

# ALFRED P. SLOAN FOUNDATION

2011 Annual Report



# Contents

<b>Mission Statement</b>	<b>2</b>
<b>President's Letter</b>	<b>3</b>
<b>2011 Grants by Program</b>	<b>13</b>
<b>2011 Financial Review</b>	<b>84</b>
<b>Audited Financial Statements and Schedules</b>	<b>86</b>
<b>Board of Trustees</b>	<b>113</b>
<b>Staff</b>	<b>114</b>
<b>Index of 2011 Grant Recipients</b>	<b>115</b>

# Mission Statement

The **ALFRED P. SLOAN FOUNDATION** makes grants primarily to support original research and broad-based education related to science, technology, economic performance, and the quality of American life. The Foundation is unique in its focus on science, technology, and economic institutions—and the scholars and practitioners who work in these fields—as chief drivers of the nation’s health and prosperity. The Foundation has a deep-rooted belief that carefully reasoned systematic understanding of the forces of nature and society, when applied inventively and wisely, can lead to a better world for all. The Foundation’s endowment provides the financial resources to support its activities. The investment strategy for the endowment is to invest prudently in a diversified portfolio of assets with the goal of achieving superior returns.

In each of our grants programs, we seek proposals for original projects led by outstanding individuals or teams. We are interested in projects that have a high expected return to society, and for which funding from the private sector, government, or other foundations is not yet widely available.

# President's Letter

Dr. Paul L. Joskow



I am pleased to introduce the 2011 Annual Report of the Alfred P. Sloan Foundation. The report contains descriptions of our grantmaking programs, a list of all grants made by the Foundation in 2011, a financial review and audited financial statements, and the names of the Foundation's Trustees and staff. My letter provides an overview of the Foundation's grant activity in 2011—focusing on new programs or those gaining momentum, as well as those that were restructured or came to an end—and concludes with some general reflections on grantmaking strategies for a foundation of our size and mission.<sup>1</sup>

The Alfred P. Sloan Foundation's mission is to make grants to support research and broad-based education in science, technology, economic performance, and the quality of American life. We also look for special opportunities to support projects that benefit the residents of the New York metropolitan area, where our staff and their families live, work, and attend school, and to fund select projects that reflect critical national needs.

The funds available to the Foundation to support its grantmaking and management come from our endowment, which was created by gifts from Alfred P. Sloan Jr., and which is managed by the Foundation's investment team with the support of our Investment Committee. Our investment team performed well under challenging market conditions and earned a 2.3% percent rate of return during calendar year 2011. As of December 31, 2011, the value of the Foundation's endowment stood at approximately \$1.6 billion.

## Basic Research

One of the most rewarding aspects of the Sloan Foundation's grantmaking is its support of new and emerging fields of scientific inquiry. New areas of science and technology research are often perceived to be too risky to attract funding from major federal agencies like the National Science Foundation and the National Institutes of Health or have difficulty finding a funding "slot" between established programs which have budget lines reserved for them. The Foundation focuses its research grants in emerging areas and community-building infrastructure to support pioneering researchers as they attempt to develop

<sup>1</sup> This letter is a collective effort that has relied on contributions of many members of the Sloan Foundation's staff. I want to thank Nate Williams, Anne McKissick, Gail Pesyna, Jesse Ausubel, Kathleen Christensen, Danny Goroff, Liz Boylan, Josh Greenberg, Paula Olsiewski, Doron Weber, Siboluo, and Sonia Epstein for their contributions.



and test new theories, build new instruments, create new data sets, and publish their research in top academic journals. In this way the Foundation has played a vital role in the development of the now-thriving disciplines of computer science, computational biology, theoretical neurobiology, and behavioral economics. In addition, Foundation grants supporting infrastructure and community-building have led to new templates, technologies, and standards for the collection, organization, and open access of scientific research and data. The Sloan Digital Sky Survey, the Census of Marine Life, and the Encyclopedia of Life are good examples.

The newest entrant in this longstanding Foundation tradition is the emerging field of indoor microbial ecology. Americans spend about 90% of their time indoors<sup>2</sup>, yet most research and policy has focused on the outdoor environment. The Foundation's program supporting research on the indoor microbial environment, led by Program Director Paula Olsiewski, is supporting research focused on

accurately characterizing the attributes of the indoor microbial environment and how it is affected by building attributes, building use, the external environment, and other factors. Initial research results make clear that indoor environments are as complex and interrelated as savannahs, swamps, and rainforests, supporting thriving invisible communities of bacteria, fungi, and other microbes that live alongside humans in the buildings where we work, rest, and play. In 2011, the Foundation committed over \$3 million in grants for research and community-building to researchers studying the microbiology of built environments, including an exciting project by the University of Colorado to study microbial populations in municipal water systems, a grant to Yale University to study airborne bacterial communities, and funds to expand DNA barcoding libraries to identify the staggering array of fungi that can be found inside buildings.

Initiated with Sloan funds in 2009 and led by Vice President Jesse Ausubel, the Deep Carbon Observatory (DCO)—an exciting multidisciplinary, decade-long, international scientific research program headquartered at the Carnegie Institution of Washington—is devoted to revolutionizing our understanding of the abundance, distribution, move-

2 The Inside Story: A Guide to Indoor Air Quality. U.S. EPA/ Office of Air and Radiation. Office of Radiation and Indoor Air (6609J) Cosponsored with the Consumer Product Safety Commission, EPA 402-K-93-007. <http://www.cpsc.gov/cpsc-pub/pubs/450.html>

ment, and properties of carbon under the earth's surface. With \$13 million in Foundation support thus far, DCO's structure is now complete with the launch of four scientific directorates—Reservoirs and Fluxes, Deep Energy, Deep Life, and Physics and Chemistry of Extreme Environments.

In most of our basic research programs and most of our educational initiatives, we expect that our grants will help catalyze new areas of inquiry, and that these funds will be leveraged with funding from other government, foundation, and private sources as the value of the research program becomes more widely recognized. For programs like the Sloan Digital Sky Survey, neurobiology, computational biology, the Census of Marine Life, the Encyclopedia of Life, etc., Sloan funds represented a small fraction of the funding as these programs reached maturity. Once the programs reached maturity or achieved their goals, the Foundation gradually withdrew its financial support.

Responsible scientific research practices must incorporate an understanding of both the potential benefits and the potential adverse effects of this research on society. Acceptable research practices should apply protocols that minimize the potential risks in ways that are not excessively burdensome on scientific inquiry. The Foundation's program in Synthetic Biology, also led by Dr. Olsiewski, partners with scientists, ethicists, and policymakers to identify and examine the risks and rewards of this rapidly advancing field, aiming to forge a consensus around a series of best practices and institutional frameworks sensitive to the ethical and physical dangers associated with synthetic biology research, while allowing and encouraging exciting new discoveries in the field. In 2011, the Foundation committed \$3.5 million in grants to work in this area, including major grants that continue our ongoing partnerships with ethicists and academics at the non-partisan Woodrow Wilson International Center for Scholars and The Hastings Center.

The Foundation's oldest continuous initiative is the Sloan Research Fellowship program, which was started by Mr. Sloan himself in 1955 and is now led by Program Director Daniel Goroff. The fellowships aim to stimulate fundamental research by supporting the work of outstanding scholars at early stages of their academic careers. In 2011, the Foundation awarded 118 fellowships to researchers chosen by independent selection committees across seven scientific and technical fields: chemis-

try, computational and evolutionary molecular biology, computer science, economics, mathematics, neuroscience, and physics. In 2011 the first nominations in the field of ocean sciences were solicited, with the first awards made in early 2012.

### **STEM Higher Education**

2011 was a year of transition for the Foundation's programs that focus on higher education in science, technology, engineering, and mathematics (STEM). In February, I invited Dr. Elizabeth S. Boylan to join the Foundation as our new program director overseeing the Foundation's education-related grantmaking. As the former provost of Barnard College, Dr. Boylan—a biologist by training—has organized, supported, and advanced student and faculty diversity for 16 years. Under her leadership, the Foundation is conducting an inventory of its STEM Higher Education grantmaking programs and reviewing how well the programs' strategy and structure advance the Foundation's goals of increasing the quality and diversity of American higher education in STEM fields. Plans for the future include an expansion of the Foundation's goals to include promoting diversity all along the academic career path while focusing on high-quality, hypothesis-driven research on the factors driving student outcomes and retention in STEM fields at the undergraduate and graduate levels.

### **Public Understanding of Science, Technology, Engineering, Mathematics, and Economics**

Sloan's multi-faceted Public Understanding program is led by Vice President Doron Weber. The program supports books, film, radio, television, theater, and other media that promote the public understanding of natural science, technology, engineering, mathematics, economics and the lives of those who have devoted themselves to advancing knowledge in these areas. The Public Understanding program had many successes in 2011. The year saw the publication of two works supported through our Books program. *Hedy's Folly*, Richard Rhodes' biography of Hedy Lamarr—one of the most celebrated actors of Hollywood's golden age who was also a talented, though underappreciated, inventor—was published to both critical and commercial success and has since gone into its third printing. Also published was *Time Machines*, Stanley Greenberg's photographic tour of some of the most important experiments of modern physics, giving readers a unique look into what the machinery of modern science looks like, from laboratories to particle accelerators.



Published in 2011 to critical acclaim, Richard Rhodes' *Hedy's Folly* tells the remarkable story of how Hedy Lamarr, one of the most celebrated stars of Hollywood's golden age, was also a brilliant (though underappreciated) inventor. (PHOTO COURTESY OF DOUBLEDAY)

In Film, the Foundation's partnerships with the Tribeca, Sundance, and Hampton's film festivals continued to provide a valuable platform for supporting filmmakers who explore scientific and technical themes and raise the visibility of films and scripts that involve science or feature scientists, technologists, or engineers as major characters. Outside the festivals, the Film program continues to innovate, with a major grant funding the expansion of an imaginative program at

the Coolidge Corner Theater in Boston, a local art house theater that screens science-themed films followed by a panel discussion of the scientific content led by local scientists. With Sloan support, the program—called *Science on Screen*—is expanding, inviting art house theaters from all over the country to hold similar events, entertaining and educating movie-goers at the same time. This initiative is a low-cost way to disseminate the program developed by the Coolidge Corner Theater to similar theaters around the country and to engage scientists in educating the public through discussions of films.

I am also pleased to congratulate the excellent team at *Radiolab*, the popular science-themed radio broadcast and longtime Sloan grantee, which received a much-deserved Peabody award in 2011. In Television, 2011 saw the debut of a four-part *NOVA* documentary about physicist Brian Greene's in-depth look at the physics of space and time, *Fabric of the Cosmos*, and an excellent season of WGBH's *American Experience*, which included a well-rounded, accessible, and highly popular episode on the construction of the Panama Canal.

### Digital Information Technology

Grantmaking in the Foundation's new program in Digital Information Technology—which focuses on leveraging developments in information technology to improve the quality of scientific research and democratize access to knowledge—began its first major grantmaking in 2011. This program is led by

Program Director Joshua Greenberg. The Foundation committed more than \$4 million in grant funds for a variety of projects, including support for the expansion of an innovative initiative led by Chicago's Adler Planetarium that invites citizen scientists to meaningfully participate in scientific work, a grant to UCLA to study how researchers in different fields use information technology to manage data, a grant to explore the possibilities and promise of research on restricted-access materials, and a series of grants aimed at developing platforms for helping researchers access and organize scholarly material on the Internet. The Foundation has also supported the planning and development of the Digital Public Library of America (DPLA), a collaborative project by a diverse collection of libraries, cultural organizations, and technologists to create the first national digital library. The DPLA initiative is led by Vice President Doron Weber.

### Economic Performance and Quality of Life

The Foundation's program in Economic Institutions, Behavior, and Performance, initiated in 2009, saw its first major outputs in 2011. This program is led by Program Director Daniel Goroff with additional grants developed by Vice President Gail Pesyna. With support from Sloan, the Brookings Institution—working with the Committee for International Monetary Reform—issued *Rethinking Central Banking*. The report, drawing lessons from the latest research on the causes of the 2008 world financial crisis, issued practical recommendations on how central banks and other financial actors should reform to increase the stability of the global financial system. Also in 2011, the Foundation committed more than \$10 million to additional projects, including core support for the influential *Brookings Papers on Economic Activity*, as well as funds toward ensuring the continuation and enhancement of the Penn World Tables, constructing a major publicly accessible research database of U.S. bankruptcy records, and understanding the factors affecting immigration in the high-skilled labor force.

The Foundation's new Working Longer program also made major grants in 2011. This program is led by Program Director Kathleen Christensen. The aging of the U.S. population, as well as the populations of most other developed countries, is creating profound social, economic, and political challenges. The Great Recession, the disappearance of traditional defined benefit pension plans, longer life expectancies, and rapidly rising health care

costs have made these challenges even more difficult. It is clear to me that a growing fraction of the work force will continue to seek full or part-time work opportunities both for economic reasons and for personal satisfaction. There are many barriers that make it difficult for older workers to continue to find satisfying job opportunities, to ease into retirement gracefully and at their own pace, and to take full advantage of public and private programs that provide financial support for older Americans—Social Security, Medicare, Medicaid, defined contribution pension plans, etc. Projects supported by this program include a partnership with the National Bureau of Economic Research to create a fellowship program for early-career economists working on issues of aging and work, grants to fund research on how employer policies and work environment affect older workers' decisions about when and how to retire, and a project by the University of Michigan's Research Data Center to link data collected through the National Institute on Aging's *Health and Retirement Study* with the Business Register of the U.S. Census, creating a unified dataset that will for the first time allow researchers to correlate health outcomes with employer characteristics. In addition, grants from prior years began to show results. A 2011 Foundation-supported conference hosted by the American Council on Education brought together top academic officers from over 100 universities to candidly discuss demographic, economic, and cultural issues around faculty retirement, an increasingly pressing issue given the aging of the U.S. professoriate.

Dr. Christensen also led the Foundation's Workplace, Workforce, and Working Families program. Though major grantmaking in the program ended in 2010, the legacy of the Foundation's work in the area of work-family scholarship continues. In one of the most significant achievements of the program, the National Science Foundation (NSF) announced—citing Sloan Foundation research—several key changes to its policies aimed at increasing the workplace flexibility available to NSF researchers. Policy changes included grant extensions for childbirth or adoption, grant suspension for parental leave, the provision of funds to hire technicians for grantees on family leave, and permission for scientists with child- or elder-care responsibilities to participate “virtually” on NSF review panels while continuing to meet family obligations. The changes will positively affect the lives of the thousands of scientists whose research is funded through the NSF.



Participants hard at work at the 2011 Science Hack Day in San Francisco. (PHOTO COURTESY OF FLICKR USER GRETCURTIS. LICENSE: CC BY 2.0)

### Civic Initiatives

The Foundation has been headquartered in New York City since its founding in 1934. Our Civic Initiatives program aims to benefit the New York City metro area in ways consonant with the Foundation's other interests in science, technology, engineering, mathematics, and economics. Dr. Olsiewski leads this program, though all Sloan program directors seek grantmaking opportunities that benefit the New York City metropolitan area. A 2011 grant to the City University of New York (CUNY) supported the creation of two fellowship programs: one supporting CUNY's high quality junior faculty in STEM disciplines; and a second giving CUNY undergraduates the opportunity to spend their summers working in CUNY labs, providing valuable experience in the actual practice of science. Other grants funded the Museum of Mathematics, to create portable math-oriented exhibits for use at science festivals around the country; and George Mason University, for a project using an innovative new technology to facilitate the participation of New Yorkers in the state redistricting process.



The Foundation continues its partnership with the Fund for the City of New York to make awards each year to outstanding New York City civil servants. In 2011, with the Foundation's support, we gave the second set of awards in our new project to recognize outstanding science and math teachers in New York City public high schools.

### Select Projects

New grantmaking largely ended in 2010 for the decade-long Biosecurity program, also led by Dr. Olsiewski. The program's achievements were celebrated in 2011 with a capstone event in Washington D.C. that brought together Sloan grantees, government officials, academics, and policymakers to assess the state of biosecurity in the ten years since the September 11th attacks, to identify areas in need of improvement and increased attention, and to assess the legacy of Sloan grantmaking in this area. Other biosecurity grants completed in 2011 include a landmark study by the University of Minnesota's Michael Osterholm on the effectiveness of government responses to the 2010 flu pandemic and a report by former Secretary of the Navy Richard Danzig on the methods and motivations of Aum Shimrikyo, based on in-person interviews with members of the Japanese terror cell that successfully released sarin gas into the Tokyo subway system in 1995.

The Foundation also has a long-standing interest in promoting selected research and outreach activities on important developments in energy supply and demand technologies, energy security, and nuclear safety and proliferation issues. Recent media coverage of the issues surrounding the extraction of natural gas from shale deposits has generated considerably more heat than light. The Foundation sought to bring sober, unbiased analysis to the issue through two major grants on shale gas in 2011. The first grant funded an interdisciplinary team of geologists and economists at the University of Texas at Austin to estimate the impact of shale gas deposits on the U.S. natural gas market under a variety of assumptions about natural gas prices. The second funded non-partisan think tank Resources for the Future to evaluate and suggest improvements to the current regulatory regime governing shale gas extraction.

A large fraction of the Foundation's grants go to scholars at colleges, universities, and non-profit research institutions. Maintaining the ability of scholars to pursue their research and teaching without fearing for their freedom or their lives is thus of considerable interest to the Foundation. In 2011, the Foundation provided major funding to the Scholar Rescue program headquartered at the Institute of International Education. This important program provides financial assistance



and placement services to scientists and other researchers living under repressive regimes, providing temporary asylum and relocation for scholars whose academic work has put them and their loved ones in danger.

### Concluding Reflections

As this letter is written (August 2012), I am completing my fifth year as president of the Alfred P. Sloan Foundation. The foundation world was new to me when I became president of the Foundation in 2008, and I have since learned a lot about “the foundation and grantmaking business” from my colleagues at Sloan, colleagues at other foundations, and from our grantees. I want to take this opportunity to offer a few reflections about what I have learned and how this has affected the Sloan Foundation’s grantmaking strategy. My thoughts on the topics addressed below have changed over time and no doubt will change in the future.

The universe of worthy philanthropic opportunities is vast. The resources at the Foundation’s disposal, though substantial, are not without limit. We must decide how to allocate the resources available to us among this vast set of philanthropic opportunities so that our funds advance our goals and are managed and used efficiently. Accordingly, it is not unreasonable to ask what principles and procedures guide our grantmaking decisions and how we structure funding arrangements at the program and grant level.

We are guided, first and foremost, by our Mission Statement. Stated simply, it is this: The Alfred P. Sloan Foundation supports research and education in science, technology, engineering, mathematics, economic performance, and the effects of progress in these disciplines on the quality of American life. It is a narrow mission, but narrow as it is, it is not nearly narrow enough. Research and education in science, technology, and economics are costly and potentially include a wide range of disciplines and philanthropic opportunities. In 2011, the Sloan Foundation approved grants totaling some \$75 million. In that same year, the combined budgets of the National Science Foundation and the National Institutes of Health—the two government agencies that fund the majority of scientific research in the U.S.—totaled \$37 billion. That total does not account for the significant research funds allocated through the Department of Energy and the Department of Defense, nor for contributions from other foundations and from individuals and private

industries that support basic and applied science research. The Sloan Foundation’s annual grant expenditure of \$75 million or so may seem like big money—and it is—but it makes up a tiny fraction of federal government spending to support basic research and education, even if we limit ourselves only to science, technology, engineering, and economics. If we are to have any measureable impact that advances the goals of our Mission Statement, we must use what funds we have wisely.

The small size of the annual grants that can be supported by the Foundation’s endowment relative to total national spending by government and foundations on science, technology, and economics explains much of what we do not fund. To take one example, in its earliest years the Foundation was heavily involved in medical research and development—the nation’s premiere cancer treatment facility, Memorial Sloan Kettering Cancer Center, bears the Sloan name in tribute to those early efforts—but, in the intervening decades, medical research has become a thriving, well-funded endeavor, and the opportunity for a foundation of our size to have a meaningful impact in the area is now very limited. As such, the Foundation no longer funds medical research. Our limited means also explain why we are not involved in the support of capital-intensive disciplines like high energy particle physics or worthwhile, but expensive, (and expensive) areas like K-12 education, except for selected projects to enhance educational opportunities in STEM fields through our Civic Program.

Instead, the Foundation has adopted an integrated series of seven strategies designed to maximize the impact of our grantmaking and exemplified by our current grant programs.

1. **Support new or neglected areas of scientific inquiry.** Some promising projects are deemed too risky, too untried, or, frankly, not sexy enough to attract attention from larger funding institutions. What is needed is a funder with a high tolerance for risk who can provide crucial start-up funds to support initial research, foster collaboration, build nascent scientific communities, develop consensus around standards for data collection and analysis, and, with luck, stimulate interest in the field by large, established funding agencies. The Foundation strives to be just such an institution, and has a long tradition of successfully incubating new and neglected disci-

plines. At present this strategy is exemplified in our Microbiology of the Built Environment program, as well as in our support for graduate students drawn from underrepresented minorities seeking advanced degrees in STEM fields. It is also apparent in the Foundation's Working Longer program, where much work needs to be done to better understand the complex interplay of legal, economic, and sociological factors affecting (and constraining) older workers' decisions to retire.

Supporting new science does not merely mean supporting new areas of scientific inquiry, however. Supporting new science also means supporting new *scientists*, which is the motivating concern of the Sloan Research Fellowship program, which aims to provide crucial research support to promising young scholars early in their careers. As it becomes more and more difficult for researchers to obtain research grants for basic research from federal funding agencies, it is especially important for us to identify, recognize, and reward promising young scholars who are entering a funding environment that will be much more difficult than the environment faced by their older colleagues.

2. **Support projects where Foundation support can be leveraged to secure other funds.** The relatively small size of the annual grants that can be supported from the Foundation's endowment does not mean that the Foundation cannot be involved in major scientific endeavors. What it does mean is that the Foundation's investment will, ultimately, provide only a small fraction of the project's total cost. Many of our major grant programs anticipate that grantees will eventually seek and obtain a large fraction of their research funds from other sources. In such cases, the total amount of Foundation support is less important than when it is provided and what it funds. Using this strategy, the Foundation looks for opportunities to support the initial phases of large, collaborative scientific projects, providing funds for initial research, institutional infrastructure, and the development of effective governance mechanisms that can in turn be leveraged into major support from other actors. The Sloan Digital Sky Survey, the Census of Marine Life, the ALN on-line learning program, and the new

Deep Carbon Observatory initiative are good examples of how this model can work.

3. **Identify and support areas where scientific collaboration can bring about meaningful progress.** Science is incremental. Meaningful progress is made through the slow accumulation of small advances. Many of the most important advances in science, technology, and economics are the results of contributions by several individuals and/or teams of researchers. By bringing groups of researchers together to work on similar or related issues, the Foundation can speed the rate of scientific advance, accelerating the pace of progress. This strategy is operative in most of the Foundation's programs, none more clearly than in our Economic Institutions, Behavior, and Performance program, where the Foundation has funded several collaborations devoted to bringing coordinated scholarly attention to pressing national issues. In a successful joint effort with the Russell Sage Foundation, for example, Sloan has brought together leading behavioral economists to study the vagaries of consumer financial behavior. In another effort, the Foundation is working with top economists, regulators, and financial experts to bring much needed scholarly attention to issues raised by the 2008 global financial crisis. A new focus in our STEM Higher Education grantmaking will be to work with organized consortia of educational institutions that will allow advances in STEM pedagogy to effectively propagate across institutions, affecting many more students than would be possible through grants to a single college or university.
4. **Recognize that foundations do not have a monopoly on good ideas or in the evaluation of proposal quality.** First and foremost, what foundations bring to the table is money! Second, we must recognize that it is our grantees who should get the credit for producing high quality research and educational materials. Third, the Foundation's staff members are intermediaries that seek to identify promising areas for research and public education, identify the best people to pursue them, and provide grant support to match up the promising research and public education opportunities with the people most likely to advance them successfully. The Sloan Foundation has a small but outstanding staff

of program directors and program associates. They are good judges of promising programs and promising grantees to achieve the goals of our programs. However, they recognize that they do not have a monopoly over good ideas or over judgments about the quality of grant proposals and the output produced by our grantees. As a result, I have implemented a number of changes in our procedures for deciding whether or not to start new grant programs, their goals and structure, and their evaluation. All major new and existing grant programs must have an outside advisory board that meets regularly to discuss grant-making strategy, and all programs must be subject to scheduled external evaluations. All potential new programs go through a “White Paper” process that ends in a “Roadmap” for the program. The White Paper process starts with a paper discussing the rationale for the proposed program, its goals, its expected duration, an estimate of its cost, and an outline of how it will be evaluated. The White Paper is then distributed to all program directors and a group of outside advisors for discussion. If this discussion leads to a decision to proceed further with the development of the new program, the White Paper is revised, recirculated for discussion, and ultimately presented to our Trustees. This process iterates to a final Roadmap for the program. The ongoing participation of external advisors in this process and the inclusion of clear goals and evaluation criteria in the Roadmap are critical for the success of this process. Finally, I have continued the Sloan Foundation’s policy of requiring external reviews of all grants greater than \$125,000 and an all-program director discussion of each and every grant exceeding \$20,000. I personally read and comment on every proposal that is brought to the weekly program staff meeting for discussion before it is funded (if it’s \$125,000 or less) or presented to the trustees (if the grant is for a larger sum). We have an excellent quality control process that depends upon cooperation among all of the program directors along with external reviewers and advisors.

5. **Bring careful, unbiased analysis to politicized issues.** Good science—by which I mean, careful, non-partisan science—is essential to crafting effective public policy, most especially in areas where powerful actors

have incentives to distort policy to their own ends. The Foundation looks for opportunities where informed, sober analysis has the potential to shed light on public policy disputes. This strategy is most recently exemplified in the Foundation’s grantmaking on high-skilled immigration, where claims of shortages and invocations of crisis more often reflect the desire of various interest groups to advance their own interests than an objective study of the facts. Recent grantmaking in the Foundation’s small energy program also reflect this strategy, with recent grants attempting to provide sound data on issues of nuclear proliferation and storage and on the extraction of natural gas from shale deposits.

6. **Support the role of science as a public good.** In economics, a public good has two basic attributes. Most importantly, it is non-rivalrous in that use by one individual does not reduce the availability or change the cost to any other individual who seeks to use it. It also may be difficult to exclude individuals from using the good and, as a result, there may be no way to pay for the costs of an appropriate quantity of the public good. This creates a difficult tradeoff between policies aimed at facilitating the use of the good once it is produced and policies (like patent and copyright laws) aimed at allowing private producers of the good to charge for using it to cover the costs of production and to provide incentives to produce more goods and to innovate. By charging for the use of the public good, however, its use is necessarily too small, as some consumers are deterred by these prices from using it. It is because of its public goods nature that most basic research is supported by government and philanthropic funds so that it will be produced whether or not its use is potentially excludable. But once that basic research has been paid for and produced with government and philanthropic funds, I believe that a reasonable case can be made that it should be made available to the public either for no charge or a modest charge to cover the costs of distribution. The Foundation seeks to support research and public education that has these public good attributes. It also supports research on policies that have the potential to advance broad access to research and educational materials in ways that do not deter investments to

produce it and to pursue further innovation. That is, we strive to find socially optimal tradeoffs between the incentives to produce and the incentives for broad use of research and educational materials in all media.

Our concern with access to science is not restricted to efforts to make scientific results, papers, and datasets available to the public. Equally important is access to scientific education itself, and to the possibility of scientific careers. And so, through our Education and Advancement for Underrepresented Groups program, the Foundation develops grants and programs aimed at ensuring that high-quality graduate education in the sciences, mathematics, and engineering are open and available to everyone regardless of race or gender. Our commitment to improving public access to science also involves a commitment to improving access for the large swathe of the public with little or no formal scientific training. Thus, our numerous initiatives in the Public Understanding program aim to create entertaining, high quality books, films, plays, and television and radio programs that allow the public to meaningfully access scientific concepts and relate them to everyday life.

7. **Help advance the accuracy, reproducibility, and credibility of scientific research.**

The Foundation supports research in science, technology, and economics; supports initiatives to educate the public about science, technology, and the economy; seeks to educate the public about the people who produce this research; and seeks to make research widely available to the scientific community and the public. These efforts are socially valuable as long as the research that is produced and relied-upon to educate the public follows accepted scientific procedures, can be verified by other scholars, and is credible. Accordingly, the Foundation has been devoting more of its attention to big, open-access data archives; to platforms that facilitate access to and use of data and computational code used in research; and to software that improves accuracy, versioning, citations, and access to scientific papers. The Foundation's Digital Information Technology program is focused on understanding how changes in information technology might meaningfully impact the conduct of science

along a number of dimensions, including supporting the development of new methods for collecting, storing, and sharing data both within the scientific community and with the public. The Foundation's concern with the credibility of science rests in part on the recognition that science as an enterprise depends largely on the public's continued conviction that scientific inquiry is being conducted responsibly. Our program in Synthetic Biology is thus focused on ensuring that this exciting and rapidly maturing discipline advances in ways sensitive to the very real public concern over the risks involved.

I conclude with a few words about our internal governance. Before I came to the Foundation several people told me that I should not expect my staff to work very hard. They would feel entitled to various "goodies" like expensive meals, lavish travel to foreign destinations, expensive hotels, etc. This has not been my experience at all at the Sloan Foundation. The staff members work very hard, take great pride in their work and—most especially—in the work of their grantees, and they are sensitive to controlling operating costs to maximize the funds available for grants. The Sloan Foundation has about 30 employees (including everyone from the reception coordinator to me), and I feel that we operate very efficiently.

I have served on a number of for-profit and non-profit boards. I know from experience that defining and adopting a proper role for the board of trustees and fostering a productive relationship with the officers of the organization is as difficult as it is essential for good performance. The Sloan Foundation has a truly outstanding Board of Trustees. They are all accomplished people with significant expertise in the areas covered by our mission statement. The Trustees use their expertise to provide effective oversight of our grant programs while at the same time giving me, the officers, and the program directors significant responsibility and flexibility to pursue our programs. The staff and I are committed to repaying that trust by crafting an open, communicative relationship with the board, freely sharing our goals, and frankly and candidly evaluating the results of our efforts. Despite their busy schedules and the multiple demands on their attention, our Trustees of the Sloan Foundation have been very generous with their time and their counsel, and I want to take this opportunity to thank them for their service.

# 2011 Grants by Program

<b>About the Grants Listing</b>	<b>14</b>
<b>Sloan Research Fellowships</b>	<b>15</b>
<b>Basic Research in STEM</b>	<b>18</b>
<b>STEM Higher Education</b>	<b>29</b>
<b>Public Understanding of Science and Technology</b>	<b>35</b>
<b>Economic Performance and Quality of Life</b>	<b>46</b>
<b>Digital Information Technology</b>	<b>65</b>
<b>Select Issues</b>	<b>73</b>
<b>Civic Initiatives</b>	<b>79</b>
<b>Other Grants</b>	<b>82</b>

## About the Grants Listing

Grants listed in this report are divided into three types.

**TRUSTEE GRANTS** are grants for amounts greater than \$125,000. All trustee grants are reviewed by an independent panel of experts and are presented quarterly to the Board of Trustees for approval.

**GRANTS MADE AGAINST PRIOR AUTHORIZATIONS** are grants in any amount made from funds set aside by the Board of Trustees to be used for specific purposes. Depending on the amount or subject matter of the grant, grants made against prior authorizations may or may not have been subject to external review by an independent panel of experts. For each authorization, the Foundation reports once yearly to the Board of Trustees about grants made against the authorized funds.

**OFFICER GRANTS** are grants for amounts less than or equal to \$125,000. Depending on the amount or subject matter of the grant, officer grants may or may not have been subject to external review by an independent panel of experts. Officer grants made by the Foundation are reported to the Board of Trustees quarterly.

Grants listed herein are listed by program, then by grant type, then alphabetically by the name of the institution receiving the grant. Not all programs make grants of each type each year.

# Sloan Research Fellowships

**Program Director: Daniel L. Goroff**

These \$50,000 awards go to the most promising early-career scientists and scholars nominated. The purpose is to help them make breakthroughs that significantly advance their fields. In 2011, as in recent years, 126 Sloan Research Fellowships were awarded in eight fields: chemistry (23); computational and evolutionary molecular biology (12); computer science (16); economics (8); mathematics (20); neuroscience (16); ocean sciences (8); and physics (23). Since the program was established in 1955, fellowships totaling over \$135 million have been awarded to more than 5,000 early-career researchers. Of these, 38 Sloan Research Fellows have gone on to become Nobel Laureates; 17 were named Fields Medalists in mathematics; 12 recent Fellows have won the John Bates Clark Medal in economics; and 60 have been recipients of the National Medal of Science. Hundreds of others have received notable prizes, awards, and honors in recognition of their major research accomplishments.

---

## 2011 FELLOWS

---

### **Albert Einstein College of Medicine**

Ertugrul M. Özbudak, MOLECULAR BIOLOGY

### **University of Arizona**

Joshua Eisner, PHYSICS

### **Boston College**

Kian L. Tan, CHEMISTRY

### **Boston University**

Xue Han, NEUROSCIENCE

Pankaj Mehta, PHYSICS

Corey Stephenson, CHEMISTRY

### **Brandeis University**

Christine M. Thomas, CHEMISTRY

### **Brigham Young University**

Jessica S. Purcell, MATH

### **Brown University**

David Badre, NEUROSCIENCE

Anastasia Volovich, PHYSICS

### **University of Calgary**

Curtis P. Berlinguette, CHEMISTRY

### **California Institute of Technology**

Chiara Daraio, PHYSICS

### **University of California, San Francisco**

Jennifer Fung, MOLECULAR BIOLOGY

Vikaas Singh Sohal, NEUROSCIENCE

Leor S. Weinberger, MOLECULAR BIOLOGY



**University of California, Berkeley**

Pieter Abbeel, COMPUTER SCIENCE  
 Per-Olof Persson, MATH  
 David F. Savage, MOLECULAR BIOLOGY  
 Koushik Sen, COMPUTER SCIENCE

**University of California, Davis**

Arne D. Ekstrom, NEUROSCIENCE

**University of California, Los Angeles**

Elissa A. Hallem, NEUROSCIENCE

**University of California, San Diego**

Jennifer N. Cha, CHEMISTRY  
 Joshua S. Figueroa, CHEMISTRY  
 Takaki Komiyama, NEUROSCIENCE  
 Gert Lanckriet, COMPUTER SCIENCE  
 Dragos Oprea, MATH  
 Gene Yeo, MOLECULAR BIOLOGY

**University of California, Santa Barbara**

Katherine A. Byl, NEUROSCIENCE  
 Benjamin Monreal, PHYSICS  
 Cenke Xu, PHYSICS

**University of California, Santa Cruz**

Richard Green, MOLECULAR BIOLOGY

**Carnegie Mellon University**

David G. Andersen, COMPUTER SCIENCE

**The University of Chicago**

Veronica Guerrieri, ECONOMICS  
 Azeem M. Shaikh, ECONOMICS  
 Jesse M. Shapiro, ECONOMICS  
 Amir Sufi, ECONOMICS

**Columbia University**

Sabin Cautis, MATH  
 Dirk Robert Englund, PHYSICS  
 Abhay Narayan Pasupathy, PHYSICS  
 Nathaniel B. Sawtell, NEUROSCIENCE  
 Latha Venkataraman, CHEMISTRY

**Cornell University**

Serena DeBeer, CHEMISTRY  
 Alon Keinan, MOLECULAR BIOLOGY  
 Rafael Pass, COMPUTER SCIENCE  
 Ashutosh Saxena, COMPUTER SCIENCE  
 Mukund Vengalattore, PHYSICS  
 Hakim Weatherspoon, COMPUTER SCIENCE

**Duke University**

Seok-Yong Lee, NEUROSCIENCE

**Georgia Institute of Technology**

Silas D. Alben, MATH  
 Christopher J. Peikert, COMPUTER SCIENCE  
 Shina Tan, PHYSICS

**Harvard Medical School**

Ali Khademhosseini, CHEMISTRY

**Harvard University**

Adam E. Cohen, CHEMISTRY  
 Michael M. Desai, MOLECULAR BIOLOGY  
 John M. Kovac, PHYSICS  
 Vinothan N. Manoharan, PHYSICS  
 Alan Saghatelian, CHEMISTRY

**University of Houston**

Vassiliy Lubchenko, CHEMISTRY

**University of Illinois, Urbana-Champaign**

Ryan C. Bailey, CHEMISTRY

**Johns Hopkins University**

Nadia L. Zakamska, PHYSICS

**Kansas State University**

Christine M. Aikens, CHEMISTRY

**University of Maryland, College Park**

Maria Cameron, MATH  
 Michael A. Levin, PHYSICS

**Massachusetts Institute of Technology**

Laurent Demanet, MATH  
 Jeff Gore, PHYSICS  
 Markus Klute, PHYSICS

**University of Massachusetts, Worcester**

Claire Benard, NEUROSCIENCE

**McGill University**

Brian Chen, NEUROSCIENCE

**Michigan State University**

Matthew Hedden, MATH  
 Ignacio Uriarte-Tuero, MATH  
 Dapeng Zhan, MATH

**University of Michigan**

Volker Elling, MATH  
 Anne J. McNeil, CHEMISTRY

**University of Nebraska, Lincoln**

Carina P. Curto, MATH

**New York University**

Robert Fergus, COMPUTER SCIENCE  
 Jinyang Li, COMPUTER SCIENCE  
 Matthieu Wyart, PHYSICS

**Northwestern University**

Jiaxing Huang, CHEMISTRY  
 Seema Jayachandran, ECONOMICS  
 David McLean, NEUROSCIENCE  
 Emily A. Weiss, CHEMISTRY

**Ohio State University**

Roman Holowinsky, MATH

**The Pennsylvania State University**

William G. Noid, CHEMISTRY

**University of Pennsylvania**

Philip T. Gressman, MATH  
 Robert Mills Strain, MATH  
 Nancy Ruonan Zhang, MOLECULAR BIOLOGY

**University of Pittsburgh**

Mark Rebeiz, MOLECULAR BIOLOGY

**Princeton University**

Mark Braverman, COMPUTER SCIENCE  
 Sylvain Chassang, ECONOMICS  
 Michael J. Freedman, COMPUTER SCIENCE  
 Jenny E. Greene, PHYSICS  
 Mala Murthy, NEUROSCIENCE

**University of Rochester**

T. Florian Jaeger, NEUROSCIENCE  
 David W. McCamant, CHEMISTRY

**Rutgers, State University of New Jersey**

Daniel Seidel, CHEMISTRY

**University of Southern California**

Aaron D. Lauda, MATH

**Stanford University**

Manuel Amador, ECONOMICS  
 Sean Hartnoll, PHYSICS  
 Fei-Fei Li, COMPUTER SCIENCE  
 Michael Ostrovsky, ECONOMICS

**Texas A&M University**

Grigoris Paouris, MATH

**University of Texas, Austin**

Jonathan W. Pillow, NEUROSCIENCE

**University of Toronto**

Sabine Stanley, PHYSICS

**Toyota Technological Institute**

Julia Chuzhoy, COMPUTER SCIENCE

**University of Buffalo, SUNY**

Xiaoqing Li, MATH

**University of Virginia**

Mikhail Ershov, MATH  
 Michael A. Hill, MATH

**University of Washington**

Elhanan Borenstein, MOLECULAR BIOLOGY  
 Xiaosong Li, CHEMISTRY  
 Dustin J. Maly, CHEMISTRY  
 Anup Rao, COMPUTER SCIENCE  
 Georg Seelig, MOLECULAR BIOLOGY  
 Paul A. Wiggins, PHYSICS

**University of Waterloo**

Adrian Lupascu, PHYSICS

**Yale University**

Daniel Abadi, COMPUTER SCIENCE  
 Michael J. Higley, NEUROSCIENCE  
 Maureen D. Long, PHYSICS  
 David A. Spiegel, CHEMISTRY



## Basic Research in STEM

<b>Deep Carbon Observatory</b>	<b>19</b>
<b>Microbiology of the Built Environment</b>	<b>23</b>
<b>Synthetic Biology</b>	<b>26</b>

# Deep Carbon Observatory

## Program Director: Jesse H. Ausubel

This program aims to revolutionize our understanding of the carbon deep in the Earth, including its connections to the origins of life and to the origins, distribution, and abundance of fossil fuels. Through a multidisciplinary international network of scientists and technologists, the Deep Carbon Observatory develops and deploys new instrumentation, collects observations, and performs analyses.

A core grant to the Carnegie Institution of Washington supports the headquarters of the program, which focuses on developing instruments to meet the severe technical challenges associated with probing the high-pressure, high-temperature processes in Earth's deep interior and on operating an organizational infrastructure that sets strategic priorities, engages a network of researchers, and secures funding commitments from institutional partners. Other grants support the design and construction of a pioneering mass spectrometer to measure tiny subterranean volumes of methane, to develop the infrastructure necessary to support the possible drilling of a borehole to the Earth's mantle, to promote efforts to use DNA sequencing to identify

and characterize deep life, and to fund the development of the Observatory's four directorates. The directorates are organized around deep life, deep energy, reservoirs and fluxes of deep carbon, and the extreme physics and chemistry of carbon in high-pressure, high-temperature environments.

---

## TRUSTEE GRANTS

---

### University of California, Davis

DAVIS, CA

*\$1,500,000 over 24 months to initiate the research of the team of the Deep Carbon Observatory concerned with basic physics and chemistry of carbon at the extreme pressure and temperature conditions of Earth's interior.*

**Project Director: Giulia Galli, Professor**

The Deep Carbon Observatory (DCO) as a whole aims to achieve transformational understanding of carbon's chemical and biological roles in Earth's interior. A multidisciplinary, decade-long effort, the DCO consists of a distributed but closely coordinated set of observational efforts and analytical instruments united by shared databases and a commitment to open access. The program leaders have set ambitious global goals, for example, to reduce the range of estimates of total carbon in Earth's mantle from a factor of twenty to a factor of two, to establish the techniques that resolve ambiguities about possible biotic versus abiotic hydrocarbon production, to accomplish the first global 3-D census of deep microbial life (presented in interactive 3-D!), and to produce a comprehensive database of thermochemical properties and speciation of carbon-bearing fluids and phases at the pressure and temperature conditions of the upper mantle.

To meet its objectives, the DCO has organized into four “directorates,” three of which—Reservoirs and Fluxes, Deep Energy, and Deep Life—have already been funded through previous Foundation grants. This grant to the University of California, Davis will provide partial funding for two years of operations of the DCO’s final directorate, concerned with the most basic physics and chemistry of carbon in the extreme conditions of the deep crust and mantle. When we think of basic natural science, we may recall subjects from high school and college courses such as phase diagrams and equations of state. A phase diagram is a type of chart used to show conditions at which thermodynamically distinct phases (such as solid, liquid, or gas) can occur at equilibrium. An equation of state describes a state of matter under a given set of physical conditions such as temperature, pressure, and volume. These are the subjects of the fourth directorate. One reason so little is known about the deep carbon cycle is ignorance of the basic physics and chemistry of carbon at the pressure and temperature conditions of Earth’s interior. Even phase diagrams and equations of state do not exist for relevant carbon-bearing fluids and minerals at the prevailing conditions deep inside Earth. Over the next two years, an international team led by University of California, Davis physicist Giulia Galli will make observations, conduct experiments, and build models concerned with thermodynamics of carbon bearing systems in the crust and mantle, dynamics and kinetics of deep carbon processes, and mineral–fluid interactions under extreme conditions. Its results, such as the database of thermochemical properties, will be essential for the other directorates and for the success of the Deep Carbon Observatory as a whole.

### **Carnegie Institution of Washington**

WASHINGTON, DC

*\$1,499,995 over 24 months to initiate the Reservoirs and Fluxes directorate of the Deep Carbon Observatory.*

**Project Director: Erik H. Hauri, Staff Scientist**

Established in June 2009, the Deep Carbon Observatory (DCO) aims to address two fundamental questions: the origins, abundance, and distribution of hydrocarbons (including so-called fossil fuels) and the origins of life, for which carbon is the key element. The DCO has organized itself into four “directorates,” each tasked with executing a different element of the DCO’s ambitious research agenda. In October 2010, the Foundation supported



Two researchers working with the Deep Carbon Observatory collect gasses venting out of the volcanic Mutnovsky Crater in Kamchatka Peninsula, Russia. The gasses, which originate in the deep Earth, hold clues about the abundance and properties of subsurface carbon. (PHOTO COURTESY OF JESSE H. AUSUBEL)

the launch of the DCO’s first directorate, on deep life. This grant will fund the operation of the second directorate, on deep carbon reservoirs and fluxes.

The ambitious aim of the Reservoirs and Fluxes directorate is to integrate, in an unprecedented way, an interdisciplinary group of researchers to study the upper part of Earth’s deep carbon cycle (about 400 kilometers). In a series of simultaneous research projects, the directorate will engage an international group of researchers to conduct fundamental field, laboratory, and modeling research tracing the origin of carbon at the global mid-ocean ridge system, the addition of carbon to oceanic plates, the subduction of carbon at subduction zones, the release of carbon-bearing fluids in the shallow mantle, the delivery of carbon to sources of subduction zone magmatism, and the emission of carbon from convergent margin volcanoes.



Deep Carbon Observatory scientists trek across a glacier on their way to the volcanic Mutnovsky Crater in Kamchatka Peninsula, Russia. Gasses venting out of the crater give scientists a peek into the chemical and physical processes at work in the deep Earth. (PHOTO COURTESY OF JESSE H. AUSUBEL)

---

### East Carolina University

GREENVILLE, NC

*\$1,499,989 over 24 months to develop the Deep Carbon Observatory's Deep Life Directorate.*

**Project Director: Matthew O. Schrenk, Assistant Professor**

Established in June 2009, the Deep Carbon Observatory (DCO) aims to address two fundamental issues: the origins, abundance, and distribution of hydrocarbons (including so-called fossil fuels) and the origins of life, for which carbon is the key element. The DCO has organized itself into four "directorates," each tasked with executing a different element of the DCO's ambitious research agenda. In October 2010, the Foundation supported the launch of the DCO's first directorate, on deep life. Funds from this two-year grant will provide support for the continuation and expansion of this directorate's research agenda.

The overarching theme of the Deep Life Directorate is understanding microbial transformations in rock-hosted deep subsurface habitats. Over the next two years, researchers organized by the

directorate plan to survey the extent and diversity of subsurface microbial communities, catalog microbial activities relative to their environmental context, and identify relationships between deep subsurface microbial processes and carbon fluxes. Several innovative approaches are planned. For example, Deep Life researchers will lower incubation chambers filled with pre-characterized mineral substrates into boreholes and fracture systems and then observe and measure what ensues. In surface labs, researchers will examine cells that tolerate temperatures above 100 degrees centigrade and pressures approaching 20,000 atmospheres.

---

### Integrated Ocean Drilling Program Management International

WASHINGTON, DC

*\$500,000 over 24 months to develop the roadmap, management, and support for a borehole into Earth's mantle.*

**Project Director: Kiyoshi Suyehiro, President and CEO**

Geologists have dreamed of drilling through the

Mohorovičić discontinuity between Earth’s crust and mantle for more than 50 years. Actual rock from this so-called “Mohole” and observations taken along the way could shed light on many of the most fundamental questions about Earth’s history and dynamics that more indirect sampling methods, mainly acoustic, have not been able to answer. The acoustic methods, such as “3-D Seismic” are effective means for creating synoptic images (similar to remote sensing by satellite), but just as a satellite cannot sequence the DNA in a plant or animal spied on Earth’s surface, so acoustic and other methods cannot specify mineral composition and other crucial aspects of Earth’s interior. Samples taken from the Mohole could prove valuable for defining the limits of life in the deepest part of the crust as well as for understanding mantle–crust interactions and other geological questions

The prospect of drilling a hole to earth’s mantle, however, is daunting. The most likely site, in the Pacific, would require drilling a hole the depth of 14 Empire State Buildings in 10 Empire State Buildings of water. While continental drillers have drilled this deep and ocean drillers have operated in such deep water, the project would involve integrating the two traditions in an unprecedented way. Risks include safety, environment, and finance (one study estimated the total cost of successfully completing the Mohole could exceed \$500 million). Funds from this grant will support efforts by the Integrated Ocean Drilling Program to begin the planning and infrastructure development necessary for successfully drilling a borehole to earth’s mantle.

---

### Ohio State University

COLUMBUS, OH

*\$1,500,000 over 24 months to initiate the Deep Energy directorate of the Deep Carbon Observatory with studies differentiating abiogenic from biogenic sources of hydrocarbons.*

**Project Director: David Cole, Ohio Research Scholar**

This grant to Ohio State University will provide two years of funding for the creation and operation of the Deep Energy directorate of the Deep Carbon Observatory. The third of four directorates that make up the observatory, the Deep Energy directorate will tap an international network of researchers to address one of the most controversial and momentous issues in earth sciences: how to distinguish hydrocarbons, including natural gas and petroleum, which originate from biological

materials (“fossil fuels”) from those that do not. The Deep Energy team’s research agenda aims to develop a fundamental understanding of environments and processes that regulate chemical, mineralogical, and isotopic signatures that could be used to unambiguously differentiate abiogenic from biogenic sources of hydrocarbons. Fifteen scientists from seven countries spanning diverse views form the core team, which is coordinated by a pair of dynamic young researchers, David Cole (Ohio State) and Chris Ballentine (Manchester University, U.K.).

---

## OFFICER GRANTS

---

### Rensselaer Polytechnic Institute

TROY, NY

*\$80,000 over 7 months to develop the data science and management dimensions of the Deep Carbon Observatory.*

**Project Director: Peter A. Fox, Tetherless World Constellation Chair**

---

### University of Rhode Island

KINGSTON, RI

*\$48,230 over 12 months to analyze and recommend public engagement strategy for the Deep Carbon Observatory.*

**Project Director: Sara C. Hickox, Director**

# Microbiology of the Built Environment

**Program Director: Paula J. Olsiewski**

While humans spend an average of 23 hours per day indoors, most environmental research and policy has focused on natural or urban outdoor environments. The goal of Sloan's Microbiology of the Built Environment program is to develop a new field of scientific inquiry focused on characterizing the microbiology of the built environments where people live, work, and play. Grantmaking focuses on building a diverse community of scientists, engineers, architects, and others to conduct research, share findings, develop data-collection tools, and establish standards and conventions for this nascent field. Recent grants have led to creation of the Biology and the Built Environment Center at the University of Oregon; establishment of MICROBE.NET, a nationwide network allowing researchers to interact and share news and data; funding of a data-analysis consortium; and support of select high-value research projects.

## TRUSTEE GRANTS

### **University of California, Berkeley**

BERKELEY, CA

*\$176,062 over 12 months to support a pilot study to examine the microbial profiles found in the air, water, and surfaces of a neonatal intensive care unit and compare them to the microbial profiles from the gut of premature infants.*

**Project Director: Jillian Banfield, Professor**

Babies are born sterile. The microbial ecosystem that thrives on and inside each of us—stomach bacteria that help us digest food, for instance—are acquired post-birth, presumably through contact with our mothers. But what of babies born prematurely, separated from their mothers, and treated in sterile neonatal intensive care units? How do these infants acquire the microbes needed to survive outside the womb? This grant supports the research of University of California, Berkeley professor Jill Banfield, who is investigating this very question. In a one-year pilot study with collaborator Dr. Michael Morowitz of the University of Pittsburgh Medical Center, Banfield will examine the microbial profiles of the air, water, and surfaces of a neonatal intensive care unit (ICU) and compare the profiles to those found in the gut of three premature infants staying in the ICU. Using modern molecular tools, the research team will analyze the microbial profiles of the neonatal ICU environments over time and space to potentially identify the sources of microbes involved in infant gut colonization.

### **The University of Chicago**

CHICAGO, IL

*\$141,450 over 12 months to fund a pilot project to examine the microbiome associated with surfaces in the home.*

**Project Director: Jack A. Gilbert, Assistant Professor**

Different parts of the body have different microbial profiles. The microorganisms that thrive in our underarms are different from those that live on our hands, which are different, in turn, from those that live on our scalp. Funds from this grant support a project by the University of Chicago's Jack Gilbert to investigate how these unique microbial profiles interact with the microbial populations of surfaces in the indoor environment. Gilbert will examine the microbial profiles associated with the dominant hand, the gut, and heel pad from 20 in-



dividuals in 10 homes. He will then compare these profiles to those found on door knobs, kitchen surfaces, bedroom and bathroom floors, and light switches following a move into a new home. These profiles will be examined every day for two weeks prior to moving and four weeks after moving to a new home, shedding light on whether the microbes found on people are transferred to the surfaces of their homes and, if so, whether the transferred microbes thrive in the new environments.

---

### **University of Colorado, Boulder**

BOULDER, CO

*\$1,202,738 over 36 months to assess the microbiology of municipal water delivery systems in the U.S..*

**Project Director: Norman R. Pace, Distinguished Professor**

Little is known about the biology of microbial populations living in our drinking water. Current systems monitor drinking water for the absence of fecal bacteria using coliform counts, a very old method, and for total bacterial load, which is determined by growing cultures of bacteria found in water samples. Yet 99.99 percent of bacteria cannot be successfully grown in culture, and thus are missed by using such methods. Our drinking water, in other words, is monitored using very old and inaccurate techniques.

This three-year grant will fund a project led by Professor Norman Pace at the University of Colorado, Boulder, to use state-of-the-art gene sequencing techniques to begin to characterize the microbial populations in municipal water delivery systems. Preliminary work by Pace and his research team on the municipal water supply in Boulder, Colorado has revealed a diverse and (perhaps) stable microbial profile in the Boulder municipal water system, one that differs significantly from the microbial populations in water supplies in New York, New Orleans, and Austin. Funds from this grant will allow Pace to continue and expand this work, as well as provide support for a smaller project to measure how concrete degradation, a common problem in aging municipal water delivery infrastructure, affects microbial populations in the water supply, and funds to complete Pace's ongoing work examining how the flooding of an engineering building on the University of Colorado, Boulder campus changed the characteristics of microbial communities inside the building.



Tim O'Connor, a researcher at the University of Oregon's Biology and the Built Environment Center, swabs a floor surface at the University's Lillis Business Complex. Analysis of such samples allows researchers to map the bacterial community living on surfaces throughout the room. (PHOTO COURTESY OF JESSICA GREEN)

---

### **University of Colorado, Boulder**

BOULDER, CO

*\$575,000 over 36 months to organize and convene three annual meetings on the microbiology of the built environment.*

**Project Director: Mark T. Hernandez, Professor**

The goal of the Foundation's Indoor Environment program is to grow a new field of scientific inquiry that eventually will be funded by traditional U.S. government funding agencies. This grant to Mark Hernandez of the University of Colorado, Boulder will fund three annual conferences to bring together the large, diverse, multidisciplinary community of biologists, engineers, architects, and others studying the microbiology of built environments. At the conferences, scientists will share research results, develop and advance a coordinated research agenda for studying indoor microbial populations, and educate NGOs and key federal agencies about the importance of directing research and regulatory resources to this new field of inquiry.

---

**University of Colorado, Boulder**

BOULDER, CO

*\$124,121 over 12 months to conduct a pilot study to examine the diversity and structure of bacterial communities in kitchens.***Project Director: Noah Fierer, Assistant Professor**

This grant will fund the efforts by Noah Fierer, a young researcher at the University of Colorado, Boulder, to examine the diversity and structure of microbial communities in kitchens. Fierer—in collaboration with his colleague Rob Knight—plans to collect samples from 12 residential kitchens to determine the geographical distribution of microbial communities and to track the movements of the communities across kitchen surfaces. He plans to collect samples from a number of kitchen surfaces before and after meal preparation and collect samples from a variety of foods that were used to prepare the meal. DNA will be isolated from the samples and then amplified, sequenced, and analyzed using bio-informatic tools.

---

**University of Ottawa**

OTTAWA, CANADA

*\$599,150 over 24 months to provide renewed support to develop fungal barcodes and use them to explore the indoor environment.***Project Director: Keith Seifert, Professor**

This two-year grant will support an ambitious research agenda spearheaded by Dr. Keith Seifert of the University of Ottawa, and Dr. Robert Samson of the Dutch Centraalbureau voor Schimmelcultures to use advanced DNA sequencing technology to further advance our understanding of fungi and the role they play in the microbial ecosystems of indoor environments. Supported activities include the analysis of more than 6,000 new fungal cultures to provide detailed DNA sequence and taxonomic information, which Seifert and Samson expect to result in the discovery of 50 to 100 new species of fungi. In addition, Seifert and Samson will conduct further research on identifying regions of fungal DNA that can be appropriately used for species identification, as the current DNA region used for identification is effective in distinguishing only 72% of known fungal species. Funds from this grant will also support the education and training of one graduate student and two postdoctoral fellows.

---

**Yale University**

NEW HAVEN, CT

*\$248,854 over 24 months to provide renewed support to examine the sources and character of airborne bacterial and fungal particles in the indoor environment.***Project Director: Jordan Peccia, Associate Professor**

This two-year grant to Yale University provides support to Professors Bill Nazaroff and Jordan Peccia to continue their ongoing work characterizing airborne microbial populations of indoor environments. The team will study the size distributions of bioaerosols from the indoor environment under occupied and unoccupied conditions. They will examine the sources, origins, and population characteristics of airborne bacteria and fungi in indoor settings that are attributable to human occupancy and collect and analyze air and dust samples from 10 different indoor environments—all elementary schools in the United States, Germany, and China. Collected samples will help shed light on how airborne bacteria and fungi differ from other airborne particulate matter, how internal physical processes in indoor environments shape bacterial and fungal size distributions, and the role human occupants play in shaping microbial populations in indoor air.

---

**GRANTS MADE AGAINST  
PRIOR AUTHORIZATIONS**

---

In June 2010, the Board of Trustees authorized the expenditure of up to \$500,000 for a series of small grants aimed at supporting the major programmatic objectives of the Foundation's Microbiology of the Built Environment program. The following grant was made against this previously authorized fund.

---

**San Diego State University**

SAN DIEGO, CA

*\$125,000 over 24 months to conduct a pilot study to examine workplace environments using viral metagenomic analysis.***Project Director: Scott T. Kelley, Associate Professor**

---

## Synthetic Biology

**Program Director: Paula J. Olsiewski**

The goal of Sloan’s Synthetic Biology initiative is to identify risks associated with research in and application of synthetic biology, and to assess the ethical, regulatory, and public-policy implications of these risks. Grantmaking aims to educate scientists, policymakers, journalists, and the public about synthetic biology; improve biosecurity and biosafety within the field; lay the groundwork to address issues in regulation and governance; and develop a cadre of scholars and practitioners to evaluate the ethical, social, and public-policy consequences of synthetic-biology research.

Recent grantmaking has focused on informing key audiences about the potential risks of synthetic biology. For instance, a grant to The Hastings Center supports ethicists working to identify and articulate ethical issues associated with synthetic biology research and provide a basis for informed policy discussion. A Sloan-funded project at the J. Craig Venter Institute is educating the scientific community about societal concerns regarding synthetic biology while also enlightening the policy and journalism communities about the science underlying synthetic biology research. A grant to

the Woodrow Wilson International Center aims to identify risks associated with synthetic biology, evaluate the adequacy of existing regulatory mechanisms, and educate policymakers and the public.

---

## TRUSTEE GRANTS

---

### **The Hastings Center**

GARRISON, NY

*\$498,536 over 24 months to provide renewed support to investigate ethical issues in synthetic biology.*

**Project Director: Thomas H. Murray, President**

Funds from this grant will support efforts by The Hastings Center to investigate ethical issues raised by the development and application of synthetic biology. The Center will explore four synthetic biology case studies: biofuels, environmental release, engineering the human microbiome, and the do-it-yourself biology movement (DIYBIO). The Hastings Center will conduct its research by convening an interdisciplinary working group for a series of three in-person meetings. It intends to pursue the following questions:

1. What are the opportunities and risks presented by synthetic biology, and does “prudent vigilance” provide appropriate guidance in dealing with them?
2. What is the best response to the possibility that synthetic biology might generate significant social and economic change?
3. How should values such as justice and liberty affect policy on synthetic biology?
4. How can we harness—that is, both take advan-

tage of and exercise appropriate control over DIY (i.e., Do-It-Yourself) synthetic biology?

5. Should technological and industrial change be directed toward desirable outcomes, or should it always be fundamentally opportunistic and market-driven?
6. How should collective or democratic deliberation be conducted?

The Center expects to produce a volume of scholarly essays, at least three scholarly articles, book chapters, several talks and lectures, as well as continued engagement with policymakers and the public on ethical issues related to synthetic biology.

---

### National Academy of Sciences

WASHINGTON, DC

*\$394,324 over 16 months to provide partial support for an international symposia series on synthetic biology.*

**Project Director: Anne-Marie Mazza, Director**

Funds from this grant provides partial support for a three-part international symposia series on synthetic biology being planned by the U.S. National Academy of Sciences (NAS) in collaboration with the U.S. National Academy of Engineering (NAE), the Royal Society (RS), the Royal Academy of Engineering (RAE), the Chinese Academy of Sciences, and the Chinese Academy of Engineering. Funds will underwrite the costs of participation by the NAS/NAE in planning, hosting, and participating in the symposia series. The three symposia will take place in the U.K., China, and the U.S.

The U.K. symposium will focus on the innovation and realization of commercial potential within synthetic biology. The Chinese symposium will focus on enabling science and technology to meet the specific demands and challenges within each field. The U.S. symposium will build on the success of the first two, looking beyond current state-of-the-art technology to next generation tools, platforms, and infrastructure, with associated policy implications. Recent high-profile reports from the Presidential Commission for the Study of Bioethical Issues and the International Risk Governance Council stress the importance of international engagement in synthetic biology. This proposed symposia series will lead to a better understanding of the international scientific and societal issues associated

with synthetic biology. The series also will provide opportunities for international dialogues on many of the societal issues in synthetic biology addressed by Sloan's Synthetic Biology program.

---

### Woodrow Wilson International Center for Scholars

WASHINGTON, DC

*\$2,344,850 over 36 months to continue work to identify and address risks associated with synthetic biology.*

**Project Director: David Rejeski, Program Director**

This grant supports an ambitious series of activities at the Woodrow Wilson Center to continue their work in identifying and addressing risks in synthetic biology. The Wilson Center's proposed 36-month work plan has five objectives: to understand public concerns about synthetic biology; to identify emerging risks of synthetic biology; to explore better oversight mechanisms, including those for the do-it-yourself biology (DIYBIO) community; to ensure that engineers and scientists working in synthetic biology are prepared to address ethical and societal concerns; and to expand the dialogue around synthetic biology.

In addition, the Wilson Center team will produce an online report card to track progress toward the recommendations made in the report of the Presidential Bioethics Commission; explore the use of metaphors to communicate between the various scientific disciplines engaged in synthetic biology and their use in communications between the scientific community and the public, including a workshop co-sponsored by the National Science Foundation; address ecological risk assessment by establishing a working group, holding a workshop, conducting analyses, and producing a report; and address international governance mechanisms by doing a side-by-side analysis of the various high-profile U.S. and E.U. reports on synthetic biology, including the reports from the President's Bioethics Commission, the European Group on Ethics, and the International Risk Governance Council. In addition, the Wilson Center plans to organize two small meetings of U.S. and E.U. policymakers and regulators to discuss similarities and differences in approaches to risk management; ethical, legal, and societal issues; and public engagement.



Hill Hacker (left), Lino Paula, and Sloan grantee David Rejeski discuss differences between European and American recommendations for addressing ethical concerns about the development of synthetic biology at the Woodrow Wilson International Center for Scholars. Since 2008, the Foundation has partnered with the Wilson Center to engage in a series of discussions with scientists, policymakers and the public about the ethical and societal costs and benefits of synthetic biology. (PHOTO COURTESY OF THE WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS)

## OFFICER GRANTS

### **BioBricks Foundation, Inc.**

CAMBRIDGE, MA

*\$84,717 over 4 months to enhance discussion of ethical, policy, and societal dimensions at the 5th annual international meeting of the synthetic biology community.*

**Project Director: Drew Endy, President**

### **University of Michigan**

ANN ARBOR, MI

*\$15,000 over 3 months to support travel costs for speakers at the 2011 Risk Science Symposium.*

**Project Director: Andrew Maynard, Director**

### **Ohio State University**

COLUMBUS, OH

*\$30,000 over 5 months to ensure the U.S. perspective on societal issues in synthetic biology is included at the first synthetic biology Science, Art, and Film Festival 'Bio:Fiction.'*

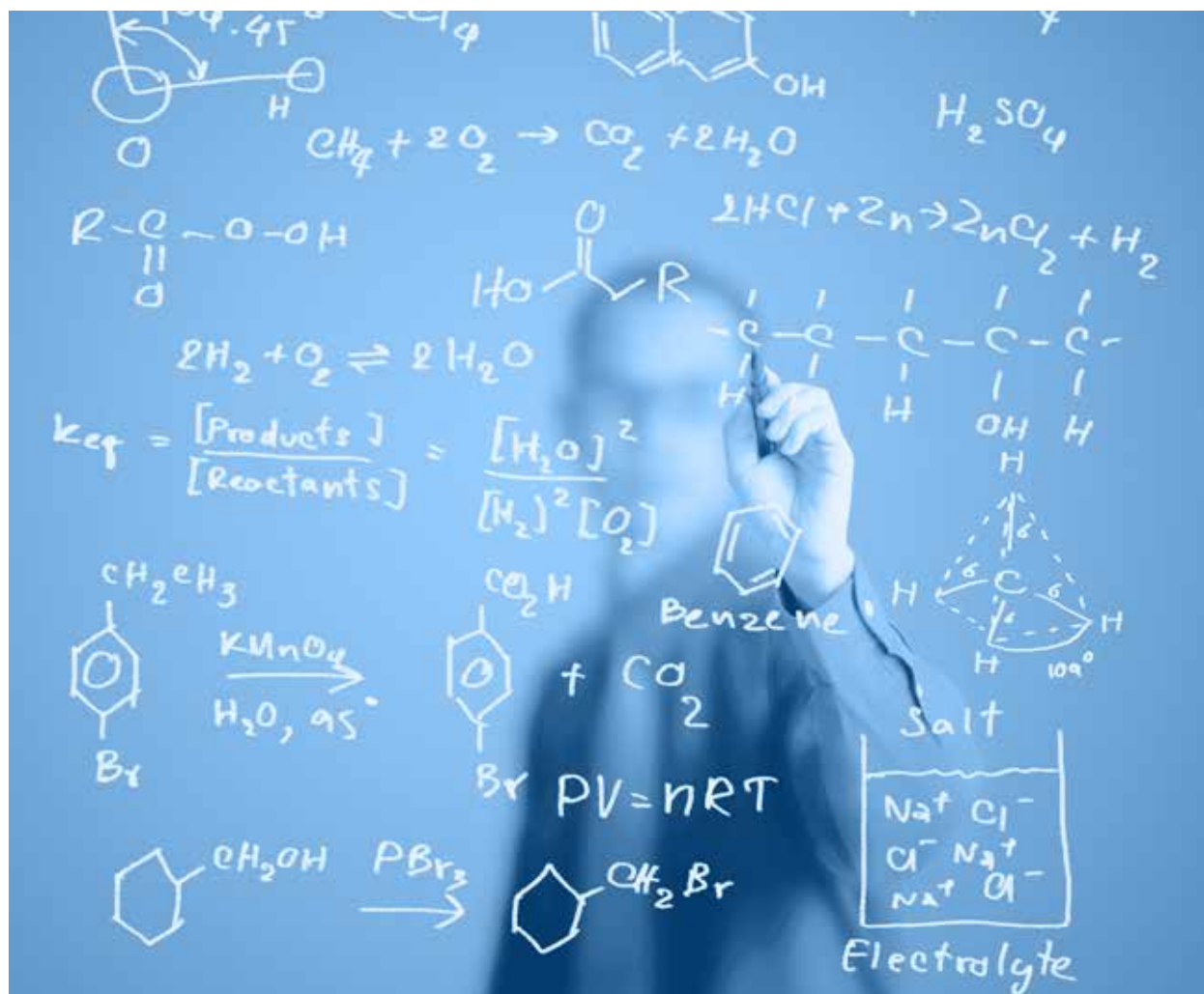
**Project Director: Allison Snow, Professor**

### **University of Washington**

SEATTLE, WA

*\$117,407 over 12 months to support travel costs for speakers and selected participants to the World Congress on Risk 2012.*

**Project Director: Alison Cullen, Professor**



## STEM Higher Education

Education & Advancement for  
Underrepresented Groups

30

The Science of Learning STEM

33

# Education & Advancement for Underrepresented Groups

## Program Director: Elizabeth S. Boylan

Blacks, Hispanics, Native Americans, and women are underrepresented among M.S. and Ph.D. recipients in the natural sciences, technology, engineering, and mathematics, a trend that continues throughout the academic pipeline—from starting assistant professors to senior academic administrators. Grantmaking in this Foundation program aims to increase the diversity of higher education in STEM fields through college and university initiatives to support the education and professional advancement of high-quality scholars from underrepresented groups. Grantmaking is divided into three subprograms.

In the **Sloan Minority Ph.D. program (MPHD)**, the Foundation partners with select faculty, departments, and universities with proven track records of successfully recruiting and graduating minority Ph.D. candidates in STEM fields. Funds provide fellowships to minority students, allowing successful degree programs to enroll, train, and eventually graduate more students than would otherwise be possible.

In the **Sloan Indigenous Graduate Partnership (SIGP)**, the Foundation provides fellowships and administrative funds to

four regional centers that foster supportive, interconnected communities devoted to successfully training Native American and Native Alaskan graduate students in STEM Master's and Ph.D. programs.

In the **Leadership Diversity program**, the Foundation supports college and university efforts to promote the effective professional development of women and minority faculty for positions of academic leadership.

The MPHD and SIGP programs are administered by longtime Foundation partner, the National Action Council for Minorities in Engineering (NACME), which receives applications, selects students for scholarships, administers awards, and supports recruitment efforts by participating faculty.

---

## TRUSTEE GRANTS

---

### University of Alaska, Anchorage

ANCHORAGE, AK

*\$144,000 over 36 months to fund for an additional three years the recruitment and retention portion of the Sloan Indigenous Graduate Partnership program at the University of Alaska.*

**Project Director: Herb Schroeder, Associate Dean**

This grant provides partial support to the University of Alaska, Anchorage for activities designed to recruit and retain indigenous graduate students in STEM disciplines as part of the university's participation in the Sloan Indigenous Graduate

Partnership (SIGP). This is the second three-year grant to the University of Alaska to fund these activities. Project Director Herb Schroeder and his staff had considerable success during their first grant, recruiting 26 students compared to an expectation of 18. Attrition has also been low, with the Alaska programs having lost only one M.S. and one Ph.D. student so far. Schroeder expects to recruit seven new students annually over the next three years. Some of the activities supported through this grant include cross-cultural training for faculty and staff who work with native graduate students; weekly team meetings; a recitation session devoted to strengthening the academic skills needed to successfully complete graduate work; and workshops for helping students with professional networking, grant writing, and serving as an effective teaching assistant.

---

### American Indian College Fund

DENVER, CO

*\$300,000 over 36 months to increase the number of faculty who possess graduate degrees in mathematics, natural science, and engineering at tribal colleges and universities.*

**Project Director: Dennis Carder, Program Officer**

A large fraction of American Indian students begin their college careers at one of the 33 accredited Tribal Colleges and Universities (TCUs). These institutions, most of which are associated with a particular tribe or set of tribes, are relatively new. Although most still provide only two-year degrees and certificates, others now offer a growing variety of four-year degrees and some offer master's degrees. Because of the important role of the TCUs in the education of Indian students, including those who major in STEM disciplines and go on to graduate work, it is important that these institutions' STEM faculty be capable of excellent teaching and guiding student research. Currently, approximately 28% of the 152 STEM faculty at TCUs have bachelor's degrees, 40% have master's degrees or are Ph.D. candidates, and 22% have doctorates.

An ongoing program funded by the Andrew W. Mellon Foundation provides scholarships to TCU faculty who are within one year of finishing their Ph.D. degrees with the understanding that these faculty would remain at their TCU institution for at least two years after earning their degree. Though the Mellon program has been successful in encouraging TCU faculty to finish graduate work



Dr. Tamunotonye Briggs (left) poses with Dr. Ansley Abraham, Program Director of the Southern Regional Education Board's State Doctoral Scholars Program at a ceremony celebrating recent Ph.D. recipients. Dr. Briggs, a scholar supported through the Sloan Minority Ph.D. program, received her degree in biomedical engineering from the New Jersey Institute of Technology. (PHOTO COURTESY OF SREB)

(18 of 20 supported students have completed their Ph.D.) the supported faculty have largely come from fields outside science, technology, engineering, and mathematics, with only two of the twenty supported fellows coming from STEM fields. Funds from this grant will provide monies to expand and supplement Mellon's successful program, administered by the American Indian College Fund, to more aggressively recruit and support faculty from STEM disciplines.

---

### National Action Council for Minorities in Engineering, Inc.

WHITE PLAINS, NY

*\$3,768,800 over 60 months to fund new obligations in the Minority Ph.D. program and the Sloan Indigenous Graduate Partnership program from July 1, 2011 to July 1, 2012.*

**Project Director: Aileen Walter, Vice President**

This grant to the National Action Council for



Minorities in Engineering (NACME) will fund new scholarship obligations in the Foundation's Minority Ph.D. program (MPHD) and the Sloan Indigenous Graduate Partnership (SIGP) that are expected to be incurred between July 1, 2011 and June 30, 2012. NACME, the Foundation's longtime agent in administering these programs, receives and processes scholarship applications, selects students for scholarships, administers the awards, and supports recruitment efforts by faculty at participating colleges and universities. Funds from this grant will support 93 scholarships for minority students entering the Minority Ph.D. program in AY 2011–12 and 26 scholarships for students entering the Sloan Indigenous Graduate Partnership in AY 2011–12.

---

### **National Action Council for Minorities in Engineering, Inc.**

WHITE PLAINS, NY

*\$557,600 over 36 months to enable the National Action Council for Minorities in Engineering to continue administering the Sloan Minority Ph.D. program and Sloan Indigenous Graduate Partnership program for an additional three years.*

**Project Director: Aileen Walter, Vice President**

The National Action Council for Minorities in Engineering (NACME) acts as the Foundation's agent in administering the Sloan Minority Ph.D. program and the Sloan Indigenous Graduate Partnership. NACME receives applications from eligible students, awards Sloan scholarships, sends checks to students, receives and monitors students' reports on their spending and their academic progress, interacts regularly with the faculty who are key to our programs' success, disburses funds to participating university campuses and departments to help them with recruitment and retention activities, monitors the spending of these funds, maintains the database for these Foundation programs, and performs analysis of these data. This grant to NACME funds the administrative costs associated with these activities for the next three years.

---

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

---

In March of 2010, the Board of Trustees authorized the expenditure of up to \$540,000 to fund small grants to help institutionalize support programs for minority graduate students at universities that participate in the Sloan Minority Ph.D. program. The following grants were made against this previously authorized fund.

---

### **University of South Florida**

TAMPA, FL

*\$125,000 over 13 months to institutionalize in the Graduate School efforts to increase the number of and enhance the success of underrepresented minority STEM graduate students at the University of South Florida.*

**Project Director: Karen Liller, Dean of the Graduate School and Associate VP for Research and Innovation**

---

## OFFICER GRANTS

---

### **American Physical Society**

COLLEGE PARK, MD

*\$18,900 over 5 months to increase awareness of the contributions to physics of women physicists.*

**Project Director: Theodore Hodapp, Director of Education & Diversity**

---

### **Drexel University**

PHILADELPHIA, PA

*\$100,591 over 9 months to establish an evaluation infrastructure that will serve as a model for research and practice in institutional, national, and international leadership development programs, particularly those focusing on women faculty in engineering, technology, and science.*

**Project Director: Diane Magrane, Director**

# The Science of Learning STEM

**Program Director: Elizabeth S. Boylan**

Grantmaking in this program aims to improve the quality of higher education in STEM fields through the support of original, high-quality, hypothesis-driven research on the factors affecting graduate and undergraduate student learning and retention in STEM fields.

Grants in this program primarily support consortia of colleges, universities, and other educational institutions with plans to study the impact and effectiveness of new approaches to STEM pedagogy paired with a commitment to institutionalize successful initiatives and disseminate results to the wider academic community. Successful proposals are expected to be hypothesis-driven, sensitive to the heterogeneity of STEM disciplines, attentive to differences in student motivations to pursue STEM careers, and concerned with the dissemination and portability of results to other institutions.

---

## TRUSTEE GRANTS

---

### **American Society for Engineering Education**

WASHINGTON, DC

*\$397,371 over 24 months to enable the American Society for Engineering Education to launch a program to routinely collect and report data on undergraduate engineering completion rates and time-to-degree.*

**Project Director: Brian L. Yoder,**  
**Assistant Program Manager**

One of the objectives of our small program focusing on student retention in STEM disciplines at the undergraduate and graduate levels is to encourage universities to obtain and pay attention to data on the migration of their own students into and out of STEM disciplines. In the absence of such data, which most universities do not have, many campuses are either unaware of or ignore high net out-migration of students from their STEM departments. The result is wasted resources, underutilized faculty and facilities, and, depending on why students leave these disciplines, disappointed educational aspirations.

Funds from this grant support a project by the American Society for Engineering Education to collect and report data on completion rates and time-to-degree in undergraduate engineering programs. Initial data collection will begin in the summer of 2012 with ASEE inviting all 380 U.S. engineering schools to participate. Data will be published in aggregate form, reporting separately on public and private institutions; schools that accept students as freshmen, sophomores, or juniors; and transfer and non-transfer students. The collected information will provide a rich dataset for scholarly analysis of student flows into and out of engineering.

---

## University of Washington

SEATTLE, WA

*\$671,781 over 36 months to assess improvements resulting from and analyzing data collected by the Project to Access Climate in Engineering (PACE).*

**Project Director: Suzanne G. Brainard,**

**Executive Director**

In October 2006, the Foundation approved a five-year grant to the University of Washington to enable Suzanne Brainard and her colleagues to assess the climate for women and underrepresented minority undergraduates in engineering schools across the country. Twenty-one engineering schools fully participated in the climate assessment—the Project to Assess Climate in Engineering (PACE)—16 at public universities and 5 at private universities, accounting for 18 percent of the full-time engineering enrollments nationwide. Of these, 15 created and implemented action plans to make improvements based on the recommendations of the study. Funds from this grant will support the continuation of PACE for three purposes:

1. Resurvey students in the 21 schools, compare the new responses to the pre-intervention responses, and analyze the results in light of the particular interventions made by each school.
2. Conduct focus groups involving approximately 40 students on each campus that administers the resurvey.
3. Code and analyze rich transcripts of student interviews that were conducted during the PACE project.

---

## OFFICER GRANTS

---

### Business-Higher Education Forum

WASHINGTON, DC

*\$56,000 over 8 months to develop a plan for piloting strategies to increase enrollment, persistence, and successful graduation of undergraduate students, particularly among women and underrepresented minorities (URMs), in the STEM disciplines in Maryland.*

**Project Director: Stephen A. Barkanic, Senior Director**

---

### St. Olaf College

NORTHFIELD, MN

*\$19,500 over 12 months to develop a new community of practice on evidence-based design for the planning of undergraduate learning spaces.*

**Project Director: Jeanne L. Narum, Principal**

---

### Wellesley College

WELLESLEY, MA

*\$39,828 over 18 months to improve recruitment and retention of students in STEM fields and produce graduates who understand the role of science in society.*

**Project Director: Adele Wolfson,  
Schow Professor of Chemistry**



## Public Understanding of Science and Technology

<b>Books</b>	<b>36</b>
<b>Film</b>	<b>37</b>
<b>Television</b>	<b>41</b>
<b>Other Efforts</b>	<b>44</b>

## Books

### Program Director: Doron Weber

Books are critical for the understanding of science and technology, allowing us to delve deeply and thoroughly into difficult or complicated subjects. The Foundation supports books that explain the scientific basis of confusing or controversial issues, that profile scientific and technological figures, and that relate the relevance of technology to daily life.

Recent grants were made to support a scholarly book about the origin of zero; a popular account of the engineering challenges of rust; an historical account of the Founding Fathers and their interest in science; and a book on the Spanish Civil War and the intersection of art and technology. Recently published books supported by the Foundation include *The Age of Insight* by Eric Kandel; *Time Machines* by Stanley Greenberg; *Ignorance* by Stuart Firestein; *Birdseye* by Mark Kurlansky; and *Hedy's Folly* by Richard Rhodes.

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

In October 2008, the Board of Trustees authorized the expenditure of up to \$450,000 to provide small grants for promising new books on science, technology, engineering, and mathematics. The

following grants were made against this previously authorized fund.

---

### Stuart Firestein

NEW YORK, NY

*\$40,000 over 8 months for research and writing of a book on the value of ignorance in science.*

**Project Director: Stuart Firestein, Professor**

---

### University of Illinois, Urbana-Champaign

CHAMPAIGN, IL

*\$50,000 over 12 months to publish volumes three and four of Ramanujan's Lost Notebook and to make substantial progress on the fifth and final volume.*

**Project Director: Buce C. Berndt, Professor**

---

### Michael Lemonick

PRINCETON, NJ

*\$55,000 over 5 months to support the writing of the book Mirror Earth, a popular account of the search for Earthlike planets beyond the Sun and the technology enabling the search.*

**Project Director: Michael D. Lemonick, Author**

---

### Princeton University Press

PRINCETON, NJ

*\$40,000 over 28 months to publish a new atlas of galaxies based on the Sloan Digital Sky Survey's collection of full-color, multiwavelength, digital images of galaxies.*

**Project Director: David W. Hogg, Director of Undergraduate Studies**

---

### Ed Regis

SABILLASVILLE, MD

*\$40,800 over 12 months for research and writing of a book on genomic engineering with George Church.*

**Project Director: Ed Regis, College Scholar**

## Film

### Program Director: Doron Weber

This program aims to influence the next generation of filmmakers to tackle science and technology themes and characters, to increase the visibility of such films, and to encourage the production of new scripts about science and technology and about scientists, engineers, and mathematicians. The program works primarily through initiatives with film schools, film festivals, and independent and Hollywood film producers. The program supports the nation's six leading film schools (American Film Institute; UCLA School of Theater, Film and Television; Carnegie Mellon University School of Drama; Columbia University Film Department; NYU Tisch School of the Arts; and USC School of Cinematic Arts) in awarding annual prizes for screenwriting and production of new films dramatizing science and technology. Award-winning short films from this program can be screened on the Museum of Moving Image website which also lists over 300 screenplays and films supported thus far. The Foundation has partnered with three major film festivals (Hamptons, Sundance, and Tribeca) and with Film Independent to develop screenplays toward production. Five feature films from the film program pipeline were completed in 2012 and screened at film

festivals and theaters nationwide. *Robot and Frank*, which originated as a student production award through the film school program, and *Valley of Saints*, which began as a Sloan/NYU First Feature grant before receiving support from Film Independent, were co-winners of the 2012 Sundance Sloan Feature Film Prize. *Robot and Frank* and *Here* both opened in U.S. theaters in 2012. *Future Weather*, which debuted at the Tribeca Film Festival, and *Whaling City* were completed and began the festival circuit. Prizes to outstanding feature films centered around science and technology have been awarded to such acclaimed directors as Darren Aronofsky, Alejandro Amenábar, Werner Herzog, Julian Schnabel, and Michael Apted, and to such up-and-coming directors as Diane Bell (*Obselidia*), Brit Marling and Mike Cahill (*Another Earth*), and Lisa Robinson and Annie Howell (*Small, Beautifully Moving Parts*).

---

## TRUSTEE GRANTS

---

### Columbia University

NEW YORK, NY

*\$150,108 over 23 months for a pilot production grant to encourage the next generation of filmmakers to incorporate science and technology themes into storytelling for the World Wide Web.*

**Project Director: Evangeline Morphos,  
Associate Professor**



Perla Haney-Jardine plays Lauduree, a 13 year-old-girl who turns to science as a way to cope with the disappearance of her mother, in Jenny Deller's *Future Weather*. The film, which received Sloan support through Film Independent and the Tribeca Film Institute, premiered to accolades at the 2012 Tribeca Film Festival—the first time Tribeca has screened a completed feature developed through the Sloan Filmmaker Fund. (PHOTO COURTESY OF TIM SCHOON)

This 18-month grant to Columbia University, one of the Foundation's six film school partners, will fund a pilot project which aims to encourage science and technology storytelling through the World Wide Web. Guided by Columbia faculty, film students will experiment with the possibilities of new media by creating a 20- to 40-minute web series, told in three- to eight-minute narrative episodes (webisodes) with science and technology themes and characters that will reach new audiences. The production awards are open to Columbia students in the third to fifth year who have finished their courses, previously shot a completed film, and have exhibited innovative approaches to the challenges of web storytelling. Five teams will be awarded grants of \$14,000 each to work on individual webisodes that will form part of a single web series. Students will work closely with film faculty and a science advisor, and grant funds will be paid out in stages based on adherence to a strict production schedule. Once finished, the web series will be entered into festivals and new media competitions, released on the internet, and distributed virally.

### Coolidge Corner Theatre Foundation

BROOKLINE, MA

*\$463,426 over 24 months to support Coolidge Corner Theatre's Science on Screen series and expand it with small grants to 40 theaters nationwide.*

**Project Director: Denise Kasell, Executive Director**

In 2010, the Foundation supported a pilot program based at the Coolidge Corner Theatre to support film screenings and subsequent science discussions at art house theaters across the country. That effort, Science on Screen, was successfully piloted at eight independent theaters across the country. Funds from this grant will enable the series to be expanded to include up to 40 theaters over the next two years.

Coolidge will prepare a syllabus that includes film programming suggestions, speakers, case studies, and marketing and outreach guidelines and will conduct a major outreach seminar at the Art House Convergence, the largest gathering of art house cinema managers in the country, which convenes

annually just before the Sundance Film Festival. Independent theaters who successfully apply to be part of the Coolidge effort will receive \$7,000 stipends to help create their own Science on Screen series, which must include a minimum of three screenings or science-themed events during the year. In addition, Coolidge will coordinate a national Science on Screen day, organizing same-day screenings at all participating theaters.

---

### **Film Independent, Inc.**

LOS ANGELES, CA

*\$330,000 over 36 months to develop science scripts and support producing teams developing Sloan-worthy feature films.*

**Project Director: Josh Welsh, Director**

Funds from this three-year grant will support activities by Film Independent to develop science-themed film scripts and assist production teams developing science-themed feature films. Grant funds will primarily support two ongoing programs at Film Independent: the Sloan Producer's Grant program, which chooses one science script each year and develops it through a seven-week course of mentorship so that the project emerges with a realistic budget, schedule, and business plan; and the Fast Track program, which chooses exceptional science-themed film projects that are ready for financing and exposes them to more than 60 film financiers, production companies, and other industry professionals during an intensive series of meetings held at the Los Angeles Film festival. Also supported through this grant is an annual reception hosted by Film Independent at the Filmmaker Forum of the Director's Guild of America, where Sloan-supported writers and directors are given special exposure to some 400 influential filmmakers and industry professionals.

---

### **New York University**

NEW YORK, NY

*\$474,400 over 40 months for an annual feature film production grant over three years to enable film students to shoot a first feature film about science and technology.*

**Project Director: Sheril Antonio, Associate Dean**

This grant funds a project by New York University's Maurice Kanbar Institute of Film & TV to spur the production of high-quality, feature-length films about science and technology through a competi-

tive award open to all NYU film students. Each year for the next three years, NYU will offer \$100,000 to the best student script exploring scientific, mathematical, or technological themes or featuring a scientist, mathematician, or engineer as a main character, with award funds to be used to turn the script into a feature-length film. NYU will administer the awards process, accepting applications, convening a faculty panel to select quarter-finalists, advising filmmakers on needed script revisions, and arranging for scripts that advance as semifinalists to procure an appropriate science advisor to ensure technical accuracy. Three scripts moving on to the final round will each receive \$5,000 awards.

---

### **Tribeca Film Institute**

NEW YORK, NY

*\$749,990 over 24 months to develop new science and technology films for production and to showcase science and technology films and hold panels and readings at Tribeca.*

**Project Director: Beth Janson, Executive Director**

Funds from this grant provide two years of funding to the Tribeca Film Institute for its ongoing efforts to support films and filmmakers that explore scientific and technological themes. With Sloan Foundation support, the Institute will annually award up to \$140,000, in grants from \$10,000 to \$40,000, to compelling narrative filmmaking that explores scientific, mathematical, and technological themes and storylines, or that features a leading character who is a scientist, engineer, innovator or mathematician. In addition to such financial support, Tribeca provides selected filmmakers with professional guidance and mentorship, including project notes, networking assistance, and exposure to financing and distribution executives. Funds from this grant also support a series of high profile events at the Tribeca Film Festival, including a screening and discussion series, readings of in-progress scripts exploring scientific and technological themes, and an awards ceremony and reception honoring winning filmmakers.



---

### **Tribeca Film Institute**

NEW YORK, NY

*\$330,700 over 9 months to hold the triennial Sloan Film Summit, developing the community and highlighting the achievements of Sloan's Film program including six film schools, four screenplay development programs, three film festivals, and associated film and theater artists.*

**Project Director: Beth Janson, Executive Director**

This grant to the Tribeca Film Institute (TFI) provides funds for the fifth triennial Sloan Film Summit in New York City in 2011. The summit is an important community-building event that brings together prize-winning students, faculty, and administration from the Foundation's six film school partners as well as screenwriters, filmmakers, and administrators from Sloan's four screenplay development and film festival partners: Sundance, Tribeca, Hamptons, and Film Independent. Funded summit activities include an opening night reception; a screening of award-winning shorts from each film school; screenplay readings of award-winning scripts with accomplished actors; panels on science, film, and new media that bring together notable scientists and filmmakers; a meeting of program administrators; and an industry meetings where filmmakers meet and pitch their films to leading members of the film industry. Among the key materials that will come out of the summit are a compilation DVD of award-winning shorts and a book and iPhone/iPad application that lists all the screenplay and film projects of the past three years with bios and contact information for the filmmakers to be distributed to agents, managers, and development executives.

---

## OFFICER GRANTS

---

### **Brooklyn Academy of Music**

BROOKLYN, NY

*\$122,250 over 4 months to support research and planning for a feature-length film and television broadcast about Einstein on the Beach.*

**Project Director: Karen Brooks Hopkins, President**

---

### **Film Independent, Inc.**

LOS ANGELES, CA

*\$35,000 over 12 months to expedite one science and technology film into production with a Fast Track fellowship.*

**Project Director: Josh Welsh, Director**

## Television

### Program Director: Doron Weber

The Foundation continues to develop various projects, mainly with public television, to help integrate science and technology, along with profiles of scientists, engineers, and mathematicians, into the nation's regular programming. Recent grants include support for a *NOVA* special, *Making of North America*, about our continent's geologic history, and for a *National Geographic* television special on James Cameron's historic dive to the Challenger Deep. The Foundation also continues to support *American Experience* and its production of science and technology-themed documentaries and Paul Solman's Emmy-winning on air and online coverage of economic and financial literacy on the *PBS NewsHour*. Other recent grants in this program resulted in *The Secret Life of Scientists*, an award-winning web series, produced by *NOVA scienceNOW*, profiling sixteen working scientists; a two-part series, *Brains on Trial*, with host Alan Alda exploring the science behind brain scans; a documentary aired by *American Experience*, *Grand Coulee Dam*; and *Hunting the Elements*, hosted by *New York Times* correspondent David Pogue, which included an iPad App that Apple named a "must have" for back to school

kids. The Foundation is also developing a feature film about physicist Lise Meitner that will have a theatrical release followed by a television broadcast.

---

## TRUSTEE GRANTS

---

### Brooklyn Academy of Music

BROOKLYN, NY

*\$600,000 over 24 months to produce a feature-length documentary on Robert Wilson and Philip Glass's historic opera, Einstein on the Beach, and distribute it for international theatrical release and domestic television broadcast.*

**Project Director: Karen Brooks Hopkins, President**

Funds from this grant to the Brooklyn Academy of Music (BAM) will support the development, production, and broadcast of a feature-length documentary on the Philip Glass opera, *Einstein on the Beach*. The documentary will explore the intersection of Einstein's life and legacy with the making of the opera.

---

### Connecticut Public Broadcasting, Inc.

HARTFORD, CT

*\$1,196,390 over 16 months for production, broadcast, and outreach for a two-part public television series about what impact the science behind brain scans could or should have on the criminal justice system.*

**Project Director: Graham Chedd, Executive Producer**

Funds from this grant support the production and broadcast of a two-hour PBS series on how new developments in neuroscience may affect the criminal justice system and our understanding of free will and personal responsibility. Produced by Graham Chedd and hosted by Alan Alda, the series will seek to explain the science behind fMRI

brain scans—both its enormous potential and its very significant current limitations—and explore what this new technology could mean for how we determine guilt and innocence. The series will feature commentary from a host of experts—neuroscientists, philosophers, ethicists, legal scholars, and judges—bringing a diverse variety of perspectives to the topic and ensuring that it remains both engaging and accessible.

---

### **Greater Washington Educational Telecommunications Association Inc.**

ARLINGTON, VA

*\$1,500,000 over 24 months for high-quality broadcast and online coverage on PBS's NewsHour to enhance economic and financial literacy.*

**Project Director: Linda Winslow, Executive Producer**

This grant provides continued support for enhanced coverage of economic and financial topics on The PBS NewsHour. Through its recurring weekly segment, Making Sen\$e with Paul Solman, the NewsHour aims to produce and broadcast at least 60 on-air segments over the next two years covering economic and financial topics. Additional funds from this grant will support a host of complementary web activities, including the production of at least 60 web-only videos on economic topics, continued operation of an online “Q&A desk” where Solman answers questions from readers, the development of a free iPad app allowing iPad users to easily access NewsHour economics content, and the production of syllabi, lesson plans, and other materials to facilitate the use of NewsHour segments in American classrooms.

---

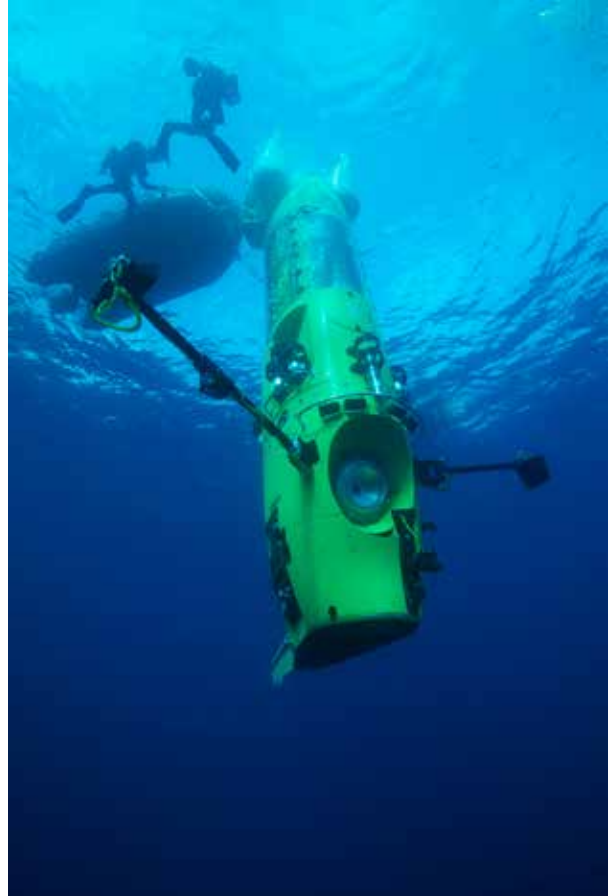
### **WGBH Educational Foundation**

BOSTON, MA

*\$2,500,000 over 24 months to research and produce four hours of documentaries on the role of science and technology in history for the American Experience with ancillary outreach including two interactive games and marketing campaign.*

**Project Director: Mark Samels, Executive Producer**

Funds from this grant support the development, production, and broadcast of three science- and technology-themed documentaries by the PBS series *American Experience*. The three proposed documentaries include: “The Poisoner’s Handbook,” based on Deborah Blum’s Foundation-supported book about the birth of toxicology and



The DeepSea Challenger, piloted by film director James Cameron, during a 2.5 mile test off the coast of Papua New Guinea as it gears up for its historic 6.8 mile dive to the bottom of the Mariana Trench, the deepest known point on Earth. Partnering with Cameron, the Sloan Foundation is supporting three films about the voyage: a 3D feature film, an IMAX film, and a documentary to be broadcast on the National Geographic Channel. (PHOTO BY MARK THIESSEN, COURTESY OF NATIONAL GEOGRAPHIC)

forensic science in the Jazz Age and how new crime-fighting techniques led to improvements in safety; “Robert Noyce, the Integrated Circuit and the Birth of Silicon Valley,” based on Leslie Berlin’s *The Man Behind the Microchip: Robert Noyce and the Invention of Silicon Valley*, a tale about one of the most important inventions of the twentieth century that has received relatively little exposure in the mass media; and “The Grand Coulee Dam” about the damming of the Columbia River—at the time, the largest concrete structure ever built—which transformed the Pacific Northwest. In addition, American Experience is proposing two interactive games to accompany the broadcast of “The Poisoner’s Handbook.”

---

**WGBH Educational Foundation**

BOSTON, MA

*\$700,000 over 14 months for broadcast of a two-hour NOVA special on the discovery and the scientific role of the elements in the periodic table with enhanced digital outreach and mobile application.*

**Project Director: Paula S. Apsell,  
Senior Executive Producer**

This grant provides support for the production and broadcast of a two-hour NOVA special about the elements of the periodic table, their discovery, and the important role they have played over the course of human history. Hosted by author and New York Times technology columnist David Pogue and based on Theodore Grey's bestselling book, *The Elements*, the NOVA special will cover a broad range of topics, including the organization of the periodic table by Dmitri Mendeleev, how early human technological development was driven largely by our understanding and mastery of metals, and the role rare earth elements currently play in such modern conveniences as cell phones and batteries. Also funded through this grant are digital outreach efforts to broaden the scope and impact of the special, including production of exclusive web-only content to complement the special, expanded activities on social networking sites like Facebook and Twitter, and the development of an interactive iPad app.

---

**WGBH Educational Foundation**

BOSTON, MA

*\$600,000 over 8 months to research, produce, and broadcast a one-hour PBS Frontline documentary about the implications of the Fukushima accident for the future of nuclear power in the U.S..*

**Project Director: Jon Palfreman, Producer**

Funds from this grant provide support for a one-hour documentary, to be produced and broadcast by the influential PBS documentary series *Frontline*, about the repercussions of the Fukushima Daichi nuclear accident caused by the 2011 earthquake and tsunami off the coast of Japan. Starting with an analysis of what went wrong at Fukushima, the program will track the still-developing story and critically evaluate the implications for U.S. nuclear safety and for the future of nuclear energy in the U.S. Using a mixture of archival footage; location shooting in the U.S., Japan, and China; and interviews with scientific and technical experts, politicians, policymakers and citizens; the documentary

will seek to present a measured, fair, and fact-based analysis of one of the major policy issues of our time. To ensure accuracy, the production team will draw on a scientific board of advisors who will provide expert guidance and information.

---

**OFFICER GRANTS**

---

**Fred Friendly Seminars, Inc.**

NEW YORK, NY

*\$19,095 over 6 months to rebroadcast the program *Minds on the Edge: Facing Mental Illness*, to publicize available resources, and to encourage dialogue about the mental health care system.*

**Project Director: Richard Kilberg,  
President/Executive Producer**

## Other Efforts

### Program Director: Doron Weber

This program encompasses a range of initiatives—live performances, lectures and conferences, museum exhibits, and web activities—to help reach a wide contemporary audience and advance public understanding of science and technology. Recent grants resulted in the fifth annual World Science Festival in New York City which included Foundation-supported programs like the multimedia performance *Icarus at the Edge of Time*, a screening of the film *Robot and Frank*, and an evening of conversation and music surrounding the Foundation-supported book *Hedy's Folly*; a pilot effort to produce and distribute short web videos based on new scientific papers; support for a documentary on the Phillip Glass opera *Einstein on the Beach*; and a grant to Brooklyn Academy of Music for an innovative stage production about the arctic explorer Shackleton.

---

## TRUSTEE GRANTS

---

### Chemical Heritage Foundation

PHILADELPHIA, PA

*\$255,000 over 12 months to increase awareness of the role of women in chemistry during the International Year of Chemistry.*

**Project Director: Denise Creedon,**

**Vice President for Institutional Advancement**

Made in recognition of the International Year of

Chemistry, this grant supports a year-long slate of activities planned by the Chemical Heritage Society (CHS) to inspire and educate the public about the critical role of chemistry and chemists in contemporary society and to increase public understanding of the role of women and minority women in chemistry. Activities supported under this grant include the recording, transcription, and editing of ten interviews with women chemists, the production of seven 12- to 15-minute web profiles of women in chemistry to be distributed online through the Chemical Heritage Society's website, and the inclusion of an additional section to the CHS website dedicated to the Women in Chemistry product. Additional funds are provided to allow CHS to develop and implement an outreach strategy to disseminate these new online materials widely through social media.

---

### Museum of Mathematics

NEW YORK, NY

*\$401,461 over 27 months to equip science festivals with portable, interactive, and hands-on mathematical activities.*

**Project Director: Glen Whitney, Executive Director**

Each year since 2009, visitors to the World Science Festival's Street Fair in New York City have experienced the Math Midway, a large and crowded carnival filled with mathematical toys and activities such as square-wheeled bicycles you can ride on a cycloidal track and plastic polyhedral solids that reveal surprising cross sections when you shine laser light through them. The Math Midway is one of many successful components unique to the World Science Festival, which the Sloan Foundation helped launch through its program on the Public Understanding of Science and Technology. Most science festivals struggle to present any kind of compelling mathematical content at all. The creators of Math Midway would now like to share what they have built, as

well as what they have learned, with science festival planners and participants throughout the country. Funds from this grant will support efforts by Museum of Mathematics founder Glen Whitney to develop up to 20 portable versions of the Math Midway exhibitions that can travel to science and mathematics festivals across the country.

The Science Festival Alliance, a Sloan Foundation grantee, has already arranged for these exhibits to be displayed and tested by organizations operating under its umbrella, including science festivals in San Diego, Philadelphia, Harlem, Cambridge, and the Bay Area. The project will also train local mathematicians to staff these exhibitions. Independent evaluation of the construction, deployment, and reception of the first six such kits is also part of the project plan under this grant, and will help clarify what works and what next steps might make sense going forward to enhance public engagement with mathematics.



Brad Lubman conducts the Orchestra of St. Luke's in a performance of *Icarus at the Edge of Time* at the opening night of the 2012 World Science Festival. Scored by Phillip Glass and based on a children's book by physicist Brian Greene, the Sloan-supported event combines music, animation, and live narration to tell the story of a courageous boy who challenges the awesome power of a black hole. (PHOTO: GREG KESSLER / © 2012 WORLD SCIENCE FESTIVAL)

---

### Science Festival Foundation

NEW YORK, NY

*\$1,300,000 over 22 months to support programming and dissemination of the World Science Festival for two years.*

**Project Director: Tracy Day,  
Co-Founder, Executive Director**

This grant provides two years of continuing support to the Science Festival Foundation to produce the World Science Festival, a weeklong series of more than 50 lectures, demonstrations, and public exhibits designed to celebrate science and scientific discovery. In addition to funding the organization and production of the festival for the next two years, funds from this grant will also support the Science Festival Foundation's continued efforts to increase its impact by establishing national and international distribution networks for Festival-created content, to expand its online media platform, and to develop programming for use in science classrooms in New York and beyond.

---

## OFFICER GRANTS

---

### Brooklyn Academy of Music

BROOKLYN, NY

*\$20,000 over 6 months to support BAM's special 150th anniversary exhibition on the Shackleton Trans-Antarctic Expedition with enhanced scientific context.*

**Project Director: Violaine Huisman, Humanities Manager**

---

### New Jersey Institute of Technology Foundation

NEWARK, NJ

*\$25,850 over 2 months as support for talks, performances, and artistic presentations on the role of beauty and aesthetics in Darwin's theories of selection.*

**Project Director: David B. Rothenberg,  
Professor of Philosophy and Music**

---

### New York Hall of Science

CORONA, NY

*\$65,000 over 10 months as a planning grant to develop an interactive electronic book using cases from the Innocence Project to educate the public about the science of DNA and the use of DNA evidence in the criminal justice system.*

**Project Director: Eric Siegel,  
Director & Chief Content Officer**



## Economic Performance and Quality of Life

<b>Economic Institutions, Behavior and Performance</b>	<b>47</b>
<b>Working Longer</b>	<b>57</b>
<b>Workplace, Work Force and Working Families</b>	<b>61</b>

# Economic Institutions, Behavior and Performance

**Program Director: Daniel L. Goroff**

This program supports nonpartisan research on the structure, behavior, and performance of the U.S. economy with the goal of providing fundamental insights that can inform and strengthen critical decisions facing leaders, policymakers, and the public.

Grantmaking is divided into four thematic subprograms.

- **Economic Implications of the Great Recession**

Projects in this sub-program study markets and governments, specifically with regard to lessons we can draw from the recent financial crisis and Great Recession. Specific research topics include systemic stability; international regulatory coordination; risk measurement, capital requirements, and credit ratings; labor market recovery rates and liquidity; dataset and model development concerning labor trends.

- **Behavioral Economics and Household Finance**

Projects in this sub-program study individuals and households, specifically with regard to the quality of their economic decision-making. Specific research topics include the annuity

paradox; the energy efficiency paradox; insurance markets; risk-taking, savings, and personal bankruptcy; cognitive biases; public understanding of economics and markets for financial advice.

- **Economic Analysis of Science and Technology**

Projects in this sub-program study universities and groundbreaking industries, specifically regarding human capital development and applications of information technology. Specific research topics include labor markets for scientists and engineers; high-skilled immigration; patterns of scientific publication, collaboration, and intellectual property protection; the economics of digitization; and the international distribution of returns on high-tech investments.

- **Empirical Economic Research Enablers**

Projects in this sub-program study economic researchers, specifically with regard to their needs, opportunities, incentives, and professional practices. Specific research topics include legal entity identifiers; data citation standards; identification and tracking systems for



scholars; federal statistics; smart disclosure platforms for obfuscated markets; data and metadata management protocols; the replicability of empirical research; and the economics of knowledge contribution and distribution.

---

## TRUSTEE GRANTS

---

### American University

WASHINGTON, DC

*\$207,665 over 16 months to create a research database by sampling and digitally preserving personal bankruptcy records going back over a century.*

**Project Director: Mary Eschelbach Hansen, Associate Professor**

Federal court records document over 30 million personal bankruptcy cases during the century since the U.S. passed its first permanent bankruptcy law in 1898. Storing and maintaining these records is expensive, however—the Administrative Office of the U.S. Courts has been spending \$2 million per year to keep about a million cubic feet of these paper records stored in boxes at Federal Records Centers in a dozen different regions—and efforts were recently announced to cut costs, possibly by disposing of all these records. Plans to discard this rich historical record naturally set off alarms among scholars of all sorts, from those studying gender and racial disparities, to those interested in business cycles. Researchers began to write about compelling projects that could only be completed using these bankruptcy records. Funds from this grant will support efforts by American University Professor Mary Hansen to work with the National Archive and Records Administration to create a research database from a statistically representative sample of these bankruptcy records, digitally preserving the data they contain for future use by scholars.

---

### The Brookings Institution

WASHINGTON, DC

*\$600,000 over 36 months to publish through the Brookings Papers on Economic Activity financial research and economic data that is accessible, reliable, and influential.*

**Project Director: Justin Wolfers, Visiting Fellows, Economic Studies**

Funds from this grant provide administrative and operational support for the continued publication of the Brookings Papers on Economic Activity (BPEA), one of the premier outlets for policy-relevant economic research.

---

### University of California, Berkeley

BERKELEY, CA

*\$270,250 over 24 months to collect and analyze experimental data for powerful statistical tests of how weatherization affects household energy efficiency.*

**Project Director: Catherine Wolfram, Associate Professor**

In the United States, buildings account for about 39% of all energy use, 68% of all electricity consumption, and 38% of all carbon dioxide emissions. Engineers estimate that retrofits for weatherizing built environments can substantially reduce waste enough to quickly pay for themselves, while also helping to decrease energy consumption and curb carbon emissions. But given the chance to save money and energy this way, the conventional wisdom is that many individuals and businesses do not take full advantage of energy efficiency investments that can save them money in the long run. The Sloan Foundation has begun funding work on this important issue by different kinds of researchers, ranging from behavioral economists to environmental engineers. Sloan funds have also helped launch the first large-scale randomized experiment to study weatherization programs. Based at the University of California, Berkeley, this pilot project has already discovered unexpected evidence that low-income homeowners are even less willing to take advantage of weatherization programs than previously thought. Moreover, such reluctance remains strong even among homeowners randomly chosen to receive encouragement and help with the process of weatherization.

One implication of this finding is that the pilot study as originally planned will not have enough “statistical power” to justify robust policy conclusions. In order to refine the statistical validity of the findings, a larger sample of households is needed. Funds from this grant will support efforts by the University of California, Berkeley team to strengthen their experimental design and expand the number of households surveyed, allowing for more robust statistical conclusions that have the potential to appropriately shape policy discussions about energy utilization.



Participants gather for a group photo at a 2011 Sloan-supported conference on the prospects for international economic collaboration. Hosted by the Bank of England, the conference brought together influential academics, policymakers, and representatives from industry to discuss such topics as the cross-border impacts of fiscal policy, global macroeconomic supervision, and the economics of global action to combat climate change. (PHOTO COURTESY OF THE BANK OF ENGLAND)

### University of California, Davis

DAVIS, CA

*\$495,650 over 36 months to enable international economic comparisons by supporting the Penn World Table's next generation.*

**Project Director: Robert C. Feenstra, Professor**

The Penn World Table (PWT), a set of national accounts data that measures real GDP and relative price levels across countries and over time, is one of the most frequently cited datasets in economics. A 2009 study found that, of all the cross-country empirical publications in the economic growth and development literature, nearly two-thirds are based on the PWT. Version 6.1 of the PWT has more than 3,000 citations.

Until now, the PWT has been a product of the Center for International Comparisons at the University of Pennsylvania, and was produced through the pioneering work of Simon Kuznets, Irving Kravis, Alan Heston, Robert Summers, and Bettina Aten. Yet this team has now either retired or moved on to other pursuits. At this point, Heston, at 77

years old, is the only one still active in preparing the PWT, and shortages of staff and funding have slowed revisions and methodological improvements to the tables. The PWT needs a new home.

This grant will partially fund the transition of the Penn World Table from the University of Pennsylvania to the University of California, Davis and the University of Groningen under the care of Robert Feenstra and Marcel Timmer, respectively. Additional funds are provided to evaluate and, if appropriate, implement proposed methodological improvements to the PWT.

### Carnegie Mellon University

PITTSBURGH, PA

*\$435,689 over 36 months to conduct and promote research on the credit rating industry and its regulation.*

**Project Director: Chester Spatt,  
Dunn Professor of Finance**

In July 2010, Carnegie Mellon professor Chester Spatt hosted a Foundation-supported conference

on the industrial organization of credit ratings agencies—the industry responsible for evaluating the creditworthiness of financial instruments and products. The 80 conference participants composed a diverse crop of researchers, including economists, industry practitioners, government officials, and international experts. In addition to presentations on a number of important topics, including litigation risk, competition among rating firms, and regulatory challenges associated with securitization, the conference hosted a session on next steps, where attendees voiced enthusiasm for forming a research network, continuing annual conferences, compiling shared data, and increasing interaction with policymakers. Funds from this grant will support a project by Professor Spatt to develop just such an ongoing research network. Additional funds provide continued support for Professor Spatt’s own work on developing sophisticated game theoretic models of the credit rating process, with an emphasis on potential biases introduced into the ratings process by the way firms purchase ratings sequentially and then decide which ratings to publish.

---

### **The University of Chicago**

CHICAGO, IL

*\$995,670 over 36 months to construct and calibrate models for analyzing how the financial sector and its regulation can influence the macroeconomy.*

**Project Director: Lars Peter Hansen, Research Director**

The financial sector has traditionally played a minor role in macroeconomic models, typically acting only as a passive transmission mechanism for monetary transactions. Prior to 2008, this minor role seemed justified. Financial crises seemed to have only limited effects on the general economy, so an oversimplified portrayal of the financial sector did not seem unreasonable. After all, the Dow fell almost 23% on Black Monday, October 19, 1987, without triggering a recession. The negative effects of the turn-of-the-century dot-com bubble were mostly confined to Silicon Valley. So when the 2008 financial crisis resulted in a recession in the U.S. and elsewhere, many macroeconomists were at a loss.

We are now acutely aware of the need for reimagined macroeconomic models that take systematic financial risk into account, models that address how financial shocks can be transmitted to the wider economy and vice versa, and that help policymakers identify and limit systematic risks. Such research has hardly begun, however, and

economists are divided on how new models should be formulated.

Funds from this grant will support the efforts of Lars Hansen of the University of Chicago and Andrew Lo of MIT to convene a working group of leading economists to explore, critique, and consolidate new approaches to modeling systemic financial risk and how the financial sector is connected to the broader economy.

---

### **Clean Air Task Force**

BOSTON, MA

*\$248,832 over 12 months to organize the formulation of a study group, a research framework, and a request-for-proposals to investigate the energy efficiency paradox.*

**Project Director: Steven G. Brick, Consultant**

Economists have been talking about the “Energy Efficiency Paradox” for nearly twenty years. The puzzle is why so few people take simple steps—such as replacing inefficient light bulbs or fixing home insulation—that engineers and other experts assure us would save energy, save money, and perhaps even help save the planet. Funds from this grant will support a project by Stephen Brick, Armond Cohen, and Joseph Chaisson of the Clean Air Task Force to start a process for studying the Energy Efficiency Paradox systematically, comprehensively, theoretically, empirically, and impartially. Their first step will be to survey what is known, unknown, and unknowable about the energy efficiency paradox. This will be accomplished in cooperation with a group of experts they will convene, including not just economists but also other social scientists, policymakers, marketers, and industry experts. Based on the survey findings, the main task for that group will be to develop and publish an overall conceptual framework for organizing research on energy efficiency. The focus will be on end-user efficiency decisions concerning residential and commercial buildings and will include considerations about costs and benefits, engineering and behavior, trends and uncertainties, finance and discounting, technology and regulation, etc. The expert group’s output will also include a draft request for proposals. This document, when circulated together with the framing paper, would ask appropriate research institutions to formulate plans and projects that the Sloan Foundation and others might consider for future funding to help resolve the fundamental questions this project will identify about energy efficiency and its supposed paradoxes.

---

**University of Maryland, College Park**

COLLEGE PARK, MD

*\$465,272 over 25 months to compile, study, and openly distribute a nationally standardized database of government health inspectors' restaurant ratings.***Project Director: Benjamin Bederson, Professor**

Funds from this grant support a project by Benjamin Bederson, Ginger Jin, and Phillip Leslie to compile, compare, and curate restaurant health inspection datasets so that they can be freely used by consumers and researchers in many cities across the U.S. The undertaking will involve reconciling the different laws, rating systems, and ranking criteria that preponderate across differing municipal, county, and state jurisdictions, as well as combining large amounts of data collected under varying formats, standards, and protocols. When completed, Bederson, Jin, and Leslie's efforts will not only render health inspection information easier for consumers to access and interpret but also provide a robust dataset for use by economists, sociologists, and other researchers interested in the efficacy of regulation and its effect on behavior.

---

**Massachusetts Institute of Technology**

CAMBRIDGE, MA

*\$327,322 over 24 months to assess whether and to what extent the loss of domestic manufacturing due to trade with China affects the productivity of other U.S. firms in the same geographical area.***Project Director: Daron Acemoglu, Elizabeth & James Killian Professor of Economics**

States, localities, and countries compete aggressively to attract or retain manufacturing plants by offering companies sizable tax breaks and subsidies. This practice is generally presumed to be economical because the benefits from having these facilities—the “spillovers”—will be greater than the cost of the subsidies. When several competing firms locate in the same geographic area, an economically desirable cluster (or “agglomeration economy”) is created, which has the potential to yield higher productivity for all the other firms in that cluster (“productivity spillovers”).

Funds from this grant support the ongoing work of M.I.T. economists Daron Acemoglu and David Autor, who are studying the economic importance of these geographic clusters of manufacturing firms and the relationship between innovation and manufacturing within these clusters. Using data

from the U.S. Census Bureau's Annual Survey of Manufacturers, Census of Manufacturers, and Economic Census, Acemoglu and Autor will investigate whether and how strongly the closing of U.S. manufacturing plants depresses the productivity of other manufacturing plants in the same geographic area.

---

**University of Michigan**

ANN ARBOR, MI

*\$401,700 over 32 months to model how U.S. labor markets for scientists and engineers respond to immigration and other factors.***Project Director: John Bound, Professor**

Do immigrant workers crowd out native ones? How do specific changes in U.S. immigration policy affect scientific and engineering labor markets? Why do foreign-born students and workers who stay in the U.S. decide to stay? How do these considerations vary across scientific fields? This grant supports the work of professors John Bound and Sarah Turner to build well-specified, carefully estimated, and policy-relevant models of how the supply of and demand for scientists and engineers in the U.S. adjust in a global context. Within this comprehensive framework, they will investigate and quantify given factors such as U.S. immigration policies, economic conditions in foreign countries, and U.S. market conditions for tertiary education as these interact with observed factors such as wages, unemployment rates, and flows between specialties in domestic labor markets for scientists and engineers.

---

**National Academy of Sciences**

WASHINGTON, DC

*\$600,000 over 18 months to study global competition for talent by comparing the high-skilled immigration policies of industrialized nations.***Project Director: Stephen A. Merrill, Board Director**

Funds from this grant will provide support for a major conference on high-skilled immigration for both researchers and nonspecialists. Organized by Stephen Merrill, Executive Director of the Board on Science, Technology, and Economic Policy of the National Academy of Sciences, the conference will concentrate on international comparisons of policies that influence the supply, demand, and mobility of scientists and engineers. An expert committee appointed by STEP will study this topic in advance of the conference and commission several review papers. Subsequent to the conference, the

Academy will issue a peer-reviewed publication featuring conference session summaries, the commissioned papers, and a research agenda that can help prioritize future work in this area.

---

### **National Bureau of Economic Research, Inc.**

CAMBRIDGE, MA

*\$392,955 over 36 months to advance understanding of household financial behavior and policy.*

**Project Director: Brigitte Madrian,**

**Aetna Professor of Public Policy & Corporate Mgmt.**

The study of markets for mortgages, credit cards, annuities, and other consumer financial products was neither organized nor widely recognized as an academic research field of its own before the subprime mortgage crisis began in 2007. Since then, the Sloan Foundation has staked out a coherent role in helping establish such a field by funding research on topics that range from retirement planning to energy efficient home improvement investments. Funds from this grant will provide continued support to one of the main components of Sloan's strategy for advancing the study of consumer financial product: The Household Finance Working Group (Working Group) based at the National Bureau of Economic Research.

Launched in December 2009, the Household Finance Working Group organizes workshops, hosts conferences, and commissions research on the economics of household finance. Activities funded through this grant include two conferences, one to be held in Washington to provide policy perspectives, and another to be held jointly with the Sloan/Russell Sage Working Group on Behavioral Economics and Consumer Financial Markets. Also supported are attempts to build up the field of household finance by expanding support for research projects conducted by graduate students and young faculty.

---

### **National Bureau of Economic Research, Inc.**

CAMBRIDGE, MA

*\$308,028 over 24 months to investigate the structure and performance of labor markets in the aftermath of the Great Recession.*

**Project Director: Alexandre Mas, Professor**

Funds from this grant support a project by economists Alexandre Mas of Princeton University and David Card of University of California, Berkeley

to advance our understanding of unemployment and the behavior of labor markets in the aftermath of the October 2008 financial crisis and the subsequent U.S. recession. With support from Sloan Foundation funds, Mas and Card will commission a dozen papers from distinguished researchers about key microeconomic aspects of the current unemployment predicament. Topics to be explored include how the recession changed current and future employment patterns, why employment has yet to significantly rebound, and what long-term effects prolonged unemployment have on workers' welfare and human capital. In addition, the grant will fund efforts to disseminate the commissioned work, including the publication of the papers in a special edition of a peer-reviewed journal, and a forum in Washington aimed at communicating research results to policymakers.

---

### **New York Law School**

NEW YORK, NY

*\$384,675 over 12 months to explore open schemes for identifying corporations, tracking their relationships, and linking data about them.*

**Project Director: Beth Simone Noveck, Professor of Law**

The usefulness of economic data sets can be severely hampered by the simple fact that there are many different corporations with the same name and many different names for the same corporation. To design a sampling frame for studying corporations, economists need to be able to specify the members of the population under consideration. To ensure compliance with relevant financial oversight laws, regulators need to be able to clearly delineate which parties are on either side of a contract. To execute complicated financial transactions, banks and traders need to know who owes what to whom. The world needs a universal, open, and persistent system that keeps track not only of corporations, organizations, and other legal entities, but also of some of the basic relationships among such entities.

Beth Noveck, a law professor at New York Law School and former leader of the White House Open Government Initiative, has assembled a distinguished team who will explore, frame, prototype, and chart ways of developing an open organizational data system robust enough to support the effective identification and tracking of modern corporations in all their various forms. Funds from this one-year grant to the New York Law School will support these efforts.

---

## New York University

NEW YORK, NY

*\$311,556 over 24 months to rank global financial firms according to the systemic risk they pose for the world economy.*

**Project Director: Robert Engle, Michael Armellino Professor of Finance**

Among the provisions contained in the Dodd-Frank Wall Street Reform and Consumer Protection Act is a requirement that regulators figure out which institutions contribute the most to systemic risk so that these companies can be supervised more closely. Making such a determination requires the creation of a sophisticated, empirically-tested, theoretically-informed model of how firm qualities contribute to systemic risk. Funds from this grant support the ongoing efforts of NYU Stern School Business Professor and Nobel Laureate Rob Engle to develop such a model, allowing a comprehensive ranking of firms that pose the most danger to the global economy. Engle's work subjects firms to a form of stress test, modeling how easily firms could meet regulatory requirements in the event of a sudden drop in asset prices similar to the one that roiled markets in the fall of 2008. Grant funds will allow for the refinement of Professor Engle's model, and for expansion of his rankings to include not just U.S. firms, but international firms as well.

---

## University of Oxford

OXFORD, UNITED KINGDOM

*\$845,747 over 36 months to promote and advance international comparative studies of household finance.*

**Project Director: Tarun Ramadorai, Reader in Finance**

Researchers who study household finance study how households make investment decisions, with a particular eye on the common, costly mistakes households make when making important investment choices, such as purchasing a home or allocating savings for retirement. As such, conclusions reached by researchers in this field are highly relevant to policy and regulatory issues of consumer protection, financial literacy, and financial product design. Unfortunately, household finance research has tended to focus on households in a small number of developed countries such as the U.S., Sweden, and Finland, that have good, easily accessible data on household investment behavior. Though understandable—good research requires good data—the small number of such

countries limits the usefulness of the research conducted, since it is unclear how lessons learned from the household financial behavior of Swedes might be applied to Brazil or India where market conditions, social norms, and national institutions differ substantially.

This grant supports the work of Tarun Ramadorai of Oxford University and John Y. Campbell of Harvard University who are working to broaden and enrich the field of household finance by bringing new international comparative perspectives to the field. Over the next three years, Ramadorai and Campbell will create a new international dataset on household financial behavior sourced from both developed and developing economies. Grant funds will support the creation of this dataset, its analysis, a fellowship to encourage participation in the project by foreign economists, and several conferences and academic workshops focused on topics relevant to the field.

---

## University of Oxford

OXFORD, UNITED KINGDOM

*\$989,739 over 36 months to measure the drivers and dynamics of high-skilled immigration.*

**Project Director: Hein de Haas, Senior Research Officer**

The decision to emigrate depends both on where the potential immigrant is going and where he or she is coming from. Changes in the conditions and laws in a given country affect people differently in different countries, depending on the conditions and laws there. Yet, when collecting information about immigration, countries tend to be interested only in their own policies, and they tend to track only the total immigrant flows across their own borders. No one nation has much incentive to collect, reconcile, or share detailed information about what is happening elsewhere.

This grant to the International Migration Institute at Oxford University supports the work of a team lead by Hein de Haas to compile information about the flow patterns and the policy determinants of high-skilled immigration, concentrating on relocation decisions by students and academics. The project, called DEMIG, studies the “DEterminants of International MIGration” by producing sharable datasets that are bilateral and longitudinal, i.e., that record both sending and receiving information between pairs of countries repeatedly over time. Funds from this grant will

allow de Hass and his team to extend DEMIG's Migration Flow Database to include skill indicators like education and employment, and extend DEMIG's Policy Database beyond immigration laws to track factors like fellowship or research funding levels that can specifically influence student and faculty mobility decisions.

---

### Stanford University

STANFORD, CA

*\$999,995 over 36 months to develop practical techniques for allowing researchers to extract aggregate statistics from large datasets while protecting the privacy of information contained in individual entries.*

**Project Director: John C. Mitchell, Professor**

Datasets that contain private or proprietary information pose a vexing problem. On the one hand, we want to make these datasets available for statistical studies and other research. On the other, we want to protect the privacy of those people or firms referenced in the data. Effective solutions to the problem of how to maximize the usefulness of data while at the same time ensuring privacy have proven elusive. Sheltering datasets in data enclaves does a good job of protecting proprietary information, but severely restricts their availability for research and inhibits the reproducibility of results. Releasing “anonymized” versions of the data—versions scrubbed of private information—greatly increases its accessibility to researchers, but often results in data that is not useful or that can be combined with other public data to “reverse engineer” the removed private information.

Funds from this grant support the work of Stanford University's Cynthia Dwork, who is developing methods for accessing data that both maximizes its usefulness to researchers and ensures the privacy and confidentiality of sensitive information in the data. Dwork's primary insight is the development of a precise mathematical definition she calls “differential privacy,” which maintains that a data access system assures differential privacy if the outcome of any admissible analysis is essentially independent of whether or not any given individual's information is included in the dataset, and her work has already shown mathematically that several useful data release mechanisms can ensure privacy in this sense. Her work has the potential to become the basis for new ways of exploring sensitive data that could revolutionize empirical research in the social sciences.

---

### University of Toronto

TORONTO, ON

*\$976,171 over 36 months to study the economics of knowledge contribution and distribution.*

**Project Director: Joshua Gans, Professor**

What motivates people to share what they know for the common good? Why do people edit pages in Wikipedia, contribute to the Zagat Guide, or participate in open-source software development when there is little or no (apparent) incentive to do so? Not only do traditional economic theories and models have little to say about the “economics of knowledge contribution,” the issues are not even easy to talk about within existing theoretical frameworks.

This grant will fund the work of economists Joshua Gans of the University of Toronto and Fiona Murray of the Massachusetts Institute of Technology as they seek to understand and explain the economics of why some uncompensated creative activities thrive for the benefit of society while others do not.

---

### University of Warwick

COVENTRY, UNITED KINGDOM

*\$561,672 over 24 months to develop mathematical foundations and applications for the control theory of complex systems.*

**Project Director: Robert Mackay, Professor of Mathematics**

Epidemiologists explain and predict the spread of infectious disease using what they call probabilistic cellular automata (PCA) models. A PCA consists of nodes in a network, each of which is in a state that changes from one time period to the next depending both on the states of nearby nodes and, to some extent, on chance, too. So imagine each node represents a person, and that each person can be in one of three states: healthy, ill, or deceased. Once researchers specify a rule for how likely you are to get sick or die tomorrow given the health of those around you today, they can run the model forward in time and begin to investigate patterns. Such techniques have helped explain how, when, and why to vaccinate, to quarantine, or to take other steps for managing the outbreak of a particular disease.

The same kind of model can also describe the spread of financial distress, where nodes represent banks that are connected to other banks through a network of loans or other obligations. This grant to economist Robert Mackay at the University of

Warwick will fund a project to convene an international team of researchers to develop theorems, tools, and applicable techniques for constructing PCA models of how financial distress propagates through financial institutions, with the eventual goal of determining how circuit breakers, bailouts, enhanced regulation, or other interventions can mitigate systemic risk.

---

### **Upjohn Institute for Employment Research**

KALAMAZOO, MI

*\$349,622 over 36 months to study ways of improving economic measurements, statistics, and indicators related to globalization.*

**Project Director: Susan N. Houseman, Senior Economist**

This grant to Susan Houseman of the Upjohn Institute for Employment Research supports ongoing efforts to study ways to improve the quality of federal statistics related to the effects of globalization and international trade flows on the U.S. economy and work with officials at the Bureau of Labor Statistics and the Bureau of Economic Analysis to develop practical strategies to correct biases or methodological flaws in current data collection practices. Funds from this grant will support the commissioning of several papers on federal data collection methodologies; an academic conference to be attended by economists, researchers, policymakers, and federal officials; a published volume of papers; and the development of concrete plans for improving how we understand and measure the effects of globalization on the U.S. economy.

---

### **Wellesley College**

WELLESLEY, MA

*\$308,075 over 36 months to examine how firms shape the immigration of scientists, engineers, and other highly skilled workers to the United States.*

**Project Director: Sari Pekkala Kerr, Senior Research Scientist**

When scientists and engineers immigrate to the United States, is it an important and enabling enhancement for our high-tech economy, or does it discourage and displace natives who would otherwise fill the jobs that these foreigners take? There is no shortage of entrenched views and vehement arguments on all sides of such questions. Immigration policy for highly skilled workers has become a controversial and polarizing topic among both politicians and academics. What is needed are dispa-

sionate empirical studies of how the immigration of highly skilled workers can affect wages, employment, innovation, and productivity.

This grant will support the work of Sari and William Kerr, rare examples of immigration researchers who are not readily associated with any political, methodological, or ideological camp. Rather, they have a reputation for working with interesting data, then letting the results speak for themselves. Their research under this grant will make pioneering use of sophisticated datasets that have only recently become available, including the Longitudinal Employer-Household Dynamics (LEHD) files now maintained by the U.S. Census Bureau. Their work will be the first study of highly skilled immigration based on data and analysis at the firm level. The project will also address the question of whether firms are substituting younger highly skilled immigrants for older highly skilled native workers.

---

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

---

In June of 2009 the Board of Trustees authorized the expenditure of up to \$900,000 over two years to fund joint or exploratory small grants in economics, in particular to fund grants resulting from a joint effort with the Russell Sage Foundation to identify unique research opportunities in behavioral economics. In June of 2010, the Board of Trustees authorized the expenditure of an additional \$1 million for continued work with the Russell Sage Foundation and for other small grants that advance the programmatic objectives of the Economic Institutions, Behavior, and Performance program. The following grants were made against these previously authorized funds.

---

### **The Brookings Institution**

WASHINGTON, DC

*\$19,616 over 4 months to hold a meeting to assess the current state of research in industrial organization and to explore ways to make the field more engaged with live empirical and policy issues.*

**Project Director: Clifford Winston, Senior Fellow**



---

**Columbia University**

NEW YORK, NY

*\$124,948 over 12 months to conduct behavioral research on decision-making by consumers that informs the design of health insurance exchanges.***Project Director: Eric Johnson,  
Norman Eig Professor of Business**

---

**New Venture Fund**

WASHINGTON, DC

*\$124,781 over 12 months to study financial institutions' use of obfuscation in marketing credit cards to consumers.***Project Director: Rachael Raab, Program Coordinator**

---

**New Venture Fund**

WASHINGTON, DC

*\$71,275 over 12 months to catalyze empirical research on how obfuscated markets respond to smart disclosure policies.***Project Director: Rachael Raab, Program Coordinator**

---

**University of Wisconsin, Madison**

MADISON, WI

*\$45,000 over 19 months to model and empirically test for unintended behavioral consequences of Medicare Part D regulations.***Project Director: Francesco Decarolis,  
Assistant Professor**

---

**Yale University**

NEW HAVEN, CT

*\$118,851 over 24 months to construct and test behavioral models of how bankruptcy and mortgage default regulations impact household financial decisions.***Project Director: Costas Meghir,  
Professor of Economics**

---

**OFFICER GRANTS**

---

**University of California, Berkeley**

BERKELEY, CA

*\$96,697 over 14 months to explore and encourage new applications of Transactions Cost Economics.***Project Director: Pablo Spiller, Professor**

---

**Center for the Study of the Presidency**

WASHINGTON, DC

*\$67,600 over 9 months to design and run an exercise involving high-level public and private sector participants that simulates a hypothetical financial crisis.***Project Director: Matthew Purushotham,  
Director of Programs**

---

**Cornell University**

ITHACA, NY

*\$124,851 over 13 months to support a pilot project to develop appropriate datasets and methodology for examining how different ownership structures-particularly private equity-affect hospital performance and outcomes.***Project Director: Rosemary Batt, Professor**

---

**Institute for New Economic Thinking**

NEW YORK, NY

*\$15,108 over 12 months to support the participation of students in a major international conference on new economic thinking.***Project Director: Robert Johnson, Executive Director**

---

**Open Knowledge Foundation**

CAMBRIDGE, UNITED KINGDOM

*\$124,315 over 19 months to promote open content and open data practices in economics.***Project Director: Rufus Pollock, Director**

---

**Syracuse University**

SYRACUSE, NY

*\$124,775 over 18 months to analyze the nature and estimated number of jobs associated with the wind energy industry in the U.S. and elsewhere.***Project Director: Jason Dedrick, Associate Professor**

## Working Longer

**Program Director: Kathleen E. Christensen**

Over the next 20 years, the U.S. population aged 62 and over is projected to nearly double, growing from 45 million to 80 million. Research shows that many older workers want or need to work later in life for a variety of personal, social, and economic reasons. Employers and employees alike have a mutual interest in creating workplace conditions that enable older Americans to work past the traditional retirement age.

Yet despite this congruence of interests, substantial barriers exist that prevent older Americans from working longer, including state and federal laws that incentivize retirement, work practices that inhibit flexible work arrangements, and cultural biases and misinformation about the capacities and motivations of older workers. This interdisciplinary research program directs scholarly attention to the issues facing older workers, the institutional barriers that inhibit working longer, and the firm behaviors that facilitate later-age labor force participation. Grantmaking focuses on a multifaceted research agenda examining aging and work in the United States.

Major grants have supported a project to link data from the National Institute of

Aging's Health and Retirement Study with the Business Register of the U.S. Census to provide linked employer–employee data sets, a project to collect and analyze data from private industry on work practices affecting older workers, a fellowship program supporting Ph.D. students working on issues related to aging and work, and several projects to investigate institutional barriers and disincentives to working longer.

---

## TRUSTEE GRANTS

---

### **Boston College**

CHESTNUT HILL, MA

*\$2,775,220 over 36 months for a renewal grant for the Boston College Center on Aging and Work.*

**Project Director: Marcie Pitt-Catsoupes, Director**

In a recent study, three out of four workers aged 50 or over, and who have never retired, report that they intend to work during retirement. Given the increasing presence of older workers, employers will be well served to identify talent management strategies for maximizing the engagement and productivity of these workers. One way to maximize engagement and productivity is through providing employees with more autonomy over when, how, and where they work through the implementation of time and place management policies. This grant to the Boston College Center on Aging and Work supports a three-year research project to analyze the effects of such policies. The Boston College research team will partner with up to six major U.S. employers with labor forces larger than 10,000 employees to study the effects of implementing time and place management policies. The team

will study the costs and benefits of such programs both for employers and employees, shedding light on how time and place management policies effect such metrics as worker productivity, absenteeism, turnover, and employee job satisfaction. The research has the potential to have wide-reaching impact as employers search for solutions on how to meet the diverse needs of an aging U.S. workforce.

---

### University of California, Los Angeles

LOS ANGELES, CA

*\$285,820 over 24 months to improve our understanding of how intergenerational support for parents, adult children, and grandchildren influences labor supply of older adults nearing retirement.*

**Project Director: Suzanne Bianchi, Professor**

Men and women nearing retirement often experience multiple family obligations—to aging parents, to spouses, to adult children, and to young grandchildren—yet there is little research on how these obligations affect the labor market activities of older Americans. This grant aims to address this gap in our understanding by supporting work by Dr. Suzanne Bianchi of UCLA and Dr. Emily Weimers of the University of Michigan to study how family obligations affect the labor market behavior of older workers. Using the Panel Study of Income Dynamics, a nationally representative longitudinal sample of over 18,000 individuals from 5,000 families across the U.S., Bianchi and Weimers will address the following questions:

1. How does the need for or the need for financial support—of parents, spouses, adult children, and grandchildren—affect current labor force behavior (including labor force participation and hours worked) of men and women in late middle age and early older age? Is there any variance across cohorts?
2. Do people with considerable demands from family stop working or work less, or do people who have always worked less care more for family members?

---

### Center For Independent Documentary

SHARON, MA

*\$315,000 over 12 months to support the production of a PBS documentary, Coming of Age in Aging America.*

**Project Director: Christine Herbes-Sommers, President**

This grant provides funds for the production of a 60- to 90-minute primetime documentary, *Coming of Age in Aging America*, to be broadcast nationally on PBS. The documentary will focus on the changing demographics of the U.S. and the challenges posed to American cultural, governmental, and other societal institutions by an aging U.S. populace. The documentary will devote considerable attention to issues of aging and work, including looking at the costs and benefits of working longer, the consequences of various retirement practices on the U.S. Social Security and Medicare systems, ageism and social biases affecting older workers, and new research on age and productivity.

---

### Michigan State University

EAST LANSING, MI

*\$419,203 over 24 months to fill a gap in research by investigating how the “employment environment” promotes or impedes the ability of individuals to remain at work past traditional ages of retirement.*

**Project Director: Peter Berg, Associate Professor**

Much of the empirical research on aging and work actually focuses on aging and “end of work”—retirement. Significantly less research has been conducted on how the nonfinancial, as well as financial, conditions of work affect the decision to stay in the labor force beyond conventional retirement. To address this, Michigan State University professor Peter Berg and his colleagues Chris Ruhm and Mary Hamman intend to assess how the “employment environment,” defined to include characteristics of the job, employer, and the industry, facilitates or impedes individuals’ abilities to work past conventional retirement age. To conduct their analysis, Berg and his team will rely on a uniquely rich German dataset, which includes detailed questions regarding the employment environment and contains extensive data on such relevant factors as staffing patterns, scheduling, hours of work, modifications to jobs demands, financial information, and turnover. Funds from this grant will support this research.

The results of this study will likely shed light on the kinds of variables that could in the future be included in U.S. survey instruments, such as the Health and Retirement Study and could be important in identifying what U.S. employers might consider doing in order to keep employees working past age 65.

---

### University of Michigan

ANN ARBOR, MI

*\$4,398,616 over 60 months to create and analyze datasets that combine the Health and Retirement Study (HRS) with data from the Census Bureau from the firms where HRS respondents have worked.*

**Project Director: Margaret Levenstein,  
Research Scientist**

Funded by the National Institute on Aging, the Health and Retirement Study (HRS) is a nationally representative panel study of Americans over the age of 50 and their spouses. Respondents are interviewed every two years. The core survey collects information on income and wealth, employment, pension plans and health insurance, physical health and functioning, cognition, expectations, preferences, demographics, family structure, and some biomarkers. Supplemental surveys of subsets of the respondents cover more extensive biological, cognitive, and genetic measures; consumption, education, and human capital; information technology use; prescription drug use; happiness and well-being; and education and human capital expenditures. This grant will fund a project by a team of researchers led by Maggie Levenstein of the Michigan Census Research Data Center to link HRS data to the U.S. Business Register, a list of business establishments in the U.S. compiled and maintained by the U.S. Census Bureau. Successfully linking these two datasets will greatly increase the potential usefulness of the HRS, allowing researchers to measure how various health and wellness markers of older workers vary and correlate with the characteristics of the firms that employ them and opening new research possibilities in economics, psychology, organizational behavior, sociology, and demography. In addition to the work required to link the two datasets, funds will support the creation and dissemination of a publicly available version of the new, linked dataset (suitably anonymized to protect the privacy of survey respondents), a series of papers conducting preliminary analysis of the data, and a conference to promote the new dataset and its use.

---

### National Bureau of Economic Research, Inc.

CAMBRIDGE, MA

*\$1,087,900 over 60 months to support fellowships for Ph.D. students working on the economics of working longer.*

**Project Director: David Card, Class of 1950  
Professor of Economics**

Funds from this grant will support the development and administration of a fellowship program aimed at encouraging young economists to work on understudied or poorly understood issues at the intersection of aging and work. Over the course of five years, eleven two-year fellowships will be awarded, providing a stipend and tuition support to qualified pre-doctoral students interested in studying the economics of labor market activity by older workers in the U.S. The fellowships will be administered by David Card, a leading labor economist and program director of NBER's Labor Studies Program.

---

### RAND Corporation

SANTA MONICA, CA

*\$609,511 over 30 months to understand the role of employers in facilitating or impeding continued employment of older workers following onset of a work-limiting disability.*

**Project Director: Nicole Maestas, Economist**

The viability of the current Social Security system and its need for reform has been a topic of recent public and political concern. What has not been getting comparable public or political attention, however, is the Social Security Disability Insurance (SSDI) program, which provides benefits to American workers who suffer from disabilities. SSDI's eligibility rules act as a major disincentive for continued employment for those applying for its benefits, since they provide income support and Medicare coverage to individuals with work-limiting disabilities only if they do not engage in substantial gainful employment. Yet despite this disincentive, some disabled workers continue working in some capacity. Funds from this grant will support research by the RAND Corporation to advance our understanding of how employer practices affect workers' continued employment after the onset of a work-limiting disability. Questions to be addressed by this research include:

1. How does workplace accommodation (with regard to how, when, and where work is done) affect the duration of continuing em-

ployment by an older worker following onset of disability?

2. How does health insurance coverage (availability, continuity, and source) and pension coverage (type and eligibility ages) affect the duration of continuing employment by an older worker following onset of disability?

This project will rely on the longitudinal, cross-sectional data of the Health and Retirement Study (HRS), which has detailed questions on health insurance, as well as employer accommodations, including work schedules and work modifications.

---

### Stanford University

STANFORD, CA

*\$315,860 over 24 months to support research and analysis of the economics of series versus parallel retirement income strategies.*

**Project Director: John B. Shoven, Director, SIEPR**

As the U.S. retirement landscape has shifted from one dominated by defined benefit (DB) plans to one dominated by defined contribution (DC) plans, older Americans have had to assume more responsibility, as well as more risk, in ensuring their long-term financial security. To that end, they must make complicated income strategy decisions: how long to work; when to retire; whether to work post-retirement; and how strategically to utilize their DC assets and Social Security benefits.

This grant supports a project by Stanford economist John Shoven, and Occidental College professor Sita Slavov to analyze and evaluate the potential financial benefits of a specific income strategy that they refer to as the “series” strategy. Utilizing this strategy, older Americans would first deplete their DC assets before drawing on their Social Security benefits, hence using their retirement resources serially. Shoven and Slavov plan to clarify how—under specific conditions that individuals and couples face, such as both working or one earning more than the other—the “series strategy” could lead to more attractive returns relative to the more typically-used “parallel” strategy, where older Americans simultaneously use their defined pension accumulations to supplement Social Security, hence using them in parallel to one another. Preliminary analyses suggest there are substantial financial benefits to the “series” strategy for older Americans, in large part due to the fact that So-

cial Security benefits are indexed to inflation and increase as initial payments are delayed.

Additional grant funds will support the publication of a publicly available brochure laying out Shoven and Slavov’s conclusions and a conference directed at informing federal policymakers, researchers, financial advisors, and other relevant stakeholders about the research.

---

## OFFICER GRANTS

---

### Institute for Women’s Policy Research

WASHINGTON, DC

*\$20,000 over 4 months to better understand the relationship between education and employment, earnings, and occupations among older Americans.*

**Project Director: Jeffrey Hayes,**

**Senior Research Associate**

---

### Michigan State University

EAST LANSING, MI

*\$49,900 over 19 months to produce an edited volume and build a community of international scholars focused on an international comparative analysis of the impact of working-time configurations on older workers.*

**Project Director: Peter Berg, Associate Professor**

---

### University of Texas, Austin

AUSTIN, TX

*\$49,973 over 12 months to determine feasibility of a follow-up study of the High School and Beyond (HSB) respondents to provide vital information about linkages of early cognitive and noncognitive skills to labor force outcomes for older Americans.*

**Project Director: Chandra Muller, Professor**

---

### WNET.ORG

NEW YORK, NY

*\$45,000 over 12 months to produce and broadcast three 30-minute Open Mind interviews on aging and work.*

**Project Director: Richard D. Heffner, Executive Producer**

---

# Workplace, Work Force and Working Families

**Program Director: Kathleen E. Christensen**

In the last half of the twentieth century, a profound and largely unexamined social and economic change took place in America: the rise of middle-class dual-earner households. Grantmaking in the Workplace, Work Force, and Working Families program addressed this monumental change on three fronts: creating a rigorous new interdisciplinary field of work-family scholarship; educating the public about research findings; and establishing the National Workplace Flexibility Initiative to make workplace flexibility a compelling national issue and a standard of the American workplace.

Since the program began in 1994, the Foundation made grants totaling \$124 million in pursuit of these goals. The Foundation established six centers and funded over 100 individual research projects at leading universities nationwide to study working families, collaborate across disciplinary boundaries, and educate the next generation of work-family researchers. Other grants supported an online network devoted to making work-family scholarship readily accessible to academics, policymakers, business leaders, and the public. Still others encouraged voluntary employer adoption of flexible work-

place practices by creating a national awards program recognizing local businesses for innovative and effective flexible work arrangements and universities for faculty career flexibility programs. Other grants supported the nonpartisan analysis of legal barriers and disincentives to voluntary adoption of flexible work arrangements and the development of a bipartisan conversation in Washington around workplace flexibility issues involving multiple stakeholders, including business, unions, working parents, older workers, military families, and workers with disabilities.

Today, workplace flexibility is part of the modern lexicon and is increasingly recognized by employees, companies, and policymakers for its ability to improve lives and achieve business objectives. Work-family is now a recognized academic field and the media routinely covers issues facing working families. Though major grantmaking in this program ended in 2010, some grants were made in 2011 to allow institutional partners to develop sustainable business models and seek replacement funding, and to ensure a lasting legacy of the Foundation's commitment to workplace flexibility and work-family scholarship.

---

## TRUSTEE GRANTS

---

### **Families and Work Institute, Inc.**

NEW YORK, NY

*\$2,334,141 over 30 months to support development of Flexibility Online to advance adoption of a flexible work program.*

**Project Director: Ellen Galinsky, President**

This grant supports the development, design, and operation of Flexibility Online, a website that aims to accelerate the implementation of workplace flexibility by using interactive web tools, social media, internet advertising, and other online outreach to engage managers, supervisors, and workers to advance adoption of flexible work arrangements in American workplaces. The site will aim to become a trusted one-stop shop on workplace flexibility, filled with interactive tools that will walk employees and managers through the complete process of bringing flexibility to the workplace, from requesting workplace flexibility, to designing flexibility policies that meet the particular needs of an employee, workplace, or industry, to the implementation and management of flexible work arrangements.

Grant funds will support the development of messaging to move forward the case for flexibility and elevate flexibility from being viewed as a private, individual challenge to one of societal concern; the construction of a comprehensive, robust, and interactive website that targets employers and employees by providing practical tools on how to implement flexible work arrangements; and the undertaking of demonstration projects in three markets to test use of online ads and social media as a means to promote business who have successfully implemented flexible work arrangements and elevate flexibility as a priority for job seekers and companies.

---

### **Society for Human Resources Management Foundation**

ALEXANDRIA, VA

*\$981,548 over 36 months to support creation of new content and expanded, accelerated outreach targeted to HR professionals, employers, and employees to advance workplace flexibility.*

**Project Director: Michael P. Aitken, Vice President**

Funds from this grant to the Society for Human Resources Management (SHRM) provide support for a major three-year SHRM initiative to accelerate

the availability of effective and flexible workplaces. The initiative will pursue three interrelated strategies that will substantially scale up existing SHRM efforts in this area. First, SHRM will hold educational programs on the business case for flexibility for HR leaders in all 50 states. Second, SHRM will produce a series of customized tools and resources aimed at HR professionals, academics, and managers/supervisors to incentivize adoption of workplace flexibility. Tools to be developed include a new Workplace Flexibility Assessment tool, online resource guides for different industries, and a DVD released at the American Management Association and to business schools. Third, SHRM will develop a series of resources and materials aimed directly at employees who might benefit from the adoption of effective flexibility practices in the workplace. SHRM is partnering in this initiative with the Families & Work Institute, which will supplement SHRM efforts by targeting additional audiences outside the scope of SHRM's membership and distribution networks.

---

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

---

In March 2010, the Board of Trustees authorized the expenditure of up to \$250,000 for small grants to support programmatic objectives in the final year of the Workplace, Work Force, and Working Families program. The following grants were made against this previously authorized fund.

---

### **Corporate Voices for Working Families**

WASHINGTON, DC

*\$20,000 over 8 months to introduce workplace flexibility as a relevant corporate responsibility (CR) gauge and integrate workplace flexibility metrics into emerging corporate responsibility reporting frameworks.*

**Project Director: Donna Klein, Executive Chair**

---

### **National Partnership for Women and Families**

WASHINGTON, DC

*\$15,000 over 6 months to create an information hub on existing and pending work-family legislation at the state level for decision-makers, policy experts, researchers, advocates, the media, and the public.*

**Project Director: Portia Wu, Vice President**

---

## OFFICER GRANTS

---

### American Council on Education

WASHINGTON, DC

*\$49,157 over 6 months to develop collateral materials and a strategy to encourage higher education leaders to commit to advancing workplace flexibility on their own campuses.*

**Project Director: Gretchen M. Bataille,  
Senior Vice President**

---

### University of Kansas

LAWRENCE, KS

*\$125,000 over 54 months to evaluate the impact of the Sloan Awards for Faculty Career Flexibility in Medical Schools on institutions in terms of policies related to career flexibility and for their faculty in terms of policy awareness, participation, and job satisfaction.*

**Project Director: Donna K. Ginther,  
Professor of Economics**

---

### Labor Project for Working Families

BERKELEY, CA

*\$15,134 over 6 months to provide terminal funding to ensure that the Alfred P. Sloan Foundation-funded LEARN WorkFamily network and contract language database is incorporated into the Labor Project for Working Families.*

**Project Director: Netsy Firestein, Executive Director**

---

### University of Pennsylvania

PHILADELPHIA, PA

*\$15,000 over 6 months to supplement graduate students and foreign academics traveling to The Sloan Work and Family Network conference in June 2012.*

**Project Director: Jerry A. Jacobs, Executive Officer**

---

### University of West Florida

PENSACOLA, FL

*\$19,974 over 36 months to develop recommendations and resources for effective college and university work-life websites.*

**Project Director: Laura L. Koppes Bryan, Chair**

---





# Digital Information Technology

# Digital Information Technology

**Program Directors: Josh Greenberg, Doron Weber**

This program seeks to better our understanding of the relationship between technology, information, and society, primarily through research on and the development of digital information technology for the conduct of scholarly research and public engagement with knowledge. Grantmaking focuses on three subareas: data and computational research; scholarly communication; and universal access to knowledge.

Grants in data and computational research aim to help researchers develop tools, establish norms, and build the institutional and social infrastructure needed to take full advantage of contemporary developments in data-driven, computation-intensive research. Grants in scholarly communication aim to support the development of new models of filtering and curating online scholarly materials and engage the emerging community of stakeholders and practitioners tackling similar issues in widely divergent disciplinary contexts. Grants in universal access to knowledge support the digitization and democratization of scientific and cultural knowledge in all its forms and aim to preserve its openness and accessibility for the widest public benefit.

---

## TRUSTEE GRANTS

---

### **Adler Planetarium**

CHICAGO, IL

*\$1,011,466 over 25 months to demonstrate the ability of data analysis through citizen science to make significant contributions across the widest possible range of research areas.*

**Project Director: Christopher Lintott, Director**

Raw data needs preparation to be useful for research. In some cases, what is needed is cleanup and normalization; in others, tagging or categorizing dataset elements. Depending on the domain and kind of data, computers can do much of the necessary work, but some tasks, due to fuzziness or complexity in the data, are currently beyond the bounds of computation. Much data prep requires human eyes, human minds, human judgment, and human labor, a daunting demand when the size of many modern scientific datasets is measured in terabytes.

The Zooniverse project, an international effort initially based at Oxford University and now housed primarily at the Adler Planetarium in Chicago, offers a straightforward solution to this problem: divide the work into very granular tasks, gather a large crowd of science enthusiasts, and let them loose on the data. “Galaxy Zoo,” the first Zooniverse initiative, asked participants to view images of galaxies collected by the Sloan Digital Sky Survey and to categorize their shapes, successfully engaging 130,000 participants who performed over 100 million distinct classifications. Subsequent projects have expanded the Zooniverse strategy into other scientific domains, asking volunteers, in one case, to help reconstruct historical climate data by entering records from the digitized images of ship logbooks.

Funds from this two-year grant will support the extension of the Zooniverse platform into new

mechanics beyond image classification (for example, sound classification of whale songs, or tagging of species from video feeds), outreach efforts to identify scientific datasets that might be usefully improved through tapping Zooniverse volunteers, and activities to engage the large and growing community of the citizen scientists that participate in Zooniverse projects.

---

### University of California, Berkeley

BERKELEY, CA

*\$836,849 over 24 months to develop solutions to copyright law obstacles facing public digital library initiatives and coordinate them with the Digital Public Library of America effort.*

**Project Director: Pamela Samuelson, Professor**

Funds from this grant support a project by Professor Pamela Samuelson of the University of California, Berkeley Law School to develop practical solutions to the obstacles copyright law places in the way of the implementation of digital library initiatives. Samuelson and her research team will address several thorny issues, including orphan works, private ordering, collective licensing, digital lending, and metadata ownership, in an effort to develop fair and practical procedures for the successful implementation of library initiatives that seek to realize the full potential of digital libraries. Over two years, funds from this grant will support several white papers, workshops and conferences, and the crafting of model legislation. The work of Samuelson's team will also help inform the continued development of the Foundation-supported Digital Public Library of America.

---

### University of California, Los Angeles

LOS ANGELES, CA

*\$1,174,129 over 36 months to conduct ethnographic research of scientific information and data practices.*

**Project Director: Christine Borgman, Professor**

Funds from this grant to information scientist Christine Borgman and anthropologist Sharon Traweek at the University of California, Los Angeles support a robust, three-year ethnographic research program to study scientific data practices and develop recommendations about needed skills and relationships within scientific teams that collect and manage data. Borgman, Traweek and their research group will carry out an ambitious "2x2" research program, comparing projects that

produce large volumes of homogeneous data with those involving smaller amounts of heterogeneous data as well as projects at earlier and later stages of their life cycles. The four sites to be studied include the Dataverse Network at Harvard, the Center for Embedded Network Sensing, a new National Science Foundation (NSF)-funded center for data-driven science, and the transfer of the Sloan Digital Sky Survey data from Fermilab to long-term homes at Johns Hopkins and Princeton. The research will help develop a better knowledge about existing data practices in modern science, inform future infrastructure investments, and clarify new roles around issues like data curation.

---

### Creative Commons

MOUNTAIN VIEW, CA

*\$250,917 over 12 months to define the main issues and challenges of enabling a large-scale science commons and an achievable strategic plan for Creative Commons.*

**Project Director: Catherine M. Casserly, CEO**

The licenses developed by Creative Commons have become an essential set of tools to patch gaps in the international system of copyright, creating a parallel, opt-in intellectual property regime that doesn't require country-by-country legislative change to implement. With those licenses fairly well integrated into modern practice, Creative Commons is embarking on a year-long process of strategic planning to determine where and how they can best have an impact in new areas, including science. This grant provides partial support to Creative Commons as it undertakes this process. Funds will augment a November meeting focused on "open science" and nine months of subsequent work on three key themes: licenses for open-access scholarship, legal and technical infrastructure for open data sharing, and the role of patent licensing in science.

---

### DuraSpace

ITHACA, NY

*\$497,433 over 18 months to develop and deploy a "Direct-To-Researcher" cloud-based data platform.*

**Project Director: Michele Kimpton,  
Chief Executive Officer**

In a poll conducted by Science in 2011, scientists across disciplines were asked, "Where do you archive most of the data generated in your lab or for your research?" More than 50% responded "in our



Participants hard at work at the 2011 Science Hack Day in San Francisco. The event brings together programmers, engineers, scientists, and technologists for 48 hours to come up with quick solutions, or “hacks”, to scientific problems. A 2011 grant from the Sloan Foundation funded an ambassador program at the conference, allowing participants from all over the world to attend the day, learn about event organization, and then organize Science Hack Days in their home cities. (PHOTO COURTESY OF FLICKR USER GRETCURTIS. LICENSE: CC BY 2.0)

lab.” While fine for short-term research needs, this “data under the desk” scenario poses real risks for the long-term utility and reproducibility of research. One way of improving this situation and getting more data under safer cover is to develop data management solutions that directly address the immediate needs of researchers while allowing the delegation of data curation functions like preservation and archiving. This grant supports a focused, iterative development process by DuraSpace to design, build, and release such a system.

### **George Mason University**

FAIRFAX, VA

*\$379,704 over 12 months to provide updated software, data, and education that facilitate public participation in the redistricting of New York State.*

**Project Director: Michael P. McDonald,  
Associate Professor**

This grant provides funds for a project by George Mason University to facilitate use of District

Builder, a free, open-source software platform that allows citizens to draw, share, and submit their own congressional redistricting maps, in New York State. Partnering with New York’s Fordham University, the George Mason team will further develop and improve the District Builder platform, populate it with relevant demographic and legal data specific to New York, launch and maintain a public website to host the District Builder platform aimed at New York residents, and engage in a series of educational and outreach initiatives, including a Fordham-sponsored competition that will encourage students to submit redistricting maps drawn using District Builder and have their submissions ranked against a set of objective, measurable criteria, with the winning map to be submitted to the New York State legislature for consideration in its redistricting decisions.

---

## George Mason University

FAIRFAX, VA

*\$861,762 over 36 months to pioneer new methods for capturing and highlighting online scholarly materials in ways that are useful to research communities.*

**Project Director: Daniel Cohen, Director**

The shift to digitally mediated forms of scholarship has been characterized by a substantial growth in channels for and diversity of scholarly work. We see this in the flourishing of content in preprint servers and rapid-publication channels like arXiv, PLoS ONE, and the Social Science Research Network alongside unconventional forms of scholarly communication like research blogs and personal websites, all of which enable scholars to put their work out for broad access. Part of the Foundation's emerging strategy to ease this transition is to support the development of new models of filtering and curating online scholarly materials.

This three-year grant supports the work of Dan Cohen and Tom Scheinfeldt at George Mason University's Center for History and New Media (CHNM) in the development of a software platform that will enable professional societies and interdisciplinary networks of scholars to collectively organize and review relevant resources. Cohen and Scheinfeldt will undertake a detailed study of various models for aggregating scholarly content, as well as a broad landscape survey of new and changing techniques for managing content on the "open web." In addition to contributing to the general body of knowledge about collective information filtering systems, this research will also directly inform the development of CHNM's "PressForward" platform, a substantial modification of the popular "Wordpress" blogging application that will enable the aggregation and curation of online scholarly resources at both an editorial and community level. Funds from this grant also support the experimental expansion of PressForward, currently powering DigitalHumanitiesNow.org, into four additional scholarly disciplines.

---

## Harvard University

CAMBRIDGE, MA

*\$2,498,168 over 22 months for an intense two-year process of workshops, meetings, plenaries, research, pilot digitization, prototype development, and community building that will result in the launch of the Digital Public Library of America.*

**Project Director: John Palfrey, Professor**

This grant to John Palfrey and Harvard University's Berkman Center for Internet and Society provides funding for an intense process of meetings, workshops, plenaries, research, pilot digitization, technical prototype development, and community building that will lead to the launch of a Digital Public Library of America (DPLA). Over the next two years, Palfrey and his team will coordinate at least 22 workshops divided among six major interrelated workstreams covering various aspects of the DPLA: content and scope, audience participation, technical architecture, finance/business models, legal issues, and governance. Each workstream will arrive at a plan of action for ensuring the best outcome for an integrated national digital library system that provides seamless access to digital resources.

---

## Indiana University

BLOOMINGTON, IN

*\$606,161 over 36 months to design a prototype system that demonstrates nonconsumptive, computational access to a restricted full-text corpus.*

**Project Director: Beth Plale, Professor**

Access to some datasets is justifiably restricted for legal, ethical, or business reasons. The existence of such datasets presents an opportunity for the smart application of technology that permits aggregate statistical or computational research on the data without violating the constraints that prevent full access. This grant, to researcher Beth Plale at Indiana University, supports a collaborative project with the Hathi Trust, holder of over 8.5 million digitized print works, to address the immense technical and theoretical issues involved in designing digital methods for mining data from in-copyright materials that respect current legal restrictions governing access to such works. Plale's team will develop a secure computing environment that will enable researchers to bring their own algorithms and tools to bear on Hathi's full-text digitized corpus, while at the same time limiting the ability of that software (or researchers) to access the work in a way that runs afoul of copyright law.

---

## National Academy of Sciences

WASHINGTON, DC

*\$334,667 over 15 months to study the feasibility of an online and open access Mathematical Heritage Library.*

**Project Director: Scott Weidman, Director, BMSA**

Funds from this grant support a project by the National Academy of Sciences' Board on Mathematical Sciences and Their Applications to study the feasibility of creating an online, open-access Mathematical Heritage Library. Issues to be addressed by the study include evaluating the potential value of such a library, identifying desired and useful capabilities for the library, assessing potential obstacles and challenges to the development process, and estimating probable costs of the library's development, deployment, and maintenance.

---

### National Academy of Sciences

WASHINGTON, DC

*\$281,258 over 24 months to develop, analyze, and promote standards for the citation and attribution of data sets by research communities.*

**Project Director: Paul F. Uhler, Director,  
Board on Research Data & Information**

Progress in science depends critically on a familiar but delicate system that rewards citations and priority. Scientists are rewarded for discovering something first, and they are rewarded for writing something that other scientists frequently reference. Though this familiar system provides well-established norms for the citation of scholarly articles, there are not similarly accepted norms for citing scientific datasets. Funds from this grant will support a project by the National Research Council's Board on Research Data and Information to address how to attribute and cite scientific datasets. The board will establish a steering committee to examine practices and standards, to hold a symposium and workshop, and to organize a joint series of meetings in cooperation with the CODATA-ICSTI Task Group on Data Citation Practices.

---

### National Information Standards Organization

BALTIMORE, MD

*\$222,706 over 21 months to develop a new specification for the real-time synchronization of web resources housed in separate repositories.*

**Project Director: Todd A. Carpenter, Managing Director**

No central authority tracks updates to an article or a dataset as it moves through various publication channels or institutional, disciplinary, or personal repositories over the course of its lifetime. A scholarly research paper, for example, might be available on a preprint server, the author's home page, a journal's website, and in an institutional

repository. Imagine the difficulty an author would face should she wish to add a passage about updated findings to previous versions of the paper. The proliferation of copies means online materials behave surprisingly like physical paper; once you print out a copy of an article, the author can't push revisions to your copy.

To address this need, the National Information Standards Organization (NISO) is beginning a project to convene a group of key computer and information scientists to develop a standard for the versioning and synchronization of web resources. They also plan to hold a series of workshops that follow the community development process, resulting in a codified standard that meets the needs of publishers, repositories, and other stewards of scholarly products. Alongside other work on data citation, annotation, and canonical author identifiers, the resulting NISO standard would be a valuable tool to facilitate the publication of scholarship and research data on the web, and is likely to be useful in other contexts as well. Funds from this grant will provide partial support for NISO's efforts over the next two years.

---

### Public Library of Science

SAN FRANCISCO, CA

*\$353,393 over 24 months to develop, deploy, and promote Article Level Metrics tools and approaches.*

**Project Director: Peter Binfield, Publisher**

From a user's perspective, rapid-publication "megajournals" like PLoS ONE share a common problem with preprint servers like arXiv or the Social Science Research Network: without traditional quality indicators, researchers are left having to make sense of an ever-growing pile of undifferentiated articles. Readers need better mechanisms at the article level to enable them to see in a moment how one paper relates to others in terms of citation, usage, and other indicators of quality so that they can easily make informed choices about which papers are most relevant to their own research and interests.

This two-year grant to the Public Library of Science supports efforts to develop, deploy, and promote just such article-level metrics both for PLoS and for the wider academic community. Funds will support three related activities. First, the PLoS team will extend their existing publishing platform to pull in data well beyond basic

download counts, from inbound web links to usage statistics via popular research management platforms like Mendeley and Zotero. Second, PLoS will substantially refine the interfaces used to present that data, testing a number of design approaches to determine what visualizations are most helpful to their users. Finally, PLoS will launch a substantial outreach program, circulating white papers and engaging both open-access and commercial publishers in a broad conversation about article-level metrics adoption. Code developed through this grant will be released under a free/open-source license.

---

### Wikimedia Foundation

SAN FRANCISCO, CA

*\$3,000,000 over 35 months to help Wikipedia develop and sustain its educational mission while constantly improving quality, diversity, and access to knowledge for people everywhere.*

**Project Director: Erik Moller, Deputy Director**

Funds from this grant provide continued support to the Wikimedia Foundation, which owns and operates Wikipedia, in its efforts to professionalize and sustain itself organizationally while improving the quality of Wikipedia articles. Wikimedia's ambitious goals in the next five years are to increase the number of people served to one billion; to increase the number of articles to 50 million; to review 25% of all articles to ensure accurate, quality information; to double the number of editors to 200,000; and to double the number of women editors and contributors from the developing world. Funds will support efforts to improve article quality by partnering with professors and universities and encouraging students to create or improve articles in their area of expertise. Also supported through this grant is a Wikimedia project to convert its most talented volunteers into paid fellows through a fellowship program focused on research, existing program work, and new high-impact work. Wikimedia is also undertaking an aggressive, high-profile campaign to attract more women contributors. Finally, Wikipedia will use some of the Foundation's support to develop its relationship with the cultural sector by working with its 30 worldwide chapters to foster partnerships with galleries, libraries, archives, museums, and educational institutions.

---

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

---

In March 2011, the Board of Trustees authorized the expenditure of up to \$500,000 for grants supporting the development of software prototypes in areas related to the Foundation's grantmaking in the Digital Information Technology program. The following grants were made against this previously authorized fund.

---

### The Alexandria Archive Institute

SAN FRANCISCO, CA

*\$109,850 over 10 months to promote greater professional acceptance and recognition for scientific data dissemination by developing editorial processes that enhance data quality and usability.*

**Project Director: Eric Kansa, Chief Technology Officer**

---

### Columbia University

NEW YORK, NY

*\$124,996 over 5 months to create a graphical, open-source Citation Style Language (CSL) editor that can be used to develop, edit, and customize bibliographic reference styles.*

**Project Director: Damon Jaggars, Librarian for Collections & Services**

---

### The Graduate Center of The City University of New York

NEW YORK, NY

*\$107,500 over 12 months to develop and test with the Modern Language Association (MLA) an alpha version of a "Commons-in-a-Box" software tool for scholarly communities first developed at City University of New York.*

**Project Director: Matthew K. Gold, Advisor, Digital Initiatives**

---

### New Media Studio

SANTA BARBARA, CA

*\$32,450 over 6 months to build and test an open-source, active archiving service for science/engineering meeting posters.*

**Project Director: Bruce Caron, Executive Director**

---

**Stanford University**

STANFORD, CA

*\$125,000 over 8 months to fund development of the Open Monograph Press platform, including an innovative pre-publication module.*

**Project Director: John Willinsky, Khosla Professor of Education**

---

---

**Columbia University**

NEW YORK, NY

*\$3,800 over 1 months to support a community forum to bring together stakeholders such as scientists, journal editors, funding agencies, to discuss reproducibility in the computational sciences.*

**Project Director: Victoria Stodden, Assistant Professor**

---

---

**OFFICER GRANTS**

---

**American University**

WASHINGTON, DC

*\$26,350 over 2 months to hold a workshop on what libraries can do today to take advantage of digitization and best serve the scholarly community under existing law.*

**Project Director: Peter Jaszi, Professor**

---

**Association of American Universities**

WASHINGTON, DC

*\$94,041 over 6 months to plan the launch of a sustainable media outlet for communicating with the public about academic research results.*

**Project Director: Andrew Jaspan, Editor & Founder**

---

**Azavea, Inc.**

PHILADELPHIA, PA

*\$124,916 over 4 months to ready public mapping prototype software for open use in the redistricting process.*

**Project Director: Robert Cheetham, President**

---

**University of California, Irvine**

IRVINE, CA

*\$119,756 over 12 months to evaluate how public access to mapping software and data, including initiatives supported by Foundation grants, impacts the redistricting process.*

**Project Director: Bernard Grofman, Professor**

---

**Code for America Labs, Inc.**

SAN FRANCISCO, CA

*\$50,000 over 3 months to support the 2011 Code for America Summit.*

**Project Director: Jennifer Pahlka, Project Director**

---

---

**Council on Library and Information Resources**

WASHINGTON, DC

*\$117,567 over 12 months to address the need for sound data management practice throughout the academy by means of a research project aimed at identifying alternative ways to build the professional capacity to handle digital data.*

**Project Director: Charles Henry, President**

---

---

**Harvard University**

CAMBRIDGE, MA

*\$15,000 over 1 month to support the Microsoft Research eScience Workshop: Transforming Scholarly Communication.*

**Project Director: Alyssa Goodman, Professor**

---

---

**Institute for the Future**

PALO ALTO, CA

*\$75,000 over 8 months to test the scalability and portability of Science Hack Day events worldwide.*

**Project Director: Ariel Waldman, Research Affiliate**

---

---

**The Internet Archive**

SAN FRANCISCO, CA

*\$58,828 over 12 months to support a summit on Linked Open Data in Libraries, Archives, and Museums (LOD-LAM), as well as dissemination of proceedings and outreach around pilot use cases.*

**Project Director: Kris Carpenter Negulescu, Director, Web Group**

---

---

**Library Foundation of Los Angeles**

LOS ANGELES, CA

*\$36,000 over 2 months for partial support for three-day conference on the role of U.S. public libraries in the age of digitization and in the creation of a digital public library.*

**Project Director: Martin Gómez, City Librarian**

---



---

**Library of Congress**

WASHINGTON, DC

*\$38,750 over 8 months to support a two-day meeting to identify gray literature preservation priorities in the sciences.*

**Project Director: Martha Anderson, Director, NDIIPP**

---

**Planetwork NGO, Inc.**

SAN FRANCISCO, CA

*\$20,000 over 1 month to support a workshop on reputation systems and web annotation.*

**Project Director: Dan Whaley, President, Co-founder**

---

**Social Science Research Network**

ROCHESTER, NY

*\$60,490 over 5 months to develop a plan for extending the Social Science Research Network's scope to include research data as well as preprint articles.*

**Project Director: Gregory J. Gordon, President/CEO**

---

**Society of American Archivists Foundation**

CHICAGO, IL

*\$6,000 over 3 months to support the Society of American Archivists sending a member of its Intellectual Property Working Group to the World Intellectual Property Organization's Committee on Copyright and Related Rights.*

**Project Director: Nancy P. Beaumont, Executive Director**

---

**StoryCorps, Inc.**

BROOKLYN, NY

*\$24,494 over 12 months to develop a plan for management of and computational access to the StoryCorps digital sound archive.*

**Project Director: Virginia Millington, Manager**



## Select Issues

**Energy & Environment** 74

**International Science Engagement** 78

## Energy & Environment

### Program Director: Gail M. Pesyna

Grantmaking in this small interdisciplinary program looks for unique opportunities to expand our understanding of the economic, technological, organizational, regulatory, national security, and environmental consequences of energy production and consumption.

Past grantmaking in this program has led to the publication of the influential MIT reports, *The Future of Nuclear Power* (2003), and *The Future of Coal* (2007) and the Foundation is currently supporting a similar project that focuses on economic, technological, and institutional issues associated with the use of solar energy. Other recent Foundation grants in this area support the exploration of strategies for the safe, responsible expansion of nuclear power around the world; a project to examine the feasibility of extending the life of existing nuclear plants; a project to disseminate safety guidelines for the responsible use of radioactive materials at academic, industrial, and medical institutions; a project on potential improvements to the measurement of carbon sequestered in forests; and two projects on natural gas: one examining the economics of state-of-the-art natural gas extraction based on detailed analyses of the geological and eco-

nomic attributes of five important U.S. shale gas deposits, and one examining environmental and regulatory issues surrounding shale gas exploration and extraction.

Due to the significant funding available from both public and private sources for energy and environmental research, the Foundation is very selective in the grants it makes in this area, supporting only non-partisan projects for which funding is not readily available, projects related to other Foundation programs or priorities, or projects where Foundation support could be leveraged to significantly raise the chances of the project's success.

---

## TRUSTEE GRANTS

---

### **Arius Association**

BADEN, GERMANY

*\$150,000 over 24 months to support continued efforts to launch regional repository working groups.*

**Project Director: Charles McCombie, President**

As countries around the world consider building their first nuclear power plant, they must inevitably consider the question of what will happen to the used or "spent" nuclear fuel that will come out of these reactors. An attractive option, especially for countries that are small or that will have only a small number of nuclear power plants, is to work cooperatively with other countries to create a regional spent fuel and high-level nuclear waste

repository, thus sharing among a set of partner countries the high costs of such a facility.

Since 2009, the Foundation has provided funds to the Arius Association to enable them to promote the regional repository approach in the Arabian Gulf/Middle East region and in Southeast Asia. Several countries in each of these regions are committed to launching nuclear power programs. Funds from this grant will provide support to Arias for the continuation of these efforts. During that time they will help plan and provide the intellectual backing for two regional meetings. The United Arab Emirates will host an Arabian Gulf/Middle East meeting; and the International Atomic Energy Agency will host a Southeast Asia meeting. By the end of the two-year grant period, Arius aims to facilitate the creation of multinational working groups considering the desirability and feasibility of creating regional repositories in each of these regions. Working with partner countries and the IAEA, Arius will draft the technical and legal documents needed to make this possible. They will also publish at least one article in a major international magazine that explains and publicizes their work on regional repositories and showcases their progress.

---

### **Carnegie Endowment for International Peace**

WASHINGTON, DC

*\$125,000 over 12 months to provide further support to the Carnegie Endowment's project to develop voluntary Principles of Conduct for nuclear reactor vendors.*

**Project Director: George Perkovich,  
Vice President for Studies & Director**

With Sloan Foundation support, the Carnegie Endowment for International Peace has brokered the development of a voluntary agreement among nuclear reactor vendors to abide by an industry-wide set of principles meant to increase the safety and security of nuclear facilities. This grant funds a year of follow-up activities subsequent to the formal adoption of the principles on September 15, 2011. Funded activities include briefing governments on the final text of the Principles of Conduct; conducting outreach to reactor operators, the World Association of Nuclear Operators, and other stakeholders encouraging them to adopt and abide by the principles; convening a review meeting to monitor implementation of the procedures set out in the Principles; developing processes to enable sharing of best practices across the industry; and working with nuclear reactor vendors to create an independent secretariat.

---

### **ICPO-INTERPOL**

*\$1,600,000 over 36 months to provide partial support to develop INTERPOL's Radiological and Nuclear Terrorism Prevention Program.*

**Project Director: Ronald Kenneth Noble,  
Secretary General**

Funds from this grant provide partial support to INTERPOL to develop a Radiological and Nuclear Terrorism Prevention Program (RNTPP). Building on the success of their Biological Terrorism Prevention Program, INTERPOL's work plan for developing the RNTPP will include organizing three terrorism prevention courses and one tabletop terrorism prevention exercise per year for three years, holding an international working group meeting to produce a report targeting the needs of police services in preventing nuclear and radiological terrorism, developing an investigative handbook, and designing and deploying five e-learning modules. Partnering with the International Atomic Energy Agency, INTERPOL will also develop a joint course aimed specifically at educating and training emergency personnel and other likely first responders to potential nuclear or radiological attacks.

---

### **J. William Jones Consulting Engineers, Inc.**

HUNTINGTON BEACH, CA

*\$325,250 over 12 months to disseminate and implement guidance to assure medical, industrial, and academic nuclear facilities' use of radioactive materials is adequately secure and resilient to man-made and natural hazards.*

**Project Director: James William Jones, President**

This grant provides continued support for a project to improve the security, resilience, and risk awareness of medical, industrial, and academic nuclear facilities that generate, use, or store radioactive materials. Previously funded work in this area resulted in the development of a risk assessment methodology for evaluating policies and procedures for handling radioactive materials and the development of an interactive toolkit allowing sites to apply this methodology to their own institutional practices. Building on this work, J. William Jones Consulting Engineers will launch a project over the next year to:

1. Continue to develop the self-assessment toolkit to include additional security measures and provide guidance for enhancing security. Provide metrics to compare assessed site security to a range of scores that would

be acceptable for sites storing materials of this type and quantity.

2. Obtain feedback from sites, regulators and other knowledgeable individuals regarding scoring and establishing acceptance levels for various amounts and types of radioactive materials.
3. Add suggestions for improving security and possibly create a security handbook as part of the interactive toolkit.
4. Encourage adoption of the developed risk assessment methodology on a voluntary basis for all Agreement States and states regulated by the Nuclear Regulatory Commission (NRC).
5. Work with states and organizations such as the Conference of Radiation Control Program Directors (CRCPD), the Department of Homeland Security, and the Agreement States to adopt the developed methodology.
6. Find ways to inform the public about the risk and the actual dangers of deployment of medical, industrial, and academic nuclear facility radioactive materials by partnering with existing organizations such as the Health Physics Society, the American Association of Physicists in Medicine, and working committees to develop spokespersons and websites.

---

### **Middlebury College**

MIDDLEBURY, VT

*\$149,155 over 24 months to enable the Monterey Institute of International Studies to expand the science-based courses offered in its Master's Degree in Nonproliferation and Terrorism Studies.*

**Project Director: William C. Potter, Director**

This grant funds an initiative at the Center for Nonproliferation Studies (CNS) at Middlebury College's Monterey Institute of International Studies to expand course offerings at CNS's unique master's program in Nonproliferation and Terrorism Studies, broadening and strengthening the scientific aspects of the curriculum. Using Sloan Foundation funding, CNS will add five additional science- and technology-based courses with at least 15 students each; offer two new weekend workshops annually on science- and technology-based themes with at least 25 students each; and continue its pre-enroll-

ment, two-week, non-credit course in basic science and mathematics for new M.A. students.

---

### **Middlebury College**

MIDDLEBURY, VT

*\$149,063 over 24 months to enable the Monterey Institute of International Studies to provide non-proliferation education and training for diplomats, government officials and mid-career professionals at international organizations.*

**Project Director: William C. Potter, Director**

In fall 2010, the Center for Nonproliferation Studies (CNS) of Middlebury College's Monterey Institute of International Studies was selected by the Austrian Foreign Ministry to manage a new Center for Disarmament and Non-Proliferation in Vienna, home city of the International Atomic Energy Agency and, therefore, the global center for nuclear diplomacy. In September 2011, CNS ran a pilot one-week intensive course on nonproliferation at the new Center, aimed at providing nonproliferation education and training for diplomats, government officials, and mid-career professionals at international organizations. Funds from this grant will allow CNS to expand its offerings in Vienna either to one two-week course annually or, if diplomats cannot spare that much time for training, to two one-week courses. Each course would have at least 20 participants, at least 70% of whom would be from non-aligned countries. The rest would be diplomats from other countries or employees of international organizations, most of whom have excellent technical backgrounds but limited knowledge of the politics, institutions, and agreements that govern the international nuclear regime.

---

### **Resources for the Future, Inc.**

WASHINGTON, DC

*\$1,171,667 over 18 months to inform and improve regulatory and legislative activities affecting shale gas development.*

**Project Director: Alan J. Krupnick,  
Research Director & Senior Fellow**

Funds from this grant support a project by Resources for the Future (RFF) to assess the risks associated with increased shale gas development in the United States as viewed by both experts and the public. Primary focus will be on water scarcity and water, air, and soil quality issues associated with surface operations at well sites, vertical well

drilling, horizontal drilling, deep hydraulic fracturing, and wastewater disposal. Expert views will be assembled from existing literature, recent government analyses, and interviews with selected experts. Public views will be determined by means of interviews with up to 100 people, four focus groups, and a survey of 1,500 randomly selected adults that will focus on public willingness to pay to reduce risks from shale gas development. Participants in the interviews, focus groups, and surveys will be drawn from residents in the western region of the United States, including Texas, where oil and gas production has a long history, and from the six-state eastern region of the Marcellus shale formation, where oil and gas production had not occurred for many years until recently and where shale gas production could be extensive in the near future. Subsequent to this research, RFF will identify, describe, and analyze the drivers of environmental risks associated with shale gas production and the policy levers potentially available to reduce these risks. RFF will describe and analyze current and prospective regulation and legislation at the national, river basin commission, and state levels, with some attention to the local level. Finally, RFF will put all of this together to develop recommendations for improvements in regulation and legislation.

---

### University of Texas, Austin

AUSTIN, TX

*\$1,501,154 over 24 months to determine the capability of U.S. shale gas to contribute significantly to natural gas supply over the next twenty years, given various assumptions about natural gas prices.*

**Project Director: Scott W. Tinker,  
Director, Bureau of Economic Geology**

Though new technology has recently led to a huge increase in the estimates of the amount of natural gas that can be produced economically from U.S. shale deposits, detailed objective analysis of how much gas can actually be produced from these deposits has not yet been done. This grant to the University of Texas at Austin's Bureau of Economic Geology (BEG) will support just such an analysis. BEG will obtain government and company data—some public and some proprietary—on all existing gas wells in the five major shale gas regions of the United States and use these data to perform a well-by-well analysis of production capacity. Although the BEG project will not cover all shale regions, the ones included are expected to yield the lion's share of shale gas over the next 20 years, the time horizon

for the study. BEG will also quantify the needs for land and water use to enable various levels of shale gas production to be achieved.

---

## OFFICER GRANTS

---

### Arizona State University

TEMPE, AZ

*\$15,000 over 12 months to provide travel support for attendees at a conference on macroeconomic theory and environmental issues.*

**Project Director: V. Kerry Smith,  
W.P. Carey Professor of Economics**

---

### Carnegie Endowment for International Peace

WASHINGTON, DC

*\$19,800 over 5 months to fund the travel of American Participants in a conference on reprocessing in Northeast Asia to be hosted by the China Arms Control and Disarmament Association.*

**Project Director: Lora Saalman, Associate**

---

### University of Leeds

LEEDS, WEST YORKSHIRE, UNITED KINGDOM

*\$60,000 over 15 months to conduct international, especially European, dialogues and related activities to explore the feasibility of an international academic network for measurement and monitoring of the world's forests.*

**Project Director: Alan Grainger, Professor**

---

### Mongolian American Scientific Research Center

ULAANBAATAR, MONGOLIA

*\$7,500 over 4 months to provide additional funding for a conference on fresh and spent fuel management and regional nuclear cooperation in Northeast Asia.*

**Project Director: Dashdorj Dugersuren, Director**

---

### Smithsonian Institution

WASHINGTON, DC

*\$60,000 over 12 months to conduct international dialogues, especially for the Americas, and related activities to explore the feasibility of an international academic network for measurement and monitoring of the world's forests.*

**Project Director: Leonard P. Hirsch,  
Senior Policy Advisor**

# International Science Engagement

**Program Director: Doron Weber**

The Foundation is undertaking a pilot effort to use science as a bridge in conflict areas by encouraging interaction and professional collaboration among scientists and engineers in neighboring countries. A planning grant was awarded to the Lee Kuan Yew School of Public Policy at the National University of Singapore to create a Science Center that will include the countries of South Asia—India, Pakistan, Bangladesh, Sri Lanka, Bhutan and Nepal. China is under consideration.

in the world. The idea was to establish an around-the-clock, year-round operation that could swiftly relocate threatened scholars to safe locations in other countries where they could continue their academic work—and ideally, return to their original countries when conditions improved. Since 2002, SRF has provided safe haven to 400 threatened scholars worldwide. Funds from this grant will provide for the relocation and safe shelter of an additional 40 scholars in science, technology, engineering, and mathematics fields.

---

## TRUSTEE GRANTS

### **Institute of International Education**

NEW YORK, NY

*\$750,000 over 38 months to provide life-saving fellowships and academic placements for persecuted scholars so they can continue their work before returning to their native countries when it is safe to do so.*

**Project Director: Jim Miller, Executive Director**

This three-year grant to the Institute of International Education (IIE) will support its important humanitarian work rescuing endangered scientists, engineers, and mathematicians through the Scholar Rescue Fund (SRF). As a result of their academic work, scholars and intellectuals—professors, teachers, researchers, writers—often come under attack in repressive regimes where freedom of thought and freedom of speech pose a challenge to authoritarian rule. In 2002, the IIE—which also runs international scholarship programs like the Fulbright—established the Scholar Rescue Fund as a permanent agency to help scholars anywhere

---

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

In October 2010, the Board of Trustees authorized the expenditure of up to \$500,000 for a series of pilot grants to support established science diplomacy organizations and to enlist their efforts in support of the Foundation's new program in International Science Engagement. The following grants were made against this previously authorized fund.

### **National University of Singapore America Foundation, Inc.**

SUNNYVALE, CA

*\$125,000 over 12 months for a planning grant to establish a South Asian science engagement project.*

**Project Director: Surya Sethi, Associate Professor**



## Civic Initiatives



## Civic Initiatives

### Program Director: Paula J. Olsiewski

Since its founding in 1934, the Alfred P. Sloan Foundation has been proud to call New York City home. With its Civic Initiatives program, the Foundation responds to unique opportunities to benefit the New York City metro area with an eye toward advancing the Foundation's other interests in science, technology, and economic performance.

*and faculty levels through two awards programs: a Summer Undergraduate Research program and a Junior Faculty Fellowship program.*

**Project Director: Gillian Small,  
Vice Chancellor for Research**

Funds from this grant support two programs at the City University of New York aimed at supporting faculty and students in STEM disciplines. The first, CUNY's Summer Research Program, provides interested undergraduates with the opportunity to engage in hands-on, in-the-lab science, assisting CUNY science faculty with ongoing research projects during the summer. Grant funds will support 10 students in each of 2012, 2013, and 2014, providing a housing allowance and a living stipend. The second supported program under this grant is CUNY's Junior Faculty Fellowship Program, which aims to support promising early-career STEM faculty at CUNY by providing a \$50,000 fellowship for use in research. Over the course of the next three years, eight faculty will receive fellowships through this grant.

## TRUSTEE GRANTS

### Fund for the City of New York

NEW YORK, NY

*\$750,000 over 36 months to provide partial support for the Sloan Public Service Awards program.*

**Project Director: Mary McCormick, President**

This grant provides three years of support for the continued operation of the Sloan Public Service Awards. Administered by the Fund for the City of New York since 1973 and supported by the Sloan Foundation since 1985, these annual awards honor exceptional civil servants working in New York City municipal government. Each of the six yearly winners receives a \$10,000 award and is honored both in a ceremony at his or her workplace and in a city-wide celebration presided over by New York City's mayor. Grant funds will support the administrative costs of the program for three years, including the selection process, nominee vetting, press outreach, event planning, and award monies.

## GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

In March 2011, the Board of Trustees authorized the expenditure of up to \$300,000 for small grants to support philanthropic affinity groups and other charitable organizations that provide services to the Foundation community. The following grants were made against this previously authorized fund.

### Research Foundation of the City University of New York

NEW YORK, NY

*\$1,075,968 over 38 months to encourage and support promising early career scientists at both student*

### Council on Foundations, Inc.

ARLINGTON, VA

*\$45,000 over 8 months to support work on behalf of the nonprofit and charitable community.*

**Project Director: Keith Greene, Director Membership**



New York City Mayor Michael Bloomberg speaks at the awards ceremony honoring the winners of the 2012 Sloan Public Service Awards. The awards, funded by the Sloan Foundation since 1985, celebrate the achievements of outstanding New York City civil servants. (PHOTO COURTESY OF THE OFFICE OF THE MAYOR OF NEW YORK)

---

### Foundation Center

NEW YORK, NY

*\$195,000 over 36 months to support work on behalf of the nonprofit and charitable community.*

**Project Director: Bradford K. Smith, President**

---

### GuideStar USA, Inc.

WILLIAMSBURG, VA

*\$5,000 over 12 months to support work on behalf of the nonprofit and charitable community.*

**Project Director: Kelly Ann Whalen, Development Director**

---

### Independent Sector

WASHINGTON, DC

*\$17,500 over 9 months to support work on behalf of the nonprofit and charitable community.*

**Project Director: Kris Prendergast, Director**

---

### Philanthropy New York

NEW YORK, NY

*\$24,000 over 9 months to support work on behalf of the nonprofit and charitable community.*

**Project Director: Ronna D. Brown, President**

---

### Technology Affinity Group

WAYNE, PA

*\$5,000 over 12 months to support work on behalf of the nonprofit and charitable community.*

**Project Director: Lisa Dill Pool, Executive Director**

---

## OFFICER GRANTS

---

### New York County District Attorney

NEW YORK, NY

*\$125,000 over 12 months to support a pilot study to examine digital court documents to detect and measure the prevalence of perjury and develop options to mitigate it.*

**Project Director: Daniel Alonso,  
Chief Assistant District Attorney**

---

### Polytechnic Institute of New York University

BROOKLYN, NY

*\$124,993 over 12 months to support a pilot project for a cyber security lecture series in New York City.*

**Project Director: Robert N. Ubell,  
Vice President, Enterprise Learning**



## Other Grants

## Other Grants

The Foundation occasionally makes grants outside its normal grantmaking programs when a unique opportunity arises to benefit society or advance other Foundation aims. The following grants made in 2011 do not fall under other existing Foundation programs.

---

### GRANTS MADE AGAINST PRIOR AUTHORIZATIONS

---

In October 2011, the Board of Trustees authorized the expenditure of up to \$500,000 for exploratory grants in mathematics that relate to the Foundation's other grantmaking priorities. The following grants were made against this previously authorized fund.

---

#### **Friends of the International Mathematical Union**

PROVIDENCE, RI

*\$73,000 over 7 months to bring international participants, perspectives, and potential partners to the planning of a Mathematical Heritage Library.*

**Project Director: Ingrid Daubechies, President**

---

### OFFICER GRANTS

---

#### **Cold Spring Harbor Laboratory**

COLD SPRING HARBOR, NY

*\$50,000 over 13 months to help develop a history of the Human Genome Project.*

**Project Director: Mila Pollock, Executive Director**

## 2011 Financial Review

The financial statements and schedules of the Foundation for 2011 and 2010 have been audited by Grant Thornton LLP. They include the consolidated statements of financial position, consolidated statements of activities and consolidated statements of cash flows, notes to consolidated financial statements and schedule of management and investment expenses.

Investment income for 2011 was \$13,302,009, a decrease of \$2,404,769 from \$15,706,778 in 2010. After the deduction of investment expenses and provision for taxes, net investment income was \$4,273,015 in 2011 as compared to \$6,779,807 for the prior year. Investment expenses for 2011 consisted of \$4,752,321 of direct investment expenses and \$3,276,673 for investment management fees paid directly to managers. Total investment expenses and provision for taxes of \$1,000,000 equaled \$9,028,994 versus \$8,926,971 in 2010. Total investment gains for 2011 were \$27,616,909 as compared with \$155,524,484 in 2010.

Grants authorized (net of grant refunds) and management expenses during 2011 totaled \$91,088,734, which was \$86,815,719 greater than 2011 net investment income. Of this total, grants authorized (net of refunds) amounted to \$81,400,234, while management expenses were \$9,688,500. Since the Foundation's inception in 1934, the cumulative excess of grants and expenses over the Foundation's net investment income has amounted to \$865.6 million.

Grants authorized and payments made during the year ended December 31, 2011 are summarized in the following table:

Grants unpaid at December 31, 2010	\$ 58,598,501
Authorized during 2011	81,798,488
Payments during 2011	<u>(75,355,856)</u>
Grants unpaid at December 31, 2011	<u>\$ 65,041,133</u>

The fair value of the Foundation's total assets was \$1,653,512,812 at December 31, 2011 including investments valued at \$1,652,024,590 as compared with total assets of \$1,703,820,396 at December 31, 2010.

Consolidated Financial Statements and  
Supplementary Information Together with  
Report of Independent Certified Public Accountants

**ALFRED P. SLOAN FOUNDATION**

December 31, 2011 and 2010

---

# Audited Financial Statements and Schedules

## Table of Contents

---

<b>Report of Independent Certified Public Accountants</b>	<b>87</b>
<b>Consolidated Financial Statements:</b>	
<b>Consolidated Statements of Financial Position     as of December 31, 2011 and 2010</b>	<b>89</b>
<b>Consolidated Statements of Activities     for the years ended December 31, 2011 and 2010</b>	<b>90</b>
<b>Consolidated Statements of Cash Flows     for the years ended December 31, 2011 and 2010</b>	<b>91</b>
<b>Notes to Consolidated Financial Statements</b>	<b>92</b>
<b>Supplementary Information:</b>	
<b>Schedule of Management and Investment Expenses     for the years ended December 31, 2011 and 2010</b>	<b>105</b>
<b>Schedule of Grants and Appropriations for the year     ended December 31, 2011</b>	<b>106</b>

---



Audit • Tax • Advisory

**Grant Thornton LLP**  
666 Third Avenue, 13th Floor  
New York, NY 10017-4011

T 212.599.0100  
F 212.370.4520  
[www.GrantThornton.com](http://www.GrantThornton.com)

## REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Trustees of  
**Alfred P. Sloan Foundation:**

We have audited the accompanying consolidated statement of financial position of Alfred P. Sloan Foundation (the “Foundation”) as of December 31, 2011, and the related consolidated statements of activities and cash flows for the year then ended. These consolidated financial statements are the responsibility of the Foundation’s management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. The consolidated financial statements of the Foundation as of and for the year ended December 31, 2010 were audited by other auditors. Those auditors expressed an unqualified opinion on those consolidated financial statements in their report dated June 21, 2011.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundation’s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Alfred P. Sloan Foundation as of December 31, 2011 and the consolidated changes in their net assets and their consolidated cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Grant Thornton LLP  
U.S. member firm of Grant Thornton International Ltd



Our audit was conducted for the purpose of forming an opinion on the 2011 consolidated financial statements as a whole. The schedule of management and investment expenses for the year ended December 31, 2011 and the schedule of grants and appropriations for the year ended December 31, 2011 are presented for purposes of additional analysis and is not a required part of the consolidated financial statements. Such supplementary information is the responsibility of Foundation management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures. These additional procedures included comparing and reconciling the information directly to the underlying accounting and other records used to prepare and present the consolidated financial statements, and other additional procedures in accordance with auditing standards generally accepted in the United States of America established by the American Institute of Certified Public Accountants. In our opinion, the 2011 supplementary information is fairly stated, in all material respects, in relation to the 2011 consolidated financial statements as a whole. The schedule of management and investment expenses for the year ended December 31, 2010 was audited by other auditors. Those auditors expressed an unqualified opinion on the Foundation's 2010 consolidated financial statements in their report dated June 21, 2011, from which the 2010 supplementary information was derived.

*Grant Thornton LLP*

New York, New York  
June 27, 2012

# Alfred P. Sloan Foundation

## Consolidated Statements of Financial Position

As of December 31, 2011 and 2010

	<u>2011</u>	<u>2010</u>
<b>ASSETS</b>		
Cash	\$ 1,488,222	\$ 793,067
Investments (Note 3):		
Direct investments – equities	65,626,154	123,631,651
Direct investments – fixed income	163,356,824	206,766,976
Direct investments – mutual funds	115,526,119	–
Alternative investments	<u>1,307,515,493</u>	<u>1,372,628,702</u>
Total investments	<u>1,652,024,590</u>	<u>1,703,027,329</u>
Total assets	<u><u>\$ 1,653,512,812</u></u>	<u><u>\$ 1,703,820,396</u></u>
<b>LIABILITIES AND NET ASSETS</b>		
<b>LIABILITIES</b>		
Grants payable (Note 8)	\$ 65,041,133	\$ 58,598,501
Federal excise tax payable (Note 5)	9,739,652	8,919,812
Deferred compensation arrangements	885,368	566,296
Accrued postretirement benefit obligation (Note 7)	3,537,474	8,441,537
Other liabilities	<u>144,095</u>	<u>49,620</u>
Total liabilities	79,347,722	76,575,766
Commitments (Notes 3, 4, and 9)		
NET ASSETS – unrestricted	<u>1,574,165,090</u>	<u>1,627,244,630</u>
Total liabilities and net assets	<u><u>\$ 1,653,512,812</u></u>	<u><u>\$ 1,703,820,396</u></u>

*The accompanying notes are an integral part of these consolidated financial statements.*

# Alfred P. Sloan Foundation

## Consolidated Statements of Activities

For the years ended December 31, 2011 and 2010

	<u>2011</u>	<u>2010</u>
INVESTMENT INCOME		
Interest and dividends	\$ 13,302,009	\$ 15,706,778
Less:		
Investment expenses	(8,028,994)	(7,067,971)
Provision for taxes (Note 5)	(1,000,000)	(1,859,000)
	<u>(9,028,994)</u>	<u>(8,926,971)</u>
Net investment income	<u>4,273,015</u>	<u>6,779,807</u>
EXPENSES		
Grants (net of refunds of \$398,254 in 2011 and \$359,086 in 2010)	81,400,234	61,561,344
Management expenses	9,688,500	8,893,817
	<u>91,088,734</u>	<u>70,455,161</u>
Excess of expenses over net investment income	<u>(86,815,719)</u>	<u>(63,675,354)</u>
INVESTMENT GAINS		
Net realized gain on disposal of investments	36,089,998	61,978,391
Unrealized (loss) gain on investments, net of deferred federal excise tax expense of \$8,183,368 and \$1,909,104 in 2011 and 2010, respectively	(8,473,089)	93,546,093
	<u>27,616,909</u>	<u>155,524,484</u>
(Decrease) increase in net assets before postretirement benefit adjustments	(59,198,810)	91,849,130
Amounts not yet recognized as a component of net periodic benefit cost	<u>6,119,270</u>	<u>(991,994)</u>
(Decrease) increase in net assets	(53,079,540)	90,857,136
Net assets at beginning of year	<u>1,627,244,630</u>	<u>1,536,387,494</u>
Net assets at end of year	<u>\$ 1,574,165,090</u>	<u>\$ 1,627,244,630</u>

The accompanying notes are an integral part of these consolidated financial statements.

# Alfred P. Sloan Foundation

## Consolidated Statements of Cash Flows

For the years ended December 31, 2011 and 2010

	<u>2011</u>	<u>2010</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
(Decrease) increase in net assets	\$ (53,079,540)	\$ 90,857,136
Adjustments to reconcile (decrease) increase in net assets to net cash used in operating activities:		
Net realized gain on disposal of investments	(36,089,998)	(61,978,391)
Unrealized loss (gain) on investments	8,638,288	(95,455,197)
Increase in federal excise tax payable	819,840	2,346,474
Increase (decrease) in grants payable	6,442,632	(11,984,209)
Decrease (increase) in accrued postretirement benefit obligation	(4,904,063)	1,705,650
Increase in deferred compensation arrangements	319,072	181,290
Increase (decrease) in other liabilities	94,475	(283,557)
	<u>(77,759,294)</u>	<u>(74,610,804)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Proceeds from sales of investments	1,144,753,084	1,257,396,401
Purchases of investments	(1,066,298,635)	(1,183,156,934)
	<u>78,454,449</u>	<u>74,239,467</u>
Net cash provided by investing activities	78,454,449	74,239,467
Net increase (decrease) in cash	695,155	(371,337)
Cash at beginning of year	<u>793,067</u>	<u>1,164,404</u>
Cash at end of year	<u>\$ 1,488,222</u>	<u>\$ 793,067</u>

*The accompanying notes are an integral part of these consolidated financial statements.*

---

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

---

### 1. ORGANIZATION

Alfred P. Sloan Foundation makes grants primarily to support original research and broad-based education related to science, technology, economic performance, and the quality of American life. Alfred P. Sloan Foundation is unique in its focus on science, technology, and economic institutions-and the scholars and practitioners who work in these fields-as chief drivers of the nation's health and prosperity. Alfred P. Sloan Foundation has a deep-rooted belief that carefully reasoned systematic understanding of the forces of nature and society, when applied inventively and wisely, can lead to a better world for all. Alfred P. Sloan Foundation's investment portfolio provides the financial resources to support its activities. The investment strategy for the investment portfolio is to invest prudently in a diversified portfolio of assets with the goal of achieving superior returns.

In June 2009, Sloan Projects LLC was established under the Delaware Limited Liability Company Act. Alfred P. Sloan Foundation and Sloan Projects LLC share the common charitable and educational purpose of supporting, among other projects, film, theatrical, and television projects that promote education about science and technology themes and characters and challenge existing stereotypes about scientists and engineers. Sloan Projects LLC is a single member limited liability company ("LLC") with the sole member being Alfred P. Sloan Foundation. Sloan Projects LLC is consolidated with Alfred P. Sloan Foundation for financial statement and tax purposes.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### **Basis of Accounting**

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting and include the assets, liabilities, net assets, and financial activities of Alfred P. Sloan Foundation and Sloan Projects LLC (collectively, the "Foundation"). All significant interorganization balances and transactions have been eliminated in consolidation.

#### **Income Taxes**

Alfred P. Sloan Foundation is exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code (the "Code") and is a private foundation as defined in Section 509(a) of the Code. Sloan Projects LLC is a single member LLC and is a disregarded entity for tax purposes. The Foundation recognizes the effect of income tax positions only if those positions are more likely than not of being sustained.

#### **Fair Value Measurements**

Fair value is defined as the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date. Fair value is a market-based measurement, not an entity-specific measurement, and sets out a fair value hierarchy with the highest priority being quoted prices in active markets. The Foundation discloses fair value measurements by level within that hierarchy. The fair value hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are those that market participants would use in pricing the asset or liability based on market data

---

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

---

obtained from sources independent of the Foundation. Unobservable inputs reflect the Foundation's assumptions about the inputs market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. The fair value is categorized into three levels based on the inputs as follows:

- Level 1 - Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Foundation has the ability to access at the measurement date. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. A quoted price in an active market provides the most reliable evidence of fair value and shall be used to measure fair value whenever available. Since valuations are based on quoted prices that are readily available and regularly available in an active market, valuation of these securities does not entail a significant degree of judgment.
- Level 2 - Valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly. Also included in Level 2 are investments measured using a net asset value ("NAV") per share, or its equivalent, that may be redeemed at that NAV as of the date of the balance sheet or in the near term, which the Foundation has generally considered to be within one-year.
- Level 3 - Valuations based on inputs that are unobservable and significant to the overall fair value measurement. Unobservable inputs shall be used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. Also included in Level 3 are investments measured using a NAV per share, or its equivalent, that can never be redeemed at NAV or for which redemption at NAV is uncertain due to lockup periods or other investment restrictions.

The categorization of a financial instrument within the fair value hierarchy is based upon the pricing transparency of the instrument and does not necessarily correspond to the Foundation's perceived risk of that instrument.

### **Investments**

Investments in equity securities with readily determinable fair values are reported at fair value based on quoted market prices. Investments in debt securities are measured using quoted market prices where available. If quoted market prices for debt securities are not available, the fair value is determined using an income approach valuation technique that considers, among other things, rates currently observed in publicly traded markets for debt with similar terms to companies with comparable credit risk, the issuer's credit spread, and illiquidity by sector and maturity.

---

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

---

The Foundation follows the accounting standards of Financial Accounting Standards Board (FASB) Accounting Standards Codification (“ASC”) Subtopic, 820-10-35-59, *Fair Value Measurement and Disclosures – Fair Value Measurements of Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. This allows for the estimation of the fair value of investments in investment companies, for which the investment does not have a readily determinable fair value, using net asset value per share or its equivalent, as provided by the investment managers. The Foundation reviews and evaluates the values provided by the investment managers and agrees with the valuation methods and assumptions used in determining the net asset values of these investments. These estimated fair values may differ significantly from the values that would have been used had a ready market for these securities existed.

Most investments classified in Levels 2 and 3 consist of shares or units in investment funds as opposed to direct interests in the funds’ underlying holdings, which may be marketable. Because the net asset value reported by each fund is used as a practical expedient to estimate fair value of the Foundation’s interest therein, its classification in Level 2 or 3 is based on the Foundation’s ability to redeem its interest at or near December 31st. If the interest can be redeemed in the near term, which the Foundation has determined to be within one-year, the investment is classified as Level 2.

Gains and losses on disposal of investments are determined on the first-in, first-out basis on a trade date basis.

### Grants

Grants are recorded as an expense and liability of the Foundation when authorized by the Trustees and the grantee has been selected and notified. In certain instances, grants are recorded as an expense and liability when the Board of Trustees appropriates amounts for selected projects. Refunded grants are recorded as a reduction to grant expense.

### Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

### Reclassifications

Certain reclassifications of prior year amounts have been made to conform to the current year presentation. Such reclassifications did not change total assets, liabilities, revenues, expenses or changes in net assets as reflected in the 2010 consolidated financial statements.

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

### 3. INVESTMENTS

The following tables present the fair value hierarchy of investments, the only financial instruments that are measured at fair value on a recurring basis, at December 31, 2011 and 2010:

	Fair value measurements at December 31, 2011			
	Total	Level 1	Level 2	Level 3
Direct investments:				
Equities:				
Domestic	\$ 65,626,154	\$ 65,626,154	\$ —	\$ —
Fixed income:				
U.S. government	163,356,824	163,356,824	—	—
Mutual funds:				
Equities	40,148,912	40,148,912	—	—
Fixed income	75,377,207	75,377,207	—	—
	115,526,119	115,526,119	—	—
Alternative investments:				
Equities:				
Domestic	\$ 101,392,252	\$ —	\$ 24,147,646	\$ 77,244,606
Long/short	151,279,366	—	92,723,631	58,555,735
International	212,190,415	—	209,834,794	2,355,621
Fixed income:				
Global sovereign bonds	55,379,915	—	55,379,915	—
Independent return	430,543,739	—	173,448,502	257,095,237
Real estate	60,050,751	—	—	60,050,751
Private equity	296,679,055	—	—	296,679,055
	1,307,515,493	—	555,534,488	751,981,005
	<u>\$ 1,652,024,590</u>	<u>\$ 344,509,097</u>	<u>\$ 555,534,488</u>	<u>\$ 751,981,005</u>



# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

	Fair value measurements at December 31, 2010			
	Total	Level 1	Level 2	Level 3
Direct investments:				
Equities:				
Domestic	\$ 123,631,651	\$ 123,631,651	\$ —	\$ —
Fixed income:				
U.S. government	184,365,247	184,365,247	—	—
Investment grade corporate bonds	13,606,419	—	13,606,419	—
Mortgage-backed	5,863,540	—	5,863,540	—
Other asset-backed	2,931,770	—	2,931,770	—
	<u>206,766,976</u>	<u>184,365,247</u>	<u>22,401,729</u>	<u>—</u>
Alternative investments:				
Equities:				
Domestic	110,367,972	—	109,096,226	1,271,746
Long/short	198,568,475	—	148,804,391	49,764,084
International	218,969,558	—	185,527,300	33,442,258
Fixed income:				
Global sovereign bonds	51,561,233	—	51,561,233	—
Independent return	420,496,660	—	78,249,791	342,246,869
Real estate	46,146,661	—	—	46,146,661
Private equity	326,518,143	—	—	326,518,143
	<u>1,372,628,702</u>	<u>—</u>	<u>573,238,941</u>	<u>799,389,761</u>
	<u>\$ 1,703,027,329</u>	<u>\$ 307,996,898</u>	<u>\$ 595,640,670</u>	<u>\$ 799,389,761</u>

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

The following table presents a reconciliation for all Level 3 assets measured at fair value at December 31, 2011:

	<u>Beginning Balance</u>	<u>Purchases</u>	<u>Settlements / redemptions</u>	<u>Total net realized and unrealized gains (losses)</u>	<u>Transfers In/ Out *</u>	<u>Ending Balance</u>
Alternative Investments:						
Equities:						
Domestic	\$ 1,271,746	\$ —	\$ —	\$ (1,046,673)	\$ 77,019,533	\$ 77,244,606
Long/short	49,764,084	—	—	(3,353,962)	12,145,613	58,555,735
International	33,442,258	—	(20,000,000)	5,934,490	(17,021,127)	2,355,621
Independent return	342,246,869	24,800,000	(19,913,423)	11,353,988	(101,392,197)	257,095,237
Real estate	46,146,661	7,791,958	(2,128,125)	8,240,257	—	60,050,751
Private equity	326,518,143	28,899,660	(61,473,961)	2,735,213	—	296,679,055
	<u>\$ 799,389,761</u>	<u>\$ 61,491,618</u>	<u>\$ (103,515,509)</u>	<u>\$ 23,863,313</u>	<u>\$ (29,248,178)</u>	<u>\$ 751,981,005</u>

The following table presents a reconciliation for all Level 3 assets measured at fair value at December 31, 2010:

<b>Beginning balance</b>	\$ 731,638,749
Total net realized and unrealized gains	87,877,432
Purchases	106,700,741
Settlements/redemptions	(126,827,161)
<b>Ending balance</b>	<u>\$ 799,389,761</u>

\* Certain alternative investments were reclassified from Level 3 to Level 2 due to the expiration of lock-up periods. One alternative investment was reclassified from Level 2 to Level 3 as the Foundation entered into a share class with a 2-year lock-up period.

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

The following table lists the redemption terms and unfunded commitments for the alternative investments as of December 31, 2011 and 2010:

2011						
	# of Funds	Fair value	Unfunded commitments in millions	Redemption frequency	Redemption notice period	Lock-up period
Alternative investments:						
Equities:						
Domestic	3	\$ 101,392,252	\$ —	monthly, annually	30 days	None
Long/short	6	151,279,366	—	quarterly, annually, other	30–90 days	None, Rolling 3-year
International	7	212,190,415	—	monthly, quarterly, other	6–60 days	None, 1-year
Fixed income:						
Global sovereign bonds	1	55,379,915	—	monthly	10 days	None
Independent return	19	430,543,739	6	monthly, quarterly, other	30–180 days	None, 1-3 years
Real estate	10	60,050,751	10	None	N/A	
Private equity	44	296,679,055	58	None	N/A	
Total		<u>\$ 1,307,515,493</u>	<u>\$ 74</u>			

2010						
	Fair value	Unfunded commitments in millions	Redemption frequency	Redemption notice period		
Alternative investments:						
Equities:						
Domestic	\$ 110,367,972	\$ —	monthly, annually		30 days	
Long/short	198,568,475	—	quarterly, annually, other		30–60 days	
International	218,969,558	—	monthly, quarterly, other		6–60 days	
Fixed income:						
Global sovereign bonds	51,561,233	—	monthly		10 days	
Independent return	420,496,660	7	monthly, annually, quarterly, other		10–180 days	
Real estate	46,146,661	19	None		N/A	
Private equity	326,518,143	66	None		N/A	
Total	<u>\$ 1,372,628,702</u>	<u>\$ 92</u>				

---

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

---

**Equities:** Alternative investments in this category invest predominantly in equity securities including U.S., international developed and emerging markets, benchmarked against MSCI All Country World Index. Equity funds have lock-up provisions that range between 3 months to no more than 3 years.

**Fixed Income:** Alternative investments in this category invest in domestic and international fixed income securities, benchmarked against Citigroup Salomon Broad index.

**Independent Return:** Independent return funds include investments such as low net exposure equity hedge funds, distressed credit, and merger arbitrage. Such strategies are expected to have equity-like long-term returns but with less correlation to the equity markets. \$87.8 million is invested in draw-down structures with no predetermined redemption date.

**Real Estate:** Includes funds that invest primarily in commercial real estate, all of which are illiquid investments.

**Private Equity:** Includes private equity and venture capital, all of which are illiquid investments.

Private foundations are required by the Internal Revenue Service to distribute 5% of average assets during the year. In order to plan and budget in an orderly manner, the Foundation implements the 5% rule by using a 12-quarter rolling average of the fair market value of its investment portfolio to determine the distribution level for the year. The last quarter on the 12-quarter rolling average is September 30th.

#### 4. FINANCIAL INSTRUMENTS WITH OFF-BALANCE-SHEET CREDIT OR MARKET RISK

The Foundation's investment strategy has the ability to incorporate certain financial instruments that involve, to varying degrees, elements of market risk and credit risk in excess of the amounts recorded in the consolidated financial statements.

During 2010, the Foundation bought and sold options contracts. Long put options purchased and short call options sold held at December 31, 2010 were valued at approximately \$2.5 million and \$(2.2 million), respectively. The Foundation did not enter into such contracts in 2011.

The Foundation does not anticipate that losses, if any, resulting from its market or credit risks would materially affect its consolidated financial statements.

---

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

---

### 5. TAXES

The Foundation is liable for a federal excise tax of 2% of its net investment income, which includes realized capital gains. However, this tax is reduced to 1% if certain conditions are met. The Foundation met the requirements for the 1% tax for the years ended December 31, 2011 and 2010. Therefore, current taxes are estimated at 1% of net investment income for 2011 and 2010. Additionally, certain of the Foundation's investments give rise to unrelated business income tax liabilities. Such tax liabilities for 2011 and 2010 are not material to the accompanying consolidated financial statements; however, the provision for taxes, as of December 31, 2011 and 2010, 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% tax is not determinable until the fiscal year in which net gains are realized, deferred taxes represent 2% of unrealized gains at December 31, 2011 and 2010.

### 6. 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 and Fidelity Investments. Retirement plan expense was \$743,678 and \$743,183 in 2011 and 2010, respectively.

### 7. POSTRETIREMENT BENEFITS OTHER THAN PENSIONS

The Foundation provides healthcare benefits for qualified retirees. The Foundation records annual amounts relating to the plan based on calculations that incorporate various actuarial and other assumptions, including discount rates, mortality, turnover rates, and healthcare cost trend rates.

The Foundation reviews its assumptions on an annual basis and makes modifications to the assumptions based on current rates and trends as appropriate. The effect of modifications to those assumptions is recorded as a charge to net assets and amortized to net periodic cost over future periods using the corridor method. The net periodic costs are recognized as employees render the services necessary to earn the postretirement benefits.

Effective January 1, 2011, the Foundation replaced its healthcare insurance provider for its retirees to United Healthcare Medicare Supplement Insurance Plan and Medicare Prescription Drug Plan. The resulting changes substantially lowered the Foundation's postretirement benefit obligation.

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

The following table sets forth the financial information for the plan for 2011 and 2010:

	<u>2011</u>	<u>2010</u>
Change in accrued postretirement benefit obligation:		
<b>Benefit obligation at beginning of year</b>	\$ 8,441,537	\$ 6,735,887
Service cost	388,208	230,973
Interest cost	478,635	396,744
Actuarial loss	(5,643,209)	46,151
Assumption change	—	1,326,484
Benefits paid	(127,697)	(294,702)
<b>Benefit obligation at end of year</b>	<u>\$ 3,537,474</u>	<u>\$ 8,441,537</u>
Components of net periodic postretirement benefit cost reported:		
Service cost	\$ 388,208	\$ 230,973
Interest cost	478,635	396,744
Amortization of transition obligation	476,061	476,061
Amortization of gain	—	(95,420)
Net periodic postretirement benefit cost	<u>\$ 1,342,904</u>	<u>\$ 1,008,358</u>
Benefit obligation weighted average assumptions at December 31, 2011 and 2010:		
Discount rate	4.33 %	5.67 %
Periodic benefit cost weighted average assumptions for the years ended December 31, 2011 and 2010:		
Discount rate	5.67 %	5.89 %

The medical trend and inflation rate is 9% in 2011 grading down to 5.5% in 2015 and thereafter.

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the postretirement benefit plan. The effects of a 1% increase (decrease) in trend rates on total service and interest cost and the postretirement benefit obligation are as follows:

	<u>2011</u>		<u>2010</u>	
	<u>1% Increase</u>	<u>1% Decrease</u>	<u>1% Increase</u>	<u>1% Decrease</u>
Effect on total service and interest cost	\$ 71,336	\$ (52,932)	\$ 116,422	\$ (90,706)
Effect on postretirement benefit obligation	556,472	(441,180)	1,391,906	(1,119,705)

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

Projected premium payments for each of the next five fiscal years and thereafter are as follows:

**Year ending December 31:**

2012	\$	148,564
2013		151,106
2014		156,189
2015		164,022
2016		172,260
Thereafter through 2021		860,009
	\$	<u>1,652,150</u>

The accumulated amount not yet recognized as a component of net periodic benefit cost was \$(2,133,396) and \$3,985,874 at December 31, 2011 and 2010, respectively. The components are as follows:

	<u>2011</u>	<u>2010</u>
Transition obligation	\$ 3,891,406	\$ 4,367,468
Net actuarial gain	(6,024,802)	(381,593)
	<u>\$ (2,133,396)</u>	<u>\$ 3,985,875</u>

The transition obligation and actuarial gain that will be amortized into net periodic benefit cost in 2012 will be \$476,061 and \$(317,241), respectively.

## 8. GRANTS PAYABLE

The Foundation estimates that the grants payable balance as of December 31, 2011 will be paid as follows:

<b>Year:</b>	<u>Amount</u>
2012	\$ 41,608,585
2013	20,096,894
2014	1,963,608
2015	1,372,046
	<u>\$ 65,041,133</u>

---

# Alfred P. Sloan Foundation

## Notes to Consolidated Financial Statements

December 31, 2011 and 2010

---

### 9. LEASE

The Foundation entered into a ten-year lease effective January 1, 1999. The lease contains an escalation clause that provides for rental increases resulting from increases in real estate taxes and certain operating expenses. On January 11, 2007, the Foundation renegotiated its lease for the period commencing on January 1, 2009 and expiring on December 31, 2016. As a result of the renegotiation, the fixed rent payable under the lease is an amount equal to (a) \$1,270,335 per annum for the period commencing on January 1, 2007 and ending on December 31, 2011 and (b) \$1,379,926 per annum for the period commencing on January 1, 2012 and ending on December 31, 2016. Effective November 1, 2008, the Foundation acquired additional space at an annual rent of \$386,250. The lease on the additional space expires on December 31, 2016. Rent expense for 2011 and 2010, including escalations, was \$1,682,983 and \$1,701,092, respectively.

### 10. LINE OF CREDIT

The Foundation established a \$50,000,000 line of credit with Bank of New York Mellon in 2008 to provide bridge funding of grants and to finance short-term working capital needs of the Foundation. To date, the Foundation has not yet used the line of credit. The interest rate is calculated using the Mellon Monthly LIBOR plus 75 basis points, with a fallback rate of Wall Street Journal Prime minus 125 basis points. The interest rate at December 31, 2011 and 2010 was 2.0% and 2.26%, respectively. If the line is used, interest will be payable monthly on the 15th of each month and principal will be due on demand. If payment is not made within 15 days following the payment date, a 4% late fee will be assessed.

### 11. SUBSEQUENT EVENTS

The Foundation evaluated its December 31, 2011 consolidated financial statements for subsequent events through June 27, 2012, the date the consolidated financial statements were available to be issued.



## **SUPPLEMENTARY INFORMATION**

# Alfred P. Sloan Foundation

## Schedule of Management and Investment Expenses

For the years ended December 31, 2011 and 2010

	<u>2011</u>	<u>2010</u>
Management expenses:		
Salaries and employees' benefits:		
Salaries	\$ 6,176,460	\$ 6,012,892
Employees' retirement plan and other benefits	3,266,981	2,931,014
Total	9,443,441	8,943,906
Rent	1,682,983	1,701,092
Program expenses	1,467,252	1,092,322
Office expenses	1,180,472	782,256
Website and publications	25,365	28,782
Professional fees	641,308	1,072,573
Total management expenses	14,440,821	13,620,931
Less direct investment and other management expenses allocated to investments	<u>(4,752,321)</u>	<u>(4,727,114)</u>
Management expenses	<u>\$ 9,688,500</u>	<u>\$ 8,893,817</u>
Investment expenses:		
Investment management fees	\$ 3,276,673	\$ 2,340,857
Direct investment and other management expenses allocated to investments	<u>4,752,321</u>	<u>4,727,114</u>
Investment expenses	<u>\$ 8,028,994</u>	<u>\$ 7,067,971</u>

*This schedule should be read in conjunction with the accompanying consolidated financial statements and notes thereto.*

# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
Adler Planetarium	\$ —	\$ 1,011,466	\$ 636,483	\$ 374,983
Alaska, University of, Anchorage	—	144,000	64,000	80,000
Albert Einstein College of Medicine	—	50,000	50,000	—
American Academy of Arts and Sciences	141,000	—	141,000	—
American Chemical Society	81,000	—	68,500	12,500
American Council on Education	743,211	49,157	792,368	—
American Film Institute	180,000	—	90,000	90,000
American Indian College Fund	50,000	300,000	150,000	200,000
American Museum of Natural History	450,000	—	250,000	200,000
American Museum of the Moving Image	160,426	—	83,890	76,536
American Physical Society	12,000	18,900	18,900	12,000
American Society for Engineering Education	—	397,371	228,536	168,835
American University	—	234,015	234,015	—
Arius Association	—	150,000	75,000	75,000
Arizona State University	—	15,000	15,000	—
Arizona, University of	80,300	50,000	98,180	32,120
Association of American Colleges and Universities	—	94,041	94,041	—
Azavea, Inc.	—	124,916	124,916	—
BioBricks Foundation, Inc.	—	84,717	84,717	—
Board of Control for Southern Regional Education	192,372	—	192,372	—
Boston College	—	2,825,220	1,081,832	1,743,388
Boston University	—	150,000	150,000	—
Brandeis University	—	50,000	50,000	—
Brigham Young University	—	50,000	50,000	—
Brooklyn Academy of Music	—	742,250	442,250	300,000
Brown University	—	100,000	100,000	—
Business-Higher Education Forum	—	56,000	56,000	—
California Institute of Technology	—	50,000	50,000	—
California, University of, Berkeley	1,327,079	1,579,858	2,035,193	871,744
California, University of, Davis	1,449,524	2,045,650	1,505,588	1,989,586
California, University of, Irvine	—	119,756	119,756	—
California, University of, Los Angeles	103,250	1,509,949	667,604	945,595
California, University of, San Diego	—	300,000	300,000	—
California, University of, San Francisco	—	150,000	150,000	—
California, University of, Santa Barbara	—	150,000	150,000	—

# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
California, University of, Santa Cruz	\$ —	\$ 50,000	\$ 50,000	\$ —
California, University of, Riverside	750,000	—	495,653	254,347
Calgary, University of	—	50,000	50,000	—
Carnegie Endowment for International Peace	—	144,800	144,800	—
Carnegie Institution of Washington	—	1,499,995	900,000	599,995
Carnegie Mellon University	193,522	485,689	261,381	417,830
Center for a New American Security, Inc.	54,000	—	54,000	—
Center For Independent Documentary	—	315,000	215,000	100,000
Center for the Study of the Presidency	—	67,600	67,600	—
Clean Air Task Force, Inc.	—	248,832	150,000	98,832
Chemical Heritage Foundation	—	255,000	255,000	—
Chicago, University of	344,203	1,337,120	673,340	1,007,983
Code for America Labs Inc.	—	50,000	50,000	—
Cold Spring Harbor Laboratory	300,000	50,000	200,000	150,000
Colorado, University of, at Boulder	460,000	1,901,859	1,421,438	940,421
Columbia University	147,891	653,852	578,852	222,891
Connecticut Public Broadcasting, Inc.	—	1,196,390	600,000	596,390
Consortium For Ocean Leadership, Inc.	400,000	—	400,000	—
Coolidge Corner Theater Foundation	—	463,426	231,713	231,713
Cornell University	92,274	424,851	517,125	—
Corporate Voices for Working Families	—	20,000	20,000	—
Council of Graduate Schools	797,856	—	605,221	192,635
Council on Foreign Relations	1,198,506	—	748,179	450,327
Council on Library and Information Resources	—	117,567	117,567	—
Council on Foundations, Inc.	—	45,000	45,000	—
Creative Commons	—	250,917	250,917	—
CUNY Graduate Center Foundation, Inc.	125,000	—	75,000	50,000
Dartmouth College	54,333	—	54,333	—
DC Foundation, University of	72,250	—	50,000	22,250
Drexel University	—	100,591	100,591	—
Duke University	—	50,000	50,000	—
DuraSpace	—	497,433	497,433	—
East Carolina University	—	1,499,989	800,000	699,989
Ed Regis	—	40,800	40,800	—
Ensemble Studio Theatre, Inc.	1,134,000	—	567,000	567,000

# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
Families and Work Institute, Inc.	\$ —	\$ 2,334,141	\$ 1,600,000	\$ 734,141
Firestein, Stuart	—	40,000	40,000	—
Film Independent, Inc.	—	365,000	145,000	220,000
Foundation Center	—	195,000	65,000	130,000
Fred Friendly Seminars Inc.	—	19,095	19,095	—
Friends of the International Mathematical Union	—	73,000	73,000	—
Fund for the City of New York	813,750	750,000	660,000	903,750
Fund for Public Health in New York, Inc.	1,250,058	—	792,244	457,814
Georgetown University	141,551	—	141,551	—
Georgia Institute of Technology	—	150,000	150,000	—
George Mason University	—	1,241,466	995,438	246,028
Greater Washington Educational Telecommunications Assn., Inc.	—	1,500,000	750,000	750,000
GuideStar USA, Inc.	—	5,000	5,000	—
Hamptons International Film Festival	379,479	—	225,716	153,763
Harvard Medical School	—	50,000	50,000	—
Harvard University	463,147	2,763,168	2,042,037	1,184,278
Hastings Center	—	498,536	248,536	250,000
Houston, University of	—	50,000	50,000	—
ICPO-INTERPOL	400,000	1,600,000	1,100,000	900,000
Illinois, University of, Urbana-Champaign	—	100,000	100,000	—
Independent Sector	—	17,500	17,500	—
Indiana University	—	606,161	229,354	376,807
Industry Studies Association	6,575	—	6,575	—
Institute of International Education Inc.	—	750,000	250,000	500,000
Institute for New Economic Thinking	—	15,108	15,108	—
Institute for Operations Research and the Management Sciences	42,189	—	42,189	—
Institute for the Future	—	75,000	75,000	—
Institute for Women's Policy Research	—	20,000	20,000	—
Integrated Ocean Drilling Program Management International	—	500,000	400,000	100,000
J. Craig Venter Institute	807,971	—	807,971	—
J. William Jones Consulting Engineers, Inc.	—	325,250	325,250	—
Johns Hopkins University	—	50,000	50,000	—
Kansas State University	—	50,000	50,000	—

# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
Kansas, University of	\$ —	\$ 125,000	\$ 125,000	\$ —
L.A. Theatre Works	133,120	—	133,120	—
Labor Project for Working Families	—	15,134	15,134	—
Leeds, University of	—	60,000	60,000	—
Lemonick, Michael	—	55,000	55,000	—
Library Foundation of Los Angeles	—	36,000	36,000	—
Library of Congress	—	38,750	—	38,750
Lyrisis	500,000	—	250,000	250,000
Manhattan Theatre Club	400,000	—	200,000	200,000
Marine Biological Laboratory	459,918	—	302,452	157,466
Maryland, University of, College Park	—	565,272	400,000	165,272
Massachusetts Institute of Technology	573,000	477,322	758,000	292,322
Massachusetts, University of, Lowell	31,000	—	31,000	—
MentorNet	—	60,000	60,000	—
McGill University	—	50,000	50,000	—
Michigan State University	—	619,103	406,517	212,586
Michigan, University of	43,674	4,915,316	1,357,416	3,601,574
Middlebury College	—	298,218	146,234	151,984
Minnesota State Colleges and Universities Foundation	49,802	—	49,802	—
Minnesota, University of	—	50,000	50,000	—
Mongolian American Scientific Research Center	75,000	7,500	82,500	—
Montana Tech. of the University of Montana	41,489	—	17,424	24,065
Montana, University of	87,300	—	38,800	48,500
Museum of Mathematics	—	401,461	200,000	201,461
National Academy of Sciences	—	1,610,249	1,169,324	440,925
National Action Council for Minorities in Engineering, Inc.	6,062,807	4,326,400	5,584,749	4,804,458
National Bureau of Economic Research, Inc.	2,393,188	1,788,883	1,628,311	2,553,760
National Geographic Society	1,000,000	—	—	1,000,000
National Information Standards Organization	—	222,706	222,706	—
National Opinion Research Center	52,650	—	52,650	—
National Partnership for Women and Families	—	15,000	15,000	—
National Postdoctoral Association	25,000	—	25,000	—
National University of Singapore America Foundation Inc.	—	125,000	125,000	—
Nebraska, University of, Lincoln	—	50,000	50,000	—

# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
New America Foundation	\$ 90,000	\$ —	\$ 90,000	\$ —
New Jersey Institute of Technology Foundation	—	25,850	25,850	—
New Media Studio	—	32,450	32,450	—
New Venture Fund	—	196,056	196,056	—
New York Botanical Garden	450,000	—	250,000	200,000
New York County District Attorney	—	125,000	65,000	60,000
New York Law School	—	384,675	384,675	—
New York Hall of Science	—	65,000	65,000	—
New York University	735,207	935,956	957,460	713,703
Northeastern University	—	32,893	32,893	—
Northwestern University	—	200,000	200,000	—
North Carolina Agricultural and Technical State University	50,000	—	25,000	25,000
North Carolina State University	198,778	—	178,778	20,000
Notre Dame, University of	115,527	—	115,527	—
Ohio State University	—	1,580,000	1,080,000	500,000
Open Knowledge Commons, Inc.	862,560	124,315	986,875	—
Oregon State University	377,110	—	377,110	—
Oregon, University of	1,300,000	—	500,000	800,000
Ottawa, University of	—	599,150	300,000	299,150
Oxford University	—	1,835,486	813,903	1,021,583
Pennsylvania State University	—	50,000	50,000	—
Pennsylvania, University of	614,316	115,000	394,443	334,873
Peter G. Peterson Institute for International Economics	154,000	115,520	269,520	—
Philanthropy New York	—	24,000	24,000	—
Pittsburgh, University of	—	50,000	50,000	—
Planetnetwork NGO, Inc.	—	20,000	20,000	—
Playwrights Horizons	100,000	—	100,000	—
Polytechnic Institute of New York University	—	124,993	124,993	—
Population Reference Bureau, Inc.	102,000	—	102,000	—
Princeton University	—	200,000	200,000	—
Princeton University Press	—	40,000	40,000	—
Public Library of Science	—	353,393	353,393	—
Public Media Lab	398,918	—	398,918	—
Purdue University	153,000	—	48,773	104,227
RAND Corporation	—	609,511	225,305	384,206

# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
Rensselaer Polytechnic Institute	\$ —	\$ 80,000	\$ 80,000	\$ —
Research Foundation of the City University of New York	—	1,075,968	500,000	575,968
Research Foundation of State University of New York	40,000	—	40,000	—
Resources for the Future, Inc.	—	1,171,667	1,171,667	—
Rhode Island, University of	—	48,230	48,230	—
Rochester, University of	—	100,000	100,000	—
Rutgers, The State University of New Jersey	—	50,000	50,000	—
San Diego State University	—	125,000	125,000	—
Science Festival Foundation	—	1,300,000	650,000	650,000
Science Friday Initiative, Inc.	420,000	—	210,000	210,000
Sloan Consortium, Sloan-C	1,900,000	—	800,000	1,100,000
Smithsonian Institution	918,000	60,000	760,000	218,000
Social Science Research Network	—	60,490	60,490	—
Society for Human Resources Management Foundation	—	981,548	881,548	100,000
Society of American Archivists Foundation	—	6,000	6,000	—
Southern California, University of	187,074	50,000	237,074	—
St. Olaf College	—	19,500	—	19,500
Stanford University	—	1,690,855	848,451	842,404
State University of New York, Buffalo	—	50,000	50,000	—
State University of New York, Oswego	160,000	—	160,000	—
StoryCorps Inc.	—	24,494	24,494	—
South Florida, University of	—	125,000	125,000	—
Sundance Institute	500,000	—	250,000	250,000
Swarthmore College	181,909	—	115,802	66,107
Syracuse University	—	124,775	124,775	—
Technology Affinity Group	—	5,000	5,000	—
Texas AgriLife Research	63,587	—	—	63,587
The Alexandria Archive Institute	—	109,850	109,850	—
The Brookings Institution	800,953	619,616	969,233	451,336
The Internet Archive	—	58,828	58,828	—
The Graduate Center of The City University of New York	—	107,500	107,500	—
The New School Center for NY City Affairs	150,000	—	—	150,000
Thurgood Marshall College Fund	157,808	—	—	157,808
Toronto, University of	—	1,076,171	384,946	691,225
Toyota Technological Institute	—	50,000	50,000	—



# Alfred P. Sloan Foundation

## Schedule of Grants and Appropriations

For the year ended December 31, 2011

Grantee	Unpaid December 31, 2010	2011		Unpaid December 31, 2011
		Authorized	Payments	
Tribeca Film Institute, Inc.	\$ 244,559	\$ 1,080,690	\$ 946,254	\$ 378,995
Upjohn Institute for Employment Research	—	349,622	25,712	323,910
Urban Institute	208,115	—	208,115	—
Virginia Polytechnic Institute and State University	—	45,000	45,000	—
Texas A&M University	—	50,000	50,000	—
Texas, University of, Austin	—	1,601,127	874,625	726,502
Virginia, University of	—	100,000	100,000	—
Warwick, University of	—	561,672	371,499	190,173
Washington, University of	—	1,089,188	635,243	453,945
Waterloo, University of	—	50,000	50,000	—
Wellesley College	—	347,903	125,863	222,040
West Florida, University of	—	19,974	19,974	—
WGBH Educational Foundation	1,700,000	3,800,000	3,200,000	2,300,000
Wikimedia Foundation	—	3,000,000	1,000,000	2,000,000
Wisconsin, University of, Madison	—	76,416	76,416	—
WNET.ORG	—	45,000	45,000	—
WNYC Public Radio	1,044,885	—	532,500	512,385
Woodrow Wilson International Center for Scholars	500,000	2,344,850	1,100,000	1,744,850
Yale University	—	567,705	443,515	124,190
<b>Total</b>	<b>42,204,971</b>	<b>86,613,603</b>	<b>75,008,312</b>	<b>53,810,262</b>
Sloan Research Fellowships to be Granted in Ensuing Year	5,900,000	400,000	—	6,300,000
Officer Grant Appropriation for Grants in Ensuing Year	3,200,000	(3,200,000)	—	—
Other Appropriations Authorized but not committed	7,293,530	(1,740,286)	622,373	4,930,871
	58,598,501	82,073,317	75,630,685	65,041,133
Reduction for Grant Transfers	—	(274,829)	(274,829)	—
Elimination of Sloan Projects LLC activity	—	—	—	—
	<b>\$ 58,598,501</b>	<b>\$ 81,798,488</b>	<b>\$ 75,355,856</b>	<b>\$ 65,041,133</b>

*This schedule should be read in conjunction with the accompanying consolidated financial statements and notes thereto.*

## Board of Trustees as of 12-31-2011

**Richard Bernstein**

Chief Executive Officer  
Richard Bernstein Capital Management

**Stephen L. Brown (Chairman)**

Retired Chairman and CEO  
John Hancock Financial Services, Inc.

**Mary Schmidt Campbell**

Dean  
Tisch School of the Arts  
New York University

**Frederick A. Henderson**

Chairman & CEO  
SunCoke Energy  
Former President & CEO  
General Motors Corporation

**Freeman A. Hrabowski, III**

President  
University of Maryland, Baltimore County

**Paul L. Joskow**

President  
Alfred P. Sloan Foundation

**Peter S. Kim**

President  
Merck Research Laboratories

**Robert Litterman**

Retired Director of Quantitative Resources  
Goldman Sachs Asset Management

**Sandra O. Moose**

President  
Strategic Advisory Services  
Former Senior Vice President  
The Boston Consulting Group

**James Poterba**

President and Chief Executive Officer  
National Bureau of Economic Research  
Mitsui Professor of Economics  
Massachusetts Institute of Technology

**Marta Tienda**

Professor of Sociology and Public Affairs  
Office of Population Research  
Princeton University

**Sheila E. Widnall**

Institute Professor  
Department of Aeronautics & Astronautics  
Massachusetts Institute of Technology

## Staff as of 12-31-2011

**Paul L. Joskow**  
President

**Jesse H. Ausubel**  
Vice President, Programs

**Leisle Lin**  
Vice President,  
Finance & Board Secretary

**Gail M. Pesyna**  
Vice President,  
Human Resources &  
Program Management

**William B. Petersen**  
Vice President & C.I.O.

**Christopher T. Sia**  
Treasurer &  
Chief Technology Officer

**Doron Weber**  
Vice President, Programs

**Kasia Barszcz**  
Administration and  
Operations Assistant

**Joseph Bohrer**  
Investment Director

**Elizabeth S. Boylan**  
Program Director

**Maria F. Charry-Vera**  
Accountant

**Kathleen E. Christensen**  
Program Director

**Deborah Collins**  
Director, Administration

**Delia DiBiasi**  
Senior Program Assistant

**Peter DiFranco**  
IT/Budget Specialist

**Daniel L. Goroff**  
Program Director

**Joshua L. Greenberg**  
Program Director

**Jennifer Heller**  
Investment Director

**Dorigen Lonergan**  
Investment Operations Manager

**Sibo Lu**  
Program Associate

**Anne L. McKissick**  
Director, Grants Management &  
Information Services

**David Michel**  
Program Assistant

**Everod L. Nelson**  
Business Analyst

**Paula J. Olsiewski**  
Program Director

**Katina L. Rogers**  
Operations Management  
Specialist

**Erica Stella**  
Grants Coordinator

**Nathan R. Williams**  
Communications Associate

**Yolanda Wolf**  
Program Assistant

**Caroline A. Young**  
Program Associate

# Index of 2011 Grant Recipients

## A

Adler Planetarium 6, 65, 106  
 Alaska, University of, Anchorage 30, 106  
 Albert Einstein College of Medicine 15, 106  
 Alexandria Archive Institute, The 70, 111  
 American Council on Education 7, 63, 106  
 American Indian College Fund 31, 106  
 American Physical Society 32, 106  
 American Society for Engineering Education 33, 106  
 American University 48, 71, 106  
 Arius Association 74, 75, 106  
 Arizona State University 77, 106  
 Arizona, University of 15, 106  
 Association of American Colleges and Universities 106  
 Azavea, Inc. 71, 106

## B

BioBricks Foundation, Inc. 28, 106  
 Board of Control for Southern Regional Education 106  
 Boston College 15, 57, 106  
 Boston University, Trustees of 15, 106  
 Brandeis University 15, 106  
 Brigham Young University 15, 106  
 Brookings Institution, The 6, 48, 55, 111  
 Brooklyn Academy of Music 40, 41, 44, 45, 106  
 Brown University 15, 106  
 Business-Higher Education Forum 34, 106

## C

Calgary, University of 15, 107  
 California Institute of Technology 15, 106  
 California, University of, Berkeley 16, 23, 48, 52, 56, 66, 106  
 California, University of, Davis 16, 19, 20, 49, 106  
 California, University of, Irvine 71, 106  
 California, University of, Los Angeles 16, 58, 66, 106  
 California, University of, Riverside 107  
 California, University of, San Diego 16, 106  
 California, University of, San Francisco 15, 106  
 California, University of, Santa Barbara 16, 106  
 California, University of, Santa Cruz 16, 107  
 Carnegie Endowment for International Peace 75, 77, 107  
 Carnegie Institution of Washington 4, 19, 20, 107  
 Carnegie Mellon University 16, 37, 49, 107

Center for a New American Security, Inc. 107  
 Center For Independent Documentary 58, 107  
 Center for the Study of the Presidency 56, 107  
 Chemical Heritage Foundation 44, 107  
 Chicago, University of 16, 23, 50, 107  
 City University of New York, Research Foundation 80, 111  
 Clean Air Task Force, Inc. 107  
 Code for America Labs, Inc. 71, 107  
 Cold Spring Harbor Laboratory 83, 107  
 Colorado, University of, at Boulder 24, 25, 107  
 Columbia University 16, 37, 38, 56, 70, 71, 107  
 Connecticut Public Broadcasting, Inc. 41, 107  
 Consortium For Ocean Leadership, Inc. 107  
 Coolidge Corner Theater Foundation 107  
 Cornell University 16, 56, 107  
 Corporate Voices for Working Families 62, 107  
 Council of Graduate Schools 107  
 Council on Foreign Relations 107  
 Council on Foundations, Inc. 80, 107  
 Council on Library and Information Resources 71, 107  
 Creative Commons 66, 107  
 CUNY Graduate Center Foundation, Inc. 107

## D

Dartmouth College 107  
 DC Foundation, University of 107  
 Drexel University 32, 107  
 Duke University 16, 107  
 DuraSpace 66, 67, 107

## E

East Carolina University 21, 107  
 Ensemble Studio Theatre, Inc. 107

## F

Families and Work Institute, Inc. 62, 108  
 Film Independent, Inc. 39, 40, 108  
 Firestein, Stuart 36, 108  
 Foundation Center 81, 108  
 Fred Friendly Seminars Inc. 108  
 Friends of the International Mathematical Union 83, 108  
 Fund for Public Health in New York, Inc. 108  
 Fund for the City of New York 8, 80, 108

**G**

George Mason University 7, 67, 68, 108  
 Georgetown University 108  
 Georgia Institute of Technology 16, 108  
 Graduate Center of The City University of New York,  
 The 70, 111  
 Greater Washington Educational Telecommunications  
 Association Inc. 42, 108  
 GuideStar USA, Inc. 81, 108

**H**

Hamptons International Film Festival 108  
 Harvard Medical School 16, 108  
 Harvard University 16, 53, 68, 71, 108  
 Hastings Center, The 5, 26, 108  
 Houston, University of 16, 108

**I**

ICPO-INTERPOL 75, 108  
 Illinois, University of, Urbana-Champaign 16, 36, 108  
 Independent Sector 81, 108  
 Indiana University 68, 108  
 Industry Studies Association 108  
 Institute for New Economic Thinking 56, 108  
 Institute for Operations Research and the Management  
 Sciences 108  
 Institute for the Future 71, 108  
 Institute for Women's Policy Research 60, 108  
 Institute of International Education 8, 78, 108  
 Integrated Ocean Drilling Program Management  
 International 21, 108  
 Internet Archive, The 71, 111

**J**

J. Craig Venter Institute 26, 108  
 Johns Hopkins University 16, 108  
 J. William Jones Consulting Engineers, Inc. 75, 108

**K**

Kansas State University 16, 108  
 Kansas, University of 63, 109

**L**

Labor Project for Working Families 63, 109  
 L.A. Theatre Works 109  
 Leeds, University of 77, 109  
 Lemonick, Michael 36, 109  
 Library Foundation of Los Angeles 71, 109  
 Library of Congress 72, 109  
 Lyris 109

**M**

Manhattan Theatre Club 109  
 Marine Biological Laboratory 109

Maryland, University of, College Park 16, 51, 109  
 Massachusetts Institute of Technology 16, 51, 54, 109, 113  
 Massachusetts, University of, Lowell 109  
 McGill University 16, 109  
 MentorNet 109  
 Michigan State University 16, 58, 60, 109  
 Michigan, University of 7, 16, 28, 51, 58, 59, 109  
 Middlebury College 76, 109  
 Minnesota State Colleges and Universities Foundation 109  
 Minnesota, University of 8, 109  
 Mongolian American Scientific Research Center 77, 109  
 Montana Tech. of the University of Montana 109  
 Montana, University of 109  
 Museum of Mathematics 7, 44, 45, 109

**N**

National Academy of Sciences 27, 51, 68, 69, 109  
 National Action Council for Minorities in Engineering,  
 Inc. 31, 32, 109  
 National Bureau of Economic Research, Inc. 52, 59, 109  
 National Geographic Society 109  
 National Information Standards Organization 69, 109  
 National Opinion Research Center 109  
 National Partnership for Women and Families 62, 109  
 National Postdoctoral Association 109  
 National University of Singapore America Foundation,  
 Inc. 78, 109  
 Nebraska, University of, Lincoln 16, 109  
 New America Foundation 110  
 New Jersey Institute of Technology Foundation 45, 110  
 New Media Studio 70, 110  
 New School Center for NY City Affairs, The 111  
 New Venture Fund 56, 110  
 New York Botanical Garden 110  
 New York County District Attorney 81, 110  
 New York Hall of Science 45, 110  
 New York Law School 52, 110  
 New York University 17, 39, 53, 110, 113  
 North Carolina Agricultural and Technical State  
 University 110  
 North Carolina State University 110  
 Northeastern University 110  
 Northwestern University 17, 110  
 Notre Dame, University of 110

**O**

Ohio State University 17, 22, 28, 110  
 Open Knowledge Commons, Inc. 110  
 Oregon State University 110  
 Oregon, University of 23, 24, 110  
 Ottawa, University of 25, 110  
 Oxford, University of 53, 65, 110

**P**

Pennsylvania State University, The 17, 110  
 Pennsylvania, University of 17, 49, 63, 110  
 Peter G. Peterson Institute for International Economics 110  
 Philanthropy New York 81, 110  
 Pittsburgh, University of 17, 23, 110  
 Planetnetwork NGO, Inc. 72, 110  
 Playwrights Horizons 110  
 Polytechnic Institute of New York University 81, 110  
 Population Reference Bureau, Inc. 110  
 Princeton University 17, 52, 110, 113  
 Princeton University Press 36, 110  
 Public Library of Science 69, 110  
 Public Media Lab 110  
 Purdue University 110

**R**

RAND Corporation 59, 110  
 Regis, Ed 36, 107  
 Rensselaer Polytechnic Institute 22, 111  
 Research Foundation of State University of New York 111  
 Resources for the Future, Inc. 76, 111  
 Rhode Island, University of 22, 111  
 Rochester, University of 17, 111  
 Rutgers, State University of New Jersey 17, 111

**S**

San Diego State University 25, 111  
 Science Festival Foundation 45, 111  
 Science Friday Initiative, Inc. 111  
 Sloan Consortium, Sloan-C 111  
 Smithsonian Institution 77, 111  
 Social Science Research Network 68, 69, 72, 111  
 Society for Human Resources Management Foundation  
 62, 111  
 Society of American Archivists Foundation 72, 111  
 Southern California, University of 17, 111  
 South Florida, University of 32, 111  
 Stanford University 17, 54, 60, 71, 111  
 State University of New York, Oswego 111  
 St. Olaf College 34, 111  
 StoryCorps Inc. 111  
 Sundance Institute 111  
 Swarthmore College 111  
 Syracuse University 56, 111

**T**

Technology Affinity Group 81, 111  
 Texas AgriLife Research 111  
 Texas A&M University 17, 112  
 Texas, University of, Austin 17, 60, 77, 112  
 Thurgood Marshall College Fund 111  
 Toronto, University of 17, 54, 111  
 Toyota Technological Institute 17, 111

Tribeca Film Institute, Inc. 112

**U**

University of Buffalo, SUNY 17, 111  
 Upjohn Institute for Employment Research 55, 112  
 Urban Institute 112

**V**

Virginia Polytechnic Institute and State University 112  
 Virginia, University of 17, 112

**W**

Warwick, University of 54, 112  
 Washington, University of 17, 28, 34, 112  
 Waterloo, University of 17, 112  
 Wellesley College 34, 55, 112  
 West Florida, University of 63, 112  
 WGBH Educational Foundation 42, 43, 112  
 Wikimedia Foundation 70, 112  
 Wisconsin, University of, Madison 56, 112  
 WNET.ORG 60, 112  
 WNYC Public Radio 112  
 Woodrow Wilson International Center for Scholars 5,  
 28, 112

**Y**

Yale University 4, 17, 25, 56, 112

**Alfred P. Sloan Foundation**

630 Fifth Avenue, Suite 2550  
New York, NY 10111-0242  
Tel: 212-649-1649 | Fax: 212-757-5117  
[www.sloan.org](http://www.sloan.org)

