Dear Colleague Letter - EFRI Research Experience and Mentoring (REM) – NSF 13-032

The National Science Foundation (NSF) Directorate for Engineering (ENG) Office of Emerging Frontiers in Research and Innovation (EFRI) continually seeks to further the progress in EFRI topic areas while broadening participation of underrepresented groups in science, technology, engineering, and mathematics (STEM) fields. This letter is to call your attention to a pilot opportunity to pursue both of these goals through supplements to active EFRI research awards. Institutions with current EFRI research awards may apply for supplemental funding for this Research Experience and Mentoring (REM) pilot program to support costs associated with bringing Research Participants (RPs) into the laboratory over the summer to participate in research aligned with the goals of EFRI-supported research, and to extend the duration of structured mentoring into the academic year.

Frequently Asked Questions for NSF 13-518, INSPIRE
The program solicitation is provided at:
NSF 13-518: Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE)

I/UCRC: Center for Water Equipment & Policy (WEP) IAB Meeting
March 26, 2013 8:00 AM to March 27, 2013 5:00 PM
Marquette University, Milwaukee, WI
This is a bi-annual meeting of the industry advisory board and center members to assess ongoing research and set priorities for new research directions. Visitors interested in membership are welcome if they are willing to sign a non-disclosure agreement.

OPPORTUNITIES FOR STUDENTS AND RECENT GRADUATES

SBE Doctoral Dissertation Research Improvement Grants (SBE DDRIG) – NSF 11-547
The following fields are supported by this program:
- Archeology
- Decision, Risk and Management Sciences
- Law and Social Sciences
- Political Science
- Science, Technology, and Society
- Biological Anthropology
- Economics
- Methodology, Measurement, and Statistics
- Research on Science and Technology Surveys and Statistics
- Sociology
- Cultural Anthropology
- Geography and Spatial Sciences
- Linguistics
- Science of Science and Innovation Policy

Full Proposal Deadline Dates: See program solicitation

The National Science Foundation's Division of Behavioral and Cognitive Sciences (BCS), Division of Social and Economic Sciences (SES), National Center for Science and Engineering Statistics (NCSES), and the SBE Office of Multidisciplinary Activities (SMA) award grants to doctoral students to improve the quality of dissertation research. These grants provide funds for
items not normally available through the student's university. Additionally, these grants allow doctoral students to undertake significant data-gathering projects and to conduct field research in settings away from their campus that would not otherwise be possible. Proposals are judged on the basis of their scientific merit, including the theoretical importance of the research question and the appropriateness of the proposed data and methodology to be used in addressing the question.

In an effort to improve the quality of dissertation research, many programs in both BCS and SES, the Research on Science and Technology Surveys and Statistics program within NCSES, and the Science of Science and Innovation Policy program in SMA accept doctoral dissertation improvement grant proposals. Requirements vary across programs, so proposers are advised to consult the relevant program's webpage for specific information and contact the program director if necessary.

**USDA National Institute of Food and Agriculture - AFRI: NIFA Fellowships Grant Program**

**Modification 1**

**Current Closing Date for Applications:** Mar 14, 2013

**Estimated Total Program Funding:** $6,000,000

The FY 2013 AFRI NIFA Fellowship RFA focuses on developing the next generation of research, education, and extension professionals in the food and agricultural sciences who will lead agriculture into the future by solving current and future challenges facing our society. The AFRI NIFA Fellowships Grant Program targets talented, highly-motivated doctoral candidates and postdoctoral trainees that demonstrate remarkable promise and the potential to become gifted education, extension, and research professionals in the United States. The NIFA Fellows are individuals who have the potential for remarkable accomplishments in agricultural science. The Program seeks to develop the technical and academic competence of doctoral candidates and the research independence and teaching competencies of postdoctoral students in the food, forestry and agricultural sciences, which are within NIFA’s challenge areas, through well-developed and highly interactive mentoring and training activities. Project types supported by AFRI within this RFA include single-function Research, Education, and Extension Projects and multi-function Integrated Research, Education, and/or Extension Projects.

**OPPORTUNITIES FOR FACULTY**

**Agriculture/Land Use**

**Agriculture and Food Research Initiative: Sustainable Bioenergy**

**USDA-NIFA-AFRI-004029**

**Current Closing Date for Applications:** Apr 03, 2013

A Letter of Intent (LOI) must be submitted (applications for conference grants are excluded) by 5:00 p.m. Eastern Time (ET) on January 28, 2013. A LOI is a prerequisite to submission of an application (conference grants is the exception).

**Estimated Total Program Funding:** $10,000,000

**Award Ceiling:** $10,000,000

**Award Floor:** $0

**Cost Sharing or Matching:** Yes
This AFRI Challenge Area focuses on the priority to secure America’s energy future. It supports the development of regional systems for the sustainable production of bioenergy and biobased products that contribute significantly to reducing dependence on foreign oil, have net positive social, environmental, and rural economic impacts, and are compatible with existing agricultural systems. The long-term outcome for this program is to implement regional systems that materially deliver liquid transportation biofuels to help meet the Energy Independence and Security Act (EISA) of 2007 goal of 36 billion gallons/year of biofuels by 2022 and reduce the National dependence on foreign oil. In order to achieve this outcome, this program will support single-function Research, multi-function Integrated Research, Education, and/or Extension Projects, and Food and Agricultural Science Enhancement (FASE) Grants that address one of the Program Area Priorities (see Sustainable Bioenergy RFA for details).

**Powering Agriculture: An Energy Grand Challenge for Development – USAID RFA-OAA-12-000027**

Closing Date for Applications: Feb 06, 2013  
Award Ceiling: $1,500,000  
Award Floor: $300,000

The USAID, the Government of Sweden, and Duke Energy Corporation invite proposals to respond to **Powering Agriculture: An Energy Grand Challenge for Development Competition**. This Broad Agency Announcement (BAA) is for a funding competition component of this Grand Challenge for Development, designed to address barriers to increasing access to clean energy services within the agriculture sectors of developing countries. This competition anticipates disbursing $10-$20 million USD. The period of performance for individual awards is up to three years; the actual period of performance will be determined at the time of award. Awards made through this BAA may be in the form of grants, cooperative agreements, contracts, and collaboration agreements depending on the nature of the submitting organization and the proposal.

**Biology**

**Division of Integrative Organismal Systems Core Programs – NSF 13-506**

Preliminary Proposal Due Date(s): January 18, 2013  
Third Friday in January, Annually Thereafter  
Full Proposal Deadline(s): August 02, 2013  
First Friday in August, Annually Thereafter  
Anticipated Type of Award: Standard Grant or Continuing Grant  
Estimated Number of Awards: 200  
Anticipated Funding Amount: $55,000,000

The Division of Integrative Organismal Systems (IOS) supports research aimed at understanding why organisms are structured the way they are and function as they do. Proposals should focus on organisms as a fundamental unit of biological organization. Principal Investigators (PIs) are encouraged to apply systems approaches that will lead to conceptual and theoretical insights and predictions about emergent organismal properties. Areas of inquiry include, but are not limited to, developmental biology and the evolution of developmental processes, nervous system development, structure, and function, physiological processes, functional morphology, symbioses, interactions of organisms with biotic and abiotic environments, and animal behavior.
The Division of Environmental Biology (DEB) supports fundamental research on populations, species, communities, and ecosystems. Scientific emphases range across many evolutionary and ecological patterns and processes at all spatial and temporal scales. Areas of research include biodiversity, phylogenetic systematics, molecular evolution, life history evolution, natural selection, ecology, biogeography, ecosystem structure, function and services, conservation biology, global change, and biogeochemical cycles. Research on organismal origins, functions, relationships, interactions, and evolutionary history may incorporate field, laboratory, or collection-based approaches; observational or manipulative experiments; synthesis activities; as well as theoretical approaches involving analytical, statistical, or computational modeling.

Geosciences

EarthCube: Developing a Community-Driven Data and Knowledge Environment for the Geosciences – NSF 13-529

Full Proposal Deadline: March 26, 2013
EarthCube Test Enterprise Governance
March 26, 2013 EarthCube Research Coordination Networks

Funding Opportunities: See solicitation for details on each of the following,
(1) EarthCube Test Enterprise Governance
Deadline: March 21, 2013
Award Information: 1 award is anticipated.
Estimated Award Size and Duration: $2,000,000-$3,000,000 for 24 months.
The actual number and size of awards will be determined based on merit review of the quality of proposals, and availability of funds.
(2) EarthCube Research Coordination Networks (RCN)
Deadline: March 21, 2013
Estimated Number of Awards: 4-6
Estimated Award Size and Duration: 24 months maximum and up to $300,000 maximum.

EarthCube is a community-driven activity sponsored through a partnership between the NSF Directorate of Geosciences and Office of Cyberinfrastructure to transform the conduct of geosciences research and education. EarthCube aims to create a well-connected and facile environment to share data and knowledge in an open, transparent, and inclusive manner, thus accelerating the ability of the geosciences community to understand and predict the Earth system.

EarthCube is a long-term dialog between the NSF and the interested scientific communities to develop cyberinfrastructure that is thoughtfully and systematically built to meet the current and future requirements of geoscientists. New avenues will be supported to gather community requirements and priorities for the elements of EarthCube, and to capture the best technologies.
to meet the current and future needs of the broad and diverse geoscience community. The EarthCube portfolio will consist of interconnected projects and activities that engage the geoscience, cyberinfrastructure, computer science, and associated communities. The portfolio of activities and funding opportunities will evolve over time depending on the status of the EarthCube effort and the scientific and cultural needs of the geosciences community. This umbrella solicitation for EarthCube allows funding opportunities to be flexible and responsive to emerging community needs and collaborative processes. The EarthCube vision and goals do not change over time, and this section of the solicitation will remain constant. Funding opportunities to develop elements of the EarthCube environment will be described in amendments to this solicitation. Amendments will appear in the Program Description Section of the solicitation and will include details on the parameters, scope, conditions, and requirements of the proposal call. Researchers who receive alerts related to solicitation releases will receive notification when the EarthCube solicitation is updated with an Amendment.

Other

**Interdisciplinary Behavioral and Social Science Research (IBSS) – NSF 12-614**

Full Proposal Deadline: January 23, 2013

December 03, 2013

December 02, 2014

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 10 to 15 Depending on the quality of proposals.

Anticipated Funding Amount: $10,000,000

The Interdisciplinary Behavioral and Social Science Research (IBSS) competition promotes the conduct of interdisciplinary research by teams of investigators in the social and behavioral sciences. Emphasis is placed on support for research that involves researchers from multiple disciplinary fields, that integrates scientific theoretical approaches and methodologies from multiple disciplinary fields, and that is likely to yield generalizable insights and information that will advance basic knowledge and capabilities across multiple disciplinary fields.

**EPA/NSF Networks for Characterizing Chemical Life Cycle (NCCLCs)**

**USEPA NSF 13-524**

Full Proposal Deadline: March 18, 2013

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 2 to 4

Awards will be funded by either EPA or NSF.

Anticipated Funding Amount: $2,000,000 to $12,000,000

Two to four awards are anticipated in FY 2013 dependent on proposal quality, the availability of funds, and other applicable considerations. Each award is limited to a maximum of $1,250,000 per year for four years (or $5,000,000 total, including direct and indirect costs).

This solicitation is jointly sponsored by the U.S. Environmental Protection Agency (EPA) and the U.S. National Science Foundation (NSF) Division of Chemistry (CHE) to encourage synergy and enhance cooperation in examining the life cycles of synthetic chemicals and materials as they relate to their manufacture, use, transport, and disposal or recycle. The Networks for Characterizing Chemical Life Cycle (NCCLCs) will promote development of trans-disciplinary, systems- and molecular-level understanding of the life cycle of important (relevant) synthetic chemicals and materials (including nanomaterials) as these distribute and are potentially altered through use in society and interaction with the built and natural environments. For this solicitation, "chemicals" refers broadly to any and all materials, compounds, and individual
chemicals or mixtures of chemicals, including nanomaterials. Advances resulting from these Networks are expected to provide methods and tools for characterizing and predicting environmental and health implications of chemical manufacture and use across the life cycle. Education, workforce development, and the translation or transfer of basic research results into social or economic benefits are critical aspects of NCCLC projects. Networks will develop strong mentoring and training activities (which include broadening participation elements) for undergraduate and graduate students as well as postdoctoral associates. Other educational activities, such as informal science communication and the education of K-12 students or the public, are encouraged. Where appropriate, intellectual property protection and a proactive plan to engage industry in technology transfer is encouraged.

**Antarctic Research – NSF 13-527**

**Full Proposal Deadline:** April 15, 2013

**Anticipated Type of Award:** Standard Grant or Continuing Grant

**Estimated Number of Awards:** 50 approximately

**Anticipated Funding Amount:** $55,000,000

The Antarctic Sciences Section anticipates committing approximately $55M as either standard or continuing awards made in response to this solicitation contingent on the availability of funds. Anticipated amounts available by program are: Antarctic Astrophysics and Geospace Sciences, $9M; Antarctic Earth Science, $8M; Antarctic Glaciology, $6M; Antarctic Instrumentation and Technology Development, $12M; Antarctic Integrated System Science, $6M; Antarctic Ocean and Atmospheric Science, $6M; and Antarctic Organisms and Ecosystems, $8M.

Scientific research, along with operational support of that research, is the principal activity of the U.S. Antarctic Program in Antarctica. The National Science Foundation's Antarctic Sciences Section fosters research on globally and regionally important scientific problems. In particular, the Antarctic Sciences Section supports research that expands fundamental knowledge of the region as well as research that relies on the unique characteristics of the Antarctic continent as a platform from which to support research. Antarctic fieldwork will only be supported for research that can only be performed or is best performed in Antarctica. The Antarctic Sciences Section strongly encourages research using existing samples, models, and data as well as research at the intersection between disciplines.

**Economics - PD 98-1320**

**Full Proposal Target Date:** January 18, 2013

**Anticipated Funding Amount:**

The NSF Economics program supports research designed to improve the understanding of the processes and institutions of the U.S. economy and of the world system of which it is a part. This program also strengthens both empirical and theoretical economic analysis as well as the methods for rigorous research on economic behavior. It supports research in almost every area of economics, including econometrics, economic history, environmental economics, finance, industrial organization, international economics, labor economics, macroeconomics, mathematical economics, and public finance.

The Economics program welcomes proposals for individual or multi-investigator research projects, doctoral dissertation improvement awards, conferences, workshops, symposia, experimental research, data collection and dissemination, computer equipment and other
instrumentation, and research experience for undergraduates. The program places a high priority on interdisciplinary research. Investigators are encouraged to submit proposals of joint interest to the Economics Program and other NSF programs and NSF initiative areas. The program places a high priority on broadening participation and encourages proposals from junior faculty, women, other underrepresented minorities, Research Undergraduate Institutions, and EPSCoR states.

The program also funds conferences and interdisciplinary research that strengthens links among economics and the other social and behavioral sciences as well as mathematics and statistics.

**Decision, Risk and Management Sciences (DRMS) - PD 98-1321**

**Full Proposal Target Date:** January 18, 2013

January 18, Annually Thereafter

**August 18, 2013**

August 18, Annually Thereafter

The NSF Decision, Risk and Management Sciences program supports scientific research directed at increasing the understanding and effectiveness of decision making by individuals, groups, organizations, and society. Disciplinary and interdisciplinary research, doctoral dissertation research, and workshops are funded in the areas of judgment and decision making; decision analysis and decision aids; risk analysis, perception, and communication; societal and public policy decision making; management science and organizational design. The program also supports small grants that are time-critical (Rapid Response Research - RAPID) and small grants that are high-risk and of a potentially transformative nature (EAarly-Concept Grants for Exploratory Research - EAGER).

**Research in Engineering Education (REE) – PD 10-1340**

**Full Proposal Deadline Date:** January 24, 2013

Fourth Thursday in January, Annually Thereafter

**Full Proposal Deadline Date:** September 19, 2013

Third Thursday in September, Annually Thereafter

The Division of Engineering Education and Centers (EEC) supports creation of a more agile engineering education ecosystem, equally open and available to all members of society, that dynamically and rapidly adapts to meet the changing needs of society and the nation's economy. Research is sought that will inform systemic change across all parts of the ecosystem; areas of interest include, but are not limited to:

1. Diversifying pathways to and through engineering degree programs.
2. Exploring credentialing in engineering education.
3. Understanding how to scale engineering education innovations.
4. Advancing engineering learning in broader eco-systems such as innovation, globalization, or sustainability.
5. Developing engineering-specific learning theories.

**Broadening Participation in Engineering – PD 13-7680**

**Due Dates:** Full Proposal Accepted Anytime - All Proposals Except for BRIGE
BRIGE proposals are subject to the annual BRIGE Solicitation deadline.
Full proposals to the Mentoring and Networking Track and the Broadening Participation Research Track are accepted any time.
Potential investigators are encouraged to contact a cognizant program officer
prior to submission.

The Broadening Participation in Engineering (BPE) Program is a Directorate-wide activity to support the development of a diverse and well-prepared workforce of engineering graduates, particularly those with advanced degrees. A central theme of the program’s activities is enhancing the ability of early career faculty members, particularly those from underrepresented groups, to succeed in their careers as researchers and educators. The Broadening Participation in Engineering Program supports projects to engage and develop diverse teams that can offer unique perspectives and insights to challenges in engineering research and education. Throughout this Program Description, the term underrepresented groups will refer to and include the following: women, persons with disabilities, and ethnic/racial groups which are in the minority in engineering, specifically African Americans, Hispanics, Native Americans, Alaska Natives, and Pacific Islanders.

The Broadening Participation in Engineering program has three synergistic elements:

1. Broadening Participation Research Initiation Grants in Engineering (BRIGE) is designed to promote the development of early career faculty who will become champions for diversity and broadening participation throughout their careers, and who can serve as change agents on their campuses. BRIGE proposals may only be submitted through the BRIGE solicitation.

2. Establishing Mentoring and Networking Opportunities for early career engineering faculty members that allow targeted faculty to engage with, learn from, and network with diverse individuals and groups in ways that will demonstrably enhance their long term career success.

3. Broadening Participation Research supports up to 3-year research projects that seek to create and study new models and innovations related to the participation and success of groups underrepresented in engineering graduate education, postdoctoral training, and academic engineering careers.

Atmospheric and Geospace Sciences Postdoctoral Research Fellowships (AGS-PRF) – NSF 11-521

Full Proposal Deadline: February 02, 2013
Anticipated Type of Award: Fellowship
Estimated Number of Awards: 10 Fellowships contingent upon availability of funds.
Anticipated Funding Amount: $86,000 per year per Fellowship during fiscal year 2013.

The Division of Atmospheric and Geospace Sciences (AGS) awards Postdoctoral Research Fellowships (PRF) to highly qualified investigators within 3 years of obtaining their PhD to carry out an independent research program. The research plan of each Fellowship must address scientific questions within the scope of AGS disciplines. The program supports researchers for a period of up to 2 years with Fellowships that can be taken to the institution or national facility of their choice.

Water

NOAA Great Lakes Habitat Restoration Program Project Grants
under the U.S. Great Lakes Restoration Initiative in Areas of Concern
Modification 3 to Funding Opportunity Number: NOAA-NMFS-HCPO-2013-2003606