

2002 ANNUAL REPORT

ALFRED P. SLOAN FOUNDATION



CONTENTS

2002 Grants and Activities

<i>Science and Technology</i>	5
Fellowships	5
Sloan Research Fellowships	5
Direct Support of Research	9
Neuroscience	9
Computational Molecular Biology	9
Limits to Knowledge	11
Marine Science	12
History of Science and Technology	18
<i>Standard of Living and Economic Performance</i>	19
Industries	19
Industry Centers	19
Industry Studies	23
Business Organizations	24
Economics Research	25
Nonprofit Sectors	27
Universities	27
Assessment of Government Performance	27
Workplace, Workforce and Working Families	30
The Workplace	30
The Workforce	33
Public Understanding of the Changing Workplace and Workforce	35
<i>Education and Careers in Science and Technology</i>	36
Scientific and Technical Careers	36
Anytime, Anyplace Learning	36
Professional Master's Degrees	42
Information about Careers	45
Retention	45
Science and Engineering Workforce	46
Education for Minorities and Women	50
Minorities	50
Women	52
Public Understanding of Science and Technology	54
Books	54
Sloan Technology Book Series	55
Radio	57

Public Television	57
Commercial Television and Films	59
Theater	61
<i>Selected National Issues and The Civic Program</i>	62
Selected National Issues	62
September 11	62
Bioterrorism	63
Federal Statistics	67
The Civic Program	69
<i>Additional Grants</i>	71
2002 Financial Report	
Financial Review	73
Auditors' Report	74
Balance Sheets	75
Statements of Activities	76
Statements of Cash Flows	77
Notes to Financial Statements	78
Schedules of Management and Investment Expenses	81

2002 GRANTS AND ACTIVITIES



SCIENCE AND TECHNOLOGY

FELLOWSHIPS

Sloan Research Fellowships

\$4,160,000

The Sloan Research Fellowship Program aims to stimulate fundamental research by young scholars with outstanding promise to contribute significantly to the advancement of knowledge. Over the past 46 years, fellowships have been awarded to over 3,700 scientists and have accounted for expenditures of about \$96 million. Twenty-eight Fellows have received Nobel prizes, thirteen have been awarded the prestigious Fields Medal in mathematics, and hundreds have received other prestigious prizes, awards, and honors in recognition of their major research accomplishments. The program is described in detail in the [Sloan Research Fellowships Brochure](#).

Department heads or other senior scientists familiar with their work nominate candidates for Sloan Research Fellowships. Within each discipline, a committee of three distinguished scientists reviews all nomination documents and recommends the final selections. During 2002, the Foundation awarded Research Fellowships of \$40,000 each, over a two-year term, to 104 scholars at 53 institutions in six fields: chemistry (23), computer science (14), economics (8), mathematics (20), neuroscience (16), and physics (23). Each fellowship is administered by the Fellow's institution and is designed to allow the greatest possible freedom and flexibility in its use. The following committees reviewed nominations for the 2002 fellowships:

Chemistry: Jon C. Clardy, Cornell University; Stephen J. Lippard, Massachusetts Institute of Technology; John C. Tully, Yale University.

Computer Science: Randy Katz, University of California, Berkeley; Barbara Liskov, Massachusetts Institute of Technology; Jeffrey Ullman, Stanford University.

Economics: John Geanakoplos, Yale University; Lars P. Hansen, University of Chicago; Paul Romer, Stanford University.

Mathematics: George C. Papanicolaou, Stanford University; Peter Sarnak, Princeton University; Ronald Stern, University of California, Irvine.

Neuroscience: Allison Doupe, University of California, San Francisco; John H. Maunsell, Baylor College of Medicine; S. Lawrence Zipursky, University of California, Los Angeles.

Physics: Laura H. Green, University of Illinois at Urbana Champaign; Joseph Polchinski, University of California, Santa Barbara; Scott Tremaine, Princeton University.

Amherst College

Physics: Jonathan R. Friedman

Arizona, University of

Physics: Daniel J. Eisenstein
Ubirajara van Kolck

Boston University

Economics: Maristella Botticini

British Columbia, University of

Mathematics: Vinayak Vatsal
Physics: Marcel Franz

California Institute of Technology

Chemistry: David W. C. MacMillan

California, University of, Berkeley

Mathematics: Thomas Scanlon
Physics: Eliot Quataert

California, University of, Davis

Mathematics: Alexander Soshnikov
Neuroscience: Marie E. Burns

California, University of, Irvine

Chemistry: Vladimir Mandelshtam
Mathematics: Hongkai Zhao

California, University of, Los Angeles

Neuroscience: Yi Sun
Stephanie Ann White

California, University of, San Diego

Mathematics: Van H. Vu
Neuroscience: Daniel E. Feldman

**California, University of, Santa
Barbara**

Chemistry: Nicola Hill
Mathematics: Stephen Bigelow

Chicago, University of

Mathematics: Leonid V. Ryzhik

Colorado State University

Chemistry: Eugene Y. Chen

Colorado, University of

Physics: Shijie Zhong

Columbia University

Chemistry: Dalibor Sames
Neuroscience: C. Daniel Salzman
Peter Scheiffele

Cornell University

Computer Science: Lillian Lee
Andrew Myers

Dartmouth College

Computer Science: Henry Farid

Florida, University of

Chemistry: Michael J. Scott

Georgetown University

Physics: David A. Egolf

Georgia Institute of Technology

Chemistry: L. Andrew Lyon
Z. John Zhang

Harvard University

Chemistry: David R. Liu
Hongkun Park
Computer Science: Avrom J. Pfeffer
Salil P. Vadhan
Physics: Eugene Demler
Andrew Foland
Shiraz Minwalla
Masahiro Morii

Illinois, University of, at Chicago

Mathematics: Daniel Bernstein
Physics: Mikhail Stephanov

Illinois, University of, at Urbana

Neuroscience: Tzumin Lee
Physics: Alexey Bezryadin

Iowa State University

Chemistry: Mei Hong

Johns Hopkins University

Chemistry: David P. Goldberg
Neuroscience: Dwight E. Bergeles

Maryland, University of

Neuroscience: Todd W. Troyer

Massachusetts Institute of Technology

Chemistry: Peter H. Seeberger
Andrei Tomakoff
Computer Science: Hari Balakrishnan
Tommi Jaakkola
Santosh S. Vempala

Economics: Esther C. Duflo
Mathematics: Andras Vasy
Neuroscience: James DiCarlo
Physics: Todadri Senthil

Michigan State University

Chemistry: Piotr Piecuch

Michigan, University of

Computer Science: Todd Austin
Mathematics: Peter D. Miller

Minnesota, University of

Mathematics: Markus Keel

New York University

Computer Science: David Mazieres
Economics: Sydney Ludvigson
Mathematics: Eric Vanden-Eijnden

North Carolina, University of

Chemistry: James P. Morken

Northwestern University

Physics: Mayda Velasco

Pennsylvania, University of

Chemistry: Marisa C. Kozlowski
Economics: Nicola Persico
Mathematics: Burkhard Wilking

Princeton University

Chemistry: Suzanne Walker
Computer Science: Amit Sahai
Economics: Robert Shimer

Purdue University

Chemistry: Jonathan J. Wilker
Mathematics: Brooke E. Shipley

Rice University

Physics: Thomas C. Killian

Rockefeller University

Neuroscience: Bingwei Lu

Rutgers University

Chemistry: Jeehiun Katherine Lee

Salk Institute for Biological Studies

Neuroscience: John Huntington
Reynolds

Southern California, University of

Mathematics: Ko Honda
Sergey Lototsky

Stanford University

Economics: Manju Puri
Mathematics: Ravi Damodar Vakil
Neuroscience: Miriam B. Goodman
Krishna Shenoy
Physics: Hari Manoharan

Texas A & M University

Chemistry: Paul Cremer

**Texas Southwestern Medical Center,
University of**
Chemistry: Patrick G. Harran

Texas, University of, at Austin
Computer Science: Douglas C. Burger
Stephen W. Keckler
Physics: Zhen Yao

Toronto, University of
Physics: Amanda Wensley Peet

Virginia, University of
Physics: Charles A. Sackett

Washington, University of
Computer Science: Steven M. Seitz
Mathematics: Sándor Kovács
Yu Yuan
Neuroscience: Bharathi Jagadeesh
Physics: Julianne Dalcanton

Waterloo, University of
Mathematics: James F. Geelen

Wisconsin-Madison, University of
Chemistry: Shannon S. Stahl
Economics: Philip A. Haile
Physics: Amy J. Barger

Wisconsin-Milwaukee, University of
Physics: Patrick R. Brady

Yale University
Economics: George J. Hall

DIRECT SUPPORT OF RESEARCH

NEUROSCIENCE, OFFICER GRANTS

Association of American Medical Colleges **\$7,000**
Washington, DC 20037

For dissemination of completed papers on gene patents. Project Director: David Korn, M.D., Senior Vice President for Biomedical and Health Sciences Research.

Cold Spring Harbor Laboratory **\$12,650**
Cold Spring Harbor, NY 11724

To provide partial support for a 2002 workshop on Neural Information and Coding. Project Director: Professor Zachary F. Mainen, Watson School of Biological Sciences.

Gordon Research Conferences **\$2,010**
West Kingston, RI 02892

Partial support for Sensory Coding and the Natural Environment: Probabilistic Models of Perception. Project Director: Pamela Reinagel, Department of Neurobiology, Harvard Medical School.

Salk Institute for Biological Studies **\$19,000**
San Diego, CA 92186

For support of a workshop, "From Microscopic to Macroscopic Brain Dynamics." Project Director: Professor Terrence J. Sejnowski, Computational Neurobiology Laboratory.

COMPUTATIONAL MOLECULAR BIOLOGY, TRUSTEE GRANTS

Cold Spring Harbor Laboratory **\$75,000**
Cold Spring Harbor, NY 11724

This grant supports the convening of an international conference to explore the feasibility of a DNA-based species identification system. The CO1 gene has recently been proposed as a basis for an inexpensive and reliable universal taxonomic "barcoding" system for animals. The conference will consider whether some such barcoding program can withstand critical evaluation and can be justified in cost and effort, as well as how well molecular approaches conform with current methods for defining species, how barcoding data can be integrated with other taxonomic data, and what practical issues arise if barcoding is carried out on a large scale. Project Director: Jan Witkowski, Executive Director, Banbury Center.

Northeastern University
Boston, MA 02115

\$43,040

This grant, made from an appropriation approved by the Board of Trustees, supplies seed funding for a new Northeast Bioinformatics Consortium. Project Director: H. William Detrich, III, Professor of Biochemistry and Marine Biology, Department of Biology.

Sloan/DOE Postdoctoral Awards in Computational Molecular Biology

This fellowship program is a joint venture of the Sloan Foundation and the U.S. Department of Energy. Fellowships provide an in-depth experience in a molecular biology laboratory for recent Ph.D.s, mostly from computationally intensive fields such as mathematics, physics, computer science, engineering, and chemistry. There is exceptional scientific potential in applying modern computational techniques to problems related to data arising from the study of human and other genomes. The program aims to increase the number of scientists possessing the cross-disciplinary skills needed to study these problems. Each two-year fellowship award carries a total budget of \$120,000, which includes stipends, benefits, research expenses, and institutional overhead.

A careful review of applications in the seventh year of the program resulted in the following nine awards in 2002. (An asterisk follows the name of each of the three awardees supported from Department of Energy funds.) The listing below includes the following: name of awardee; Ph.D. field of awardee; Ph.D. institution; postdoctoral sponsoring institution; sponsoring senior scientist(s); proposed research plan.

Crooks, Gavin; Theoretical Chemistry; University of California at Berkeley; University of California at Berkeley; Stephen Brenner; "Improving the Prediction of Protein Structure From Sequence Using Additional Experimental/Statistical Constraints."

Kamei, Daniel; Chemical Engineering; Massachusetts Institute of Technology; Massachusetts Institute of Technology; Douglas Lauffenburger and Bruce Tidor; "Design of Fc-Conjugated Proteins Using Computational Structural Biology."

Nguyen, Dat*; University of California at Davis; Harvard University School of Medicine; George Church; "Computational Modeling for Detection of cis-Regulatory Biological Modules."

Pasquinelli, Melissa; Chemistry; Carnegie Mellon University; Duke University; David Beratan; "Development of Computational Strategies for the Prediction of Electron Transfer Rates in Dynamically-Modulated Protein Complexes."

Raphael, Benjamin; Mathematics; University of California at San Diego; University of California at San Diego; Pavel Pevzner and Steven Wasserman; "Genome-Scale Identification of Regulatory Motifs and Networks."

Rifkin, Ryan; Operations Research; Massachusetts Institute of Technology; Massachusetts Institute of Technology; Phillip Sharp; “Alternative Splicing in the Nervous System.”

Vogt, Marc; Chemistry; Georgia Institute of Technology; University of Massachusetts; Lila Gierasch and Arnold Haggler; “The Free Energy Landscape of a B-Clamshell Protein.”

Voigt, Christopher*; Biochemistry and Molecular Biophysics; California Institute of Technology; University of California at Berkeley; Adam Arkin; “Computationally Focusing the Directed Evolution of Biochemical Networks.”

Williams, Tiffani*; Computer Science; University of Central Florida; University of New Mexico; Bernard Moret; “High-Performance Computational Phylogenetics.”

COMPUTATIONAL MOLECULAR BIOLOGY, OFFICER GRANTS

American Physical Society **\$25,000**
College Park, MD 20740

Partial support for a conference on opportunities in biology for physicists. Project Director: Judy Franz, Executive Officer.

Marine Biological Laboratory **\$45,000**
Woods Hole, MA 02543

Assistance for admitted students to attend a new short course, “Advances in Genome Technology and Bioinformatics.” Project Director: Mitchell L. Sogin, Director.

Stanford University **\$13,000**
Stanford, CA 94309

Support for a meeting on algorithms and software for genomic-scale sequencing. Project Director: Professor Serafim Batzoglou, Department of Computer Science.

LIMITS TO KNOWLEDGE, OFFICER GRANT

University of Arkansas **\$39,297**
Fayetteville, AR 72701

To explore the known, unknown, and unknowable about the diets of early humans, and how such knowledge bears on modern notions of “natural” diets. Project Director: Professor Peter S. Ungar, Department of Anthropology.

Consortium for Oceanographic Research and Education **\$1,000,000**
Washington, DC 20036

The Consortium has been supported with past grants to establish and operate the international secretariat for the Census for Marine Life (CoML). A full-time senior scientist has been recruited for the staff, funds have been obtained from other sources to match Sloan funding for the secretariat, meetings have been held, and reports issued. The research and educational dimensions of the CoML are moving ahead. This grant supplies two additional years of support for the international secretariat. Leadership for various CoML component projects has been distributed around the world. For example, Japan, Canada, England, and Norway, as well as the U.S., host headquarters of field programs, and Denmark hosts the leadership of the CoML's historical component. The international secretariat must meet the challenge of fostering this international network while providing needed cohesion and identity. Foci for the international secretariat for the next two years include insuring that adequate funds flow to the projects, reviewing and maintaining the schedule of activities, and producing visible successes that build momentum and spirit in the entire program. Project Director: Penelope Dalton, Vice President.

Dalhousie University **\$500,000**
Halifax, Nova Scotia
Canada B3H 4R2

This grant supports the formation of a network of researchers who will add a modeling dimension to the Census of Marine Life (CoML). Modeling will aid prediction of the future of marine animal populations. It can also improve the design and cost-effectiveness of data collection, the formulation of testable hypotheses, and the interpretation of historical data. The network includes members in Japan, Iceland, United States, and Canada. Modeling centers are planned at Dalhousie University, University of Iceland, and Tokyo University. Five topics will be explored: statistical design of CoML field projects; interfaces between data structures and modeling activities; analytic activities addressing common CoML themes, such as inferring species distributions based on sparse data; meta-analysis to combine diverse data sets reliably into larger pictures; and predictions of extinction or changes in dominant species in certain seas. Project Director: Professor Ransom A. Myers, Killam Chair of Ocean Studies, Department of Biology and Marine Biology.

Duke University **\$1,842,000**
Durham, NC 27708

The National Ocean Partnership Program (NOPP) is a cooperation mandated by Congress among the various government agencies concerned with the oceans. The legislation creating NOPP welcomed the involvement of private sector partners to work on national objectives and programs that cut across agency mandates. Participation in NOPP was supported in 2000 by a number of Foundation grants for projects in support of the Ocean

Biogeographical Information System (OBIS) that serves the Census of Marine Life. This project, from a consortium led by Duke University, was put forth in response to a second request for proposals made in the fall of 2001. The project aims to extend OBIS to marine mammals, reptiles (e.g., turtles), and seabirds, three species groups of intense public interest as well as biological importance, for which huge amounts of data are available. The Duke consortium includes the University of California at San Diego, University of Washington, and the College of the Atlantic in Maine, as well as institutions in Europe. The National Marine Fisheries Service has endorsed the research plan and is considering assuming responsibility for maintaining the OBIS system for the three species groups at the end of the third year of the project. Project Director: Professor Andrew J. Read, Nicholas School of the Environment and Earth Sciences.

University of Alaska
Fairbanks, AK 99775

\$310,000

Shallow waters along the world's coastlines, where complex ecosystems have evolved, have been widely studied. However, because they are so diverse and so subject to influences from pollution to global warming and changing sea-levels, baseline studies are critically needed over most of the world's coastal zones. This project involves work of the University of Alaska with a network of experts headquartered at the University of Kyoto, to implement the initial phases of the Natural Geography of Inshore Areas (NaGISA) as part of the Census of Marine Life. The ultimate goal is a series of well-distributed standard line surveys from shore to 20 meters depth around the world that can be repeated annually. NaGISA is the first systematically designed global survey of near-shore diversity. Japan has taken the lead in developing this component of the Census and has committed to ten years of core funding. An international steering committee guides the project and leads the effort to engage many nations in NaGISA. This grant will be used for several cross-cutting needs for which national funds are not available, for example, to establish education and outreach programs, to convene workshops to extend NaGISA to more locations, and to support travel for experts to ensure quality control at NaGISA sites. Project Director: Professor Brenda Konar, School of Fisheries and Ocean Sciences.

University of California, San Diego
La Jolla, CA 92093

\$250,000

This grant supports a series of international conferences on the known, unknown, and unknowable in marine diversity as a way to organize reporting in the Census of Marine Life (CoML) and to stimulate and harmonize conversations among researchers involved in its various components and between these researchers and the general public. The plan is to organize one conference about each of the grand questions of the Census: What did live in the oceans? What does live in the oceans? What will live in the oceans? Each meeting will explore what is known, how it is known, and how well it is known; what is unknown but knowable, and how and with what effort and over what length of time it might become known; and what might be fundamentally unknowable at various spatial scales and levels of detail. Researchers from CoML projects will participate. Insights

gained may well influence future surveys and research designs of the CoML and lead to more effective attacks on the unknown. Each conference will produce a benchmark report about the state of knowledge at the outset of the Census that should be of broad public interest. Project Director: Professor Nancy Knowlton, Center for Marine Biodiversity and Conservation, Scripps Institute of Oceanography.

University of New Hampshire
Durham, NH 03824

\$897,000

The historical component of the Census of Marine Life, called the History of Marine Animal Populations (HMAP), has three goals: to develop a picture of the oceans before fishing; to build and make available data sets about marine animal populations covering long periods of time since fishing became important; and to develop understanding of the relative importance for marine animal populations of changes in human activity and in environmental factors such as ocean temperature. This grant follows a 2000 major grant to the University in support of HMAP. Centers for the History of Marine Animal Populations have been established not only at the University of New Hampshire, but also at the University of Hull in the United Kingdom and the University of Southern Denmark. Leaders of these three centers, together with a network of over 50 historians and scientists in 18 countries, have undertaken seven regional case studies and published a book defining challenges and reporting early results. They have created accessible HMAP websites and databases integrated into the Census's Ocean Biogeographical Information System. Summer programs on HMAP held in 2001 and 2002 attracted 58 graduate students and post-docs. The network has also raised funds more than equal to the Foundation's initial \$1.2 million grant. The current grant continues support for the HMAP team to advance the program toward its goal of answering the historical question of what lived in the oceans in time for the planned 2010 report that will culminate the Census. HMAP will complete its current case studies, initiate 4-6 more, and complete planning so that a globally representative set of such case studies can be completed by 2010. Funds will continue to be raised and additional centers for the history of marine animal populations will be created. Project Director: Andrew Rosenberg, Dean, College of Life Sciences and Agriculture.

University of Rhode Island
Narragansett, RI 02882

\$480,000

During the first two years of the Census of Marine Life (CoML), Foundation support was directed at assessing the feasibility and value of the project. For the past three years, funds have been aimed at making the project happen. Outstanding scientists have become involved in research on various Census projects and worldwide commitments have reached about \$30 million, including more than \$11 million from the Sloan Foundation. As the Center now enters its phase of most rapid growth, necessitating continued large financial and political commitments, public awareness of, and confidence in, the Census must grow. This grant will support a set of efforts to enhance the public outreach and education dimensions of the Census. Ongoing and planned work of the CoML will be brought to the attention of the international news media. Scientists associated with

individual Census projects will be furnished with resources and tools for presenting the results of their work more effectively and with a consistent image. The foundation will be laid for an international education program for timely sharing of the discoveries of the CoML, beginning with an integrated Census web portal and a prototype for an educational website. A highly visible event planned for October 2003 will officially and publicly launch the Census, showcasing early results as well as plans for the remainder of the decade. The effect of these outreach and education efforts should be greatly enhanced visibility of the Census, which in turn should help national and regional committees and the various field project leaders around the world to obtain the funds needed to complete the Census. Project Director: Sara C. Hicks, Director, Office of Marine Programs, Graduate School of Oceanography.

University of Southampton
Southampton, SO 14 3ZH
England

\$375,000

Since 1977, about two dozen “vent” communities have been discovered on the sea floor where heat and chemicals spewing from the Earth’s interior create a chimney-like region abounding in life and completely decoupled from the Sun. More recently, dispersed and cooler “seep” communities where life flourishes have been discovered on the ocean floor. This grant supports the study of these “chemosynthetic ecosystems” (ChESS) as part of the Census of Marine Life. The goal of the ChESS program is to construct the biogeography of vent and seep communities, to go from the few actual observations made of such communities to knowledge of the abundance and distribution of these communities and the diversity among them. The ChESS team’s management committee includes members from seven countries. High-tech submersible vehicles, both manned and unmanned, are essential but extremely expensive tools for such a project. Rather than build more subs, the aim will be to make sure that the visits to vents and seeps likely to take place during the coming decade, whether by United Kingdom, French, Japanese, U.S. or other vehicles, will sample the sea floor in such a way as to yield an understanding of the macro picture. This includes promoting exploration in more remote parts of the oceans, such as the Arctic floor, that might otherwise not be visited. The network of researchers will also pull together all existing information on life at vents and seeps into a shared archive. Sampling protocols will be standardized and discussion fostered on theories about circulation of deep water that might help to bridge the gap between sparse observations and a global biogeography. Of crucial importance to the success of this 8-year program is gaining the commitment to coordinate and integrate their efforts from those groups around the world who observe and study vent and seep communities. Project Director: Paul A. Taylor, Professor of Deep-Sea Biology, Southampton Oceanography Centre.

University of Southern Maine
Portland, ME 04101

\$1,645,000

The first of the field projects of the Census of Marine Life, initiated in 1999, was for the Gulf of Maine. During 2002, the strategy for the project was revamped. A comprehensive

scientific plan was prepared and accepted by the regional community. The Gulf of Maine portion of the Census's Ocean Biogeographical Information System was launched. The first major non-Sloan funding for the project was obtained. The current grant supports the implementation of the field project during the next three years with the aim of getting a much better picture of everything that lives in the water column from sediments to surface in a region where fisheries matter greatly. Principal project outputs will include an enlarged field program with at least six research projects aimed at understanding the biodiversity of life in the benthos, the slope sea and seamounts bordering the Gulf of Maine, and the role of predation by large fish and mammals in the dynamics of the ecosystem. Additional field studies will be developed by working groups under the scientific steering committee, as guided by the needs specified in the program's scientific plan. Ongoing relevant monitoring by U.S. and Canadian agencies will be integrated into the Census program. An electronic dynamic atlas of the Gulf of Maine will be created, with unprecedented access to marine databases for research, and making it possible for resource managers and industry to visualize patterns in the ecosystem. A "state-of-the-ecosystem report" will be prepared to serve as a building block of the worldwide Census of Marine Life and a reference work to support preparation of a fisheries ecosystem plan. The estimate of the total project cost is \$25 million. Efforts to obtain this funding from U.S. and Canadian governmental agencies, foundations, and industries concerned with the region are underway. Project Director: Evan D. Richert, Associate Research Professor.

The following grants were funded from an appropriation approved by the Sloan Foundation Board of Trustees to support small grants and expenses for the Census of Marine Life. These grants were for a variety of purposes: dissemination of information and outreach; strengthening commitments of U.S. constituencies and cooperation with international organizations; support of national programs for the Census abroad; and pilot program development.

Food and Agriculture Organization of U.N. **\$20,000**
Rome, Italy

To help support a meeting on improving information about the status and trends of fisheries. Project Director: Richard Grainger, Chief, Fishery Information, Data and Statistics Unit, Fishery Resources and Environment Division.

North Pacific Marine Science Organization **\$45,000**
Sidney, B.C.
Canada V8L 4B2

To prepare a prototype census of marine life for the North Pacific, using existing information and the framework of the known, unknown, and unknowable. Project Director: Alexander S. Bychkov, Executive Secretary.

Partnership for Observation of the Global Oceans

\$40,000

Dartmouth, Nova Scotia

Canada B2Y 4A2

For a meeting to assess what is known and unknown about biodiversity in the oceans around South America and to stimulate South American participation in the Census of Marine Life. Project Director: Shubha Sathyendranath, Executive Director.

HISTORY OF SCIENCE AND TECHNOLOGY

TRUSTEE GRANT

American Society for Artificial Internal Organs
Boca Raton, FL 33429

\$146,000

The primary goal of the Foundation's program to promote the use of the World Wide Web for the recent history of science and technology has been to lower the barriers for those who actually made history to contribute directly to a durable historical record. This grant supports the building of sites about prosthetic devices for kidneys, hearts, and lungs. ASAIO will seek contributions not only from inventors of devices and physicians who implant and monitor them, but also from patients, nurses, manufacturers, and regulators. The aim is to obtain at least 75 major contributions by those who participated in the history and attract several hundred thousand visitors to the site within two years. Hyperlinks will be installed among the various sites and with related sites of the Smithsonian Institution and the National Library of Medicine, organizations whose cooperation from the outset has been welcomed. Project Director: Robert Bartlett, M.D., Chair, Project Bionics.

OFFICER GRANT

George Mason University Foundation, Inc.
Fairfax, VA 22030

\$43,750

To establish and archive a website on the history of the on-line services industry. Project Directors: Professor Roy Rosenzweig, Department of History; R. Taylor Walsh, Owner, Onlinebriefings.com.

STANDARD OF LIVING AND ECONOMIC PERFORMANCE

INDUSTRIES

INDUSTRY CENTERS, TRUSTEE GRANTS

Columbia University **\$294,000**
New York, NY 10027

The telecommunications industry is currently in a state of considerable distress. This grant supports a series of workshops, conferences and studies focused on the industry's ills and the identification of possible ameliorative actions. The project will be carried out by the Columbia Institute for Tele-Information, the Sloan Industry Center for the telecommunications industry. A series of small (about 20 participants) topic-specific workshops will generate ideas, analyses, and proposals that will form the basis for one or two larger conferences in 2003. The origin and reasons for the crisis, paths to financial recovery, appropriate managerial strategies, post 9/11 telecom requirements, and policy recommendations are topics to be considered. An advisory board for the project, consisting of experts from industry, labor, finance, government, and academia, will be organized to help sharpen the topics of each workshop and to recommend attendees representing an appropriate mix from these constituencies. Conclusions and recommendations emerging from each workshop will be issued as a report and posted on the project website. Project Director: Professor Eli Noam, School of Business; Director, Columbia Institute for Tele-Information.

Massachusetts Institute of Technology **\$1,885,000**
Cambridge, MA 02139

This grant renews support for another three years of the Global Airlines Industry Center at MIT. This Center has developed close contacts with people and companies in this industry, including labor unions, airport operators, and government agencies. Center research has been focused on five broad themes: (1) safety and security; (2) industry structure and competition; (3) labor relations and human resources; (4) infrastructure; and (5) alternative business models. Ten faculty members and ten students are currently working on Center projects. The results of research have been well integrated into the teaching program: the air transportation curriculum has been restructured; three new courses, including a graduate course on the airlines industry, have been developed; an airline management educational game has been created that simulates the choice of airline and routings by passengers and teaches students the complexity of airline management decisions; two teaching cases, on Jet Blue and Southwest Airlines, have been written and published by Harvard Business School Press; and a textbook is being written based on the new airlines industry course. The Center's focus over the coming three years will revolve around the central theme of the industry's restructuring and the

search for a new business model against a backdrop of safe operations. The Center's program receives substantial support from both the industry and government. Project Director: Professor Cynthia Barnhart, Department of Civil and Environmental Engineering.

Massachusetts Institute of Technology
Cambridge, MA 02139

\$152,400

For the past decade, faculty and students from the Sloan Industry Centers have met at annual conferences to share research results and insights on their industries. Attendance at these events has for the most part been limited to persons working at the various Centers. During 2002, a new initiative to grow the community of scholars interested in studying industries was started by inviting a group of researchers outside the Centers to become "Affiliates" of the industry centers program. This grant supports the 2002 annual conference and includes funds for the participation of Affiliates. The conference will be thematically organized and will consist of a series of panels on topics of interest to multiple industries, such as the management of global supply chains, industry security post 9/11, and deregulation. Project Director: Professor Richard K. Lester, Director, Industrial Performance Center.

University of California, San Diego
La Jolla, CA 92093

\$1,500,000

This grant renews support of the Information Storage Industry Center at UC, San Diego for another three years. The storage component of computer systems continues to be an increasingly valuable part of the entire system. The current projection is that 20% of every information technology dollar will be spent on storage within two years, compared to just 4% three years ago. During the past years, the Center has conducted research in the following areas: organizations and geography; international competition; manufacturing, ramp-up, and learning; and field reliability and data integrity. Much of this research is documented in *From Silicon Valley to Singapore: Location and Competitive Advantage in the Hard Disk Drive Industry*, by David G. McKendrick, Richard F. Doner, and Stephen Haggard (Stanford University Press). During the renewal period, the Center will continue research on manufacturing by studying how changes in technology, manufacturing, and infrastructure affect product design; employ recent economic theories of the firm to investigate the structure of the storage industry; begin a project on competitive dynamics by examining different segments of this expanding industry; and continue work on the reliability of storage systems. The Center has agreed to raise at least \$0.5 million from industry and other sources as a match to part of this Foundation grant. Project Director: Professor Roger Bohn, Graduate School of International Relations and Pacific Studies.

University of Pittsburgh
Pittsburgh, PA 15260

\$256,000

This grant supports plans to encourage the growth of a national community made up of people in the Sloan Industry Centers, others who have been drawn into industry studies over the years, and new scholars. The aim is to see the unique knowledge base of this community recognized for others to draw upon. A Committee for Industry Studies will be formed, made up of Professor Giarratani, two to four additional faculty members from among the Sloan Industry Centers, and the two Foundation program directors who have been involved with grants for industry studies. The Committee will have three purposes: (1) identify and promote services that will strengthen the industry studies community; (2) enlist academic leaders who will help to establish this community in a way that will be self-sustaining; and (3) decentralize responsibility for service activity to academic leaders. The Committee's recommendations are expected to extend and broaden many of the kinds of activities that the Foundation has sponsored over the years. Forming an editorial board to prepare a reprint series of the best published papers in industry studies and establishing a peer-reviewed journal are possibilities to be considered. Other suggestions include organizing additional workshops on topics that cut across industries, promoting the exchange of scholars among Centers, and organizing panels of researchers at annual meetings of professional societies. The Committee will decide which activities are of highest priority for achieving the goal of community-building. Project Director: Professor Frank Giarratani, Department of Economics.

The following grants, made from an appropriation approved by the Board of Trustees, support various activities designed to strengthen the connections among the Sloan industry centers and to increase their visibility and the impact of their studies.

Georgia Tech Research Corporation
Atlanta, GA 30318

\$10,000

To conduct two Industry Center panel sessions at the 2002 Annual Meeting of the Institute for Operations Research and Management Sciences. Project Director: Professor Chelsea C. White, III, School of Industrial and Systems Engineering.

Georgia Tech Research Corporation
Atlanta, GA 30318

\$3,000

To disseminate information and develop an ongoing dialogue on security issues within the Sloan Industry Centers community. Project Director: Professor Chelsea C. White, III, School of Industrial and Systems Engineering.

Institute of Paper Science and Technology **\$25,000**
Atlanta, GA 30318

To support a listserv and website for the Sloan Industry Centers. Project Director: Robert G. Patterson, Director, IPST Knowledge Initiative.

University of California, Davis **\$3,000**
Davis, CA 95616

To disseminate information and develop an ongoing dialogue on globalization within the Sloan Industry Centers community. Project Director: Professor Martin Kenney, Department of Human and Community Development.

University of Minnesota **\$15,000**
Minneapolis, MN 55415

Support for activities to disseminate results from the flat display project. Project Director: Thomas P. Murtha, Associate Professor of Strategic Management and Organization, Carlson School of Management.

Wayne State University **\$45,000**
Detroit, MI 48202

To support post-9/11 activities of the Trucking Industry Program related to trucking security. Project Director: Professor Michael H. Belzer, College of Urban, Labor and Metropolitan Affairs.

The following four grants, from an appropriation approved by the Board of Trustees, support the awards of Sloan Industry Center Fellowships. Each fellowship carries a stipend of \$50,000 and includes \$7,500 for related expenses of the center at which the fellowship research will be conducted.

Carnegie Mellon University **\$57,500**
Pittsburgh, PA 15213

Sloan Industry Center Fellowship for Anita M. Sands, under the supervision of Professor Richard Florida at the Carnegie Mellon Software Industry Center.

Massachusetts Institute of Technology **\$57,500**
Cambridge, MA 02139

Sloan Industry Center Fellowship for Matthias Holweg, under the supervision of Professor John Paul MacDuffie at the MIT International Motor Vehicle Program.

Massachusetts Institute of Technology **\$57,500**
Cambridge, MA 02139

Sloan Industry Center Fellowship for Michael E. Levine, under the supervision of Professor Cynthia Barnhart at the MIT Global Airline Industry Program.

Massachusetts Institute of Technology **\$57,500**
Cambridge, MA 02139

Sloan Industry Center Fellowship for Sarah S. Stallings, under the supervision of Professor Stan Finkelstein at the MIT Program on the Pharmaceutical Industry.

INDUSTRY STUDIES, TRUSTEE GRANT

University of Pennsylvania **\$191,000**
Philadelphia, PA 19104

This project is an extension of five years of research by the Financial Institutions Industry Center at Wharton on the management and performance of telephone call centers in the financial services industry. The project will take advantage of two large data sets provided to the Center by their industry participants. It will focus primarily on issues of efficiency within a call center and will uniquely combine these data with mathematical and engineering methodologies. Project Director: Carol A. Leisenring, Co-Director, Wharton Financial Institutions Center.

INDUSTRY STUDIES, OFFICER GRANTS

National Bureau of Economic Research **\$45,000**
Cambridge, MA 02138

To support the planning phase for a set of industry studies of international differences in the business practices and productivity of multinational firms. Project Director: Kathryn L. Shaw, Professor of Economics, Graduate School of Industrial Administration, Carnegie Mellon University.

Rutgers University **\$21,000**
New Brunswick, NJ 08901

To develop a conceptual framework and empirical methodology for a Human Resources Network project on social capital. Project Director: Professor Eileen Appelbaum, Director, Center for Women & Work.

University of California, Berkeley **\$30,000**
Berkeley, CA 94720

To develop a Globalization Network project on the creation and capture of value in global industries. Project Director: Clair Brown, Professor of Economics; Director, Center for Work, Technology, and Society.

University of Maryland Foundation **\$45,000**
Adelphi, MD 20783

To conduct a study of the biotechnology cluster in Maryland. Project Director: Professor Jacques S. Gansler, School of Public Affairs; Director, Center for Public Policy and Private Enterprise.

University of Pittsburgh **\$24,000**
Pittsburgh, PA 15260

To develop a conceptual framework and empirical methodology for a Human Resources Network project on social capital. Project Director: Carrie R. Leana, Professor of Business Administration, Katz Graduate School of Business.

University of Pittsburgh **\$45,000**
Pittsburgh, PA 15260

To create a network and launch a thematic project on social capital in the workplace. Project Director: Carrie R. Leana, Professor of Business Administration, Katz Graduate School of Business.

BUSINESS ORGANIZATIONS, OFFICER GRANTS

Stetson University **\$33,000**
St. Petersburg, FL 33707

To produce a law review article analyzing the role of the corporation in helping employees deal with changes in work and family life. Project Director: Marleen A. O'Connor, Professor of Law.

University of California, Los Angeles
Los Angeles, CA 90095

\$45,000

To write and publish two review law articles incorporating insights from behavioral science and economics into the legal study of corporations. Project Director: Lynn A. Stout, Professor of Law.

University of Pennsylvania
Philadelphia, PA 19104

\$25,000

To provide partial support for a conference that furthers the theory of team production. Project Director: Edward B. Rock, Professor of Business Law, Law School.

ECONOMICS RESEARCH, TRUSTEE GRANTS

Case Western Reserve University
Cleveland, OH 44106

\$299,200

The Advanced Manufacturing Project (AMP) is a Foundation-supported group of researchers studying the metal and plastic component manufacturing industry. This sector is made up of companies that fabricate and/or assemble molded, forged, formed, and machined goods made of metal and plastic, principally for sale to manufacturers of such products as automobiles, construction machinery, electrical appliances, and medical instruments. Although the sector has experienced stagnant productivity growth for the past two decades, some firms have performed extremely well. AMP's preliminary results show that the most successful component manufacturers not only have a clear product strategy, but also have a clear workforce management strategy. AMP's research has attracted the attention of the Working for America Institute (WAI), which is a nonprofit organization affiliated with the AFL-CIO that does research and provides technical assistance to unions and firms who want to work together to strengthen the industries they are in, improve their companies' performance, and retain and create good jobs for American workers. This grant supports a cooperative effort by WAI and AMP to study the role of labor unions, both positive and negative, in affecting business performance and productivity in this industrial sector. Project Director: Professor Susan Helper, Center for Regional Economic Issues.

National Bureau of Economic Research
Cambridge, MA 02138

\$957,605

This grant supports a project that will involve extensive field research designed to develop deeper understanding of the stark contrast between U.S. productivity growth in the 1990s and that of most European countries. The plan is to visit firms in both Europe and the U.S., talk with people, observe what's going on, and collect and analyze firm-level data along with the more conventional country- and industry-level data. Six to ten research teams will be organized to study a range of both manufacturing and service industries, focusing on multinational companies that have made investments in

information technology (hardware and software) and human resource management practices in both their U.S. and European operations. By means of visits and interviews, they will attempt to determine the factors that influence the performance of these organizations. Not only investment in technology and human resources, but also such factors as the ability to hire and fire workers and differences in company policies and decision-making procedures from one country to another will be considered. Six to ten company level studies being a small sample, the project will also include a Web-based survey of additional firms in these industries and take account of currently available European and U.S. studies and data sets. Project Director: Kathryn L. Shaw, Professor of Economics, Graduate School of Industrial Administration, Carnegie Mellon University.

University of Pittsburgh
Pittsburgh, PA 15260

\$244,803

The new technology that made thin-slab casting possible opened the American market for flat-rolled steel products to competition from minimills that use electric furnaces to produce steel primarily from ferrous scrap. It allowed scrap-based producers to challenge markets that had been the exclusive province of manufacturers using the traditional basic oxygen furnace to produce steel primarily from iron ore. Since 1989, eleven minimills were constructed that employ scrap-based technology to produce flat-rolled steel. Of the new steel plants, five are located in established steel-producing regions and thereby enjoy the benefits of clustering. In sharp contrast, six of the new plants are in regions with little or no previous activity in steel production. This grant supports research to investigate the process and results of industry clustering in these “greenfield” sites and to compare the key characteristics of the clusters that developed around these sites with those of the new thin-slab minimills that located in established industry regions. The analysis will be based on primary data gathered at plant visits and will permit quantitative measures of interindustry linkages at each plant location. It will illuminate the nature of localization economies that accrue to individual plants in an industry as that industry expands in a given region. Project Director: Professor Frank Giarratani, Department of Economics.

ECONOMICS RESEARCH, OFFICER GRANT

Columbia University
New York, NY 10027

\$35,000

Partial support for a study of the uneven development of technology across different fields of medicine. Project Director: Professor Richard R. Nelson, School of International and Public Affairs.

NONPROFIT SECTORS

UNIVERSITIES, TRUSTEE GRANT

University of Pennsylvania **\$75,000**
Philadelphia, PA 19104

Virtual U, the university simulator developed with Foundation funds and released for sale in July of 2000, allows experimentation with the operation of an entire university. This computer simulation “game” serves as a significant aid for education about universities and also for research on universities. Expert users of Virtual U include professors of higher education, mainly in graduate schools of education, and their students, as well as senior managers in higher education and those that work with them, such as trustees and state education officials. This grant supports a variety of activities (refining a website and on-line newsletter, developing additional materials to support the use of the software for teaching and training, and organizing meetings and demonstrations) intended to enlarge and deepen the expert user community for Virtual U. Project Director: Professor Robert Zemsky, Director, Institute for Research on Higher Education.

UNIVERSITIES, OFFICER GRANT

Woodrow Wilson International Center for Scholars **\$40,000**
Washington, DC 20004

To explore applications of game-based learning by drawing on the experience of the university simulator. Project Director: David Rejeski, Special Assistant to the Director and Flum Scholar.

ASSESSMENT OF GOVERNMENT PERFORMANCE, TRUSTEE GRANTS

Association of Government Accountants **\$415,730**
Alexandria, VA 22301

Past Foundation grants to the Governmental Accounting Standards Board (GASB) have supported the staff work necessary for the GASB to consider establishing performance measurement reporting standards. In October of 2002, the Board of Trustees approved an appropriation of \$1,425,000 to fund a program of experimentation using the now-published GASB guidelines for use by state and local governments in developing performance measurement reports to citizens. To further encourage governments to use the GASB guidelines and to provide recognition to those that do so well, the Association of Government Accountants (AGA) has developed a Certificate of Excellence in Service Efforts and Accomplishments (SEA) Reporting Program. This grant supports the

implementation of this certificate program, to be developed by AGA in consultation with GASB. AGA will review SEA reports voluntarily submitted by state and local governments, evaluate the reports using GASB's criteria and other factors (including the extent of participation by citizens and elected officials), provide the governments with recommendations for improvement of the reports, and award a Certificate of Excellence to those governments that prepare the highest quality SEA reports. Project Director: Lisa Thatcher, Assistant to the Executive Director, and Director, Certificate of Excellence in Accountability Reporting Program.

The City of Minnetonka
Minnetonka, MN 55345

\$97,127

The City of Minnetonka is a middle-class suburb of Minneapolis with a population of 51,000. Ninety percent of the residents have access to the internet from their homes. This grant supports the City's expansion of its website to include an interactive citizen request system. The idea is to employ the power of the internet to enable citizens to report concerns to and make requests of city departments. The departments will be able to respond, indicating that the request has been noted and, when appropriate, specifying a date when some city response (e.g., resolution of a complaint) can be expected. The system will allow the user to track the progress of the department's response, including a final notification that the work has been done. At the user's option, the request can be made public on the website. A variety of statistics, such as frequencies of different types of requests, clearance rates by department, and levels of user satisfaction with responses, will be collected and displayed publicly for the information of users and department managers. Project Director: Amy Cheney, Information Technology Manager.

Urban Resource Systems, Inc.
San Francisco, CA 94117

\$462,062

The Neighborhood Parks Council (NPC), a project of Urban Resources Systems, Inc., was launched in 1996 to restore San Francisco's declining system of over 200 parks and 4000 acres of open space through citizen participation. Its coalition now includes 96 local park groups with about 3000 active participants. NPC has excellent relations with the Recreation and Park Department, the Department of Public Works, and the Office of the Controller, all of which have endorsed NPC's planned program for citizen-based performance assessment of San Francisco's parks. This grant supports NPC's project for a pilot phase of 18 months. Obtaining consensus on standards and performance measures for parks will start the project. Two or more parks will be selected for assessment. At least one will employ citizen volunteers armed with hand-held computers and attached digital cameras, an approach first developed by the Fund for the City of New York for use by citizens in NYC. At least one pilot will employ an interactive website by means of which citizens will be encouraged to provide complaints and service requests relevant to conditions within the selected park. Before the park-specific pilots are launched, a preliminary feedback mechanism to relevant city agencies will be established. This will be tested, adjusted, and then finalized using the data from the selected parks. Project Director: Isabel Wade, Executive Director.

The following six grants, funded from an appropriation approved by the Board of Trustees, support small projects and planning efforts for possible larger grants in the Foundation's program on assessment of government performance.

College of the Holy Cross **\$44,840**
Worcester, MA 01610

Support for the establishment of two new courses focusing on citizen-based performance assessment. Project Director: Stephen C. Ainlay, Vice President for Academic Affairs and Dean of the College.

Institute of Internal Auditors Research Foundation **\$45,000**
Altamonte Springs, FL 32701

To strengthen the role of auditors in state and local government performance measurement. Project Director: Basil H. Pflumm, Executive Director.

Iowa State University **\$42,400**
Ames, IA 50011

To fund a study of attitudes toward performance assessment of city elected officials. Project Director: Professor Alfred Ho, Department of Political Science.

National Civic League **\$25,000**
Denver, CO 80202

To fund the consideration of government performance measurement in the revision of the League's Model City Charter. Project Director: Derek Okubo, Director, National Headquarters.

Sustainable Seattle **\$54,610**
Seattle, WA 98101

To help Sustainable Seattle launch citizen-based performance assessment of Seattle government agencies. Project Director: Raymond Victorine, Executive Director.

West Harlem Environmental Action, Inc. **\$40,040**
New York, NY 10027

To fund planning of a project for assessment of New York City's performance on environmental health measures. Peggy Shepard, Executive Director.

WORKPLACE, WORKFORCE AND WORKING FAMILIES

THE WORKPLACE, TRUSTEE GRANTS

American Association of University Professors
Washington, DC 20005

\$406,146

The Foundation's new action program, the Dual Ladder Program, is designed to create two legitimate career paths for women in colleges and universities by (1) reconstituting tenure to allow for part-time appointments so that working mothers can increase their chances of a senior appointment; and (2) adding a second path for career development for those on contingent appointments. This grant supports several AAUP projects designed to raise the consciousness within the academy around work-family issues. A special issue of *Academe* will be published addressing the need for a new faculty workplace that better fits the needs of a changing workforce. Articles will focus on innovative solutions to work/family challenges, including part-time tenure and tenure-track appointments. AAUP will also launch an interactive work/family web site with hyperlinks to examples of innovative work/family policies, such as part-time tenure, stopping the tenure clock, and multi-year contracts for contingent faculty. The Association will also move toward creating professional career paths for contingent staff by issuing a statement in 2003 on faculty and contingent appointments and making this statement a focal point for the subsequent AAUP governance conference. Project Director: John Curtis, Director of Research.

College of William & Mary
Williamsburg, VA 23187

\$154,914

Senior faculty members at colleges and universities, typically hired in the 1960s and 1970s and now nearing retirement, are predominantly male and likely to be in traditional marriages. Their replacement cohort is quite different: these junior faculty members are increasingly female and in dual-career marriages. Currently over 51 percent of faculty age 35 and younger are female, whereas fewer than 30 percent of faculty over age 55 are female. Younger female faculty members are also more likely to have dependents. As a result of this demographic shift, faculty now want and expect workplace supports that will allow them simultaneously to pursue their family and career aspirations. These supports include suitable leave policies, modified responsibilities policies, and part-time tenure track and tenure options. This grant supports a study that will use current phased retirement policies and practices as a potential model for designing flexible career paths for the current younger faculty. Project Director: Professor David W. Leslie, School of Education.

McGill University
Montreal, Quebec

\$211,038

Michigan State University
East Lansing, MI 48824

\$147,143

A Foundation grant five years ago to McGill University supported research on what happens professionally to managers who work on reduced-hours arrangements. The research showed that career advancement was more than feasible for part-time managers. Approximately 80 percent of the sample of part-time managers who had managerial responsibilities were promoted while working part-time. The current grant will enable McGill, in conjunction with Michigan State University, to conduct a follow-up study of the original sample of part-time managers. How these part-time managers have fared professionally over the years will be documented. How their experience influenced their own management practices and how their immediate supervisors learned to manage them when they clearly deviated from the norm of the full-time manager will be studied. It is hoped that the results of this project will lead to a better understanding of how some firms have produced a better match between the structure of career paths within the firm and new needs and desires of their workforce for modified work hours. Project Directors: Mary Dean Lee, Faculty of Management (McGill); Ellen E. Kossek, Professor of Organizational Behavior and Human Resources, Graduate School of Labor and Industrial Relations (MSU).

The following two grants are funded from an appropriation approved by the Board of Trustees to support the Dual Ladder Program, a new action program to provide incentives for colleges and universities to add to the existing tenure ladder a second, or dual, ladder for career advancement of those currently in the secondary labor pool, e.g., adjuncts and part-time instructional staff. The dual ladder will provide opportunities for promotion, equitable compensation, and consideration for tenure-track appointments for these employees. The Program also aims to rethink the current rigid tenure track by promoting part-time tenure track and tenured career paths in order to increase the probability of women advancing to senior faculty positions.

American Sociological Association
Washington, DC 20005

\$36,500

For a study of the effects of resource allocation and family formation strategies on achieving tenure by faculty parents. Project Directors: Roberta Spalter-Roth, Director, Research Program on the Discipline and the Profession, ASA; Professor Ivy Kennelly, Department of Sociology, George Washington University.

University of Virginia
Charlottesville, VA 22903

\$5,744

Travel funds to present research on faculty leave policies and stopping the tenure track.
Project Director: Steven E. Rhoads, Professor of Government and Foreign Affairs.

The following two grants are funded from an appropriation approved by the Board of Trustees to support study of the mismatch between the workplace and the changing workforce. The traditional workplace, requiring full-time, full-year work, with minimal to no time off and maximum opportunities for overtime, no longer fully fits the needs of the diverse workforce. Although many workers, especially working parents and older workers, are interested in part-time and part-year work, such arrangements are limited and often carry penalties of disproportionate pay, few or no benefits, limited career opportunities, and virtually no movement between full-time and part-time work. Grants under this appropriation are designed to study various aspects of the mismatch between the current workplace and the current workforce and to raise awareness of this fundamental problem.

Brandeis University
Waltham, MA 02454

\$32,258

For research on total family work hours and stress outcomes in dual earner families.
Project Director: Rosalind C. Barnett, Director, Community, Families & Work Program, Women's Studies Research Center.

Employment Policy Foundation
Washington, DC 20005

\$43,860

To fund the first year of *The Balancing Act Newsletter*. Project Director: Edward Potter, President.

THE WORKPLACE, OFFICER GRANTS

Boston College
Chestnut Hill, MA 02167

\$45,000

Support for a series of international briefs on labor market incentives for older workers in industrial nations. Project Director: Professor Alicia H. Munnell, Finance Department, School of Management.

Georgetown University
Washington, DC 20057

\$45,000

Analysis of the structural and legal obstacles to providing better alignment between the workplace and the workforce. Project Director: Chai R. Feldblum, Professor of Law.

Pennsylvania State University **\$22,800**
University Park, PA 16802

Research on employee access to flexibility in work hours, work schedules, and work location. Project Director: Professor Lonnie Golden, Department of Economics, Penn State Delaware County.

Rutgers University **\$43,103**
New Brunswick, NJ 08901

For an assessment of the effects of rigid head count systems on part-time opportunities. Project Director: Professor Eileen Appelbaum, Director, Center for Women and Work.

THE WORKFORCE, TRUSTEE GRANTS

Cornell University **\$652,903**
Ithaca, NY 14851

The Cornell Employment and Family Careers Institute was the first of the Sloan Centers on Working Families. Initially funded in 1996, the Institute received a three-year renewal grant in 1999. Although eligible for a second such grant, the fact that the Institute's Director is leaving Cornell has led to the current grant for support of a seventh and final year. Institute research has changed the face of work-family studies to include consideration of life course issues and to focus on decisions made by couples regarding work and family. Amply documented has been the fact that the career patterns that characterize many professional careers in the U.S., such as in law, medicine, and academia, no longer fit the life course needs of working couples. Furthermore, the desire for work patterns that vary from a strict 40 hour week, 52 week year has also been made clear. This desire holds across the life course, from the early years of child rearing to the later years of pre- and post-retirement. Fifty refereed journal articles, 21 book chapters, and 77 working papers, have been published. A book, *It's About Time: Couples and Careers* by Phyllis Moen (Editor) is scheduled for publication early in 2003. In addition to its research, the Institute has also guided the work of twenty predoctoral fellows, with nine completing their degrees during 1997-2002. During this same time period, eleven postdocs have been trained at the Institute. Books and articles based on data developed by the Institute will continue to be published. Arrangements have been completed with the Murray Center at Radcliffe/Harvard to archive and make Institute data available to the public. Project Director: Professor Phyllis E. Moen, Departments of Human Development and Sociology; Director, Cornell Employment and Family Careers Institute.

Linköping University **\$249,707**
Linköping, Sweden

Università Di Roma La Sapienza **\$245,270**
Rome Italy

The Center on Everyday Lives of Families (CELF) at UCLA is documenting, by means of videotapes and interviews, a week in the lives of U.S. middle-class dual-earner families to discern ways in which parents and children manage to be a family in the face of the pressures of work, school, and other obligations. On the basis of this documentation, a unique video archive is being created. This grant supports a project that extends CELF's research in an international direction by examining the everyday challenges that face working middle-class families in Italy and Sweden. Although both countries have experienced significant changes in work-family patterns during the last two to three decades, there are no documented detailed ethnographic studies of how actual families cope with the dual demands of work and family obligations in their day-to-day lives. Researchers in Italy and Sweden will model their research on that being done at CELF. They will interview and ethnographically video-record dual-earner middle-class families, focusing on how parents and children coordinate and carry out tasks before they leave for work and school and after they return. These videos of the lives of Italian and Swedish working families over the course of a week will form the basis of a large video archive. Project Directors: Professor Karin Aronsson, Department of Child Studies (Linköping); Professor Clotilde Pontecorvo, Department of Developmental and Social Psychology (Roma La Sapienza).

THE WORKFORCE, OFFICER GRANTS

Brandeis University **\$44,918**
Waltham, MA 02454

Support for a study of travel demands of working families. Project Director: Rosalind C. Barnett, Director, Community, Families and Work Program, Women's Studies Research Center.

Claremont Graduate University **\$42,000**
Claremont, CA 91711

For research on psychological capital as critical to quality of life. Project Director: Mihaly Csikszentmihalyi, Professor of Management; Director, Quality of Life Research Center.

Eastern Sociological Society, Inc. **\$27,500**
Wayne, NJ 07470

Support for a conference on work-family issues. Project Director: Jerry A. Jacobs, President; Professor of Sociology, University of Pennsylvania.

University of Northern Iowa
Cedar Falls, IA 50614

\$44,000

For study of work-family issues among nonprofessionals. Project Director: Professor Adam Butler, Department of Psychology.

University of Texas at Austin
Austin, TX 78712

\$38,804

Support for an economic study of The Time Crunch. Project Director: Professor Daniel S. Hammermesh, Department of Economics.

PUBLIC UNDERSTANDING OF THE CHANGING WORKPLACE AND WORKFORCE,
OFFICER GRANT

Persephone Productions, Inc.
Washington, DC 20006

\$45,000

For support of one show of *To The Contrary* to highlight the mismatch between career paths and workers. Project Director: Bonnie Erbe, Chief Executive Officer.

EDUCATION AND CAREERS IN SCIENCE AND TECHNOLOGY

SCIENTIFIC AND TECHNICAL CAREERS

ANYTIME, ANYPLACE LEARNING, TRUSTEE GRANTS

Council for Adult and Experiential Learning **\$750,000**
Chicago, IL 60603

A past Foundation grant to the Council for Adult and Experiential Learning (CAEL) supported preliminary discussions with representatives of 12 electric utilities and the International Brotherhood of Electrical Workers (IBEW) concerning the creation of an online associates degree curriculum in Electric Power Technology for technicians working in the generation and transmission of electricity. An Energy Providers Coalition for Education (EPCE) was started in 2001. Modeled on the successful National Coalition for Telecommunications Education and Learning, it is a partnership between CAEL, Bismarck State College in North Dakota, 12 energy companies, and the IBEW. Bismarck offers two associates degrees in the program, one for technicians working at power plants, and another for technicians working on the power line and distribution side of the industry. With this grant, Bismarck will create an additional 25 ALN courses and add two more specialty degrees to the EPCE offerings. Efforts will be undertaken to market the EPCE programs within the industry and to add new member companies to the coalition. The grant will also fund initial efforts by CAEL to explore comparable arrangements for ALN education in two new industries: tooling and machining, and pharmaceuticals. Project Director: Pamela Tate, President.

Council for Adult and Experiential Learning **\$450,000**
Chicago, IL 60603

This grant supports efforts of the Council to launch the Healthcare Career Advancement Program (H-CAP), a nationally available two-year degree program for those aspiring to become registered nurses. The Council has constructed a coalition of colleges, healthcare providers, and locals of the Service Employees International Union, to support and oversee H-CAP. University of Phoenix Online will provide core courses for all participating students. A group of community colleges in different regions of the country will manage the clinical portion of the program in conjunction with local participating hospitals and other medical facilities. An Advanced Degree in Nursing will be awarded by the community colleges. Licensure as registered nurses further requires that applicants also successfully pass state examinations administered by the National Council of State Boards of Nursing. Project Director: Pamela Tate: President.

Franklin W. Olin College of Engineering
Needham, MA 02492

\$750,000

This grant is a renewal of support for a variety of activities of the Sloan Center for Online Learning Environments (SCOLE). The online refereed *Journal of Asynchronous Learning Network* has become an important publication and will continue to be published. The annual ALN conference will continue to receive Center assistance. The book, *Online Education*, published after each of the last three Sloan Summer Workshops, remains a Center activity. SCOLE will also continue to screen applicants and add new members to Sloan-C, the consortium of institutions, ranging from elite universities to community colleges, that have received ALN grants from the Foundation or have strong ALN online educational programs. A Sloan-C listserv will be actively managed and an “effective practices” website will be set up. Project Director: John R. Bourne, Professor of Electrical and Computer Engineering.

New England College of Finance
Boston, MA 02111

\$500,000

New England College of Finance (NECF) is a private institution that serves both as a membership association and an accredited not-for-profit college for financial organizations, at present mainly those with a substantial New England presence. NECF grants an associates degree in business, with options for certificates in such subjects as investing, fundamentals of banking, etc. NECF classes are typically held at 54 different locations in New England, most of which are member-company premises. Employers pay tuition and fees directly to NECF for enrolling students, who may hold such positions as bank teller, customer services representative, transfer agent, brokerage clerk, and underwriting administrator, or may be first-line supervisors of such employees. With this grant, NECF will convert their degree and certificate programs into ALN format and embark on a program to extend their reach to the national financial services industry. This effort will be helped by the fact that many of the firms with which NECF is associated are national and global in reach. A strong marketing program to attract students from new companies is also planned by the College. Project Director: Robert A. Regan, President & CEO.

New York University
New York, NY 10012

\$200,000

The New York City Fire Department (FDNY), with over 16,000 employees, has for many years had an extensive internal training program. Typical courses include Company Commander Course, 40 hours; Safety Coordinator Course, 16 hours; and First Responder-Defibrillation, 70 hours. These training courses are mainly intended for their own employees, but some are offered to personnel of other fire departments who come to New York for classes. This grant enables the FDNY to open an online branch for training and education purposes. New York University will lead an effort to train 25 FDNY instructors in ALN, convert four training courses into ALN format, and develop a website that will enable FDNY personnel to access courses and eventually earn degrees from over

75 Sloan Consortium institutions. NYU will also advise and assist the FDNY and participating Consortium schools in how to handle prior learning assessments (PLA). Since tuition reimbursement is not provided by the FDNY, personnel have a strong incentive to seek college credit for some of their fire department training. The Council on Adult and Experiential Learning will provide consulting services to help formalize the PLA process and make it equitable for all concerned. Project Director: David Finney, Dean, School of Continuing and Professional Studies.

Research Foundation of State University of New York **\$100,000**
Albany, NY 12246

Annual workshops have been held for ALN grantees to meet and discuss their experiences with ALN programs under five separate categories that have come to be known as the ALN Pillars: learning effectiveness; faculty satisfaction; access; cost-effectiveness; and overall student satisfaction. Papers presented at recent workshops have been published in book form (*Online Education*, edited by John Bourne, vols. 1-3). This grant supports the 2002 summer workshop, which is expected to feature papers in each of the Pillar categories that will identify the most effective practices from all Sloan ALN programs. Project Director: Eric E. Fredericksen, Assistant Provost for Advanced Learning Technology.

University of Illinois at Springfield **\$500,000**
Springfield, IL 62794

This grant will allow Springfield, the smallest and newest of the University of Illinois campuses and heretofore funded only indirectly through Foundation ALN grants to the University of Illinois system, greatly to expand their ALN degree programs and to include new degree programs in their ALN offerings. Bachelor degrees in liberal studies and master's degrees in management information systems and education are already offered. New undergraduate degrees, in chemistry, communications, English, history, and computer science, and a master's degree in teaching will be added. The first four bachelor degrees do not currently exist anywhere in ALN format. The Springfield ALN program expects to enroll 7,000 students, about 40 percent of the total enrollment, by the end of this three-year project. Project Director: Michael Cheney, Provost and Vice Chancellor for Academic Affairs.

The following four grants were made from appropriations approved by the Sloan Foundation Board of Trustees to fund small projects for the ALN Program and ALN conferences and workshops.

HVACR-edu., Inc. **\$45,000**
Heron, MT 59844

To develop and offer additional ALN courses in Heating, Ventilation, Air Conditioning, and Refrigeration. Project Director: Douglas C. Compton, President.

Ohio State University
Columbus, OH 43210

\$5,000

Support for online learning modules on city planning. Project Director: Professor Jennifer Evans-Cowley, City and Regional Planning, School of Architecture.

Stevens Institute of Technology
Hoboken, NJ 07030

\$26,120

Support for a multi-institutional initiative to assess the value of remote online laboratories in undergraduate engineering education. Project Director: Professor Sven K. Esche, Department of Mechanical Engineering.

University of Wisconsin-Extension
Madison, WI 53780

\$36,500

Support for a conference on scaling-up online education. Project Director: David J. Ward, Director of Research.

The following five grants were made from an appropriation approved by the Board of Trustees for support of exploratory efforts to make New York City a leader in the use of asynchronous learning networks (ALNs) for anytime, anyplace learning.

Audrey Cohen College
New York, NY 10013

\$31,270

Support to start an ALN. Project Director: Anne Lopes, Purpose Leader, School for Human Services.

Cornell University
Ithaca, NY 14853

\$35,000

Support for ALN course development. Project Director: Carol B. Robbins, Senior Extension Associate; Director, Corporate Career Development Programs, School of Industrial and Labor Relations Extension, New York City Regional Division.

CUNY Graduate Center Foundation, Inc.
New York, NY 10021

\$43,300

Support to develop a plan for ALN training of legal services representatives. Project Director: Mary Milton, Executive Director, New York City Distance Learning Coalition.

Stevens Institute of Technology **\$45,000**
Hoboken, NJ 07030

Support to continue New York City ALN activities. Project Director: Robert N. Ubell, Dean, Online Learning.

Stevens Institute of Technology **\$35,000**
Hoboken, NJ 07030

Support for an initial meeting on ALNs for New York City small institutions. Project Director: Robert N. Ubell, Dean, Online Learning.

ANYTIME, ANYPLACE LEARNING, OFFICER GRANTS

Association for Computing Machinery **\$25,000**
New York, NY 10036

For planning a project to update high school teachers on JAVA. Project Director: Maria Klawe, President.

Babson College **\$45,000**
Babson Park, MA 02457

Support to quantify ALN status and ALN opportunities. Project Director: Elaine Allen, Associate Professor of Mathematics and Statistics.

California State University, Fresno **\$30,000**
Fresno, CA 93726

Support for a summer faculty workshop on online teaching. Project Director: Hye Ok Park, Executive Director, Digital Campus.

Council on Competitiveness **\$10,000**
Washington, DC 20005

Support for a breakfast briefing on online learning for House members. Project Director: C. William Booher, Jr., Senior Advisor, Public Affairs.

George Meany Center for Labor Studies, Inc. **\$45,000**
Silver Spring, MD 20903

Support to develop a plan for a new ALN degree program. Project Director: Susan J. Schurman, President.

Harvard University **\$45,000**
Boston, MA 02115

Funds to create and launch four ALN courses in public health. Project Director: John Spengler, Professor of Environmental Health and Human Habitation, Harvard School of Public Health.

League for Innovation in the Community College **\$30,000**
Phoenix, AZ 85048

For planning of a full community college ALN course marketplace project. Project Director: Mark David Milliron, President & CEO.

MGH Institute of Health Professions **\$45,000**
Boston, MA 02129

Support to develop a partial ALN Certificate for radiological technicians. Project Director: Patricia Brown, Director, Distance Learning and Continuing Education.

Rutgers University **\$45,000**
New Brunswick, NJ 08901

Support for a project to improve success with online learning of low-income populations. Project Director: Mary L. Gatta, Director of Research and Analysis, Center for Women and Work.

University of Maryland University College **\$30,000**
College Park, MD 20742

Support for an anti-cheating online resource. Project Director: Claudine SchWeber, Associate Vice President, Office of Distance Education and Lifelong Learning.

University of Virginia **\$44,000**
Charlottesville, VA 22904

For a study of learning and e-learning by engineers. Project Director: Professor Melissa Appleyard, Graduate School of Business Administration.

Villanova University **\$42,000**
Villanova, PA 19085

Support for an assessment of cable as a medium of education delivery. Project Director: Professor Stephen J. Andriole, Department of Decision and Information Technology.

Commission on Professionals in Science and Technology
Washington, DC 20005**\$179,106**

The Commission (CPST) collects, analyzes, and disseminates reliable information about the human resources of the U.S. in the fields of science and technology. It also promotes education programs for potential scientists, engineers, and technicians, and develops policies for the optimum utilization of scientific and technological human resources by educational institutions, industry, and government. With this grant, CPST will compile data on the education and employment of science master's degree recipients, and will create a dedicated master's education website designed for university administrators and faculty, higher education organizations, federal agencies, professional scientific societies, public and private policymakers, and corporate professionals. CPST will track master's education, with special reference to professional science master's programs and their graduates, in regular issues of its primary publication, *CPST Comments*. It will include policy discussions about financial and other support for master's education as part of its regular programs and activities, and will organize a 2003 national meeting of all those providing professional science master's degree programs. Project Director: Eleanor Babco, Executive Director.

Illinois Institute of Technology
Chicago, IL 60616**\$225,000**

The Institute has a strong tradition of master's level education in engineering, architecture, and business, but not in the sciences. Five years ago its chemistry and physics departments instituted three master's degree programs, in analytical chemistry, materials, and health physics. This grant supports the expansion of these programs and the introduction of three new professional master's degree programs in cell and molecular biology (biotechnology), microbiology, and biochemistry. In addition to providing disciplinary depth, all the master's programs include courses in fields such as technical communication, project management, statistics, and intellectual property management. The Institute intends to use asynchronous learning networks on the Internet and its TV network in course offerings. It will be the first Sloan-supported provider of professional master's degree science programs to have a major commitment to distance learning. Project Director: Allan S. Myerson, Dean, Armour College of Engineering & Science.

Temple University
Philadelphia, PA 19122**\$225,000**

Temple produces the largest number of undergraduate chemists and biochemists in a region, stretching from Wilmington to northern New Jersey, that includes the greatest concentration of pharmaceutical and chemical companies in the U.S. With this grant, Temple will establish three professional master's degree programs, in drug analysis, chemo-informatics, and investigative chemistry. The drug analysis track centers on pharmaceutical chemistry, toxicology, instrumentation, and regulatory processes. Chemo-informatics deals with biochemistry, proteomics, neural computation and machine

learning, and data structures, warehousing, filtering, and mining. Investigative chemistry focuses on toxicology and pharmacology, including DNA fingerprinting, trace analysis, studies of evidence, and operations in crime laboratories. Temple aims to reach a total enrollment of 100-120 students in these master's programs. Project Director: Professor Susan A. Jansen, Department of Chemistry.

The following four grants made in 2002 are funded from an appropriation approved by the Board of Trustees to provide start-up funding for new professional master's degree programs in bioinformatics. This specialty offers real promise for developing attractive scientific career paths at the master's level and there is strong and growing demand for skilled scientists in this field.

Stanford University **\$120,154**
Stanford, CA 94305

Project Director: Russ B. Altman, Associate Professor of Genetics and Medicine;
Director, Biomedical Informatics Training Program.

University of Michigan **\$74,739**
Ann Arbor, MI 48109

Project Director: David J. States, Professor of Human Genetics and Director of
Bioinformatics, School of Medicine.

University of South Florida **\$76,550**
Tampa, FL 33612

Project Director: Professor Michael Barber, Department of Biochemistry and Molecular
Biology.

Virginia Commonwealth University **\$74,671**
Richmond, VA 23284

Project Director: Gregory A. Buck, Director, Center for the Study of Biological
Complexity.

PROFESSIONAL MASTER'S DEGREES, OFFICER GRANTS

American Geological Institute **\$44,500**
Alexandria, VA 22302

To document and foster professional master's degrees in geosciences. Project Director:
Nicholas H. Claudy, Human Resources Manager.

The Conference Board, Inc. **\$45,000**
New York, NY 10022

To provide information to employers about professional master's degrees in the sciences. Project Director: Cassandra A. Simmons, Program Director.

Georgia State University Research Foundation **\$39,798**
Atlanta, GA 30303

For studies of trends in bioinformatics training programs, including employment experiences of recent graduates; trends in announcements of positions in the field; and employment practices of firms in the bioinformatics field. Project Director: Paula E. Stephan, Professor of Economics, Andrew Young School of Policy Studies.

Lake Tahoe Center **\$44,620**
Los Angeles, CA 90049

For the first career placement retreat on bioinformatics. Project Director: C. Fred Fox, President; Professor, Microbiology, Immunology, and Molecular Genetics, UCLA.

Lake Tahoe Center **\$15,000**
Los Angeles, CA 90049

For costs of attendance of directors of Sloan-supported professional master's degree programs in bioinformatics at the symposium, "Integrating Genomics, Epigenomics, Proteomics, and Phenomics in Drug Discovery and Diagnosis." Project Director: C. Fred Fox, President; Professor, Microbiology, Immunology, and Molecular Genetics, UCLA.

Long Island University **\$45,000**
Brooklyn, NY 11548

To develop a national picture of professional master's degrees in sciences and foster discussion about the degrees among higher education experts. Project Director: Judith Glazer-Raymo, Professor of Education.

Society for Industrial and Applied Mathematics **\$39,000**
Philadelphia, PA 19104

To document and foster professional master's degrees in industrial and applied mathematics. Project Director: James M. Crowley, Executive Director.

Society for Industrial Microbiology **\$15,000**
Fairfax, VA 22030

To document and foster professional master's degrees in microbiology. Project Director: Carol D. Litchfield, Executive Director.

INFORMATION ABOUT CAREERS, TRUSTEE GRANT

**American Institute of Mining, Metallurgical, and
Petroleum Engineers**
New York, NY 10016

\$125,000

With this grant, the Institute will develop and maintain a website that features information derived from materials developed for the Sloan Career Cornerstone Series. This Series was made possible over the past several years by means of grants to nine professional societies, representing various mathematics, physical science, and engineering disciplines, for the preparation of videotapes, CD-ROMs, and web-based materials designed to inform students about the nature of careers of employees working in the various disciplines. Large numbers of these society-developed career information materials have been distributed to career counseling centers at high schools and colleges. The website to be developed will contain a version of the Cornerstone media products. The individual professional societies agree to this new approach that will lead the new site to become the primary means for new users to view Cornerstone materials. Project Director: Nellie Guernsey, Executive Director.

INFORMATION ABOUT CAREERS, OFFICER GRANTS

Iowa Public Television Foundation
Johnston, IA 50131

\$45,000

Support for a website devoted to careers in science and technology. Project Director: Cheryl Mullenbach, Executive Officer.

University of Maryland Foundation
Adelphi, MD 20783

\$10,000

Partial support for *The Langenberg Lecture and Award*. Project Director: Brent C. Berwager, Assistant Vice Chancellor, University System of Maryland.

RETENTION, TRUSTEE GRANT

Council of Graduate Schools
Washington, DC 20036

\$82,123

This grant supports efforts by the Council of Graduate Schools (CGS) to develop a national strategy for enhancing Ph.D. completion by graduate students in mathematics, science, and engineering. CGS's membership includes all major research institutions in the U.S. and Canada, accounting for more than 90 percent of Ph.D. degrees awarded. A white paper on Ph.D. attrition and completion will be prepared, to be followed by an invitation-only meeting, with invitees to include carefully chosen current doctoral

students, recent Ph.D. graduates, students who left a doctoral program without the degree, researchers, data custodians, disciplinary society research directors, and graduate deans. The meeting will have the following goals: identify institutional and departmental practices that are most likely to result in high completion and low attrition for Ph.D. students; identify gaps in data and knowledge about attrition and completion; reach consensus on how to measure attrition, collect data, and present data accurately to prospective students; and seek common support among the participating communities for promising interventions that would promote Ph.D. completion. CGS will produce a proceedings report that will be widely disseminated as a CGS publication, including to all CGS member graduate deans. Project Director: Debra Stewart, President.

RETENTION, OFFICER GRANTS

Carnegie Mellon University **\$40,900**
Pittsburgh, PA 15213

To continue studying the experience of undergraduate women in computer science at Carnegie Mellon University. Project Director: Professor Lenore Blum, Department of Computer Science.

Georgia Tech Research Corporation **\$34,625**
Atlanta, GA 30332

To fund a pilot project intended to improve undergraduate retention by enhancing communication between undergraduate mathematics students and international teaching assistants. Project Director: Judith Shaul Norback, Director of Workplace and Academic Communication, School of Industrial and Systems Engineering, Georgia Institute of Technology.

University of Maryland **\$44,977**
College Park, MD 20742

For preliminary work on a project to examine the critical transition for graduate students from course-taker to independent scholar. Project Director: Barbara Lovitts, Research Associate, Department of Sociology.

SCIENCE AND ENGINEERING WORKFORCE, TRUSTEE GRANTS

American Association for the Advancement of Science **\$456,000**
Washington, DC 20005

Postdoctoral fellows (“postdocs”) have become increasingly numerous and important in U.S. research institutions. The best guess is that there are now in excess of 50,000 young

scientists in such positions, up sharply over only the past decade. Postdocs are not graduate students, nor faculty or staff scientists, nor even employees in many cases. As a result, they have fallen between the cracks of the science workforce, constituting a heterogeneous cadre of “apprentice” scientists. They mainly do their work in the absence of well-defined expectations of employment rights and responsibilities, performance evaluations, adequate pay scales, normal employment benefits such as health insurance and pensions, and established procedures for conflict resolution. As their numbers and length in postdoc status have grown, these circumstances have become increasingly problematic. Over the past few years, a number of organizations have called for substantial modifications and improvements in postdoc employment arrangements. Over the same period, grassroots organizations of postdocs have been established at leading research universities. Leaders of six of these campus-based postdoctoral associations convened earlier this year and proposed the establishment of a national membership association that would include individual postdocs and early-career scientists, campus-based postdoctoral associations, universities and other research institutions, scientific and professional societies, and sponsors from science-based corporate sectors. The initiative would be established under the umbrella and with the assistance of the American Association for the Advancement of Science with the goal of becoming a self-sustaining membership organization after an initial startup period. The aims are to build consensus, encourage implementation of “best practice” policies, and enter into constructive dialogue about such matters with the federal agencies that finance most of the postdocs in U.S. research institutions. This grant supports efforts of the AAAS that will lead to the establishment of such a national postdoctoral association. Project Director: Shirley Malcom, Director, Education and Human Resources Directorate.

National Bureau of Economic Research, Inc.
Cambridge, MA 02138

\$1,475,000

The Foundation is interested in developing a more comprehensive picture of the basic facts about the U.S. labor market and workforce in science and engineering. The interested researchers turn out to be widely scattered among numerous institutions. This grant will support the development of a national research network that will coalesce these scattered individuals into an ongoing collaborative research enterprise. The national research network will address the following questions: (1) Have relative career prospects in many scientific and engineering fields been deteriorating, as frequently alleged, and if so, how can this be explained given that U.S. science and engineering have been highly successful and play central roles in the U.S. economy? (2) Where in the economy (academe, industry, research institutes) are most scientists and engineers employed and how has this been changing in recent years? (3) What is the labor market situation in the information technology (IT) sector and what are the educational backgrounds of its employees? Do IT worker shortages or surpluses exist and, if either, in which occupations and skill levels? (4) What have been the effects of recent increases in admission of foreign scientists and engineers to the U.S. workforce and how important are they to the successes of U.S. science and engineering and to career prospects in these fields? It is expected that the network will galvanize research on the science and engineering workforce both by increasing the number of researchers addressing this part

of the U.S. labor market and by encouraging widespread communication among researchers, spurring new research ideas and objective analysis on the economic and policy issues involved. Project Director: Richard B. Freeman, Director, NBER Labor Studies Program; Professor of Economics, Harvard University.

National Bureau of Economic Research, Inc.
Cambridge, MA 02138

\$198,200

Professor Borjas's book, *Friends or Strangers: The Impact of Immigrants on the U.S. Economy* (Basic Books, 1990) concentrates, as does the work of most labor economists, on the low-skilled, poorly educated, low-wage component of the U.S. workforce, since a large fraction of this group is made up of recent immigrants. In spite of the fact that more than half of the nation's students in science and engineering enter the country on foreign student visas, the high-skill, especially the science and engineering parts of the workforce, have received little attention. This grant supports research to develop an economic and analytic analysis of the costs and benefits of the foreign student visa system in the United States. The findings of this research will be reported in papers prepared for academic journals, in op-ed articles, and in a book. Project Director: Professor George J. Borjas, Kennedy School of Government.

Sigma Xi, The Scientific Research Society
Research Triangle Park, NC 27709

\$355,989

This grant supports the development and implementation of a web-based survey mechanism that will allow a survey of postdoc perceptions of policies and practices at their institutions. A new channel will thereby be created for individual postdocs to provide anonymous and candid feedback to university administrators and to their peers. The resulting data will make it possible for university administrators, postdoc offices, and postdoc associations to benchmark their postdoc training and employment practices against those of other universities. Periodic assessments of postdoc conditions will be feasible and be available for use by researchers and agencies interested in improved understanding of the postdoc population. Sigma Xi will function as coordinator and facilitator of a set of local surveys to be implemented by campus-based postdoc associations. The project will produce a series of reports custom-tailored for university administrators, department chairs, postdoc associations, and the survey participants themselves. Information developed from the web surveys will be compiled and made available via the websites of Sigma Xi and *Science* magazine, and via articles prepared for print publications such as *The Scientist* and *Chronicle of Higher Education*, among others. Project Director: Geoffrey Davis, Visiting Scholar, Sigma Xi Center.

The Urban Institute
Washington, DC 20037

\$287,834

The Foundation has long been interested in a project designed to integrate now-scattered existing data with the aim of producing an overall "portrait" of the U.S. science and engineering workforce. This grant supports such a project, to be carried out by the former

director of the Engineering Workforce Commission (Ellis) and a leading demographer at the Urban Institute (Passel). They plan to integrate existing data sources from the National Science Foundation and other sources into a dynamic model and combined database of the “stocks” and “flows” of scientists and engineers working in the U.S. This has become possible only recently, as a result of the appearance of new and more accessible forms of data sources that are still widely scattered and inconsistent. Project Directors: Richard Ellis, Consultant; Jeffrey Passel, Principal Research Associate.

SCIENCE AND ENGINEERING WORKFORCE, OFFICER GRANTS

American Association for the Advancement of Science **\$10,860**
Washington, DC 20005

Support for planning a new national postdoctoral association. Project Directors: Shirley Malcom, Director, Education and Human Resources Directorate; Ellis Rubinstein, Editorial Director, *Science's Next Wave*; Crispin Taylor, Editor, *Science's Next Wave*.

Sigma Xi, The Scientific Research Society **\$30,000**
Research Triangle Park, NC 27709

To provide partial funding for Sigma Xi's 2002 Forum, “Changing the Face of Science and Engineering.” Project Director: Evan R. Ferguson, Deputy Executive Director.

University of New Mexico **\$40,000**
Albuquerque, NM 87131

For a study of Native Americans in information technology. Project Director: Professor Roli Varma, School of Public Administration.

EDUCATION FOR MINORITIES AND WOMEN

MINORITIES, TRUSTEE GRANTS

American Association for the Advancement of Science **\$300,302**
Washington, DC 20005

This grant supports an expansion of a minority scientists network through *Science's* Next Wave, an online publication directed at graduate students, post-docs, and young faculty. Funds will be used primarily for encouraging minority mathematics, science, and engineering students to attend graduate school and helping them through the undergraduate-to-graduate transition. The interactive website would serve as an outreach to undergraduate minority students, their faculty mentors and advisors, and also to minority graduate students. Different components of the website will be directed at students, faculty mentors and advisors, and administrators. A "community-building" section will include news items of special interest to minority students, links to other useful sites, and stories about and testimonials from potential role models. An expanded GrantsNet site will provide a free, comprehensive, searchable database of research funding opportunities, as well as essays on funding and profiles of students and faculty who have received funding. The outreach program includes creation of a network of campus representatives, organization of local workshops, attendance at regional and national meetings of minority professional societies, and Network advertising in journals and magazines read by minority mathematics, science, and engineering students. Project Director: Crispin Taylor, Editor, *Science's* Next Wave.

The following grants are funded from an appropriation approved by the Sloan Foundation Board of Trustees for the Minority Ph.D. program. The aim of the program is to increase the number of underrepresented minority Ph.D.s in mathematics, science, and engineering. Recruitment and retention efforts and direct aid for students are part of the program, as are meetings of faculty participants and Sloan Scholars (students participating in the program). The program is now administered by the National Action Council for Minorities in Engineering (see the grant description below for details). The program includes a feeder component in which grants are made to selected departments that (1) have a high percentage of minority students and (2) send on for Ph.D.s in science and technology fields a significant number of their minority graduates following the predoctoral degree. The aim is to encourage and support efforts within such selected departments to increase this number of minority Ph.D. students.

National Action Council for Minorities in Engineering, Inc. **\$3,500,000**
New York, NY 10118

National Action Council for Minorities in Engineering, Inc. **\$235,000**
New York, NY 10118

These grants enable the National Action Council for Minorities in Engineering (NACME) to continue to administer the Sloan Foundation's minority Ph.D. program. NACME receives applications for Sloan scholarships from eligible students, i.e., new minority students entering Ph.D. programs to work with faculty approved by the Foundation. It selects awardees using Foundation-specified criteria, makes awards, receives student requests for payments, and makes these payments. It monitors the progress of each student and ensures that students report on their academic progress and expenditures. NACME awards the recruitment grants of \$2000 per Sloan Scholar to participating universities and also makes payments for and monitors the grants to the undergraduate and master's feeder programs. NACME will continue to provide some assistance to faculty participating in the minority Ph.D. program as they seek and recruit new minority doctoral students for their departments. It will advertise this minority Ph.D. program to its undergraduate fellowship recipients and to the many minority undergraduates who attend the annual meetings of various science and engineering societies where it has a presence. Finally, it will continue to maintain a website that encourages and helps interested minority mathematics, science, and engineering undergraduates make contact with faculty in the Sloan program. The larger of these grants supplies funds that NACME distributes to others as part of the Foundation's program; the smaller grant supports the cost of administration and of other program activities provided by NACME itself. Project Director: Aileen Walter, Vice President, Scholarship Management.

University of Puerto Rico, Mayaguez **\$125,000**
Mayaguez, Puerto Rico 00681

This grant supports the fourth meeting of faculty participants in the Sloan Minority Ph.D. Program. Project Director: Jose Colluci, Associate Dean and Professor, Department of Chemical Engineering.

MINORITIES, OFFICER GRANT

Purdue University
West Lafayette, IN 47907

\$6,540

Funding for the publication of “Mastering the Ph.D. Process: Tips for Surviving and Excellence in a Doctoral Program.” Project Director: Dwight E. Lewis, Director of Minority Programs for the Graduate School.

WOMEN, TRUSTEE GRANTS

The following five grants were made from an appropriation approved by the Sloan Board of Trustees to support the Sloan Pre-Tenure Leave Fellowship Program. The goal of this program was to make more acceptable a faculty member’s taking of a leave for purposes of childbearing, infant care, and other unexpected dependent care, and to promote institutional mechanisms that would minimize the career cost of taking such a leave. Each grant provides for a fellowship to the indicated faculty member, the amount to be matched by the faculty member’s home institution. In each case, a supplement of \$5,000 has been added for the fellow’s department, to be used to focus attention on and address work-family issues for other faculty, postdoctoral fellows, or graduate students. This program has now been discontinued.

University of California, Santa Cruz
Santa Cruz, CA 95064

\$25,000

Fellowship for Dr. Katia Obracza. Project Director: Professor Richard Hughey, Chair, Department of Computer Engineering.

University of California, Santa Cruz
Santa Cruz, CA 95064

\$25,000

Fellowship for Dr. Ingrid Parker. Project Director: Professor C. Leo Ortiz, Chair, Department of Ecology and Evolutionary Biology.

University of Maryland
College Park, MD 20742

\$25,000

Fellowship for Dr. Ella Atkins. Project Director: Professor W. L. Fourney, Chair, Department of Computer Engineering.

Virginia Commonwealth University
Richmond, VA 23284

\$7,400

Fellowship for Dr. Jason Merrick. Project Director: Professor Darcy P. Mays, Chair, Department of Statistical Sciences and Operations Research.

Virginia Commonwealth University
Richmond, VA 23284

\$10,937

Fellowship for Dr. Jill Gordon. Project Director: Professor Jay Albanese, Chair,
Department of Criminal Justice.

WOMEN, OFFICER GRANT

Cambridge University Press American Branch
Port Chester, NY 10573

\$15,000

To promote *Contributions of Twentieth Century Women to Physics* by N. Byers (Editor).
Project Director: Frank Smith, Publishing Director, Social Sciences.

PUBLIC UNDERSTANDING OF SCIENCE AND TECHNOLOGY

BOOKS, TRUSTEE GRANTS

Writers Room, Inc. **\$71,000**
New York, NY 10003

This grant is from an appropriation approved by the Board of Trustees to encourage artist and writer colonies to support science and technology projects. A previous grant supported the dedication of one of the 35 desks in the Writers Room exclusively to science and technology books. Three writers were supported with suitable book projects, enabling them to work in subsidized space and produce books centering on science and technology subjects. A waiting list for use of the designated desk developed as more members of the Writers Room learned about its existence and were stimulated to consider science and technology themes in their plays, novels, and screenplays. The current grant supplies funds for two desks dedicated to science and technology writing. Project Director: Donna Brodie, Executive Director.

The following grants, from an appropriation to provide small grants for promising new books on science and technology, were made to authors for writing projects as specified.

Antonina W. Bouis **\$45,000**
New York, NY 10017

To translate a scientific biography of Andre Sakharov from Russian into English.

Richard Preston **\$41,000**
Hopewell, NJ 08525

For research and writing of a book on the science of bioweapons.

Oliver Sacks **\$44,500**
New York, NY 10014

For research and writing of a book on the neurology of aging.

Kathy Sawyer **\$42,000**
Washington, DC 20003

For research and writing of a book about the Martian meteorite.

BOOKS, OFFICER GRANTS

New York is Book Country

\$6,000

New York, NY 10019

To showcase *A Beautiful Mind* as an example of turning science and technology books into films. Project Director: Linda C. Exman, President.

University of California, Los Angeles

\$14,000

Los Angeles, CA 90095

To complete the preparation of a book about great women physicists of the twentieth century. Project Director: Nina Byers, Professor of Physics.

SLOAN TECHNOLOGY BOOK SERIES

The Foundation is sponsor of a series of books intended to broaden public understanding of important modern technologies. Books in the Sloan Technology Series describe the development of specific technologies, including the circumstances of their emergence, their early development and use, their applications, and their actual and potential impacts on society.

Sixteen books have been published in the series:

Craig Canine, *Dream Reaper: The Story of an Old-Fashioned Inventor in the High-Tech, High-Stakes World of Modern Agriculture* (Knopf, 1995)

T. A. Heppenheimer, *Turbulent Skies: The History of Commercial Aviation* (Wiley, 1995)

Richard Rhodes, *Dark Sun: The Making of the Hydrogen Bomb* (Simon & Schuster, 1955)

Robert Buder, *The Invention That Changed the World: How a Small Group of Radar Pioneers Won the Second World War and Launched a Technological Revolution* (Simon & Schuster, 1996)

Martin Campbell-Kelly and William Aspray, *Computer: A History of the Information Machine* (Basic Books, 1996)

David E. Fisher and Marshall Jon Fisher, *Tube: The Invention of Television* (Counterpoint, 1996)

- Stephen S. Hall, *A Commotion in the Blood: Life, Death, and the Immune System* (Henry Holt, 1997)
- Robert Kanigel, *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency* (Viking, 1997)
- Bettyann Holtzmann Kevles, *Naked to the Bone: Medical Imaging in the Twentieth Century* (Rutgers University Press, 1997)
- Robert Pool, *Beyond Engineering: How Society Shapes Technology* (Oxford University Press, 1997)
- Michael Riordan and Lillian Hoddesen, *Crystal Fire: The Birth of the Information Age* (Norton, 1997)
- Victor K. McElheny, *Insisting on the Impossible: The Life of Edwin Land* (Perseus Books, 1998)
- Dorsey, Gary, *Silicon Sky: How One Small Start-Up Went Over the Top to Beat the Big Boys Into Satellite Heaven* (Perseus Books, 1999)
- Hecht, Jeff, *City of Light: The Story of Fiber Optics* (Oxford University Press, 1999)
- Rhodes, Richard (Editor), *Visions of Technology: A Century of Vital Debate About Machines, Systems and the Human World* (Simon and Schuster, 1999)
- Waldrop, M. Mitchell, *The Dream Machine: J.C.R. Licklider and the Revolution That Made Computing Personal* (Viking, 2001)

RADIO, TRUSTEE GRANT

American Communications Foundation
Mill Valley, CA 94941

\$795,000

With past Foundation support, the American Communication Foundation (ACF) developed science and technology stories in consultation with scientists across the country for broadcasting by Charles Osgood on CBS radio as part of *The Osgood File*. This grant will allow ACF to research and produce 80 new science and technology stories for Osgood over the next two years. ACF will also prepare 60 new science and technology stories for broadcast on national and local television news. ACF staff chooses science and technology story ideas, does background research, and compiles contact lists and other resources, which they then offer to interested television stations. ACF has developed relationships with news producers nationwide and has established itself as a reliable provider of science and technology news stories. With this grant, ACF will add seven new television outlets and continue outreach to national television networks. Project Director: Cynthia Perry, President.

PUBLIC TELEVISION, TRUSTEE GRANTS

Educational Broadcasting Corporation (WNET/Thirteen)
New York, NY 10001

\$1,000,000

This grant funds the production and broadcast of a four-part television series called *War Plane*, divided into programs on bombers, fighters, jets and helicopters, and on stealth, spying, and satellites. The series takes the familiar subject of airplanes and air warfare and examines it through the lens of technology. It will illuminate not only the impact of technology on war but also how war influenced and often accelerated the development of certain technologies. The series will look at how technology is reshaping air war by use of space platforms, computers, intelligence systems, unmanned bombers, stealth planes, and new reconnaissance capabilities. The programs will be shot around the globe and make use of archival footage, dramatic recreations, and sophisticated computer modeling and simulation to convey major battles and technological breakthroughs. Project Director: Beth Hoppe, Executive Producer, Science Programs.

Public Broadcasting Service
Alexandria, VA 22314

\$699,319

A two-hour PBS documentary focusing on the demolition, clearing, and reconstruction at “ground zero,” the World Trade Center terrorist attack site, will be produced with this grant. The film will explore the engineering challenges posed by the destruction and by recovery and rebuilding efforts. Having received early and exclusive permission to film at the site, the producer has unique footage of the excavation of the WTC foundation, including subway and train tunnels, and the efforts to assess damage to (and restore)

water, sewage, electrical, telephone, gas, and transportation services. The film will also examine how engineers worked with business and political leaders, architects, and urban designers to determine what transportation facilities and structures should replace the fallen WTC. The program should help advance public understanding of engineering as a critical element in the rescue and rebuilding of lower Manhattan. Project Director: Kenneth Mandel, Producer, Great Projects Film Company, New York.

WGBH Educational Foundation

\$2,075,000

Boston, MA 02134

With this grant and other funds, WGBH's award-winning team at *The American Experience* will produce a new four-part television series, *Innovators*, which will examine the theme of innovation and its role in the nation's history. Each hour will profile three figures loosely centered around the following themes: "Dreamers" looks at three immigrants, Insull (transmission lines), Rosenthal (modern brassiere), and Wang (word processor), who became successful innovators; "Go-Getters" deals with Colt (revolver), Walker (hair care franchise), and Turner (CNN), innovators who used their optimism and ingenuity to meet daunting challenges; "Fighters" emphasizes the tenacity that lies at the center of so much innovation and tells the stories of the Kellogg brothers (ready-to-eat cereal), Gianini (banking system), and Kearns (intermittent windshield wiper), each of whom battled against the odds to achieve success; and "Empire Builders" examines Trippe (jet travel), Disney (marketing), and Woodruff (global Coca Cola), three men who helped American innovation make its mark around the world. This series will be the lead production of WGBH's new History unit and will be shown as a prime time feature. Project Director: Margaret Drain, Executive Producer, WGBH.

WGBH Educational Foundation

\$1,000,000

Boston, MA 02134

This grant supports the preparation and airing of a two-hour NOVA documentary about the life and work of Percy Julian, a pioneering chemist and the first African-American elected to the National Academy of Sciences. Julian made major contributions to science and medicine during the 1930s and 1940s, deriving steroids from soybeans and synthesizing compound S, a pre-cortisone. He also became the director of a major industrial research lab, a wealthy entrepreneur, and a prominent civil rights spokesman. The National Science Foundation has completed the funding of this project with a grant of \$0.5 million. The grant also supports an outreach campaign by NOVA involving thousands of guides for teachers at middle and high schools and a range of activities addressed to minority communities and historically black colleges. Project Director: Paula Apsell, Executive Producer, NOVA.

WGBH Educational Foundation

\$500,000

Boston, MA 02134

NOVA plans to produce a four-part series on the origins of the universe, the beginnings of planet earth, and the origin of life on earth. The show, *Origins*, will pull together a

wide range of scientific information into a single coherent story. It will have as host Neil deGrasse Tyson, the distinguished astronomer and director of the American Museum of Natural History's Rose Center and Hayden Planetarium, and a prominent African-American role model in science. The National Science Foundation has made a \$2.1 million grant in support of this project. The Sloan Foundation grant will enlarge Tyson's role and ensure that he provides a continuous link throughout the series. It will also allow the personal story of how he became fascinated with the sky and developed a successful career in astronomy to be woven into the narrative. To accompany the series, Tyson will write a book that lays out the key scientific arguments in a more detailed and comprehensive way than television normally allows. Project Director: Paula Apsell, Executive Producer, NOVA.

PUBLIC TELEVISION, OFFICER GRANTS

Catticus Corporation **\$45,000**
Berkeley, CA 94710

Research and planning for a two-hour PBS show on the search for an AIDS vaccine. Project Directors: Michael Schwarz and Bill Jersey, Co-Producers.

Cold Spring Harbor Laboratory **\$25,000**
Cold Spring Harbor, NY 11724

Support for the jubilee celebration of the discovery of DNA. Project Director: James D. Watson, President.

COMMERCIAL TELEVISION AND FILMS, TRUSTEE GRANTS

Carnegie Mellon University **\$120,000**
Pittsburgh, PA 15213

With this grant, Carnegie-Mellon University will create and host a website for the Sloan Foundation's film program. The site will link the six participating film schools (American Film Institute, CMU, Columbia, NYU, UCLA, and USC), as well as the broader Foundation effort in film, including relationships with the Hamptons, Tribeca, Sundance, and Nashville film festivals. Foundation programs at the Ensemble Studio Theater and the Manhattan Theater Company, as well as other initiatives in theater, all designed to encourage the creation of new plays about scientists and engineers, will be linked to the website. The site will include synopses of all prize-winning student scripts, with brief biographies and contact information for screenwriters and directors. Student works receiving festival awards for science and technology films could be posted on the site and thereby made accessible to outside agents, producers, and studio executives. A

logbook of new films and plays created within the Foundation's programs will let filmmakers and dramatists learn about each other's work. Annual science and technology seminars at each film school will be described. The site will serve the growing community of those engaged with all aspects of new artistic work about science and technology. Project Director: Elizabeth Bradley, Head, School of Drama.

Columbia University
New York, NY 10027

\$286,000

The Film Division at Columbia University is one of the six members of the Foundation's film program, which is designed to encourage young film directors and screenwriters to create compelling drama about science and technology and to more accurately portray scientists and engineers in film and television. This grant supports Columbia's creation of a first feature production award for a promising film about science and technology. The award provides \$100,000 seed money for an appropriate film by a Columbia film school graduate, aiming to get the film produced and theatrically distributed. The award should serve to encourage the creation of more first feature films about science and technology and will supply valuable support to screenwriters and directors at an early stage of their post-graduate careers. Project Director: Dan Kleinman, Chairman, Film Division, School of the Arts.

Hamptons International Film Festival, Inc.
New York, NY 10013

\$286,500

This grant renews support for the Hamptons International Film Festival (HIFF) for another three years. In addition to continuing the annual award of a \$25,000 Sloan Film Prize for the best feature film that deals with science and technology, HIFF will add three new elements. Each year it will screen at least two short films made by students of the six film schools in the Foundation program. It will sponsor an annual panel of filmmakers, actors, and scientists and engineers to discuss various themes in science and technology films and hold a reception to bring these groups together in a social setting. Finally, HIFF will hold a Screenwriter's Workshop to develop two science and technology scripts by emerging screenwriters. Project Director: Denise Kasell, Executive Director.

Nashville Independent Film Festival
Nashville, TN 37202

\$161,000

This grant supports the development by the Nashville Independent Film Festival of six screenplays and film treatments featuring science and technology themes or characters. Some of these scripts will be based on original ideas or pre-existing material, such as books or articles; others will make use of existing scripts that can benefit from further development. The grant includes funding for an advisory board of scientists and engineers who, along with a Foundation representative, will review each script. Project Director: Brad Yonover, Film Producer.

The Sundance Institute
Salt Lake City, UT 84110

\$480,000

To stimulate the creation and exhibition of science and technology films, Sundance will develop a new program with three annual components: a \$20,000 feature film prize, to be presented at the Sundance Film Festival Awards ceremony, for the best science and technology film; a forum on science and technology films as part of the festival's series of panels, featuring actors, directors, producers, screenwriters, and scientists and engineers; and a film fellowship to be awarded to a promising screenwriter working on a science and technology script for the Sundance Screenwriter's Lab. The winning feature film will receive at least three screenings at the festival. The Science and Technology Film Fellowship will take a science and technology screenwriting project and develop it by means of a series of intensive labs, workshops, individualized consultations, and networking with outside experts. A \$10,000 bridge grant will help move the project from the Sundance program into pre-production, covering costs such as casting agent, location scout, and production accountant. Project Director: Ken Brecher, Executive Director.

Tribeca Film Institute Inc.
New York, NY 10013

\$287,700

A special Sloan science and technology film series will be initiated at the Tribeca Film Festival in New York. Four to six science and technology films will be screened and two major panels, with members of the entertainment industry joined by scientists and engineers, will be held. A new Screenwriting Lab will also be organized. Two professional screenwriters will be selected and mentored over a period of six months in the development of screenplays incorporating science and technology themes. An advisory panel, including filmmakers, writers, and scientists and engineers, will oversee the work. Each writer will be expected to complete a screenplay. The Tribeca Film Institute will showcase the new work before studios, agents, distributors, filmmakers, and producers and hold several events to move the completed screenplays to production. Project Director: Jane Rosenthal, Chair and Co-Founder.

THEATER, OFFICER GRANT

Mathematical Sciences Research Institute
Berkeley, CA 94720

\$16,800

For taping of a discussion about mathematics and humor and reading of a play about Einstein and Picasso with actor Steve Martin. Project Director: Robert Osserman, Special Projects Director.

SELECTED NATIONAL ISSUES AND THE CIVIC PROGRAM

SELECTED NATIONAL ISSUES

SEPTEMBER 11, TRUSTEE GRANTS

At their October 2, 2001 meeting, the Board of Trustees of the Sloan Foundation approved a special appropriation to be used for disaster recovery related to the terrorist attack of September 11, 2001. Six grants, described in last year's Annual Report, were funded from this appropriation in 2001. The following five 2002 grants were also made from this appropriation.

Architecture Research Institute, Inc. **\$58,000**
New York, NY 10016

To fund the activities of Rebuild Downtown Our Town. Project Director: Beverly Willis, President and Director.

**Business Education in Science and Technology
for New Americans, Inc.** **\$30,000**
New York, NY 10038

To equip a classroom at the Manhattan School of Computer Technology as a computer laboratory. Project Director: Luba Rabinovich, President.

Fire Safety Education Fund **\$45,000**
Brooklyn, NY 11201

To help the New York City Fire Department retain the services of consultants as it implements the recommendations of the recent McKinsey study of what the FDNY should do to prepare for future catastrophic events. Project Director: Daniel Shacknai, Deputy Fire Commissioner.

Regional Plan Association Inc. **\$100,000**
New York, NY 10003

To fund activities of the Civic Alliance to Rebuild Downtown New York. Project Director: Christopher Jones, Director of Economic Programs.

Regional Plan Association Inc.
New York, NY 10003

\$30,000

To fund the participation of Rebuild Downtown Our Town in the Civic Alliance to Rebuild Downtown New York. Project Director: Christopher Jones, Director of Economic Programs.

BIOTERRORISM, TRUSTEE GRANTS

The Advertising Council, Inc.
New York, NY 10016

\$1,265,628

The Advertising Council (AC) is a private, nonprofit organization that has been the leading producer of public service communications programs in the United States since 1942. Last year, AC campaigns received more than \$1.5 billion in donated media time and space. With an earlier officer grant, the AC conducted focus group research on homeland security which revealed that people are anxious about terrorism, but do not know what to do to be more prepared. This grant supports the development of a public education media campaign to empower American citizens to prepare for and respond to potential terrorist attacks. A public service campaign strategy will be developed; multimedia advertising products to support the campaign strategy will be produced; a tracking study of the campaign will be conducted; multimedia products will be disseminated to national media outlets; and results of the media dissemination plan will be monitored and reported. The multimedia public education campaign will include the creation and distribution of advertising products in several languages. The materials will include a brochure containing concrete steps citizens can take to protect themselves. Information will be available via a toll-free phone number and on a website. The overarching aim of this project is to increase the anti-terrorism preparedness of the American public by raising public awareness concerning the importance of preparedness, and by educating Americans concerning specific actions they can take to protect themselves, their families and communities from future terrorist attacks. Project Director: Arie Weissman, Executive Vice President and CFO.

The Brookings Institution
Washington, DC 20036

\$250,000

Since smallpox is a deadly terrorist threat, an appropriate policy with respect to immunizing some or all of the population by vaccine needs to be developed. In gauging the scale of various bioterror threats, and in designing effective public health responses to them, it is crucial to have epidemic models depicting the spatial spread of contagious diseases in urban and other settings. This grant supports the development and testing of an agent-based interactive model of selective vaccination and quarantine. Model software will be available to policy makers, educators, public health officials, and other interested parties, enabling them to test their own assumptions about transmission dynamics for a wide variety of diseases. A workshop will be held to discuss and disseminate the software and the researchers' findings. A "Brookings Policy Brief" will be prepared and several

papers will be published in the academic and popular press. Project Director: Joshua M. Epstein, Senior Fellow.

Children's Hospital Boston
Boston, MA 02115

\$289,585

Real-time electronic surveillance of non-specific disease indicators, such as ambulance calls, emergency room visits, and sales of over-the-counter medications, collectively known as syndromic surveillance, is one approach for detecting natural and man-made (bioterrorism) disease outbreaks. A grant to the New York Academy of Medicine (see below for details) is producing a software package that will enable health departments to conduct syndromic surveillance in their regions. This new grant supports additional work aimed at developing detection algorithms for simultaneously analyzing multiple signal streams and also for setting surveillance alarms. Multiple signal streams must be analyzed simultaneously for effective syndromic surveillance since signal data will be available from multiple, sometimes overlapping regions and, even within a given region, multiple detections (i.e., emergency department visits, pharmacy sales, absentee data) are best considered together. Because there are high monetary and societal costs for errors (sounding a false alarm or not sounding an alarm for an actual attack) and because tradeoffs must be made between these errors, great care must be exercised in setting a threshold for sounding an alarm so as to create confidence that an alarm truly represents a positive detection. The algorithms to be developed aim to improve single stream detection, allow the simultaneous processing of information from multiple streams, set appropriate alarm thresholds, and automatically convey the information in both numerical and text format to investigators and decision makers. Project Director: Professor Kenneth D. Mandl, M.D., Division of Emergency Medicine.

George Washington University
Washington, DC 20052

\$260,307

The purpose of this project is to define specific operational concepts for mass casualty regional care. The primary goal is to establish an optimal information system by connecting people and data sources, and by providing those involved with the information necessary to accomplish their objectives. The model, to be developed before the end of the calendar year, will delineate each critical function that emergency management and the health and medical sectors must address in order to adequately manage mass casualty incidents. It will provide a framework for state and regional planners and guidance for prioritizing and allocating resources in establishing federally-mandated bioterrorism preparedness plans. Project Director: Joseph A. Barbera, M.D., Co-Director, Institute for Crisis, Disaster, and Risk Management.

The New York Academy of Medicine
New York, NY 10029

\$700,000

This grant supports work of a consortium of institutions (New York Academy of Medicine (NYAM), New York City Department of Health (NYCDOH), and the

University of Connecticut) to develop and disseminate easy-to-use software that aims to provide early warnings of a bioterrorist attack or disease outbreak. The New York City Health Department carries out syndromic surveillance (see the Children's Hospital Boston grant above for further details) by real-time monitoring of 911 ambulance calls and emergency department visits at 33 hospitals. The current system is cumbersome and will be improved and converted to a user-friendly software package to be made available at no charge from the NYAM and NYCDOH websites. The software is to be prototyped and evaluated through daily use at the NYCDOH. A conference will be held to discuss the software and identify potential improvements. Project Director: Farzad Mostashari, M.D., President, OutbreakDetect, Inc.

RAND Corporation

\$734,200

Santa Monica, CA 90407

A major part of the Foundation's program on bioterrorism concerns civilian preparedness. The public needs to know what to do and what to have on hand, both at home and at work, during and in the aftermath of a bioterrorism attack. Over a nine month period, RAND will define practical steps that citizens can take to prepare for and respond to catastrophic terrorist attacks and will develop an implementation plan. The plan involves identifying appropriate civil preparedness strategies, reviewing and vetting of civil preparedness recommendations with various emergency preparedness groups, and identifying ways to institutionalize recommended civilian preparedness strategies. Project Director: Lynn E. Davis, Senior Political Scientist.

The following six grants were funded from an appropriation approved by the Board of Trustees for support of short-term projects and the planning stage of larger projects to reduce the threat of bioterrorism.

The Advertising Council, Inc.

\$30,000

New York, NY 10016

To conduct focus groups on homeland security. Project Director: George Perlov, Senior Vice President, Director of Planning and Research.

Building Wellness Consultancy, Inc.

\$42,000

Alpharetta, GA 30022

To provide partial funding for a study to look at the cost effectiveness of improved building air filtration. Project Director: H. E. Barney Burroughs, President & CEO.

Earth Day New York, Inc. **\$10,000**
New York, NY 10017

To provide partial support for a conference on “Rethinking the Built Environment: High Performance Buildings, Barriers to Terrorism, Energy Security.” Project Director: Pamela Lippe, Executive Director.

Georgia Tech Research Corporation **\$40,160**
Atlanta, GA 30318

To fund proof of concept development of a real time anthrax spore detector. Project Director: Professor William D. Hunt, School of Electrical and Computer Engineering.

Indoor Air 2002, Inc. **\$10,000**
Santa Cruz, CA 95062

To sponsor the Ninth International Conference on Indoor Air Quality and Climate. Project Director: Hal Levin, President.

National Institute of Building Sciences **\$74,933**
Washington, DC 20005

To fund a workshop on the Office of Homeland Security guidance document, “Guidance for Protecting Building Environments from Airborne Chemical, Biological, or Radiological Attacks.” Project Director: Claret M. Heider, Vice President, MMC/BSSC (Multihazard Mitigation Council/Building Seismic Safety Council).

BIOTERRORISM, OFFICER GRANTS

Chemical and Biological Arms Control Institute **\$30,000**
Washington, DC 20006

For activities to promote international cooperation in the fight against bioterrorism. Project Director: Michael Moodie, President.

Fund for the City of New York **\$45,000**
New York, NY 10016

To support the public information campaign of the Fund for Public Advocacy disaster preparedness project. Project Director: Stewart Desmond, Deputy Public Advocate for Communications.

Harvard University
Cambridge, MA 02138

\$45,000

To support a pilot study to evaluate physical methods (germicidal ultraviolet light, high efficiency filtration, and ultraviolet photocatalytic oxidation) to prevent dissemination of airborne infections. Project Director: Donald K. Milton, M.D., Department of Environmental Health, Harvard School of Public Health.

New York Biotechnology Association
New York, NY 10022

\$20,000

A planning grant to develop concepts for the Civilian Medical Reserve Corps. Project Director: Richard M. Hatchett, M.D., Civilian Medical Reserve Project.

National Strategy Forum, Inc.
Chicago, IL 60604

\$42,350

To conduct a workshop entitled, "Regional Planning for Mass Casualty Care." Project Director: Richard E. Friedman, President.

Rutgers University
New Brunswick, NJ 08901

\$45,000

To fund an international conference on computational and mathematical epidemiology. Project Director: Professor Fred S. Roberts, Director, Center for Discrete Mathematics & Theoretical Computer Science.

University of Colorado Foundation
Boulder, CO 80306

\$10,000

Partial support for an October 10-11, 2002 workshop on "Science, Technology, and Security: Knowledge for a Post-9/11 World." Project Director: Professor Roger A. Pielke, Department of Environmental Studies.

FEDERAL STATISTICS, TRUSTEE GRANT

The Urban Institute
Washington, DC 20037

\$1,400,000

The Census Bureau has created the Longitudinal Employer-Household Dynamics (LEHD) database that for the first time links data on the employment history and characteristics of millions of U.S. workers to data on their employers. Supported by an earlier officer grant, the Urban Institute convened a workshop to discuss the possibility of collaborations between the LEHD project and Sloan industry centers. The current grant funds such a collaborative research program. It would engage the active research

involvement of the Urban Institute, five Sloan industry centers (finance, retail food, semiconductors, software, and trucking), the Census Bureau, and seven State employment data agencies. Each of the five industry centers has developed its own research plan to make use of the LEHD data, with such work to be financed by about \$700,000 in research subcontracts from the grant total. The LEHD data will provide the industry center researchers with extensive assistance in generating industry-specific measures of workforce composition and quality. Insights about labor markets, career ladders, low income employees, and wage data will become available for their industries. Arrangements for security clearance and confidentiality will be made to allow researchers direct access to the LEHD data. A number of papers and a book are planned to present research findings. Project Directors: Julia Lane, Principal Research Associate, Labor and Social Policy Center; Professor John C. Haltiwanger, Department of Economics, University of Maryland; Professor John M. Abowd, Department of Labor Economics, School of Industrial and Labor Relations, Cornell University.

FEDERAL STATISTICS, OFFICER GRANT

The Urban Institute
Washington, DC 20037

\$30,000

Support of conference of Sloan industry center directors, state labor market information directors, and Census Bureau researchers on collaborative use of the Census Bureau's new Longitudinal Employment Household Dynamics database. Project Director: Julia Lane, Principal Research Associate, Labor and Social Policy Center.

THE CIVIC PROGRAM

TRUSTEE GRANT

Polytechnic University
Brooklyn, NY 11201

\$469,293

Polytechnic University has plans for the creation of an Urban Security Initiative. The faculty intends to concentrate on four areas: First Responder, Fire and Emergency Operations (especially communication aspects); Biochemistry/Biosensors; Cybertechnology/Information Assurance; and Urban Infrastructure. Integration of the four areas will stimulate the creation of new courses, the addition of security-related material to existing courses, and the development of new certificate and degree programs. For example, the Fire Protection Engineering Society of New York State has asked Polytech to create a B.S. or certificate program in fire protection. Polytech's flexible master's degree program will allow students to combine courses in many ways to match their interests and the varied needs of the market for technical security professionals. Faculty members have research underway in each of these four areas. For example, within the Department of Chemistry and Chemical Engineering work on sensors, especially for the detection of anthrax spores, is ongoing and heading toward commercialization. The Center for Construction Management Technology is applying its three-dimensional modeling of buildings to the needs of the Fire Department to keep track of personnel and the spread of fire, to security issues associated with non-structural elements (such as heating, ventilation, and air conditioning), and to the security of infrastructure networks (such as water and natural gas distribution systems). Polytech expects to raise funds for research and course development elsewhere. This grant supplies seed money to allow the hiring of a full-time project director who would be a senior member of the faculty and come with a mixed academic and industry background. The grant will also fund some initial forums and conferences, and begin the creation of a data base and clearing house on urban security. Project Director: George Bugliarello, Chancellor.

THE CIVIC PROGRAM, OFFICER GRANTS

City Limits Community Information Service, Inc.
New York, NY 10005

\$45,000

For a study of New York City's telecommunications by the Center for an Urban Future. Project Director: Neil Kleiman, Director.

Friends of the Museum of Money and Financial Institutions

\$38,500

New York, NY 10017

To fund the enhancement of the Museum's website and to promote the launching of the Museum in lower Manhattan. Project Director: Martin Shubik, President; Professor of Mathematical Institutional Economics, Yale University.

ADDITIONAL GRANTS

TRUSTEE GRANT

The Foundation Center **\$195,000**
New York, NY 10003

The Foundation Center is the primary source for disseminating information about foundation programs and priorities to grant seekers and the general public. The Center operates five libraries located in New York City, Washington D.C., Atlanta, Cleveland, and San Francisco. It distributes publications, including *The Foundation Directory* and *Foundation Giving*, and maintains a computer database on foundation grants. The Center maintains a variety of on-line training modules and provides an extensive learning service to nonprofit organizations. An on-line news service, *Philanthropy News Digest*, with some 40,000 subscribers, is provided at no charge. The Sloan Foundation has been one of the supporters of the Center since 1963. This grant is a three-year renewal of operational support. Project Director: Sara L. Engelhardt, President.

OFFICER GRANTS

Council on Foundations **\$45,000**
Washington, DC 20036

General support (dues). Project Director: Dorothy S. Ridings, President and CEO.

Independent Sector **\$12,500**
Washington, DC 20036

General support (dues). Project Director: Sara E. Melendez, President.

New York Regional Association of Grantmakers **\$12,500**
New York, NY 10018

General support (dues). Project Director: Barbara Bryan, President

2002 FINANCIAL REPORT



2002 FINANCIAL REVIEW

The financial statements and schedules of the Foundation for 2002 and 2001 have been audited by KPMG LLP. They include the balance sheets, statements of activities and cash flows, and schedules of management and investment expenses.

Investment income for 2002 was \$21,305,487, a decrease of \$10,157,956 from \$31,463,443 in 2001. After the deduction of investment expenses and provision for taxes, net investment income was \$14,124,873 in 2002 as compared with \$22,915,695 for the prior year. Investment expenses during 2002 totaled \$6,840,614 of which \$5,174,127 represented investment management fees. The provision for taxes amounted to \$340,000. The total of these deductions from investment income in 2002 was \$7,180,614 versus \$8,547,748 in 2001. Total investment losses for 2002 and 2001 were \$93,100,846 and \$14,744,681, respectively.

Grants authorized (net of grant refunds) and management expenses during 2002 totaled \$56,432,739, which was \$42,307,866 greater than 2002 net investment income. Of this total, grants authorized (net of refunds) amounted to \$50,935,978 while management expenses were \$5,496,761. Since the Foundation's inception in 1934, the cumulative excess of grants and expenses over the Foundation's net investment income has amounted to \$264.4 million.

Grant payments in 2002 were \$58,882,225 compared with \$60,842,714 for the prior year. Together with management expenses, investment expenses, taxes paid and other charges, the total of cash expenditures net of grant refunds in 2002 was \$71,075,451 while in 2001 the amount was \$75,025,218.

Grants authorized and payments made during the year ended December 31, 2002 are summarized in the following table:

Grants unpaid at December 31, 2001	\$ 65,123,622
Authorized during 2002	51,223,152
Payments during 2002	<u>(58,882,225)</u>
Grants unpaid at December 31, 2002	<u>\$ 57,464,549</u>

The fair value of the Foundation's total assets was \$1,170,659,494 at December 31, 2002 including investments valued at \$1,170,284,470 as compared with total assets of \$1,314,367,357 at December 31, 2001.

AUDITORS' REPORT

Report of KPMG LLP
Independent Auditors

The Board of Trustees
Alfred P. Sloan Foundation

We have audited the accompanying balance sheets of the Alfred P. Sloan Foundation as of December 31, 2002 and 2001, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the Foundation's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly in all material respects, the financial position of the Alfred P. Sloan Foundation as of December 31, 2002 and 2001, and the changes in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary information included in the schedules of management and investment expenses for the years ended December 31, 2002 and 2001 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

KPMG LLP

February 14, 2003
New York, New York

BALANCE SHEETS
DECEMBER 31, 2002 AND 2001

	<u>2002</u>	<u>2001</u>
Assets		
Cash	\$ -	\$ 674,416
Investments:		
Equities	836,244,737	951,822,670
Fixed income	223,547,193	251,483,730
Limited marketability	110,492,540	109,457,715
Total investments	<u>1,170,284,470</u>	<u>1,312,764,115</u>
Other	375,024	928,826
Total	<u>\$1,170,659,494</u>	<u>\$1,314,367,357</u>
 Liabilities and Net Assets		
Grants payable	\$ 57,464,549	\$ 65,123,622
Deferred federal excise tax	-	640,078
	<u>57,464,549</u>	<u>65,763,700</u>
Net assets - unrestricted	1,113,194,945	1,248,603,657
Total	<u>\$1,170,659,494</u>	<u>\$1,314,367,357</u>

See accompanying notes to financial statements.

STATEMENTS OF ACTIVITIES
YEARS ENDED DECEMBER 31, 2002 AND 2001

	<u>2002</u>	<u>2001</u>
Investment Income:		
Interest and dividends	\$ 21,305,487	\$ 31,463,443
Less:		
Investment expenses	6,840,614	7,482,748
Provision for taxes	340,000	1,065,000
	<u>7,180,614</u>	<u>8,547,748</u>
Net investment income	<u>14,124,873</u>	<u>22,915,695</u>
Expenses:		
Grants authorized (net of refunds of \$287,174 in 2002 and \$537,658 in 2001)	50,935,978	58,467,848
Management expenses	5,496,761	5,053,842
	<u>56,432,739</u>	<u>63,521,690</u>
Excess of expenses over net investment Income	<u>(42,307,866)</u>	<u>(40,605,995)</u>
Investment Gains (Losses):		
Net (loss) gain on disposal of investments	(8,603,348)	52,200,029
Unrealized loss in investments, net of deferred federal excise tax	(84,497,498)	(66,974,710)
	<u>(93,100,846)</u>	<u>(14,774,681)</u>
Decrease in net assets	(135,408,712)	(55,380,676)
Net assets at beginning of year	1,248,603,657	1,303,984,333
Net assets at end of year	<u>\$1,113,194,945</u>	<u>\$1,248,603,657</u>

See accompanying notes to financial statements.

STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2002 AND 2001

	<u>2002</u>	<u>2001</u>
Cash Flows From Operating Activities:		
Decrease in net assets	\$ (135,408,712)	\$ (55,380,676)
Adjustments to reconcile decrease in net assets to net cash used in operating activities:		
Net loss (gain) on disposal of investments	8,603,348	(52,200,029)
Unrealized loss in investments	85,137,576	68,341,541
Decrease in deferred federal excise tax	(640,078)	(1,366,831)
Decrease (increase) in other assets	553,802	(928,826)
Increase in other liabilities	-	(189,746)
Decrease in grants payable	(7,659,073)	(1,837,208)
Net cash used in operating activities	<u>(49,413,137)</u>	<u>(43,561,775)</u>
Cash Flows From Investing Activities:		
Proceeds from sales of investments	2,189,765,469	1,861,743,622
Purchases of investments	(2,141,026,748)	(1,818,035,247)
Net cash from investing activities	<u>48,738,721</u>	<u>43,708,375</u>
Net (decrease) increase in cash	<u>(674,416)</u>	<u>146,600</u>
Cash at beginning of year	674,416	527,816
Cash at end of year	<u>\$ -</u>	<u>\$ 674,416</u>

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

The accompanying financial statements have been prepared substantially on the accrual basis of accounting. Investment income and investment and management expenses, including post-retirement benefit expense, are recorded on the cash basis, the effect of which on the accompanying financial statements is not materially different from the accrual basis. Grants are accrued when authorized by the Trustees. Certain accounting estimates are a routine part of financial statements prepared by management and are based upon management's current judgments. Actual results could differ from these estimates.

Gains or losses on disposal of investments are determined on the first-in, first-out basis. Fair value for public securities is based on quoted market prices. Investments within equity hedge funds, focused equity strategies, and limited marketability are reported at estimated fair values based upon information provided by the managers of the various interests.

2. Investments

Investments at December 31, 2002 and 2001 are summarized as follows:

	2002		2001	
	<i>Cost</i>	<i>Fair Value</i>	<i>Cost</i>	<i>Fair Value</i>
<i>Equities</i>				
Large Capitalization	\$ 252,577,939	\$ 231,173,300	\$ 262,158,712	\$ 281,720,729
Small Capitalization	63,472,827	60,760,185	100,996,665	106,961,935
Equity Hedge Funds	125,000,000	120,098,184	100,000,000	114,521,734
Focused Equity Strategies	239,499,558	252,341,161	250,921,255	262,311,600
Non-U S	168,693,073	169,638,356	181,024,490	187,715,428
Pending equity transactions, net	2,233,551	2,233,551	(1,408,756)	(1,408,756)
<i>Fixed Income</i>				
Bonds and Notes	128,155,398	134,083,960	190,662,424	192,775,953
Pending and fixed income transactions, net	122,373,650	122,373,650	105,738,674	105,738,674
Obligation to return collateral held under securities lending agreement	(32,910,417)	(32,910,417)	(47,030,897)	(47,030,897)
<i>Limited Marketability</i>				
Real Estate	6,027,515	4,037,352	7,133,215	4,896,753
Private Equity	148,295,059	106,455,188	131,050,009	105,046,531
Pending limited marketability transactions, net	-	-	(485,569)	(485,569)
Total	<u>\$1,223,418,153</u>	<u>\$1,170,284,470</u>	<u>\$1,280,760,222</u>	<u>\$ 1,312,764,115</u>

2. Investments (continued)

At December 31, 2002, the Foundation had unfunded commitments to limited partnerships of approximately \$142 million.

3. Financial Instruments with Off-Balance-Sheet Credit or Market Risk

The Foundation's investment strategy incorporates certain financial instruments which involve, to varying degrees, elements of market risk and credit risk in excess of the amounts recorded in the financial statements. These instruments include financial futures, forward foreign currency contracts and loaned securities.

The Foundation is subject to market risk associated with the changes in the value of the futures contracts. Below is a table summarizing the long and short exchange-traded financial futures positions at December 31, 2002 and 2001.

	<u>2002</u>		<u>2001</u>	
<u>Futures Contracts</u>	<u>Number of Contracts</u>	<u>Value (Millions)</u>	<u>Number of Contracts</u>	<u>Value (Millions)</u>
<i>U.S. Treasury Futures</i>				
Long	260	\$ 52.6	47	\$ 8.2
Short	(463)	(66.4)	(275)	(28.9)
<i>Eurodollar Futures</i>				
Long	288	70.5	-	-

These amounts, however, may differ from the Foundation's future cash requirements as the Foundation may close out futures positions prior to settlement and thus be subject only to the change in value of the futures contracts since the contracts are valued daily using the mark-to-market method. The net appreciation in the market value is recognized as received. The margin requirements on deposit with a third party for futures contracts were approximately \$1.0 million at December 31, 2002 and \$0.5 million at December 31, 2001.

The Foundation purchases forward foreign currency contracts as a hedge against fluctuations in currency prices. Forward foreign currency buy and sell contracts held as of December 31, 2002 were valued at approximately \$6.1 million and \$5.9 million, respectively, and, as of December 31, 2001, at approximately \$12.4 million and \$11.7 million, respectively. Such contracts involve, to varying degrees, risk of loss arising from the possible inability of counterparties to meet the terms of the contract.

3. Financial Instruments with Off-Balance-Sheet Credit or Market Risk (continued)

Through a securities lending program managed by a custodian firm, the Foundation loans certain stocks and bonds included in its investment portfolio. The custodian firm has indemnified the program. The Foundation's gross securities loaned to certain borrowers at December 31, 2002 and 2001 amounted to \$32 million and \$46 million, respectively. The Foundation holds collateral of 103 percent of the market value of the lent securities.

Management does not anticipate that losses, if any, resulting from its market or credit risks would materially affect the financial position of the Foundation.

4. Taxes

The Foundation is liable for a federal excise tax of 2 percent of its net investment income, which includes realized capital gains. However, this tax is reduced to 1 percent if certain conditions are met. The Foundation met the requirements for the 1 percent tax for the years ended December 31, 2002 and December 31, 2001. Therefore, current taxes are estimated at 1 percent of net investment income for 2002 and 2001. Additionally, certain of the Foundation's investments give rise to unrelated business income tax liabilities. Such tax liabilities for 2002 and 2001 are not significant to the accompanying financial statements; however, the provision for taxes, as of December 31, 2002 and 2001, includes an estimate of tax liabilities for unrelated business income.

Deferred taxes principally arise from differences between the cost value and fair value of investments. Since the qualification for the 1 percent tax is not determinable until the fiscal year in which net gains are realized, deferred taxes represent 2 percent of unrealized gains or losses of investments. There is no deferred tax liability at December 31, 2002 because the fair value of investments is less than cost on that date.

5. Retirement Plan

The Foundation has a defined contribution retirement plan covering substantially all employees under arrangements with Teachers Insurance and Annuity Association of America and College Retirement Equities Fund which provides for the purchase of annuities for employees. Retirement plan expense was \$465,483 and \$415,422 in 2002 and 2001, respectively. In addition, the Foundation provides certain health care and life insurance benefits to its retirees. The cost of providing these benefits to retirees was \$136,170 and \$115,688 in 2002 and 2001, respectively, on a pay-as-you-go basis.

6. Lease

The Foundation entered into a ten-year lease effective January 1, 1999. The lease contains an escalation clause which provides for rental increases resulting from increases in real estate taxes and certain operating expenses. Annual base rent expense is approximately \$652,000. Rent expense for 2002 and 2001, including escalations, was \$742,515 and \$667,303.

**SCHEDULES OF MANAGEMENT AND INVESTMENT EXPENSES
YEARS ENDED DECEMBER 31, 2002 AND 2001**

	<u>2002</u>	<u>2001</u>
Management expenses		
Salaries and employees' benefits:		
Salaries	\$3,555,612	\$3,370,482
Employees' retirement plan and other benefits	<u>1,362,088</u>	<u>1,191,625</u>
Total	4,917,700	4,562,107
Rent	742,515	667,303
Program expenses	698,064	630,363
Office expenses	511,147	508,046
Website and publications	52,804	50,654
Professional fees	<u>241,018</u>	<u>300,549</u>
Total management expenses	7,163,248	6,719,022
Less management expenses allocated to investments	<u>1,666,487</u>	<u>1,665,180</u>
Management expenses	<u>\$5,496,761</u>	<u>\$5,053,842</u>
Investment expenses		
Investment management fees and expenses	\$5,174,127	\$5,817,568
Management expenses allocated to investments	<u>1,666,487</u>	<u>1,665,180</u>
Investment expenses	<u>\$6,840,614</u>	<u>\$7,482,748</u>