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*Reception in Honor of Recipients of the
1989 Presidential Awards for Excellence in
Science and Mathematics Teaching*

NATIONAL ACADEMY OF SCIENCES
WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY
NATIONAL SCIENCE FOUNDATION

October 24, 1989

Laserpoint
MECC

Math Aids/Math Products Plus
McDougal, Littell & Company
Merrill Publishing Company

Minnesota Mining and Manufacturing Foundation, Inc.

Nalge Company

Nasco-Science Education Division

National Aeronautics and Space Administration

National Association of Biology Teachers

National Council of Teachers of Mathematics

National Geographic Society

National Institutes of Health

National Science Teachers Association

National Teaching Aids, Inc.

National Wildlife Federation

New York Zoological Society, Bronx Zoo

OMNI Magazine

Other Worlds Educational Enterprises

PASCO Scientific

Peter Li, Inc.

Prisco-Science Education Division

Prentice Hall School Division

Reliance Electric Company

SRA/Pergamon

Scholastic Inc.

Science Screen Report

Science Service

Scott, Foresman and Company

Silver Burdett & Ginn

Society for Industrial and Applied Mathematics

Society for Visual Education, Inc.

South-Western Publishing Company

TAB Books, Inc.

TOPS Learning Systems

TVO Video/TVOntario

Tandy Corporation/Radio Shack

Texas Instruments

The Acid Rain Foundation, Inc.

The American Radio Relay League, Inc.

The Cleveland-Cliffs Foundation

The Game School Corporation

The Planetary Society

The University of Wisconsin Press

United Learning

Vernier Software

W.H. Freeman and Company

Wadsworth, Inc.

Ward's Natural Science Establishment, Inc.

World Book, Inc.

*The Presidential Awards for
Excellence in Science and Mathematics Teaching*

*A program of the National Science Foundation administered by the
National Science Teachers Association and the
National Council of Teachers of Mathematics*

Cooperating Organizations

American Association for the Advancement of Science

American Association of Physics Teachers

American Chemical Society

American Geological Institute

American Institute of Physics

Council of State Science Supervisors

Federation of American Societies for Experimental Biology

The Mathematical Association of America

National Academy of Sciences

National Association of Biology Teachers

National Association of Geology Teachers

National Earth Science Teachers Association

Contributors

Addison-Wesley Publishing Company
 American Association for the Advancement of Science
 American Association of Physics Teachers
 American Chemical Society
 American Geological Institute
 American Institute of Physics
 American Nuclear Society
 American Science Center/Jerryco Inc.
 Applied Science Software Company
 Arlington-Hews, Inc.
 Astronomical Society of the Pacific
 Baltimore Gas and Electric Company
 CONDUIT
 Cabisco Mathematics
 Carolina Biological Supply Company
 Central Scientific Company
 CompuServe
 Connecticut Valley Biological Supply Company, Inc.
 Consortium for Mathematics and Its Applications
 Cray Research, Inc.
 DC Heath and Company
 Dale Seymour Publications
 Davidson & Associates, Inc.
 Discovery Corner
 Du Pont Company
 Edison Electric Institute
 Edmund Scientific Company
 Educational Activities, Inc.
 Focus Media, Inc.
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 Good Apple, Inc.
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 Heldref Publications
 Hewlett-Packard Company
 Holt, Rinehart and Winston, Inc.
 Houghton Mifflin Company
 IBM Educational Systems
 Idea Factory, Inc.
 Imported Publications, Inc.
 Intel Foundation
 International Technology Education Association
 J. Weston Welch, Publisher
 Janson Publications, Inc.
 John and Janet Delmonte Foundation
 Kendall/Hunt Publishing Company

Program

Welcome and Honors Ceremony, Auditorium

FRANK PRESS
President, National Academy of Sciences

THE HONORABLE D. ALLAN BROMLEY
Assistant to the President for Science and Technology

THE HONORABLE ERICH BLOCH
Director, National Science Foundation

LEON LEDERMAN
1988 Physics Nobel Laureate

Reception Buffet

This reception is partially sponsored by contributions from the following organizations: Addison-Wesley Publishing Company, Baltimore Gas and Electric Company, Cray Research, Inc., Edison Electric Institute, Holt, Rinehart and Winston, Inc., Houghton Mifflin Company, Intel Foundation, Minnesota Mining and Manufacturing Foundation, Inc., Merrill Publishing Company, Nalge Company, Reliance Electric Company, Scott, Foresman and Company, South-Western Publishing Company, Texas Instruments, The Cleveland-Cliffs Foundation

Recipients of the Presidential Awards for Excellence in Science and Mathematics Teaching

Mathematics teachers are listed on the left, science teachers on the right.

Alabama

LARRY DEVAN WILLIAMS
 Euraw High School
 Euraw

ROBERT SOL DAVIS
 The Altamont School
 Birmingham

Alaska

BEVERLY G. VAN CAMP
 Bethel Junior/Senior High School
 Bethel

LOUISE E. ASHMUN
 Thorne Bay School
 Thorne Bay

Arizona

JOHN R. LASSEN, JR.
 Marcos de Niza High School
 Tempe

JOHN MICHAEL TRIMBLE
 Corona del Sol High School
 Tempe

Arkansas

RONALD E. TOWNSEND
 Fayetteville High School
 Fayetteville

SILAS IRVING GRANDERSON
 Elmwood Junior High School
 Rogers

California

HAROLD D. TAYLOR
 Hillsdale High School
 San Mateo

STEVEN R. KEITH
 Casa Roble Fundamental High School
 Orangevale

Colorado

PATRICK SCOTT MARA
 South High School
 Pueblo

LARRY G. FRIEDRICH
 William J. Palmer High School
 Colorado Springs

Connecticut

TARA S. RICKART
 Nonnewaug High School
 Woodbury

ANTHONY J. GIANCOLA
 New Canaan High School
 New Canaan

District of Columbia

JOAN E. REINTHALER
 Sidwell Friends School
 Washington

YVONNE A. LEWIS
 Douglass Junior High School
 Washington

U. S. Territories

FLORAMMA STANISLAUS
 Samoana High School
 Pago Pago, American Samoa

DEODEGARIA D. LACSON
 Marianas High School
 Saipan, Northern Marianas

VELMA VENETTA TYSON
 Elena L. Christian Junior High School
 St. Croix, Virgin Islands

RICHARD WILLIAM PEASE
 Leone High School
 Pago Pago, American Samoa

Utah

PAMELA P. GILES
 Brighton High School
 Salt Lake City

MICHAEL B. HARRIS
 Layton High School
 Layton

Vermont

SUSAN SOLTAU
 Essex Junction Educational Center
 Essex Junction

LLOYD PAUL IRISH
 Champlain Valley Union High School
 Hinesburg

Virginia

HARRISON W. STRALEY, IV
 Woodberry Forest School
 Woodberry Forest

JAMES D. SPROULL
 McLean High School
 McLean

Washington

JOYCE B. STEVENS
 Cascade Junior High School
 Auburn

JOHN E. PAULS
 Alderwood Middle School
 Lynnwood

West Virginia

DEBORAH A. SELDOMRIDGE
 Keyser High School
 Keyser

JOSEPH E. GRIFFITH
 Sistersville High School
 Sistersville

Wisconsin

JANE ANN HOWELL
 Platteville Middle School
 Platteville

JAY A. ZIMMERMAN
 Brookfield Central High School
 Brookfield

Wyoming

NANCY MERRILL
 Big Horn School
 Big Horn

LINDA L. FLEMING
 Little Snake River Valley School
 Baggs

Oklahoma

SUSAN ALYCE SHUMATE
Edmond Memorial High School
Edmond

JEFFREY L. SMITH
Midwest City High School
Midwest City

Oregon

NANCY LEE ANDERSON
Judson Middle School
Salem

PATRICK H. CANAN
Corvallis High School
Corvallis

Pennsylvania

ELIZABETH EVERETT ROSEBOROUGH
Taylor Allerdice High School
Pittsburgh

MICKEY MAHOLTZ
Curwensville Area High School
Curwensville

Puerto Rico

CARMEN M. PEREZ GONZALEZ
Eugenio M. de Hostos
Mayaguez

WILMA M. GIOL RUJIZ
Colegio San Ignacio de Loyola
Rio Piedras

Rhode Island

MARY D. PROVOST
North Smithfield Junior-Senior
High School
North Smithfield

CAROL-ANN W. TRIPP
Providence Country Day School
East Providence

South Carolina

REBECCA SMITH KRUEGER
Richland Northeast High School
Columbia

JOSEPH A. STIEVE
Spring Valley High School
Columbia

South Dakota

HELEN KEPHART
Vermillion High School
Vermillion

RONALD R. FAHY
Belle Fourche High School
Belle Fourche

Tennessee

DEBORAH DAVIES
University School of Nashville
Nashville

DONNA ANN BERRY
Baylor School
Chattanooga

Texas

DIANN C. RESNICK
Bellaire High School
Bellaire

MICHAEL WAYNE HOKE
West Orange Middle School
Orange

Department of Defense Dependents Schools

LINDA MARIE BOLICH
Lakenheath High School
England

SANDY SAPATKA
Mannheim High School
West Germany

MARY F. EPLETT
Soesterberg American High School
Netherlands

KENNETH DUANE VANLEW
Frankfurt American High School
West Germany

Delaware

PATRICIA L. GYSLING
Glasgow High School
Newark

ELLIS E. UNDERKOFFLER
Talley Junior High School
Wilmington

Florida

CHARLENE MOORE KINCAID
Gulf Breeze High School
Gulf Breeze

SUSAN W. ZOLTEWICZ
Eastside High School
Gainesville

Georgia

MARGARET WINGATE FAIRCLOTH
Southeast High School
Macon

MICHAEL H. EDMONDSON
William H. Spencer High School
Columbus

Hawaii

NAOMI J. NISHIDA
Waipahu High School
Waipahu

KAREN M. NISHIMOTO
James B. Castle High School
Kaneohe

Idaho

ANNE MARIE SUK
Nampa Senior High School
Nampa

MARIANNE B. ANDERSON
Pocatello High School
Pocatello

Illinois

SUSAN K. EDDINS
Illinois Mathematics & Science Academy
Aurora

RONNEE ELAINE BERNBERG
Lake View High School
Chicago

Indiana

GARY H. EMMERT
Ben Davis Junior High School
Indianapolis

JOSEPH D. RUHL
Jefferson High School
Lafayette

Iowa

EARL OCKENGA
Malcolm Price Laboratory School
Cedar Falls

FLOYD FRANK STURTEVANT
Ames High School
Ames

Kansas

BEULAH ELLINGTON
Shawnee Mission West High School
Shawnee Mission

RICHARD (BRAD) WILLIAMSON
Olathe South High School
Olathe

Kentucky

AMY THOMPSON HERMAN
Atherton High School
Louisville

JOHN DAVID LEDDEN
Beechwood High School
Ft. Mitchell

Louisiana

CAROLYN S. SESSIONS
Louisiana State University
Laboratory School
Baton Rouge

KATHY L.M. DAVIS
E. McMinn Magnet Secondary School
New Orleans

Maine

RAYMOND E. FISHER
Mt. Avarat School
Topsham

EARL C. COOMBS
Winslow High School
Winslow

Maryland

PATRICIA ROBINSON BALTZLEY
Francis Scott Key High School
Union Bridge

WILLIAM R. KRAYER
Gaithersburg High School
Gaithersburg

Massachusetts

DWAYNE CAMERON
Old Rochester Regional High School
Mattapoisett

RONALD D. DEFONZO
Franklin High School
Franklin

Michigan

ANITA JOHNSTON
Napoleon High School
Napoleon

STEWART R. SCHULTZ
West Bloomfield High School
West Bloomfield

Minnesota

VICKI RAE DEVOSS
Work Opportunity Center
Minneapolis

MARV MIKESH
John Adams Junior High School
Rochester

Mississippi

CLAUDIA R. CARTER
Mississippi School for Math & Science
Columbus

MICHAEL CAIN
Stone High School
Wiggins

Missouri

MYRNA J. MAIN
Macon R-1 School
Macon

GREG THURMON
Salisbury R-IV High School
Salisbury

Montana

LAWRENCE R. KABER
Flathead High School
Kalispell

MARILYN B. ALEXANDER
Helena Capital High School
Helena

Nebraska

LEONA J. PENNER
Lincoln East Junior-Senior High School
Lincoln

ED BROGIE
Laurel-Concord Public School
Laurel

Nevada

SALLY J. NELSON
Elton Garrett Junior High School
Boulder City

JAMES E. BLATTMAN
Albert Lowry High School
Winnemucca

New Hampshire

RICHARD G. BROWN
Phillips Exeter Academy
Exeter

DANIEL J. BISACCIO
Thayer High School
Winchester

New Jersey

NADIA MAKAR
Union Hill High School
Union City

JUDITH A. TREHARNE
Ocean Township High School
Oakhurst

New Mexico

MAXIMO GURULE
Peñasco Junior-Senior High School
Peñasco

VICTORIA W. SANCHEZ
Van Buren Middle School
Albuquerque

New York

PHILIP R. REYNOLDS
Niskayuna High School
Schenectady

JOANNE K. GALLAGER
Tamarac Middle School
Troy

North Carolina

LARRY M. THOMASON
North Rowan High School
Spencer

CAROLYN J. MORSE
Chapel Hill High School
Chapel Hill

North Dakota

LUANN L. STEHR
Minot High School
Minot

WADE V. FORSTER
Bismack High School
Bismack

Ohio

DIANNE OLIX
Fairmont High School
Kettering

JUDITH L. DOYLE
Newark High School
Newark

The National Medal of Technology Nomination Evaluation Committee

George Bugliarello
Bob O. Evans
S. Allen Heininger
Richard R. Nelson
William C. Norris
George B. Rathmann
Roland W. Schmitt
Robert M. White, Chairman
Elias R. Zenkich

Paul V. Braden
Executive Director



DINNER

honoring 1989 recipients of The National Medals of Science & Technology



October 17, 1989

Grand Ballroom
The Mayflower
Washington, D.C.

1989 Recipients

The National Medal of Science

Arnold O. Beckman
Richard B. Bernstein
Melvin Calvin
Harry G. Drickamer
Katherine Esau
Herbert E. Grier
Viktor Hamburger
Samuel Karlin
Philip Leder
Joshua Lederberg
Saunders Mac Lane
Rudolph A. Marcus
Harden M. McConnell
Eugene N. Parker
Robert P. Sharp
Donald C. Spencer
Roger W. Sperry
Henry M. Stommel
Harland G. Wood

The National Medal of Technology

Herbert W. Boyer
Stanley N. Cohen
Helen Edwards
Robert R. Everett
Jay W. Forrester
Richard A. Lundy
J. Ritchie Orr
Alvin Tollestrup

The President's Committee on the National Medal of Science

John D. Baldeschwieler
Carl O. Bostrom
Roland H. Carlson
David R. Challoner, Chairman
Sherwin T. S. Chan
Samuel Conti
William R. Graham*
Roger D. Hartman
Yuet W. Kan
Willie J. Nunnery
Frank Press*
Rita Ricardo-Campbell
I. M. Singer
Ronald H. Winston
James F. Hays
Executive Secretary

*Member, Ex Officio

Previous Recipients of the National Medal of Technology

1985

Frederick P. Brooks, Jr., Erich Bloch and Bob O. Evans, IBM Corp.
 Steven P. Jobs and Stephen Wozniak, Apple Computer, Inc.
 Marvin M. Johnson, Phillips Petroleum Co.
 Ralph Landau, Halcon-Scientific Design Group
 John T. Parsons and Frank L. Stulen, John T. Parsons Co.
 Harold A. Rosen and Allen E. Puckett, Hughes Aircraft Co.
 Joseph F. Sutter, Boeing Commercial Airplane Co.
 AT&T Bell Telephone Laboratories, Inc., Ian M. Ross, Pres.

1986

Bernard Gordon, Analogic Corporation
 Reynold B. Johnson, formerly with IBM Corp.
 William C. Norris, Control Data Corp.
 Frank N. Piasecki, Piasecki Aircraft Corp.
 Stanley D. Stookey, Corning Glass Works
 Francis Versnyder, United Technologies Corp.

1987

Joseph V. Charyk, Communications Satellite Corp.
 W. Edwards Deming, Consultant
 John Franz, Monsanto Corp.
 Robert Noyce, Intel Corp.

1988

John L. Atwood, Rockwood International Corp.
 Arnold O. Beckman, SmithKline-Beckman Corp.
 Paul M. Cook, Raychem Corp.
 Raymond Damadian, FORMAR Corp.
 Robert H. Dennard, IBM Corp.
 Harold E. Edgerton, EG&G Corp.
 Clarence L. (Kelly) Johnson, Lockheed Corp.
 Edwin H. Land, Polaroid Corp.
 Paul C. Lauterbur, University of Illinois
 David Packard, Hewlett-Packard Co.

Program

Presiding D. Allan Bromley
 Assistant to the President
 for Science and Technology

Dinner

Introduction of Medal of Technology Robert A. Mosbacher
 Secretary of
 Commerce

Introduction of Medal of Science Recipients D. Allan Bromley

Previous Recipients of The National Medal of Science

Menu

Poached Medallion of Salmon
Brevale Sauce

* * * * *

Spinach Salad with Mushrooms
Mustard Vinaigrette

* * * * *

Cornish Game Hen, Chasseur Sauce
Wild Rice
Vegetables of the Season

* * * * *

Selection of French Pastries

* * * * *

Coffee Tea

1962
von Karmán, Theodore

1963

Bush, Vannevar
Pierce, John Robinson
van Nieu, Cornelis B.
Wilner, Norbert

1964

Adams, Roger
Ammann, Othmar H.
Dezhnevsky, Theodosius
Dreyer, Charles Stark
Leshchetz, Solomon
Miller, Neal Elgar
Moore, Harold Marston
Nirenberg, Marshall Warren
Schwinger, Julian
Urey, Harold Clayton
Woodward, Robert Burns

1965

Bardeen, John
Debye, Peter J. W.
Dryden, Hugh I.*
Johnson, Clarence Leonard
Lederman, Leon Max
Lewis, Warren Kendall
Rosen, Francis Peyton
Rubey, William Walden
Simpson, George Gaylord
Van Slyke, Donald D.
Zariski, Oscar

1966

Bjerrén, Jacob
Chandrasekhar, Subrahmanyan
Eyring, Henry
Knipping, Edward Fred
Lippmann, Fritz Albert
Linnor, John Willard
Rose, William Cunningham
Shannon, Claude Elwood
Van Vleck, John Hasbrouck
Wright, Sewall
Zworykin, Vladimir Kosma

1967

Beams, Jesse Wakefield
Birch, Albert Francis
Britt, Gregory
Cohn, Paul Joseph
Coke, Kenneth Stewart
Hammer, Louis Plack
Hartov, Harry E.
Hedelberger, Michael
Kistlikowsky, George Bogdan
Land, Edwin Herbert
Sikorsky, Igor I.
Sturtevant, Alfred Henry

1968

Barrett, Horace Albert
Barrett, Paul Douglas
Brodie, Bernard Bigman
Brook, Dudley Wulf
Eckert, J. Presper
Friedman, Herbert
Lush, Jay Laurence

Newmark, Nathan Mortimore

Neyman, Jerzy
Onsager, Lars
Skinner, Burthius Frederic
Wigner, Eugene Paul

1969

Brown, Herbert Charles
Feller, William*
Huebner, Robert Joseph
Kilby, Jack S.C.
May, Ernst
Parosky, Wolfgang K.H.

1970

Bauer, Richard Dagobert
Dicke, Robert H.
McClintock, Barbara
Muller, George E.
Sabin, Albert B.
Sandage, Allan Rex
Slater, John Clarke
Wheeler, John Archibald
Winsten, Saul*

1973

Amnon, Daniel Israel
Dierassi, Carl
Edgerton, Harold Eugene
Ewing, William Maurice
Haagen-Smit, Arie Jan
Harnesl, Vladimir
Seltz, Frederick
Sutherland, Earl W., Jr.
Tulley, John Wilder
Whitcomb, Richard Travis
Wilson, Robert Kathbin

1974

Bloembergen, Nicholas
Chance, Britton
Chargaff, Erwin
Flory, Paul John
Fowler, William A.
Gödel, Kurt
Komphner, Rudolph
Nicol, James V.
Pauling, Linus
Pech, Ralph Brazelton
Pitzer, K.S.
Shannon, James A.
Wollman, Abel

1975

Backus, John
Benedict, Marston
Bechtel, Hans A.
Chern, Shing-shen
Danzig, George Bernard
Davis, Hallowell
Gyorgy, Paul*
Hendricks, Sterling B.
Hirschfelder, Joseph Oakland
Pickering, William H.
Saret, Lewis Hastings
Termon, Frederick Eimmons
Wegel, Orville Alvin
von Braun, Wernher
Wilson, E. Bright
Wu, Chien-Shung

1976

Cohen, Morris
Friedrichs, Kurt Otto
Goldmark, Peter C.
Goodenough, Samuel A.
Guillemin, Roger C.L.
Gutowsky, Herbert S.
Muller, Erwin W.*
Porter, Keith R.
Racker, Herman
Rossini, Frederick D.
Suzuki, Verner E.
Taube, Henry
Uhlenbeck, George E.
Whitney, Hassler
Wilson, Edward O.

1979

Burns, Robert H.
Crosby, Elizabeth C.
Doob, Joseph L.
Ryngaert, Richard P.
Kunth, Donald E.
Kornberg, Arthur
Lehn, Hermann N.
Mark, Herman F.
Mindlin, Raymond D.
Noyce, Robert N.
Ochoa, Severo
Parker, Earl R.
Purcell, Edward M.
Ramo, Simon
Saitel, John H.
Spitzer, Jr., Jayman
Stadman, Earl R.
Steinbock, G. Leiyard
Weiss, Paul A.
Wesskopt, Victor F.

1981

Handler, Philip
Anderson, Philip W.
Benzet, Seymour
Burton, Glenn W.
Cahn, Mildred
Cotton, F. Albert
Heinemann, Edward H.
Katz, Donald I.
Nambu, Yoichiro
Stone, Marshall H.
Stork, Gilbert
Teller, Edward
Townes, Charles H.

1982

Bechtel, Howard L.
Berg, Paul
Burbidge, E. Margaret
Goldhaber, Maurice
Goldstone, Herman H.
Hewlett, William R.
Hoffmann, Rudi
Landsberg, Helmut E.
Low, George M.*
Munk, Walter H.
Pimentel, George C.
Reines, Frederick
Rockes, Wendell L.
Rossi, Bruno B.

1983

Bechtel, Howard L.
Berg, Paul
Burbidge, E. Margaret
Goldhaber, Maurice
Goldstone, Herman H.
Hewlett, William R.
Hoffmann, Rudi
Landsberg, Helmut E.
Low, George M.*
Munk, Walter H.
Pimentel, George C.
Reines, Frederick
Rockes, Wendell L.
Rossi, Bruno B.

1986

Buchanan, Solomon J.
Cohen, Stanley
Craze, Horace R.
Feshbach, Herman
Gray, Harry B.
Henderson, Donald A.
Hofstadter, Robert
Lax, Peter D.
Lee, Yuan Tseh
Lippmann, Hans Wolfgang
Lin, Ty
Marvel, Carl S.
Mountcastle, Vernon B.
Oliver, Bernard M.
Palade, George E.
Simon, Herbert A.
Stein, Joan A.
Westheimer, Frank H.
Yang, Chen Nung
Zygmund, Antoni

1987

1988

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THE WHITE HOUSE

WASHINGTON

May 19, 1989

National Medal
of Science
1989

MEMORANDUM FOR THE PRESIDENT

FROM: WILLIAM R. GRAHAM *WRG*
SUBJECT: Proposed Awardees for the
National Medal of Science, 1989

I. ACTION-FORCING EVENT: Annual award of the National Medal of Science.

II. ANALYSIS: Public Law 86-209, signed by President Eisenhower in 1959, authorizes the President to award annually a National Medal of Science to not more than 20 persons who deserve special recognition for outstanding contributions to knowledge in the physical, biological, mathematical, engineering, social, or behavioral sciences.

The award, the nation's highest honor for science, is viewed by the scientific community as a symbol of the nation's commitment to excellence in science and technology. The award recognizes the contributions of individual scientists to the strength and security of the nation and the well-being of our citizens.

After reviewing the recommendations of the President's Committee on the National Medal of Science and receiving clearance through Michael Astrue, Associate Counsel in the Office of the White House Counsel, and the White House Security Office, I propose 19 recipients of the National Medal of Science for 1989.

III. RECOMMENDATION: That you approve the nominees for the National Medal of Science.

Arnold O. Beckman
Richard B. Bernstein
Melvin Calvin
Harry G. Drickamer
Katherine Esau
Herbert E. Grier
Viktor Hamburger
Samuel Karlin
Philip Leder

Joshua Lederberg
Saunders Mac Lane
Rudolph A. Marcus
Harden M. McConnell
Eugene N. Parker
Robert Phillip Sharp
Donald C. Spencer
Roger W. Sperry
Henry M. Stommel
Harland G. Wood

IV. DECISION:

☐ approve ☐ approve as amended ☐ reject ☐ no action

Attachment:

List of proposed awardees and their citations

Nominations for the National Medal of Science

Arnold O. Beckman, Vice Chairman of the Board, SmithKline-Beckman Corporation, Irvine, California.

For his leadership in the development of analytical instrumentation, and for his deep and abiding concern for the vitality of the Nation's scientific enterprise.

Richard B. Bernstein, Professor of Chemistry, Department of Chemistry and Biochemistry, University of California, Los Angeles, California

For his development and use of the technique of molecular beams, which has played a significant role in shaping the field of modern chemical dynamics.

Melvin Calvin, University Professor of Chemistry, Department of Chemistry, University of California, Berkeley, California.

For his pioneering studies in the mechanism of photosynthesis and bioenergetics, and for the application of scientific theory toward the solution of the most fundamental problems of the age--energy, food, chemical and viral carcinogenesis, and the origin of life.

Harry G. Drickamer, Professor of Chemical Engineering, Chemistry and Physics, Department of Chemical Engineering, University of Illinois, Urbana, Illinois.

For his discovery of the "pressure tuning" of electronic energy levels as a way to obtain new and unique information on the electronic structure of solids.

Katherine Esau, Professor of Botany, Emeritus, Department of Biological Sciences, University of California, Santa Barbara, California.

For her distinguished achievements in and contributions to the advancement of the botanical sciences; for furthering the understanding of the structure and development of plant food-conducting tissue; and for elucidating the virus-plant host relationship.

Herbert E. Grier, Director, CER Corporation, La Jolla, California.

For his many pioneering scientific contributions and his leadership role in ultra-high-speed electronic stroboscopy, electro-optic innovations, national defense, and aerospace sciences.

Viktor Hamburger, Professor Emeritus, Department of Biology,
Washington University, St. Louis, Missouri.
For his steadfast work which led to the discovery and
understanding of normally occurring neuronal death, nerve
growth factor, and competitive relationships in the
vertebrate nervous system.

Samuel Karlin, Professor of Mathematics, Department of
Mathematics, Stanford University, Stanford,
California.
For his broad and remarkable researches in mathematical
analysis, probability theory and mathematical statistics,
and in the application of these ideas to mathematical
economics, mechanics, and population genetics.

Philip Leder, Professor and Chairman, Department of Genetics,
Harvard Medical School, Boston, Massachusetts.
For his innovative studies that have significantly advanced
knowledge and provided new directions for research in
molecular genetics, immunology and cancer etiology.

Joshua Lederberg, President, The Rockefeller University, New York,
New York.
For his work in bacterial genetics and immune cell single
type antibody production; for his seminal research in
artificial intelligence in biochemistry and medicine; and
for his extensive advisory role in government, industry and
international organizations which address themselves to the
societal role of science.

Saunders Mac Lane, Professor Emeritus, Department of Mathematics,
University of Chicago, Chicago, Illinois.
For revolutionizing the language and content of modern
mathematics by creating and developing the fields of
homological algebra and category theory, for outstanding
contributions to undergraduate and graduate education in
mathematics, and for incisive leadership of the mathematical
and scientific community.

Rudolph A. Marcus, Professor of Chemistry, Division of Chemistry
and Chemical Engineering, California Institute
of Technology, Pasadena, California.
For his fundamental, far-reaching, and eminently useful
developments of theories of unimolecular reactions and of
electron transfers in chemistry and biochemistry.

Harden M. McConnell, Professor of Chemistry, Department of
Chemistry, Stanford University, Stanford,
California.
For his seminal contributions in developing the power of
nuclear and electron magnetic resonance spectroscopy, the
introduction of the spin labelling technique, and for
original discoveries on the structure, properties and
functioning of cell membranes.

Eugene N. Parker, Distinguished Service Professor, Department of Physics, University of Chicago, Chicago, Illinois.

For his fundamental studies of plasmas, magnetic fields, and energetic particles on all astrophysical scales; for his development of the concept of solar and stellar winds; and for his studies on the effects of magnetic fields on the solar atmosphere.

Robert Phillip Sharp, Professor of Geology, Emeritus, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California.

For his illumination of the nature and origin of the forms and formation processes of planetary surfaces, and for leadership in multidisciplinary education to promote excellence among earth and planetary scientists.

Donald C. Spencer, Professor of Mathematics, Emeritus, Department of Mathematics, Princeton University, Princeton, New Jersey.

For his original and insightful research which has had a profound impact on twentieth-century mathematics, and for his role as an inspiring teacher to generations of American mathematicians.

Roger W. Sperry, Professor Emeritus, Division of Biology, California Institute of Technology, Pasadena, California.

For his work on neurospecificity which showed how the intricate brain networks for behavior are effected through a system of chemical coding of individual cells, which has made fundamental contributions to the understanding of human nature.

Henry M. Stommel, Senior Scientist, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts.

For his original, penetrating and fundamental contributions to the physics of ocean circulation.

Harland G. Wood, University Professor, Emeritus, Department of Biochemistry, Case Western Reserve University, Cleveland, Ohio.

For his pioneering work on the biochemistry of CO₂ fixation, for major contributions to medical education, and for leadership in biochemistry at the national and international level.



NATIONAL SCIENCE FOUNDATION

Office of the Director

As we discussed. Please call me
if you need anything.

Marjorie MacFarlane

357-9419

4/16/90

PYI
Awardees
1989

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT-BIOLOGICAL, BEHAV & SOCIAL SCIENCE

PYI NAME/INST NAME, ADDRESS

Amasino, Richard M
University of Wisconsin Madison
Department of Biochemistry
750 University Ave
Madison, WI 53706

Banks, Jeffrey S
University of Rochester
Department of Political Science

Rochester, NY 14627

Beltz, Barbara S
Wellesley College
Department of Biological Sciences

Wellesley, MA 02181

Block, Barbara A
University of Chicago
Organismal Biology & Anatomy
5801 South Ellis Avenue
Chicago, IL 60637

Brown, Jonathon D
Southern Methodist University
Department of Psychology

Dallas, TX 75275

Cooper, James B
University of California Santa Barbara
Department of Biological Sciences
C/o Contracts and Grants
Santa Barbara, CA 93106

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT-BIOLOGICAL, BEHAV & SOCIAL SCIENCE

PVI NAME/INST NAME, ADDRESS

Ettensohn, Charles A
Carnegie-Mellon University
Biological Sciences
5000 Forbes Avenue
Pittsburgh, PA 15213

Feigon, Juli
University of California Los Angeles
Chemistry & Biochemistry
405 Hilgard Avenue
Los Angeles, CA 90024

Fink, Rachel D
Mount Holyoke College
Department of Biological Sciences

South Hadley, MA 01075

Golden, Susan S
Texas A&M Research Foundation
Biology
Box 3578
College Station, TX 77843

Hansen, David E
Amherst College
Chemistry

Amherst, MA 01002

Hoskins, Sally G
CUNY City College
Biological Sciences
Convent Ave at 138th St
New York, NY 10031

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT-BIOLOGICAL,BEHAV & SOCIAL SCIENCE

PYI NAME/INST NAME, ADDRESS

Kopito, Ron R
Stanford University
Biological Science
Encina Hall
Stanford, CA 94305

Landick, Robert C
Washington University
Department of Biology
Lindell & Skinker
St Louis, MO 63130

LeMaster, David M
Northwestern University
Molecular Biophys/Biochemistry
633 Clark Street
Evanston, IL 60208

Marshall, Diane L
University of New Mexico
Department of Biology
Bandelier West, Room 223
Albuquerque, NM 87131

Montell, Craig
Johns Hopkins University School of Medicine
Department of Biological Chemistry
Homewood Divisions, Room 113
Baltimore, MD 21218

Moroney, James V
Louisiana State University Baton Rouge
Department of Botany

Baton Rouge, LA 708034101

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT-BIOLOGICAL, BEHAV & SOCIAL SCIENCE

PYI NAME/INST NAME, ADDRESS

Mykles, Donald L
Colorado State University
Department of Biology
Office Of The President
Fort Collins, CO 80523

Olsen, Gary J
University of Illinois at Urbana
Department of Biology
809 South Wright Street
Urbana, IL 61801

Romer, Christina D
University of California Berkeley
Department of Economics

Berkeley, CA 94720

Rowe, Timothy
University of Texas at Austin Main Campus
Department of Geological Sciences
8701 Mopac Boulevard
Austin, TX 78712

Shleifer, Andrei
University of Chicago
Department of Graduate School of Bus
5801 South Ellis Avenue
Chicago, IL 60637

Smith, Lloyd M
University of Wisconsin Madison
Chemistry
750 University Ave
Madison, WI 53706

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT-BIOLOGICAL, BEHAV & SOCIAL SCIENCE

PYI NAME/INST NAME, ADDRESS

Stephens, David W
University of Nebraska Lincoln
Department of Zoology
14th & R Streets
Lincoln, NE 68588

Strauss, Steven H
Oregon State University
Forest Science

Corvallis, OR 973315503

Strier, Karen Barbara
University of Wisconsin Madison
Department of Anthropology
750 University Ave
Madison, WI 53706

Wissinger, Scott A
Allegheny College
Department of Biology
North Main
Meadville, PA 16335

Zuniga, Martha C
University of Texas at Austin Main Campus
Microbiology
8701 Mopac Boulevard
Austin, TX 78712

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR COMPUTER & INFO SCIE & ENGINR

PYI NAME/INST NAME, ADDRESS

Beigel, Richard
Yale University
Computer Science
1504a Yale Station 108
New Haven, CT 06520

Canny, John F
University of California Berkeley
Computer Science Department

Berkeley, CA 94720

Colella, Phillip
University of California Berkeley

Berkeley, CA 94720

Dean, Thomas L
Brown University
Computer Science

Providence, RI 02912

DeRose, Anthony
University of Washington
Computer Science

Seattle, WA 98195

Donald, Bruce R
Cornell University - Endowed
Computer Science
123 Day Hall
Ithaca, NY 14853

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR COMPUTER & INFO SCIE & ENGINR

PYI NAME/INST NAME, ADDRESS

Elman, Howard C
University of Maryland College Park
Computer Science

College Park, MD 20742

Faloutsos, Christos
University of Maryland College Park
Department of Computer Science

College Park, MD 20742

Fuja, Thomas E.
University of Maryland College Park
Electrical Engineering

College Park, MD 20742

Hemachandra, Lane A
University of Rochester
Computer Science

Rochester, NY 14627

Hill, Mark D
University of Wisconsin Madison
Computer Sciences
750 University Ave
Madison, WI 53706

Horwitz, Susan
University of Wisconsin Madison
Computer Sciences
750 University Ave
Madison, WI 53706

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR COMPUTER & INFO SCIE & ENGINR

PVI NAME/INST NAME, ADDRESS

Huang, Ming-Deh
University of Southern California
Computer Science Department

Los Angeles, CA 90089

Malik, Jitendra
University of California Berkeley
Electrical Engineering & Computer Sci.

Berkeley, CA 94720

Meng, Teresa H.-Y.
Stanford University
Electrical Engineering
Encina Hall
Stanford, CA 94305

Pasquale, Joseph
University of California San Diego
Computer Science & Engineering
7108 Building B
San Diego, CA 92093

Pingali, Keshav
Cornell University - Endowed
Computer Science
123 Day Hall
Ithaca, NY 14853

Polychronopoulos, Constantine
University of Illinois at Urbana
Ctr. for Supercomputing Res. & Dev.
809 South Wright Street
Urbana, IL 61801

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR COMPUTER & INFO SCIE & ENGINR

PYI NAME/INST NAME, ADDRESS

Rabaey, Jan
University of California Berkeley

Berkeley, CA 94720

Sasaki, Galan H
University of Texas at Austin Main Campus
Electrical & Computer Engineering
8701 Mopac Boulevard
Austin, TX 78712

Smith, Michael J
University of Hawaii Manoa
Electrical Engineering
2540 Maile Way
Honolulu, HI 96822

Van Gelder, Allen
University of California Santa Cruz
Computer & Information Science
1156 High Street
Santa Cruz, CA 95064

Van Veen, Barry D
University of Wisconsin Madison
Electrical & Computer Engineering
750 University Ave
Madison, WI 53706

Wawrzynnek, John
University of California Berkeley
Electrical Engineering and Computer Sci
Berkeley, CA 94720

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR COMPUTER & INFO SCIE & ENGINR

PYI NAME/INST NAME, ADDRESS

Weld, Daniel S
University of Washington
Department of Computer Science

Seattle, WA 98195

Winslett, Marianne
University of Illinois at Urbana
Computer Science
809 South Wright Street
Urbana, IL 61801

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Arnold, Frances H
California Institute of Technology
Chemical Engineering
4800 Oak Grove Drive
Pasadena, CA 91125

Aubry, Nadine
CUNY City College
Mechanical Engineering
Convent Ave at 138th St
New York, NY 10031

Beckermann, Christoph
University of Iowa
Mechanical Engineering

Iowa City, IA 52242

Bentsman, Joseph
University of Illinois at Urbana
Mechanical & Industrial Engineering
809 South Wright Street
Urbana, IL 61801

Blankschtein, Daniel
Massachusetts Institute of Technology (MIT)
Chemical Engineering
77 Massachusetts Avenue
Cambridge, MA 02139

Blume, Janet A
Brown University
Engineering

Providence, RI 02912

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Burns, Scott A
University of Illinois at Urbana
General Engineering
809 South Wright Street
Urbana, IL 61801

Campbell, Stephen
University of Minnesota at Minneapolis St Paul
Electrical Engineering
1919 University Avenue
Minneapolis, MN 55455

Chiang, Hsiao-Dong
Cornell University - Endowed
Electrical Engineering
123 Day Hall
Ithaca, NY 14853

Cho, Bo H
Virginia Polytechnic Institute and State University
Electrical Engineering
339 Burruss Hall
Blacksburg, VA 24061

Clark, Nigel N
West Virginia University
Mechanical & Aerospace Engineering

Morgantown, WV 26506

Colton, Jonathan S
Georgia Tech Research Corporation - Georgia Inst of Technology
School of Mechanical Engineering
Administration Building
Atlanta, GA 30332

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Compton, Richard C
Cornell University - Endowed
Electrical Engineering
123 Day Hall
Ithaca, NY 14853

Coullard, Collette R
Purdue University
School of Industrial Engineering
West Lafayette, IN 47907

Cramer, Steven M
Rensselaer Polytechnic Institute
Department of Chemical Engineering
Troy, NY 121803590

Dordick, Jonathan S
University of Iowa
Chemical & Materials Engineering
Iowa City, IA 52242

Dunn-Rankin, Derek
University of California Irvine
Mechanical Engineering
Campus Drive
Irvine, CA 92717

Engheta, Nader
University of Pennsylvania
Electrical Engineering
34th and Spruce Street
Philadelphia, PA 19104

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

-----INST NAME, ADDRESS-----

Ertekin, R. Cengiz
University of Hawaii Manoa
Ocean Engineering
2540 Maile Way
Honolulu, HI 96822

Farhat, Charbel
University of Colorado at Boulder
Computer & Information Science Eng.
Campus Box B 19
Boulder, CO 80309

Foufoula-Georgiou, Efi
University of Minnesota at Minneapolis St Paul
Civil and Mineral Engineering
1919 University Avenue
Minneapolis, MN 55455

Gallagher, Daniel L
Virginia Polytechnic Institute and State University
Civil Engineering
339 Burruss Hall
Blacksburg, VA 24061

Garrett, James H
University of Illinois at Urbana
Civil Engineering
809 South Wright Street
Urbana, IL 61801

Gorelick, Steven M
Stanford University
Applied Earth Sciences
Encina Hall
Stanford, CA 94305

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Graves, David B
University of California Berkeley
Electronics Research Laboratory

Berkeley, CA 94720

Hammer, Daniel A
Cornell University - Endowed
Chemical Engineering
123 Day Hall
Ithaca, NY 14853

Hayes, Kim F
University of Michigan Ann Arbor
Civil Engineering

Ann Arbor, MI 481091220

Hjellming, Lisa-Noelle
University of North Carolina Charlotte
Mechanical Engineering
U N C C Station
Charlotte, NC 28223

Howard, H. Craig
Stanford University
Civil Engineering
Encina Hall
Stanford, CA 94305

Hunt, Melany L
California Institute of Technology
Mechanical Engineering
4800 Oak Grove Drive
Pasadena, CA 91125

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PVI NAME/INST NAME, ADDRESS

Hunt, William D
Georgia Tech Research Corporation - Georgia Inst of Technology
Electrical Engineering
Administration Building
Atlanta, GA 30332

Indeck, Ronald S
Washington University
Electrical Engineering
Lindell & Skinker
St Louis, MO 63130

Jayaraman, Sundaresan
Georgia Tech Research Corporation - Georgia Inst of Technology
Textile Engineering
Administration Building
Atlanta, GA 30332

Jones, Nicholas P
Johns Hopkins University
Civil Engineering
Charles & 34th Street
Baltimore, MD 21218

Jones, James D
Purdue University
Mechanical Engineering

West Lafayette, IN 47907

Kevrekidis, Yannis G
Princeton University
Chemical Engineering

Princeton, NJ 08544

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

-----NAME/INST NAME, ADDRESS-----

Keyes, David E
Yale University
Mechanical Engineering
1504a Yale Station 108
New Haven, CT 06520

Kim, Steven H
Massachusetts Institute of Technology (MIT)
Mechanical Engineering
77 Massachusetts Avenue
Cambridge, MA 02139

Konvopoulos, Kyriakos
University of Illinois at Urbana
Mechanical and Industrial Engineering
809 South Wright Street
Urbana, IL 61801

Kuga, Yasuo
University of Michigan Ann Arbor
Electrical Engineering & Computer Sci

Ann Arbor, MI 481091220

Lamb, H. Henry
North Carolina State University at Raleigh
Chemical Engineering
P.O.Box 5067
Raleigh, NC 276958208

Lau, Kam Yin
Columbia University
Electrical Engineering
Box 20 Low Memorial Library
New York, NY 10027

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Lavernia, Enrique J
University of California Irvine
Department of Mechanical Engineering
Campus Drive
Irvine, CA 92717

Lee, Kok-Meng
Georgia Tech Research Corporation - Georgia Inst of Technology
Mechanical Engineering
Administration Building
Atlanta, GA 30332

Lehto, Mark R
Purdue University
Industrial Engineering

West Lafayette, IN 47907

Lieu, Dennis K
University of California Berkeley
Mechanical Engineering

Berkeley, CA 94720

Linderman, Jennifer J
University of Michigan Ann Arbor
Chemical Engineering

Ann Arbor, MI 481091220

Matthys, Eric F
University of California Santa Barbara
Mechanical & Environmental Engineering
C/o Contracts and Grants
Santa Barbara, CA 93106

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Meng, Chia-Hsiang
Ohio State University
Mechanical Engineering
125 South Oval Mall
Columbus, OH 43210

Meshkati, Najmedin
University of Southern California
Inst of Safety & Sys Management

Los Angeles, CA 90089

Mishra, Umesh K
North Carolina State University at Raleigh
Elect Engr/Computer Science
P.O.Box 5067
Raleigh, NC 276958208

Molter, Lynne A
Swarthmore College
Engineering

Swarthmore, PA 19081

Monismith, Stephen G
Stanford University
Civil Engineering Department
Encina Hall
Stanford, CA 94305

Monteiro, Paulo Jose M
University of California Berkeley
Civil Engineering

Berkeley, CA 94720

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Ngo, Khai D. T
University of Florida
Electrical Engineering
238a Tigert Hall
Gainesville, FL 32611

Pak, Ronald Y
University of Colorado at Boulder
Civil Environmental & Architectural Eng
Campus Box B 19
Boulder, CO 80309

Panagiotopoulos, Athanassios Z
Cornell University - Endowed
Chemical Engineering
123 Day Hall
Ithaca, NY 14853

Poola, Kameshwar R
University of Illinois at Urbana
Coordinated Science Laboratory
809 South Wright Street
Urbana, IL 61801

Pratsinis, Sotiris E
University of Cincinnati
Chemical & Nuclear Engineering
Mail Location 627
Cincinnati, OH 45221

Rabbitt, Richard D
Washington University
Mechanical Engineering
Lindell & Skinker
St Louis, MO 63130

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PVI NAME/INST NAME, ADDRESS

Ramulu, Mamidala
University of Washington
Mechanical Engineering

Seattle, WA 98195

Rawlings, James B
University of Texas at Austin Main Campus
Chemical Engineering
8701 Mopac Boulevard
Austin, TX 78712

Reckhow, David A
University of Massachusetts Amherst
Civil Engineering

Amherst, MA 01003

Reed, Michael L
Carnegie-Mellon University
Electrical & Computer Engineering
5000 Forbes Avenue
Pittsburgh, PA 15213

Rodwell, Mark J
University of California Santa Barbara
Electrical & Computer Engineering
C/o Contracts and Grants
Santa Barbara, CA 93106

Rohde, John R
University of Wisconsin Milwaukee
Civil Engineering & Mechanics
P O BOX 340
Milwaukee, WI 53201

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PVI NAME/INST NAME, ADDRESS

Sansalone, Mary
Cornell University - Endowed
Structural Engineering
123 Day Hall
Ithaca, NY 14853

Schlesinger, Tuviah E
Carnegie-Mellon University
Electrical and Computer Engineering
5000 Forbes Avenue
Pittsburgh, PA 15213

Shawki, Tarek G
University of Illinois at Urbana
Theoretical & Applied Mechanics
809 South Wright Street
Urbana, IL 61801

Sigman, Karl
Columbia University
Industrial Engineering & Oper Research
Box 20 Low Memorial Library
New York, NY 10027

Sriram, Duvvuru
Massachusetts Institute of Technology (MIT)
Civil Engineering
77 Massachusetts Avenue
Cambridge, MA 02139

Stone, Howard A
Harvard University
Applied Sciences
Holyoke Center 458
Cambridge, MA 02138

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PVI NAME/INST NAME, ADDRESS

Synolakis, Costas E
University of Southern California
Civil Engineering

Los Angeles, CA 90089

Thomas, Brian G
University of Illinois at Urbana
Mechanical & Industrial Engineering
809 South Wright Street
Urbana, IL 61801

Thurston, Deborah L
University of Illinois at Urbana
General Engineering
809 South Wright Street
Urbana, IL 61801

Tirupati, Devanath
University of Texas at Austin Main Campus
Management
8701 Mopac Boulevard
Austin, TX 78712

Tranquillo, Robert T
University of Minnesota at Minneapolis St Paul
Chemical Engineering & Materials Science
1919 University Avenue
Minneapolis, MN 55455

Vanderlick, T. Kyle
University of Pennsylvania
Chemical Engineering
34th and Spruce Street
Philadelphia, PA 19104

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR ENGINEERING

PYI NAME/INST NAME, ADDRESS

Vohs, John M
University of Pennsylvania
Department of Chemical Engineering
34th and Spruce Street
Philadelphia, PA 19104

Wiggins, Stephen R
California Institute of Technology
Applied Mechanics
4800 Oak Grove Drive
Pasadena, CA 91125

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECTORATE FOR GEOSCIENCES

PYI NAME/INST NAME, ADDRESS

Anovitz, Lawrence M
University of Arizona
Department of Geosciences
601 Administration Building
Tucson, AZ 85721

Chamberlain, C. Page
Dartmouth College
Earth Sciences
106 Parkhurst Hall
Hanover, NH 03755

Deming, Jody W
University of Washington
School of Oceanography, WB-10

Seattle, WA 98195

Gurnis, Michael C
University of Michigan Ann Arbor
Geophysics

Ann Arbor, MI 481091220

McLennan, Scott M
SUNY at Stony Brook
Department of Earth & Space Sciences

Stony Brook, NY 117940001

5

=====

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PVI NAME/INST NAME, ADDRESS

Anderson, Greg W
University of Minnesota at Minneapolis St Paul
School of Mathematics
1919 University Avenue
Minneapolis, MN 55455

Arovas, Daniel P.
University of California San Diego
Physics Department
7108 Building B
San Diego, CA 92093

Atwater, Harry A
California Institute of Technology
Applied Physics
4800 Oak Grove Drive
Pasadena, CA 91125

Banuelos, Rodrigo
Purdue University
Department of Mathematics

West Lafayette, IN 47907

Bates, Frank S.
University of Minnesota at Minneapolis St Paul
Chemical Engr and Materials Science
1919 University Avenue
Minneapolis, MN 55455

Bent, Brian E
Columbia University
Department of Chemistry
Box 20 Low Memorial Library
New York, NY 10027

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PYI NAME/INST NAME, ADDRESS

Blake, Geoffrey A
California Institute of Technology
Geological and Planetary Sciences
4800 Oak Grove Drive
Pasadena, CA 91125

Bonahon, Francis
University of Southern California
Mathematics

Los Angeles, CA 90089

Collins, Robert W
Penn State Univ Central Office
Materials Research Laboratory
201 Old Main
University Park, PA 16802

Diamond, Patrick H
University of California San Diego
Physics
7108 Building B
San Diego, CA 92093

Doering, Charles R
Clarkson University
Physics

Potsdam, NY 13676

Elser, Veit
Cornell University - Endowed
Physics Department
123 Day Hall
Ithaca, NY 14853

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PYI NAME/INST NAME, ADDRESS

Filippenko, Alexei V
University of California Berkeley
Department of Astronomy

Berkeley, CA 94720

Gladney, Larry
University of Pennsylvania
Physics
34th and Spruce Street
Philadelphia, PA 19104

Goldman, Vladimir J.
SUNY at Stony Brook
Physics Department

Stony Brook, NY 117940001

Haegel, Nancy M
University of California Los Angeles
Material Science and Engineering
405 Hilgard Avenue
Los Angeles, CA 90024

Hanson, Robert M
St Olaf College
Department of Chemistry

Northfield, MN 55057

Hrushovski, Ehud
Massachusetts Institute of Technology (MIT)
Department of Mathematics
77 Massachusetts Avenue
Cambridge, MA 02139

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PYI NAME/INST NAME, ADDRESS

Hulet, Randall G
William Marsh Rice University
Physics
P O BOX 1892
Houston, TX 77251

Humanic, Thomas J
University of Pittsburgh
Physics & Astronomy
4200 Fifth Avenue
Pittsburgh, PA 15260

Huston, Joey W
Michigan State University
Physics and Astronomy

East Lansing, MI 48824

Kanatidis, Mercouri G
Michigan State University
Department of Chemistry

East Lansing, MI 48824

Kardar, Mehran
Massachusetts Institute of Technology (MIT)
Department of Physics
77 Massachusetts Avenue
Cambridge, MA 02139

Kuhr, Werner G
University of California Riverside
Department of Chemistry
900 University Avenue
Riverside, CA 92521

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PYI NAME/INST NAME, ADDRESS

Kuki, Atsuo
Cornell University - Endowed
Department of Chemistry
123 Day Hall
Ithaca, NY 14853

Lewandowski, John J
Case Western Reserve University
Materials Science & Engineering
University Circle
Cleveland, OH 44106

Lin, Fang-Hua
University of Chicago
Department of Mathematics
5801 South Ellis Avenue
Chicago, IL 60637

Manohar, Aneesh V
University of California San Diego
Physics
7108 Building B
San Diego, CA 92093

Mathieu, Robert D
University of Wisconsin Madison
Astronomy Department
750 University Ave
Madison, WI 53706

Matyjaszewski, Krzysztof
Carnegie-Mellon University
Chemistry
5000 Forbes Avenue
Pittsburgh, PA 15213

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PVI NAME/INST NAME, ADDRESS

McMahon, Robert J
University of Wisconsin Madison
Department of Chemistry
750 University Ave
Madison, WI 53706

Milner, Richard G
Massachusetts Institute of Technology (MIT)
Physics
77 Massachusetts Avenue
Cambridge, MA 02139

Myers, Andrew G
California Institute of Technology
Department of Chemistry
4800 Oak Grove Drive
Pasadena, CA 91125

Myers, Anne B
University of Rochester
Department of Chemistry

Rochester, NY 14627

Narayan, Ramesh
University of Arizona
Department of Astronomy
601 Administration Building
Tucson, AZ 85721

Okumura, Mitchio
California Institute of Technology
Department of Chemistry
4800 Oak Grove Drive
Pasadena, CA 91125

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PYI NAME/INST NAME, ADDRESS

Polonyi, Janos
Massachusetts Institute of Technology (MIT)
Physics
77 Massachusetts Avenue
Cambridge, MA 02139

Richmond, Thomas G
University of Utah
Department of Chemistry
302 Park Building
Salt Lake City, UT 84112

Romano, Joseph P
Stanford University
Mathematics
Encina Hall
Stanford, CA 94305

Saper, Leslie D
Duke University
Mathematics

Durham, NC 27706

Schauer, Cynthia K
University of North Carolina Chapel Hill
Department of Chemistry
300 Bynum Hall 008a
Chapel Hill, NC 27514

Shaka, Athan J
University of California Irvine
Department of Chemistry
Campus Drive
Irvine, CA 92717

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PVI NAME/INST NAME, ADDRESS

Shapiro, Marjorie
Harvard University
Physics
Holyoke Center 458
Cambridge, MA 02138

Sibert, Edwin I
University of Wisconsin Madison
Department of Chemistry
750 University Ave
Madison, WI 53706

Soriaga, Manuel P
Texas A&M University Main Campus
Department of Chemistry

College Station, TX 77843

Stanton, Christopher J
University of Florida
Department of Physics
238a Tigert Hall
Gainesville, FL 32611

Stark, Philip B
University of California Berkeley
Mathematics

Berkeley, CA 94720

Stern, Mark A
Duke University
Department of Mathematics

Durham, NC 27706

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PYI NAME/INST NAME, ADDRESS

Thorne, Robert E
Cornell University - Endowed
Lab of Atomic & Solid State Physics
123 Day Hall
Ithaca, NY 14853

Tonry, John L
Massachusetts Institute of Technology (MIT)
Physics Department
77 Massachusetts Avenue
Cambridge, MA 02139

Vafa, Cumrun
Harvard University
Physics
Holyoke Center 458
Cambridge, MA 02138

Voorhees, Peter W
Northwestern University
Dept/Materials Science & Engineering
633 Clark Street
Evanston, IL 60208

Watson, Dan M
University of Rochester
Physics and Astronomy

Rochester, NY 14627

Wise, Frank W
Cornell University - Endowed
Dept/Applied and Engineering Physics
123 Day Hall
Ithaca, NY 14853

PRESIDENTIAL YOUNG INVESTIGATORS
CLASS OF 89

DIRECT FOR MATHEMATICAL & PHYSICAL SCIEN

PVI NAME/INST NAME, ADDRESS

Wodtke, Alec M
University of California Santa Barbara
Department of Chemistry
C/o Contracts and Grants
Santa Barbara, CA 93106

Young, Gerald W
University of Akron
Mathematical Sciences
302 East Buchtel Avenue
Akron, OH 44325

Zimmt, Matthew B
Brown University
Department of Chemistry

Providence, RI 02912

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01. List	Presidential Young Investigators Awardees for 1989, Directorate for Biological, Behavioral and Social Sciences [personal information redacted] (2 pp.)	1989	(b)(6)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Administration Files
WHORM Cat.:
File Location: Administrative: Awards [4 of 4] [1989-90]

Date Closed:	3/4/2010	OA/ID Number:	62024-008
FOIA/SYS Case #:	2005-0336-F	Appeal Case #:	
Re-review Case #:		Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
02. List	Presidential Young Investigators Awardees for 1989, Directorate for Computer and Information Science and Engineering [personal information redacted] (2 pp.)	1989	(b)(6)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Administration Files
WHORM Cat.:
File Location: Administrative: Awards [4 of 4] [1989-90]

Date Closed:	3/4/2010	OA/ID Number:	62024-008
FOIA/SYS Case #:	2005-0336-F	Appeal Case #:	
Re-review Case #:		Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
P-3 Release would violate a Federal statute [(a)(3) of the PRA]
P-4 Release would disclose trade secrets or confidential commercial or
financial information [(a)(4) of the PRA]
P-5 Release would disclose confidential advice between the President
and his advisors, or between such advisors [(a)(5) of the PRA]
P-6 Release would constitute a clearly unwarranted invasion of
personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of
gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
(b)(2) Release would disclose internal personnel rules and practices of an
agency [(b)(2) of the FOIA]
(b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
(b)(4) Release would disclose trade secrets or confidential or financial
information [(b)(4) of the FOIA]
(b)(6) Release would constitute a clearly unwarranted invasion of
personal privacy [(b)(6) of the FOIA]
(b)(7) Release would disclose information compiled for law enforcement
purposes [(b)(7) of the FOIA]
(b)(8) Release would disclose information concerning the regulation of
financial institutions [(b)(8) of the FOIA]
(b)(9) Release would disclose geological or geophysical information

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03. List	Presidential Young Investigators Awardees for 1989, Directorate for Engineering [personal information redacted] (4 pp.)	1989	(b)(6)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Administration Files
WHORM Cat.:
File Location: Administrative: Awards [4 of 4] [1989-90]

Date Closed:	3/4/2010	OA/ID Number:	62024-008
FOIA/SYS Case #:	2005-0336-F	Appeal Case #:	
Re-review Case #:		Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
 P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
 P-3 Release would violate a Federal statute [(a)(3) of the PRA]
 P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
 P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
 P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
 (b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
 (b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
 (b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
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 (b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
 (b)(9) Release would disclose geological or geophysical information

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
04. List	Presidential Young Investigators Awardees for 1989, Directorate for Geosciences [personal information redacted] (1 pp.)	1989	(b)(6)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Administration Files
WHORM Cat.:
File Location: Administrative: Awards [4 of 4] [1989-90]

Date Closed:	3/4/2010	OA/ID Number:	62024-008
FOIA/SYS Case #:	2005-0336-F	Appeal Case #:	
Re-review Case #:		Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
 P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
 P-3 Release would violate a Federal statute [(a)(3) of the PRA]
 P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
 P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
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C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
 (b)(2) Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
 (b)(3) Release would violate a Federal statute [(b)(3) of the FOIA]
 (b)(4) Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
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 (b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
 (b)(9) Release would disclose geological or geophysical information

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
05. List	Presidential Young Investigators Awardees for 1989, Directorate for Mathematical and Physical Sciences [personal information redacted] (3 pp.)	1989	(b)(6)	

Collection:

Record Group: Bush Presidential Records
Office: Science and Technology Policy, Office of (OSTP)
Series: Bromley, D. Allan, Files
Subseries: Administration Files
WHORM Cat.:
File Location: Administrative: Awards [4 of 4] [1989-90]

Date Closed:	3/4/2010	OA/ID Number:	62024-008
FOIA/SYS Case #:	2005-0336-F	Appeal Case #:	
Re-review Case #:		Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
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Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
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