Vinton "Vint" Cerf, Chairman Bonnie Bassler Sethuraman Panchanathan

Dan E. Arvizu, ex officio Kelvin K. Droegemeier, ex officio France A. Córdova, ex officio

James J. Duderstadt

President Emeritus and Professor of Science and Engineering, University of Michigan

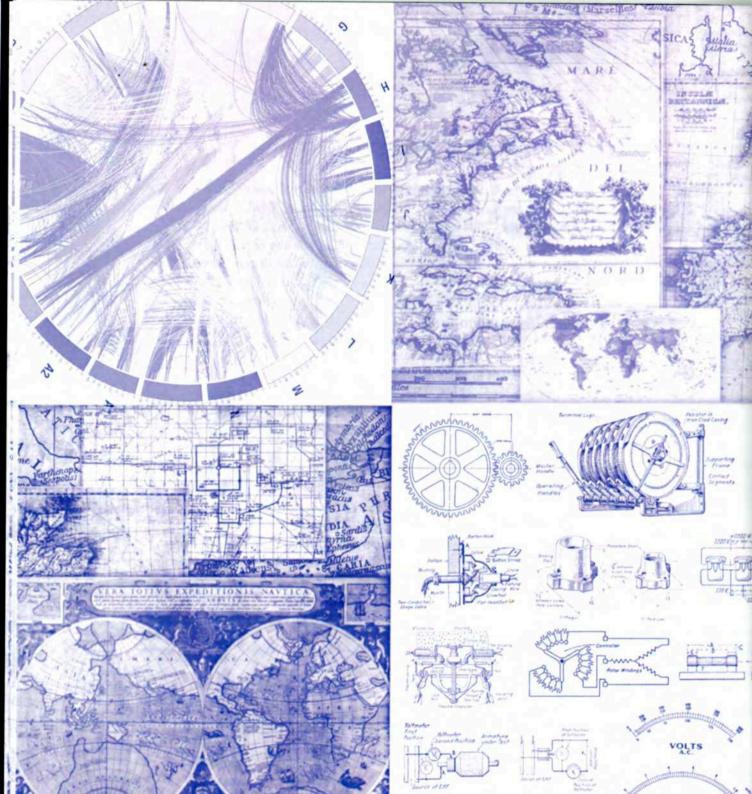
For articulating and demonstrating a clear vision of how the interplay of science, engineering research and education, and public policy is necessary to enhance the welfare of our Nation and its people.

ABOUT THE RECIPIENT

James J. Duderstadt is President Emeritus and University Professor of Science and Engineering at the University of Michigan. A graduate of Yale University (B.Eng., 1964) and the California Institute of Technology (M.S., Ph.D., 1967), he has served the University of Michigan since 1968 as a faculty member, dean, provost, and president. His teaching and research interests have spanned a wide range of subjects in science, mathematics, and engineering, including nuclear fission reactors, thermonuclear fusion, computer simulation, information technology, and policy development in areas such as energy, education, and science. He has published over 30 books and 200 technical publications.

Duderstadt has served on or chaired governing and advisory boards including the National Science Board, the National Academies, and various federal agencies, international organizations, and corporations. At the University of Michigan, he co-chairs the program in Science, Technology, and Public Policy and directs the Millennium Project, a research center exploring the impact of advanced technologies on society, located in the James and Anne Duderstadt Center, a multimedia complex on the Michigan campus.

He has received recognition for teaching, research, and service activities, including election to Phi Beta Kappa, Tau Beta Pi, the National Academy of Engineering, and the American Academy of Arts and Sciences. Among his many awards are the E.O. Lawrence Award for excellence in nuclear research, the Arthur Holly Compton Prize for outstanding teaching, the Reginald Wilson Award for national leadership in achieving diversity, and the National Medal of Technology for exemplary service to the nation.





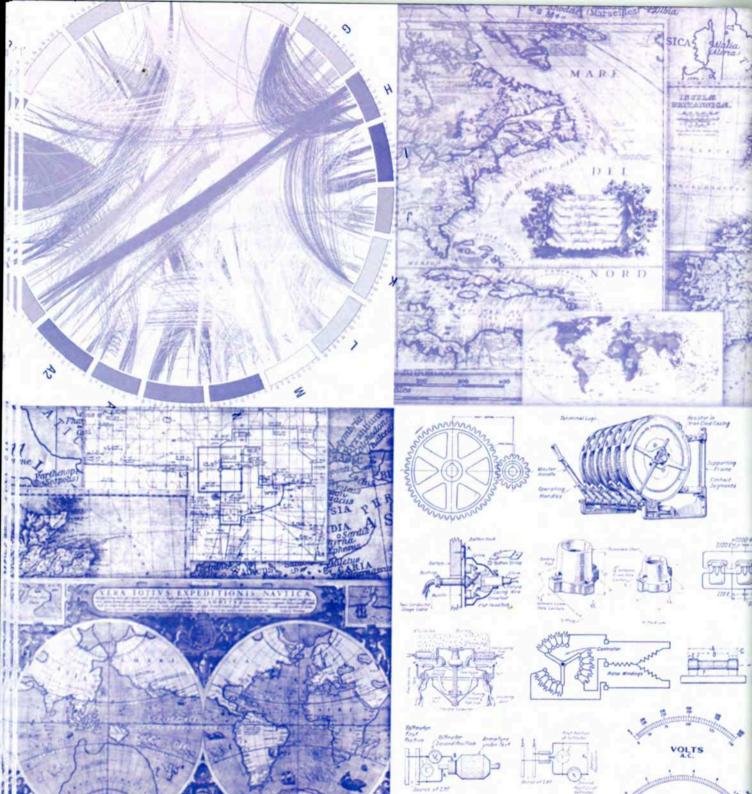
Alan T. Waterman Award

The Alan T. Waterman Award recognizes an outstanding young researcher in any field of science or engineering supported by the National Science Foundation. Congress established the Alan T. Waterman Award in August 1975 to mark the 25th Anniversary of the National Science Foundation and to honor its first Director. In addition to a medal, the awardee receives a grant of \$1,000,000 over a 5-year period for scientific research or advanced study in the mathematical, physical, biological, engineering, social, or other sciences at the institution of the recipient's choice.

2015 Selection Committee

Juan Meza, Chairman Cynthia Burrows Patricia Kuhl Jane Lubchenco Marcia K. McNutt Randy Nelson Jill Pipher Charles Manski Mark Smith Karan Watson Peidong Yang Ali Yazdani

Dan Arvizu, ex officio Ralph Cicerone, ex officio France A. Córdova, ex officio C. D. Mote, ex officio





NSB Group Public Service Award

The National Science Board Public Service Award honors individuals and groups that have made substantial contributions to increase public understanding of science and engineering in the United States.

2015 Selection Committee

Vinton "Vint" Cerf, Chairman Bonnie Bassler Sethuraman Panchanathan

Dan E. Arvizu, ex officio Kelvin K. Droegemeier, ex officio France A. Córdova, ex officio



AMERICAN MUSEUM & NATURAL HISTORY

New York, NY

For fostering public understanding of science through scientific research, improving the teaching and learning of science, and training and encouraging the next generation of scientists.

ABOUT THE RECIPIENT

The American Museum of Natural History, founded in 1869, is one of the world's preeminent scientific, educational, and cultural institutions.

The Museum encompasses 45 permanent exhibition halls, including the Rose Center for Earth and Space and the Hayden Planetarium, as well as galleries for temporary exhibitions. It is home to the Theodore Roosevelt Memorial, New York State's official memorial to its 33rd governor and the nation's 26th president, and a tribute to Roosevelt's enduring legacy of conservation. The Museum's five active research divisions and three cross-disciplinary centers support approximately 200 scientists, whose work draws on a world-class permanent collection of more than 33 million specimens and artifacts, as well as specialized collections for frozen tissue and genomic and astrophysical data, and one of the largest natural history libraries in the world.

Through its Richard Gilder Graduate School, it is the only American museum authorized to grant the Ph.D. degree. In 2012, the Museum began offering a pilot Master of Arts in Teaching program with a specialization in Earth science, which is the only non-university affiliated such program in the United States. Annual attendance has grown to approximately 5 million, and the Museum's exhibitions and Space Shows can be seen in venues on five continents. The Museum's website and collection of apps for mobile devices extend its collections, exhibitions, and educational programs to millions more beyond its walls.



Boston, MA

For advancing public understanding of engineering and science and for pioneering and championing the introduction of engineering education in K-12 schools nationwide.

ABOUT THE RECIPIENT

The Museum of Science, Boston, led by president and director Ioannis Miaoulis, PhD, created the National Center for Technological Literacy* (NCTL*) in 2004 to foster science, technology, engineering, and math (STEM) knowledge for all. One of the world's largest science centers, drawing over 1.4 million visitors a year, the Museum is the first science museum in the United States with a strategy and infrastructure to integrate engineering into schools and museums nationwide. The strategy involves: advocacy; reforming standards and assessments; creating K-12 curricula, teacher professional development, and museum programming; and enhancing public views of engineering.

Because of the lack of elementary engineering curricula, the NCTL piloted Engineering is Elementary* in 2003-2004 with 8 teachers and 200 students. The NCTL has also created middle and high school curricula, Building Math and Engineering the Future*, as well as out-of-school-time curricula. As of February 2015, NCTL curricula had reached an estimated 83,800 teachers and 7.7 million students nationwide. Its Gateway Project guides STEM reform via districtwide leadership development and strategic planning.

Through the NCTL, the Museum has also promoted engineering to over 3 million museum-goers via its Star Wars: Where Science Meets Imagination exhibition, engaged over 580,000 visitors in Design Challenges, and, since 2005, led a \$41 million National Science Foundation-funded Nanoscale Informal Science Education Network, reaching 30 million people. The NCTL helped build support for the Engineering Education for Innovation Act, introduced in Congress (2010, 2011), and the Educating Tomorrow's Engineers Act (2013, 2015).

Vannevar Bush Award Recipients

| | | | THE RESERVE OF THE PARTY OF THE |
|------|--|------|--|
| 2014 | Richard A. Tapia | 1998 | Robert M. White |
| 2013 | Neal Lane | 1997 | H. Guyford Stever |
| 2012 | Leon M. Lederman | 1996 | Phillip H. Abelson |
| 2011 | Charles M. Vest | 1995 | Norman F. Ramsey, Jr. |
| 2010 | Bruce A. Alberts | 1994 | Frank Press |
| 2009 | Mildred Dresselhaus | 1993 | Norman Hackerman |
| 2008 | Norman R. Augustine | 1992 | Jerome B. Wiesner |
| 2007 | Shirley Ann Jackson | 1991 | James A. Van Allen |
| 2006 | Raj Reddy | 1990 | [No Award Presented] |
| | Charles H. Townes | 1989 | Linus Pauling |
| 2005 | Robert W. Galvin | 1988 | Glenn T. Seaborg |
| 2004 | Mary L. Good | 1987 | David Packard |
| 2003 | Richard C. Atkinson | 1986 | I. I. Rabi |
| 2002 | Erich Bloch | 1985 | Hans A. Bethe |
| 2001 | Lewis M. Branscomb | 1984 | Roger R. Revelle |
| | Harold Varmus | 1983 | Frederick Seitz |
| 2000 | Herbert F. York | 1982 | Lee A. DuBridge |
| | Norman Borlaug | 1981 | William O. Baker |
| 1999 | Maxine F. Singer | 1980 | James R. Killian, Jr. |
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| | | | | | | 5 % |
| | | Alan T. Waterman | Awar | d Recipients | | - |
| | 2014 | Feng Zhang | 1995 | Matthew P. A. Fisher | | 1 |
| | 2013 | Mung Chiang | 1994 | Gang Tian | | |
| | 2012 | Scott J. Aaronson | 1993 | Deborah L. Penry | | 65 |
| | | Robert J. Wood | 1992 | Shrinivas R. Kulkarni | | 100 |
| | 2011 | Casey W. Dunn | 1991 | Herbert Edelsbrunner | | 35 |
| | 2010 | Subhash A. Khot | 1990 | Mark E. Davis | | 201/0 |
| | 2009 | David B. Charbonneau | 1989 | Richard H. Scheller | | N. C. |
| | 2008 | Terence C. Tao | 1988 | Peter G. Schultz | | 1 |
| | 2007 | Peidong Yang | 1987 | Lawrence H. Summers | | Ach |
| | 2006 | Emmanuel J. Candes | 1986 | Edward Witten | | 7 7 |
| 10 4 | 2005 | Dalton Conley | 1985 | Jacqueline K. Barton | | |
| 10000 | 2004 | Kristi S. Anseth | 1984 | Harvey M. Friedman | | |
| 1 | 2003 | Angelika Amon | 1983 | Corey S. Goodman | | |
| 1985 | 2002 | Erich D. Jarvis | 1982 | Richard Axel | | |
| 3 | 2001 | Vahid Tarokh | 1981 | W. Clark Still | | |
| 7 | 2000 | Jennifer A. Doudna | 1980 | Roy F. Schwitters | | |
| | 1999 | Chaitan S. Khosla | 1979 | William P. Thurston | | |
| A 146 M | 1998 | Christopher C. Cummins | 1978 | Richard A. Muller | | 3 |
| | 1997 | Eric Cornell | 1977 | J. William Schopf | | 1 |
| | 1996 | Robert M. Waymouth | 1976 | Charles L. Fefferman | | |
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NSB Public Service Award Individual Recipients

| 2014 | Arthur L. Caplan | 2005 | Ira Flatow |
|------|-----------------------|------|----------------------------|
| 2013 | Jo Anne Vasquez | 2004 | Oliver Sacks |
| 2012 | Lawrence M. Krauss | 2003 | Kathryn D. Sullivan |
| 2011 | Moira A. Gunn | 2002 | Eugenie C. Scott |
| 2010 | Nalini M. Nadkarni | 2001 | Dava Sobel |
| 2009 | Roald Hoffman | 2000 | Philip and Phylis Morrison |
| 2008 | [No Award Presented] | 1999 | Stephen Jay Gould |
| 2007 | Bassam Z. Shakhashiri | 1998 | Jane Goodall |
| 2006 | Alan Alda | | |
| | Craig R Barrett | | |

NSB Public Service Award Group Recipients

| 2014 | AAAS Science & Technology Policy | 2005 | Committee on the Status of Women |
|------|-----------------------------------|------|----------------------------------|
| | Fellowships Program | | in Computing Research |
| 2013 | [No Award Presented] | 2004 | Alfred P. Sloan Foundation |
| 2012 | NPR Science Desk | 2003 | Council for the Advancement of |
| 2011 | Exploratorium | | Science Writing |
| 2010 | The Expanding Your Horizons | | Earth & Sky, Inc. |
| | Network | 2002 | Society for the Advancement of |
| 2009 | American Chemical Society Project | | Chicanos and Native Americans in |
| | SEED | | Science |
| 2008 | Bayer Corporation | 2001 | Education Division, Wildlife |
| | SAE International | - / | Conservation Society, |
| 2007 | NUMB3RS Television Drama Series | | The Bronx Zoo |
| 2006 | Association of Science-Technology | 2000 | Science Service |
| | Centers | 1999 | "Bill Nye the Science Guy" |
| | | 1998 | NOVA, PBS Series |

ABOUT THE NATIONAL SCIENCE BOARD

The National Science Board (NSB) is the 25-member policymaking body for the National Science Foundation and advisor to the President and Congress on science and engineering issues. Drawn primarily from universities and industry, and representing a variety of science and engineering disciplines and geographic areas, NSB members are selected for their eminence in research, education, or public service, and records of distinguished service.

CURRENT MEMBERSHIP

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France A. Córdova, Director, National Science Foundation

Michael L. Van Woert, Executive Officer