



THE PRESIDENT

welcomes you to

THE WHITE HOUSE

on the occasion of the presentation of

THE NATIONAL
MEDAL OF SCIENCE

AND

THE NATIONAL
MEDAL OF TECHNOLOGY
AND INNOVATION



Monday, September 29, 2008

THE NATIONAL MEDAL OF SCIENCE

The National Medal of Science is the Nation's highest scientific honor. Established by Congress in 1959, and administered by the National Science Foundation, it is bestowed annually by the President of the United States on a select group of individuals deserving of special recognition for their outstanding contributions in one of the following fields: biology, chemistry, geology, physics, mathematics, sociology, behavioral and economic sciences, and engineering. President John F. Kennedy awarded the first Medal of Science in 1962 to the late Theodore Von Karman, professor emeritus, California Institute of Technology. Four hundred and forty-nine individuals have been awarded the Medal of Science including such distinguished scientists and engineers as Eugene M. Shoemaker, co-discoverer of the Shoemaker-Levy comet; economist Milton Friedman; Edward Witten, for string theory; and C. Kumar N. Patel, inventor of the carbon dioxide laser, which helped revolutionize the medical surgery field. Each year, an independent twelve-member presidentially-appointed committee of scientists and engineers reviews nominations and makes its recommendations to the President, who selects the laureates.



2007 NATIONAL MEDAL OF SCIENCE LAUREATES

Fay Ajzenberg-Selove

University of Pennsylvania

For her pioneering contributions in nuclear physics that have advanced research into many applications, including energy generation from fusion, dating of artifacts, and nuclear medicine; her passion for teaching; and her outstanding service to her profession.

Mostafa A. El-Sayed

Georgia Institute of Technology

For his seminal contributions to our understanding of the electronic and optical properties of nano-materials and to their applications in nanocatalysis and nano-medicine; his humanitarian efforts in promoting the exchange of ideas; and his role in developing the scientific leadership of tomorrow.

Leonard Kleinrock

University of California, Los Angeles

For his fundamental contributions to the mathematical theory of modern data networks, and for the functional specification of packet switching, which is the foundation of Internet technology. His mentoring of generations of students has led to the commercialization of technologies that have transformed the world.

Robert J. Lefkowitz

Duke University Medical Center

For his discovery of the seven transmembrane receptors, deemed the largest, most versatile, and most therapeutically accessible receptor signaling system, and for describing the general mechanism of their regulation, influencing all fields of medical practice.

2007 NATIONAL MEDAL OF SCIENCE LAUREATES

Bert W. O'Malley

Baylor College of Medicine

For his pioneering work on the molecular mechanisms of steroid hormone action and hormone receptors and coactivators, which has had a profound impact on our knowledge of steroid hormones in normal development and in diseases, including cancer.

Charles P. Slichter

University of Illinois at Urbana-Champaign

For establishing nuclear magnetic resonance as a powerful tool to reveal the fundamental molecular properties of liquids and solids. His inspired teaching has led generations of physicists and chemists to develop a host of modern technologies in condensed matter physics, chemistry, biology, and medicine.

Andrew J. Viterbi

University of Southern California

For his development of the maximum-likelihood algorithm for convolutional coding, known as the "Viterbi algorithm," and for his contributions to Code Division Multiple Access (CDMA) wireless technology that transformed the theory and practice of digital communications.

David J. Wineland

National Institute of Standards and Technology

For his leadership in developing the science of laser cooling and manipulation of ions, with applications in precise measurements and standards, quantum computing, and fundamental tests of quantum mechanics; his major impact on the international scientific community through the training of scientists; and his outstanding publications.

THE NATIONAL MEDAL OF TECHNOLOGY AND INNOVATION

The National Medal of Technology and Innovation is the Nation's highest award for technological achievement. It recognizes American innovators whose vision, intellect, creativity and sheer determination have made profound and lasting contributions to our economy and quality of life. Established by Congress and administered by the US Patent and Trademark Office within the U.S. Department of Commerce, one hundred and eighty-three Medals have been awarded to individuals, team members and companies. The first Medal of Technology was presented in 1985 by President Ronald Reagan. Recipients have included such technological pioneers as Ray M. Dolby of Dolby Laboratories; Steve Wozniak, formerly of Apple Computer; Stephanie Kwolek, formerly of Dupont; and outstanding American companies that have led the world in technological innovation. An independent committee representing both private and public sectors evaluates the merits of all candidates nominated through an open, competitive solicitation process. Committee recommendations are forwarded to the Secretary of Commerce, who makes recommendations to the President for final decision.



2007 NATIONAL MEDALS OF TECHNOLOGY AND INNOVATION LAUREATES

Paul Baran

NovoVentures, Inc.

For the invention and development of the fundamental architecture for packet-switched communication networks, which provided a paradigm shift from the circuit-switched communication networks of the past and later was used to build the ARPANET and the Internet.

Roscoe O. Brady

National Institutes of Health

For his discovery of the enzymatic defects in hereditary metabolic disorders such as Gaucher disease, Niemann-Pick disease, Fabry disease, and Tay-Sachs disease, devising widely used genetic counseling procedures and the development of highly effective enzyme replacement therapy that provided the foundation for patient treatment; and for stimulating the creation of and fostering the success of many biotechnology companies that produce the therapeutics for the treatment of these diseases.

David N. Cutler

Microsoft Corporation

For having designed and implemented standards for real-time, personal and server-based operating systems, carrying these projects from conception through design, engineering, and production for Digital Equipment Corporation's RSX-11 and VAX/VMS and for Microsoft's Windows NT-based computer operating systems; and for his fundamental contributions to computer architecture, compilers, operating systems, and software engineering.

Armand V. Feigenbaum

General Systems Company, Inc.

For his leadership in the development of the economic relationship of quality costs, productivity improvement, and profitability, and for his pioneering application of economics, general systems theory and technology, statistical methods, and management principles that define the Total Quality Management approach for achieving performance excellence and global competitiveness.

2007 NATIONAL MEDALS OF TECHNOLOGY AND INNOVATION LAUREATES

Adam Heller

The University of Texas at Austin

For his fundamental contributions to electrochemistry and bioelectrochemistry and the subsequent application of those fundamentals in the development of technological products that improved the quality of life across the globe, most notably in the area of human health and well-being.

Carlton Grant Willson

The University of Texas at Austin

For the creation of novel lithographic imaging materials and techniques that have enabled the manufacturing of smaller, faster, and more efficient microelectronic components that have improved the competitiveness of the U.S. microelectronics industry.

eBay Inc.

San Jose, California

For pioneering the technology that encouraged and supported online trade, enabling global entrepreneurship and the growth of the Internet worldwide.

Skunk Works

Palm Dale, California

For an exceptional 65-year record of developing cutting-edge aircraft, technologies, and systems solutions for the U.S. Government, including development of unique advanced aircraft technologies critical to the national defense; and for the introduction of operational "stealth" capability that has changed the landscape of U.S. war-fighting capabilities.



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