

# Research News

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Office of Sponsored Programs and Research (OSPR)  
Cleveland State University

<http://www.csuohio.edu/uored/index.html>

## OSPR Announcements

### **CSU CERT Training**

**CSU Community Emergency Response Team (CERT)**

URL: <http://www.csuohio.edu/offices/police/safety/cert.html>

CSU faculty, staff, and students are invited to obtain certification in CERT by attending the spring session of classes that will be held on Thursdays from 1:00 - 3:00PM beginning on February 12<sup>th</sup> and continuing through April 16<sup>th</sup>. All classes will be held in the Urban building.

CSU allows faculty and staff to complete the 20-hours training course during work hours - with permission of their supervisors. Students are encouraged to take the training as well. In order to participate you must complete the CERT waiver and application forms prior to the start of the classes and submit them to the Campus Safety CERT Liaison, Officer Beverly Pettrey, in CB 2128M. The forms can be downloaded from the above URL. If you have any questions, please visit the above URL or contact any of the CSU CERT Co-Directors:

JeJuana Brown [j.c.brown23@csuohio.edu](mailto:j.c.brown23@csuohio.edu)

George Hamm [g.hamm62@csuohio.edu](mailto:g.hamm62@csuohio.edu)

Beverly Pettrey [b.pettrey@csuohio.edu](mailto:b.pettrey@csuohio.edu)

### **George Gund Foundation Addresses Severe Losses**

The George Gund Foundation ([www.gundfdn.org](http://www.gundfdn.org))

[http://www.gundfdn.org/NEWS AND PUBLICATIONS/NEWS/how we respond economy.asp](http://www.gundfdn.org/NEWS_AND_PUBLICATIONS/NEWS/how_we_respond_economy.asp)

The George Gund Foundation has lost almost one-third of its value, due to the current stock crisis. The foundation sent out an e-mail on January 8, 2009 to current grantees explaining that to meet its obligations and to continue to distribute funds to requests, the foundation reduced its operating budget by cutting travel expenses for staff members and by providing an online annual report, rather than a printed one.

Even with these measures, the foundation will have to decrease the amount of money it is able to award to potential grantees, while at the same time, the foundation will increase the percentage of its assets that it gives away. The Gund Foundation said it will go "substantially beyond" the federally mandated 5% annual distribution. The foundation still intends to provide grantees with operating funds

when and if it is possible, but it urged grantees to understand that the Gund wants to assist as many needs as it can. Any requestor that does receive operating funds more than likely will receive fewer dollars than in years past.

The Gund anticipates working with grantees to reduce their expenses by helping them to find ways to collaborate with similar groups, thus weathering the reduced funding capabilities of the foundation itself.

## **Ohio Art Council's *Festivals and Competitions Directory***

**Ohio Arts Council (OAC)** ([www.oac.state.oh.us](http://www.oac.state.oh.us))

Directory Found At: [www.oac.state.oh.us/search/OACFestival/SearchFestivals.asp](http://www.oac.state.oh.us/search/OACFestival/SearchFestivals.asp)

OAC has just published (online) the 2009 *Festivals and Competitions Directory*. OAC believes the directory is a helpful tool for artists and crafts persons who are looking for places to display and sell their work. It is organized by date and location and includes alphabetical indexes of festivals by name, city, region and sponsor. The directory lists events and competitions that seek all types of art – from traditional crafts to arts on the cutting edge. It provides detailed information about arts and crafts festivals and competitions, including dates, activities, number of spaces available for artists to display work, fees and contact information.

In addition, for Ohioans who are looking for arts experiences in Ohio, the directory is a good starting point. A complete version of the 2009 Ohio Arts Council's *Festivals and Competitions Directory* will also be listed online at the above URL.

## **Federal Grant-Maker Announcements**

### **IACUC Revisions and Updates**

**National Institutes of Health (NIH)** ([www.nih.gov](http://www.nih.gov))

Office of Laboratory Animal Welfare (OLAW) (<http://olaw.nih.gov/>)

Office of Extramural Research (OER) (<http://grants.nih.gov/grants/oer.htm>)

NIH Notice Number: (NOT-OD-09-035)

Release Date: January 8, 2009

URL: <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-09-035.html>

This Notice provides guidance to Public Health Service (PHS) awardee institutions and Institutional Animal Care and Use Committees (IACUCs) concerning the acceptable actions of an IACUC to meet the requirements of *the Public Health Service Policy on the Humane Care and Use of Laboratory Animals* (PHS Policy) in the following situation: upon full committee review of an animal study protocol, the IACUC decides that modification(s) is needed to secure approval. Please go to the above URL for complete details.

### **Initiative for Humanities and Culture**

**American Academy of Arts and Sciences (Amacad)**

(<http://www.amacad.org/default.aspx>)

Program URL: <http://www.amacad.org/projects/humanities.aspx>

The American Academy of Arts and Sciences (Amacad) is a leading proponent of the humanities in the US. Following World War I, the Academy joined with several small

professional societies in forming the American Council of Learned Societies (ACLS). In the mid-1970s, the Academy promoted the creation of the National Humanities Center in North Carolina – and that center has achieved well-merited international respect as an institute for advanced study.

Now, Amacad has created the *Initiative for Humanities and Culture* as a way in which scholars and citizens can explore “the significance of the humanities to our national culture” in response to what it terms “increasingly complex challenges — political, cultural, technological, and financial — (that) are profoundly altering conditions for the humanities in the United States”. This new effort, the Academy believes, will help to further its traditional role of advancing research “about the humanities in American life” while providing a forum from which new policies and sound resources can be created and/or found to ensure that the humanities survive and thrive in 21<sup>st</sup> century America. Leading the Initiative is “a committee of distinguished Academy Fellows” comprising Patricia Meyer Spacks (University of Virginia), Steven Marcus (Columbia University), Denis Donoghue (New York University), Francis C. Oakley (Williams College), and Leslie Berlowitz (American Academy).

Some current projects supported by Amacad and the Initiative include:

(<http://www.amacad.org/projects/humanities.aspx>):

- **Humanities Indicators:** ([www.amacad.org/projects/indicators.aspx](http://www.amacad.org/projects/indicators.aspx)) - in collaboration with humanities institutions throughout the country, the Academy has created “a framework and institutional base for the compilation, analysis, and publication of comprehensive longitudinal statistical data about the humanities”.
- **Humanities Departmental Survey:** ([www.amacad.org/projects/survey1.aspx](http://www.amacad.org/projects/survey1.aspx)) The Academy has collected data about the humanities in higher education and will make it available (shortly) electronically as part of the Humanities Indicator. Administered in AY2007-2008 to about 1500 college and university humanities departments, the survey gathered various data in each discipline, including the number and nature of faculty; the distribution of teaching loads; the number of undergraduate majors and minors; and other aspects of the student experience. The disciplines surveyed were: History, English, Foreign Languages and Literatures, Art History, Linguistics, Religion, and the History of Science. The long-term goal is “to create original multidisciplinary trend data that can be used to produce indicators of the state of the humanities in higher education”.
- **Scholarship on the Humanities:** ([www.amacad.org/projects/research.aspx](http://www.amacad.org/projects/research.aspx)) a series of related studies that analyze “the evolution of humanities disciplines and institutions, examines the conditions and intellectual climate in which they operate, and assesses the role and value of the humanities in society”.

## Travel and Financial Reporting Amendments

National Science Foundation (NSF) ([www.nsf.gov](http://www.nsf.gov))

URL: [http://www.nsf.gov/pubs/gc1/sigchg\\_jan09.pdf](http://www.nsf.gov/pubs/gc1/sigchg_jan09.pdf)

NSF has made changes to Travel Policies regarding permissible circumstances and conditions that determine how and if a researcher(s) may use foreign air carriers.

These changes are governed by the "Open Skies" Agreement(s) between the US government and a foreign government meeting the requirements of the Fly America Act ([http://www4.law.cornell.edu/uscode/html/uscode49/usc\\_sec\\_49\\_00040118----000-.html](http://www4.law.cornell.edu/uscode/html/uscode49/usc_sec_49_00040118----000-.html)).

The section on Expenditure(s) Reporting has been updated include the required use of the new Federal Financial Report for submission of expenditure information. In fact, Office of Management and Budget required that federal agencies begin using the new report for financial information by October 2009. NSF has deactivated its FastLane Federal Cash Transaction Report effective January 5, 2009. FastLane will provide instructions for using the new financial report. (See this URL for details: <http://www.nsf.gov/bfa/dfm/cmeab.jsp>).

Both changes are effective January 5, 2009.  
You may direct questions about these changes to:

The Policy Office, Division of Institution and Award Support  
Telephone: (703) 292-8243  
E-mail to [policy@nsf.gov](mailto:policy@nsf.gov)

## Assistance to Researchers

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Proposal Preparation URL: <http://www.nsf.gov/funding/preparing/>

Grants Proposal Guide (GPG):

[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)

The Proposal and Award Policies and Procedures Guide (PAPP)

[http://www.nsf.gov/pubs/policydocs/pappguide/nsf09\\_1/index.jsp#B](http://www.nsf.gov/pubs/policydocs/pappguide/nsf09_1/index.jsp#B)

How to Manage Your Award: <http://www.nsf.gov/awards/managing/>

General Grant Conditions:

[http://www.nsf.gov/awards/managing/general\\_conditions.jsp](http://www.nsf.gov/awards/managing/general_conditions.jsp)

The Policy Office URL: <http://www.nsf.gov/bfa/dias/policy/>

In addition to Directorate, Division, and Program pages, National Science Foundation provides many aids on its vast web site to assist potential applicants and those who have received awards.

### ■ NSF Home Page

The Home Page provides access to all Divisions, Directorates, Programs, and assistance pages. In addition, it has a Quick Find device in the upper left hand corner called "Funding Opportunities". From this Dialog Box, the user can quickly move to links that display current funding opportunities, upcoming due dates for applications submissions, a direct link to the Proposal Preparation Page, and a concise guide (link) to trends in NSF funding. The NSF Home Page Link is provided above after the agency's name and acronym.

### ■ The Proposal Preparation Page

The Proposal Preparation Page provides clear instructions and information about what NSF expects to see in a proposal and provides many helpful links to Grants.gov, FastLane, and NSF Grants Policy Pages, available at the above URL.

■ **The Grants Proposal Guide (GPG)**

The Grants Proposal Guide (recently updated) is posted to the web site at the above URL. It is a comprehensive guide, available as a PDF file or as HTML on the site, which covers all sorts of topics that researchers need when developing proposals for the NSF. In the Pre-Submission Section, NSF provides Program and Funding Opportunity Descriptions; Explanatory guides for Letters of Intent, Preliminary Proposals, Full Proposals, etc. to ensure that proposers understand the critical information that NSF needs in each of these steps; Eligibility criteria; plus much more. The Proposal Submission section provides the user with informative step by step descriptions and explanations. It also has sections on Awards, Non-Award Decisions, and Resubmissions/Renewals. This is a very helpful guide that all potential applicants should bookmark for review and guidance.

■ **The Proposal & Award Policies and Procedures Guide (PAPP)**

The Proposal & Award Policies & Procedures Guide is a two-part guide that contains information and articles explaining NSF's proposal and award process. Part One comprises the NSF *Grant Proposal Guide* and will in the future also contain the NSF *Grants.gov Application Guide*. The Grant Proposal Guide (GPG) (and eventually the Grants.gov Application Guide) provides the user with information pertinent to preparing and submitting proposals to NSF. Part Two provides NSF documents that help the user to manage and monitor the award and administration of grants and cooperative agreements made by the Foundation. Included in this Part are articles that explain the NSF award process, from issuance and administration of an NSF award through closeout. PAPP is available at the above URL.

■ **The Awards Administration Guide (AAG) – How to Manage Your Award**

The AAG is found in the NSF Proposal & Award Policies & Procedures Guide (in Part Two). AAG describes NSF policies that govern the award and administration of grants and cooperative agreements to keep them in compliance with Office of Management and Budget Regulations (Circular A-110) and other regulatory guides. The AAG is applicable to NSF grants and cooperative agreements, unless noted otherwise in the award instrument. This Guide does not apply to NSF contracts.

■ **General Grant Conditions**

From time to time, NSF makes changes in the way it manages and governs awards and component pieces of awards – such as travel policies, acceptable expenses, and the like. NSF provides users with a quick overview of all recent changes from the General Grant Conditions page which is a compendium of links that take the user to a descriptive page regarding the specific change. See the above URL.

■ **The Policy Office**

The Policy Office develops and implements proposal and award policy for all the programs that are offered by the agency. It is further responsible for issuing notices about those policies and updates to them. Policy Office also provides users with assistance on all questions and issues regarding NSF policy and policy-related issues.

OSPR will provide an educational seminar on the NSF web site during the spring semester 2009 – please look for registration notices in the Campus Mailbag and via notices to colleges and departments.

## Federal Grants

### **NASA 2009 Research in Space & Earth Sciences**

**National Aeronautics and Space Administration (NASA)** ([www.nasa.gov](http://www.nasa.gov))

**NASA Headquarters**

Grants.gov URL:

<http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&opId=44768>

Program URL:

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={12AE9E93-939F-1F96-2B1C-93F88EDEA9C8}&path=open>

Top of Range: \$1M (per year, depending on focus/effort)  
Bottom of Range: Under \$100K - \$1M (per year, depending on focus/effort)  
Number of Awards: Up to several dozen depending on scope of applications  
Duration of Awards: 4 years average (some programs may be awarded for less than 4 years but 5 years is maximum duration)

This NASA Research Announcement (NRA) solicits proposals for supporting basic and applied research and technology across a broad range of Earth and space science program elements relevant to one or more of the following NASA Research Programs: Earth Science, Heliophysics, Planetary Science, and Astrophysics. This ROSES NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, stratospheric balloon, and suborbital rocket investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. For details go to the Program URL above and click on "D.5 GALEX Guest Investigator - Cycle 5 (PDF)."

### **Senior Scientist Research and Mentorship Award (K05)**

**Department of Health and Human Services (DHHS)** ([www.dhhs.gov](http://www.dhhs.gov))

**National Institutes of Health (NIH)** ([www.nih.gov](http://www.nih.gov))

Funding Opportunity Number: PA-09-076  
Program Closing Date: January 7, 2012  
Deadlines: February 12, June 12, October 12 Annually  
CFDA Number(s): 93.271 -- Alcohol Research Career Development Awards for Scientists and Clinicians

93.279 -- Drug Abuse and Addiction Research  
Programs Cost Sharing or Matching Requirement:  
None

Grants.gov:

<http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppId=44747>

Program URL: <http://grants.nih.gov/grants/guide/pa-files/PA-09-076.html>

The purpose of the Senior Scientist Research and Mentorship Award (K05) is intended to provide protected time for outstanding senior scientists who have demonstrated a sustained high level of productivity conducting biomedical research relevant to the scientific mission of the appropriate institute to focus on their research and to provide mentoring of new investigators. The overall goal of NIH-supported career development programs is to help ensure that a diverse pool of highly trained scientists are available in adequate numbers and in appropriate research areas to address the Nation's biomedical, behavioral, and clinical research needs. Mechanism of Support: This Funding Opportunity Announcement (FOA) will utilize the NIH Senior Scientist Award (K05) mechanism. Funds Available and Anticipated Number of Awards: The total amount to be awarded by the participating ICs and the number of awards will depend upon the quality and merit of applications received and the availability of funds.

## **NIH Small Research Grant Program (Parent R03)**

**National Institutes of Health (NIH)** ([www.nih.gov](http://www.nih.gov))

**Department of Health and Human Services (DHHS)** ([www.dhhs.gov](http://www.dhhs.gov))

Funding Opportunity Number: PA-06-180

Deadlines: February 16, June 16, October 16 annually

Award Ceiling: \$50,000

CFDA Number(s): 93.114 -- Applied Toxicological Research and Testing  
93.115 -- Biometry and Risk Estimation  
93.121 -- Oral Diseases and Disorders Research  
93.172 -- Human Genome Research  
93.242 -- Mental Health Research Grants  
93.273 -- Alcohol Research Programs  
93.279 -- Drug Abuse Research Programs  
93.286 -- Discovery and Applied Research  
93.287 -- Bioengineering Research  
93.361 -- Nursing Research  
93.853 -- Extramural Research Programs in the Neurosciences and Neurological Disorders  
93.855 -- Allergy, Immunology and Transplantation Research  
93.856 -- Microbiology and Infectious Diseases Research  
93.864 -- Population Research  
93.865 -- Child Health and Human Development Extramural Research  
93.866 -- Aging Research  
93.867 -- Vision Research  
93.879 -- Medical Library Assistance  
93.929 -- Center for Medical Rehabilitation Research

Cost Sharing or Matching Requirement: No

Grants.gov:

<http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppld=43644>

Program URL: <http://grants.nih.gov/grants/guide/pa-files/PA-06-180.html>

The National Institutes of Health (NIH) Investigator-Initiated Small Grant (R03) funding opportunity supports small research projects that can be carried out in a short period of time with limited resources. Investigator-initiated research, also known as unsolicited research, is research funded as a result of an investigator submitting a research grant application to NIH in an investigator's area of interest and competency. The R03 grant mechanism supports different types of projects including pilot and feasibility studies; secondary analysis of existing data; small, self-contained research projects; development of research methodology; and development of new research technology.

## Thermal Transport Processes

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Deadlines: Full Proposal Window: February 1, 2009 - March 1, 2009  
February 1 - March 1, Annually Thereafter  
Full Proposal Window: August 15, 2009 - September 15, 2009  
August 15 - September 15, Annually Thereafter

FY09 Deadlines: March 2, 2009 - 5:00PM submitter's local time, and  
September 15, 2009 - 5:00PM submitter's local time

Duration: 1 – 3 years unsolicited grant awards is generally one to three years. The average annual award size for the program is \$90,000. Small equipment proposals up to \$100,000 will also be considered and may be submitted during these windows. Any proposal received outside the announced dates will be returned without review.

Grants.gov:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18663>

Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=13367](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13367)

The Thermal Transport Processes program supports engineering research aimed at gaining a basic understanding of the microscopic and macroscopic levels of thermal transport phenomena (heat and mass transfer) underlying energy conversion and conservation, the synthesis and processing of materials, cooling and heating of infrastructure and equipment, the interaction of industrial processes with the environment, the propulsion of air and land-based vehicles, and thermal phenomena in biological and environmental systems. The program supports fundamental research and engineering education in transport processes that are driven by thermal gradients, and their manipulation to achieve engineering goals. This engineering science forms an important part of the intellectual infrastructure of a wide array of modern technologies.

Basic research in convection heat and mass transfer with and without phase change, heat and mass transfer at nano- and molecular scales, radiative transport, and the fundamental characterization of material properties important to these processes are especially relevant to this program. Priority is given to innovative, insightful investigations of fundamental problems with broad engineering and societal

applications and to novel use of heat and mass transfer principles to meet the engineering needs of the nation.

Examples of critical fundamental areas include, but are not limited to:

- Thermal transport in energy conversion and conservation processes, including environmental interactions, is vital to reduce the nation's dependence on petroleum
- Heat and mass transfer at length and/or time scales from the molecular to the continuum, is a subject of continuing importance to energy conversion and conservation, biotechnology, microelectronics, and biochemical detection
- The fundamental understanding of the interaction of energetic beams, such as produced by lasers, with solid, liquid or porous surfaces is vital to the evolution of advanced meso-, micro- and nano-manufacturing techniques

Proposals for Conferences, Workshops, and Supplements may be submitted at any time, but must be discussed with the program director before submission.

This award accepts CAREER proposals. The duration of CAREER awards is five years. The submission deadline for Engineering CAREER proposals is in July every year.

Please see the following URL for more information:

<http://www.nsf.gov/pubs/2005/nsf05027/nsf05027.jsp>

Please note that proposals of these types must be discussed with the program director before submission.

## Biomedical Engineering (BME)

National Science Foundation (NSF) ([www.nsf.gov](http://www.nsf.gov))

Deadline:	See announcement
Duration of Award:	1 – 3 years
Award Amount:	\$100,000 (individual investigator) \$200,000 (multiple investigators – including indirect costs) \$100,000 for Small Equipment Proposals

Grants.gov:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18669>

Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501023](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501023)

The mission of the Biomedical Engineering (BME) Program is to Provide opportunities to develop novel ideas into discovery-level and transformative projects that integrate engineering and life science principles in solving biomedical problems that serve humanity in the long-term and advance both engineering and life sciences with biomedical engineering projects that are at the interface of engineering and biomedical sciences. The program supports fundamental, transformative, and discovery research applied to biological systems. The BME program does not support clinical studies. The long-term impact of the projects can be related to disease diagnosis and/or treatment, improved health care delivery, or product development.

The BME program supports projects in the following BME themes:

1. Neural engineering (brain science, computational neuroscience, neurotech, cognitive engineering);
2. Computational modeling, multiscale modeling, biocomplexity;
3. Cardio/pulmonary systems engineering;
4. Gene and drug delivery systems;

5. Cellular and tissue engineering (cellular biomechanics, genetically engineered stem cell differentiation with long-term impact in tissue repair and regenerative medicine);
6. Biomaterials and biomimetics

Proposals for Conferences, Workshops, and Supplements may be submitted at any time, but must be discussed with the program director before submission. See the above program URL.

## Energy for Sustainability

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Funding Opportunity Number: PD-09-7644

Deadline: FY 2009 are:

March 2, 2009 - 5:00PM submitter's local time,  
 Sept 15, 2009 - at 5:00PM submitter's local time  
 2009 and Thereafter:

Full Proposal Window: Feb 1 - March 1, Annually

Full Proposal Window: Aug 15 – Sept 15

Annually

Duration of Award: 1 – 3 years

Amount of Award: \$100,000 annually

Grants.gov:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18671>

Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501026](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501026)

CAREER URL: <http://www.nsf.gov/pubs/2005/nsf05027/nsf05027.jsp>

The Energy for Sustainability program supports fundamental research and education in energy production, conversion, and storage and is focused on energy sources that are environmentally friendly and renewable.

Most world energy needs are currently met through the combustion of fossil fuels. With projected increases in global energy needs, more sustainable methods for energy production will need to be developed, and production of greenhouse gases will need to be reduced. Sources of sustainable energy include:

1. Sunlight -- Photovoltaic devices have the potential to supply a significant fraction of electrical energy to the power grid;
2. Wind -- Wind power is a growing source of electrical energy. Increased efficiency requires a fundamental knowledge of the interaction of wind with the blade structure;
3. Biomass -- available from agricultural crop residues, forest products, aquatic plants, and municipal wastes. In addition to hydrogen, biomass can be a source of liquid, solid, and gaseous fuels including biofuels such as ethanol;
4. Hydrogen -- research that generates enabling science and technologies for more efficient hydrogen generation and storage is supported by the program. Potential sources of hydrogen include conversion from biomass and from electrolysis, photolysis or thermolysis of water; and
5. Alcohols -- Fuel cells have the potential to convert fuels such as hydrogen and alcohols to electricity at high efficiencies and should play an increasing role in energy conversion.

Critical components of fuel cells requiring additional research include catalysts and electrolytes. Development of these components also requires fundamental research

on the reaction and transport mechanisms at the catalyst and membrane electrolyte interface.

Advances in these areas are needed to address key challenges in efficiency, durability, power density, and environmental impacts. The engineering aspects of fuel-cell design and operation also require further study in areas such as water and thermal management. Understanding the fluid flow, and optimizing blade design are important aspects in developing more efficient wind generators. Although silicon-based materials have been most widely used, other semi-conducting materials and titanium dioxide also have potential. New materials and novel fabrication techniques for solar energy conversion are supported by the program.

Proposals for Conferences, Workshops, and Supplements may be submitted at any time, but must be discussed with the program director before submission.

Applicants to this program may also use the mechanism of CAREER awards, the duration of which is five years. The submission deadline for Engineering CAREER proposals is in July every year. Please note that proposals of these types must be discussed with the program director before submission. See the above URLs for details.

## Environmental Sustainability

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Funding Opportunity Number: PD-09-7643 Opportunity Category:

Deadlines: Mar 01, 2009  
Submission Window Dates Feb 1, 2009 - March 1, 2009  
February 1 - March 1, Annually Thereafter  
August 15, 2009 - September 15, 2009  
August 15 - September 15, Annually Thereafter

Duration: 1 – 3 years for unsolicited awards

Award Average: \$100,000  
Small equipment proposals up to \$100,000 will also be considered and may be submitted during these windows

CFDA Number(s): 47.041 -- Engineering Grants Cost Sharing or Matching

Requirement: No

Grants.gov:  
<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=18672>

Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501027](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501027)

From the website:

"The Environmental Sustainability program supports engineering research with the goal of promoting sustainable engineered systems that support human well-being and that are also compatible with sustaining natural (environmental) systems. These systems provide ecological services vital for human survival. The long-term viability of natural capital is critical for many areas of human endeavor. Research in Environmental Sustainability considers long time horizons and incorporates contributions from the social sciences and ethics.

This program supports engineering research that seeks to balance society's need to provide ecological protection and maintain stable economic conditions. There are four principal general research areas which are supported:

- Industrial Ecology
- Green Engineering
- Ecological Engineering
- Earth Systems Engineering

Visit the above URLs for complete details.

## Environmental Implications of Emerging Technologies

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Funding Number: PD 09-1179

Deadline: Full Proposal Window: February 1, 2009 - March 1, 2009  
February 1 - March 1, Annually Thereafter  
Full Proposal Window: August 15, 2009 - September 15, 2009  
August 15 - September 15, Annually Thereafter

FY09 Deadlines: March 2, 2009 - at 5:00 pm submitter's local time, and  
September 15, 2009 - at 5:00 pm submitter's local time.

Duration: 1 – 3 years Unsolicited Grants

Average Award: \$80,000  
Small equipment proposals up to \$100,000 will also be considered and may be submitted during these windows.

Grants.gov:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18674>

Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501030](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501030)

The Environmental Implications of Emerging Technologies program provides support to develop and test the environmental effects of new technologies. Fundamental and basic research is sought to establish and understand outcomes as a result of the implementation of new technologies such as nanotechnology, biotechnology, and information technology. The program also supports research on the development and refinement of sensors and sensor network technologies that can be used to measure a wide variety of physical, chemical, and biological properties of interest in characterizing, monitoring, and understanding environmental impacts. The program emphasizes engineering principles underlying technology impacts. Innovative production processes, waste reduction, recycling, and industrial ecology technologies are of interest. All of these have implications that would be relevant to this program. Current areas of support include:

- Understanding and mitigating how new developments in nanotechnology, biotechnology, and information technology will interact with the environment
- Nanotechnology environmental, health, and safety implications and applications
- Predictive methodology for the interaction of nanoparticles with the environment and with the human body, including predictive approaches for toxicity
- Fate and transport of natural, engineered, and incidental (by-product) nanoparticles
- Risk assessment and management of the effect of nanomaterials in the environment
- Evaluation of the effect of increased usage of renewable resources on water supply and land use

- Sensor and sensor network technologies as they relate to the measurement of these environmental implications

Current areas of support do not include biomedical and nanotoxicology topics involving clinical trials.

## Fluid Dynamics

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Grants.gov:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18675>

Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=13365](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13365)

Deadlines: Full Proposal Window: Feb 1, 2009 - March 1, 2009  
February 1 - March 1 Annually Thereafter  
Full Proposal Window: August 15, 2009 - Sept 15, 2009  
August 15 - September 15 Annually Thereafter

FY09 Deadlines: March 2, 2009 - 5:00PM submitter's local time, and  
September 15, 2009 - 5:00PM submitter's local time

Duration: 1 – 3 years for unsolicited awards

Award Amount: \$80,000  
Small equipment proposals up to \$100,000 will also be considered and may be submitted during these windows.

The Fluid Dynamics program supports fundamental research and education on mechanisms and phenomena governing fluid flow. Topics include: hydrodynamic stability; transitional flows and turbulence; Newtonian and non-Newtonian fluid mechanics; sediment transport; waves and coastal engineering; hydraulics; multi-scale, multi-phenomena models and computations; micro- and nano-scale flow phenomena; and biofluid mechanics. Proposed research should contribute to basic understanding, thus enabling the better design, predictability, efficiency, and control of systems that involve fluids. Proposals addressing innovative uses of fluids in materials development, manufacturing, biotechnology, nanotechnology, clinical diagnostics and drug delivery, sensors development and integration, energy and the environment, are encouraged.

Proposals for Conferences, Workshops, and Supplements may be submitted at any time, but must be discussed with the program director before submission.

This award accepts CAREER proposals. The duration of CAREER awards is five years. The submission deadline for Engineering CAREER proposals is in July every year. Visit this URL for more: <http://www.nsf.gov/pubs/2005/nsf05027/nsf05027.jsp>. Please note that proposals of these types must be discussed with the program director before submission.

## Process and Reaction Engineering

**National Science Foundation (NSF)** ([www.nsf.gov](http://www.nsf.gov))

Grants.gov:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18676>

Biotechnology, Biochemical, and Biomass Engineering  
National Science Foundation

Deadlines: Full Proposal Window: February 1, 2009 - March 1, 2009  
February 1 - March 1, Annually Thereafter  
Full Proposal Window: August 15, 2009 - Sept 15, 2009  
August 15 - September 15, Annually Thereafter  
FY09 Deadlines: March 2, 2009 - 5:00PM submitter's local time, and  
September 15, 2009 - 5:00PM submitter's local time.  
Duration: 1 – 3 years Unsolicited Grant awards  
Average Award: \$120,000  
Grants.gov:  
<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppld=18677>  
Program URL: [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=501024](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=501024)

The Biotechnology, Biochemical, and Biomass Engineering (BBBE) program deals with fundamental problems involved in the processing and manufacturing of products of economic importance by effectively utilizing renewable resources of biological origin and bioinformatics originating from genomic and proteomic information. The BBBE program emphasizes basic engineering and biological research that advances the fundamental knowledge base that contributes to a better understanding of cellular and biomolecular processes (in vivo, in vitro, and/or ex vivo) and eventually to the development of generic enabling technology and practical application.

Quantitative assessments of bioprocesses and their rates at the levels of gene regulation and expression, signal transduction pathways, posttranslational protein processing, enzymes in reaction systems, metabolic pathways, cells and tissues in cultivation, and biological systems including animal, plant, microbial and insect cells, etc. are considered vital to the successful research projects in the BBBE program. Research projects supported through the BBBE program include, but are not limited to:

- Fermentation technology
- Enzyme technology
- Recombinant DNA technology
- Cell culture technology
- Ex vivo and therapeutic stem cell culture technology
- Metabolic engineering
- Tissue engineering
- Nanobiotechnology
- Quantitative systems biotechnology
- Biosensor development
- Food processing with special focus on the safety of the nation's food supply

Proposals for Conferences, Workshops, and Supplements may be submitted at any time, but must be discussed with the program director before submission.

This award accepts CAREER proposals. The duration of CAREER awards is five years. The submission deadline for Engineering CAREER proposals is in July every year. For details visit: <http://www.nsf.gov/pubs/2005/nsf05027/nsf05027.jsp>. Please note that proposals of these types must be discussed with the program director before submission.

## **FIPSE: EU-US Atlantis Program**

Department of Education (ED) ([www.ed.gov](http://www.ed.gov))

**Office of Postsecondary Education (OPE)**

<http://www.ed.gov/about/offices/list/ope/index.html>

**Fund for the Improvement of Postsecondary Education (FIPSE)**

<http://www.ed.gov/about/offices/list/ope/fipse/index.html>

Deadline: March 23, 2009

CFDA 84.116J

Grants.gov URL:

<http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppld=44489>

Program URL: <http://www.ed.gov/programs/fipseec/index.html>

The European Union-United States Atlantis Program is offered as a joint grant competition by FIPSE and the European Commission's Directorate General for Education and Culture (DG EAC). The competition seeks to promote a student-centered, transatlantic dimension to higher education and training in a wide range of academic and professional disciplines. To that end, the program will fund collaborative projects that seek to develop programs of study leading to joint or dual undergraduate or graduate degrees. The program will also fund a small number of policy-oriented grants and one-team mobility grants. The program supports projects that develop organizational frameworks for transatlantic student mobility, including work placements and internships that will provide adequate language preparation and full academic credit. Also supported are innovative curricula; teaching materials, methods, and modules; research internships; and teaching assignments. Visit the above URLs for full details and application materials.

## **NIJ FY09 Social Science Research on Wrongful Conviction**

**United States Department of Justice (DOJ)** ([www.usdoj.gov](http://www.usdoj.gov))

**Office of Justice Programs (OJP)** ([www.ojp.usdoj.gov/](http://www.ojp.usdoj.gov/))

**National Institute of Justice (NIJ)** ([www.ojp.usdoj.gov/nij/](http://www.ojp.usdoj.gov/nij/))

Grants.gov URL:

<http://www07.grants.gov/search/search.do?&mode=VIEW&flag2006=false&oppld=44761>

Program URL: <http://www.ncjrs.gov/pdffiles1/nij/SL000847.pdf>

Funding Opportunity Number: NIJ-2009-1936

Deadline: March 16, 2009

Expected Number of Awards: 100

Award Ceiling: \$600,000

Award Floor: \$0

CFDA Number: 16.560 -- National Institute of Justice Research, Evaluation, and Development Project Grants

Cost Share/Match: None

"NIJ is interested in stimulating a scientifically rigorous body of research on the topic of wrongful convictions, specifically focusing on the 200-plus cases of exonerations based on post-conviction DNA examinations, and comparisons of DNA-based and non-DNA based exonerations." In the 200 plus cases that have resulted in exonerations based on post-conviction DNA evidence, there has been reportage in the media and other venues but very little social science-based research on the topic. NIJ seeks proposals that will "support a more expansive and empirical examination of wrongful convictions than currently exists." Specifically NIJ is looking

for research proposals that focus on “post-conviction DNA exonerations in the investigation, trial, and post-conviction stages of the criminal justice process as well as a comparison to non-DNA exonerations.” NIJ will give “strong preference” to those research plans that propose “the collection and analysis of data in all three of these stages.” Please visit the Program ULR for complete details.

## **Private and Corporate Grants**

### **Beckman Foundation Science Grants**

#### **Arnold and Mabel Beckman Foundation**

100 Academy

Irvine, CA 92617-3002

Telephone: (949) 721-2222

Deadline: October 1 Annually

URL: [www.beckman-foundation.com](http://www.beckman-foundation.com)

The foundation makes grants on a national basis to nonprofit research institutions to promote research in chemistry and life sciences, broadly interpreted, to foster the invention of methods, instruments, and materials that will open new avenues of research in science. Giving is limited primarily to the US and there is no support for political or religious purposes, or for research that does not fall within the foundation's areas of interest. No grants are made to individuals (except for Beckman Young Investigator's Program), and there are other funding restrictions. Areas of interest include AIDS research; Biological sciences; Biomedicine; Cancer; Cancer research; Chemistry; Engineering/technology; Eye diseases; Eye research; Heart & circulatory diseases; Heart & circulatory research; Marine science; Medical research, institute; Physical/earth sciences; Physics; Science. Here are the grant programs the Beckman offers:

**Beckman Scholars Program:** An invited program for accredited universities and four-year colleges in the US that provides scholarships which are meant to be use to advance the education, research training and personal development of select students in chemistry, biochemistry, and the biological and medical sciences. The sustained, in-depth undergraduate research experiences and comprehensive faculty mentoring are unique in terms of program scope, content and level of scholarship awards (\$17,600 for two summers and one academic year)

**Beckman Young Investigators Program:** The program is intended to provide research support to the most promising young faculty members in the early stages of academic careers in the chemical and life sciences. The program is open to persons with tenure-track appointments in academic and nonprofit institutions that conduct fundamental research in the chemical and life sciences. Candidates must be citizens or permanent residents of the US at the time of application. Documentation of US citizenship (copy of birth certificate or passport) or permanent residency status must be provided with the application. Persons who have applied for permanent residency but have not received their government documentation by the time of application are not eligible.

To be eligible, an applicant should not have completed more than three full years in his or her tenure-track or other comparable independent research appointment. Regardless of eligibility under this rule, no individual may apply for a Beckman Young Investigator award more than three times.

Proposed research that cuts across traditional boundaries of scientific disciplines is encouraged. Proposals should feature projects that show promise for contributing significant advances in the research fields of interest to the foundation, comprising innovative departures in research rather than extensions or expansions of existing programs. Funding is normally for a period of three years and average about \$264,000 over the term of the project. The foundation does not provide for overhead or for indirect costs.

The Beckman does not fund general institutional expenses, general fundraising campaign expenses such as dinners and mass mailings, or contributions to unified funds or to a pooled fund that is itself used to award grants of any kind, or social science, religious, political, or other research that does not fall within the foundation's areas of interest. Grant policy, application forms, and procedure information are available at the above URL.

#### Contact

Jacqueline Dorrance, Executive Director  
Fax: (949) 721-2225

## **Fellowships: Institutional/Individual**

Bellagio Center Creative Arts Residencies

Rockefeller Foundation (<http://www.rockfound.org/>)

Deadline: February 11, 2009 (for residencies between mid-August through November 26, 2009)

The Bellagio Center creative arts residencies are designed to give composers, novelists, playwrights, poets, video/filmmakers, and visual artists time for disciplined work, individual reflection, and collegial engagement free of the usual interruptions of their professional and personal life.

Located on a peninsula adjacent to Lake Como, two hours north of Milan, Italy, the Bellagio Center typically offers one-month stays for no more than three to five creative artists at a time. The foundation seeks applicants from any country in the world who are able to demonstrate a history of significant achievement in their respective artistic disciplines. Individuals from developing countries and young artists with significant accomplishments -- exhibitions, publications, performances -- are particularly encouraged to apply. Decisions are based on the quality of the proposed project, the ability of the applicant to articulate the project's purpose and goals, the professional qualifications and achievements of the applicant, and the suitability and value of the center for the proposed activity. Spouses/life partners may accompany the resident, or may apply for a concurrent residency. The center also offers collaborative residencies for two to four persons working on the same project.

Residencies are typically four weeks long; however, shorter periods may be available. Room and board are provided without charge to all residents and their spouses/partners. Residents and spouses/partners must pay for their own airfare and local transportation to/from Bellagio. Assistance with round-trip economy airfare between the home country and Milan is available on a financial needs basis to qualifying residents and their spouses/partners from developing countries.

For detailed program information, visit the above URL.

## Student Funding Opportunities

### **2009 Jack Kent Cooke Graduate Scholarship**

**Jack Kent Cooke Foundation (JKCF)** ([www.jkcf.org](http://www.jkcf.org))

Lansdowne, VA 20176

Telephone: 800-498-6478

Deadline (Internal): February 10, 2009 (Mid-March to the foundation)

Award: Up to \$50,000 per year

Program URL: <http://www.jkcf.org/scholarships/graduate-scholarships/>

Through this highly competitive offering (about 3% of the applicants receive awards), JKCF awards thirty scholarships to outstanding students. A viable candidate must meet the foundation's minimum qualifications:

1. Nominated by his or her undergraduate institution
2. Senior or a recent graduate (since May 2004) of an accredited US college or university,
3. Cumulative college grade point average of 3.5 or better on a 4.0 scale (or the equivalent), and
4. Plan to attend a full-time graduate or professional degree program at an accredited university in fall 2009.
5. First graduate degree the candidate has ever pursued.
6. Not previously nominated for the Jack Kent Cooke Graduate Scholarship.

The web site describes the program in detail and all the application materials may be downloaded from the site. The foundation advises that students with outstanding academic records (GPA 3.5 or above) and very high graduate admissions examination test scores (GRE, GMAT, MAT, LSAT, MCAT, etc.) are the best applicants for this scholarship.

CSU will be allowed to send forward to the foundation only two names. If you intend to apply, complete the application and submit all required forms and documentation to Dean Vera Vogelsang-Coombs in the College of Graduate Studies (Parker Hannifin Hall, Room 205) by no later than February 10, 2009. The applications will be reviewed by a six-person faculty committee which will then submit CSU nominees to the foundation the CSU nominees.

### **2009 STOP Hunger Scholarships**

**Sodexo Foundation (SDXF)** ([www.SodexoFoundation.org](http://www.SodexoFoundation.org))

Sodexo, Inc. ([www.sodexoUSA.com](http://www.sodexoUSA.com))

Deadline: February 27, 2009

Amount of Award: \$5,000 to student + \$5,000 matching grant to hunger-related charity of student's choice

Number of Awards: Up to 5

Additional Award: Up to 20 regional honorees receive \$1,000 grant in their name to the hunger-related charity of their choice

URL: [http://www.sodexofoundation.org/hunger\\_us/scholarships/scholarships.asp](http://www.sodexofoundation.org/hunger_us/scholarships/scholarships.asp)

The Sodexo Foundation is the charitable arm of Sodexo, Inc. The foundation supports innovative programs to help children and families in the US who are battling problems such as poverty, unemployment, lack of education and food insecurity.

The foundation has increased the amount of its *STOP Hunger Scholarships* to \$5,000 and will begin accepting applications on January 1, 2009. The scholarships will be presented on June 4, 2009 at the Sodexo Foundation Dinner in Washington, D.C.

To be eligible, students must be enrolled in an accredited education institution (kindergarten through graduate school) in the US and be able to demonstrate an on going commitment to hunger-relief activities in their community. Applications are completed online. Full details and the application are found at the above URL.

Contact:  
John Friedman  
Telephone: 301-987-4456  
E-mail: [john.friedman@sodexo.com](mailto:john.friedman@sodexo.com)

## **Ohio Board of Regents Graduate/Professional Fellowship Program**

**Ohio Board of Regents (OBOR)** (<http://regents.ohio.gov/>)

Deadline: March 1, 2009 (annually)

URL: <http://regents.ohio.gov/sgs/fellowship/>

CSU URL: <http://www.csuohio.edu/gradcollege/students/funding/index.html>

The 2009-2010 Ohio Board of Regents Graduate and Professional Fellowship Program is a state sponsored competitive program that provides chosen candidates with a \$3,500 stipend each year for two years of full-time graduate/professional study in the State of Ohio beginning in the 2009-2010 academic year. About 70 scholars receive Regents Fellowships each year with at least one fellowship awarded to a senior from Cleveland State University. In the past, as many as three Cleveland State seniors have received awards. Guidelines can be found at either of the above URLs.

## **Nathan J. Stark Internship for Nonprofit Development**

**National Academy of Social Insurance** (<http://www.nasi.org/>)

**National Health Policy Forum** (<http://www.nhpf.org>)

Deadline: March 1, 2009

Duration: 12 weeks in the summer

Stipend: \$3,000

The Nathan J. Stark Internship for Nonprofit Development will provide two students with an opportunity to learn about nonprofit organizations, how they work, how they raise funds, and how they make a difference. Interns will be based at the National Academy of Social Insurance or at the National Health Policy Forum.

Each summer two students interested in a career in the nonprofit sector will be awarded the internship based on national recruitment and a competitive selection process. The interns will work in Washington, D.C.; will participate in a series of seminars and programs. International students with a valid student visa can be placed with these nongovernmental organizations if placement projects match their skills and interests.