

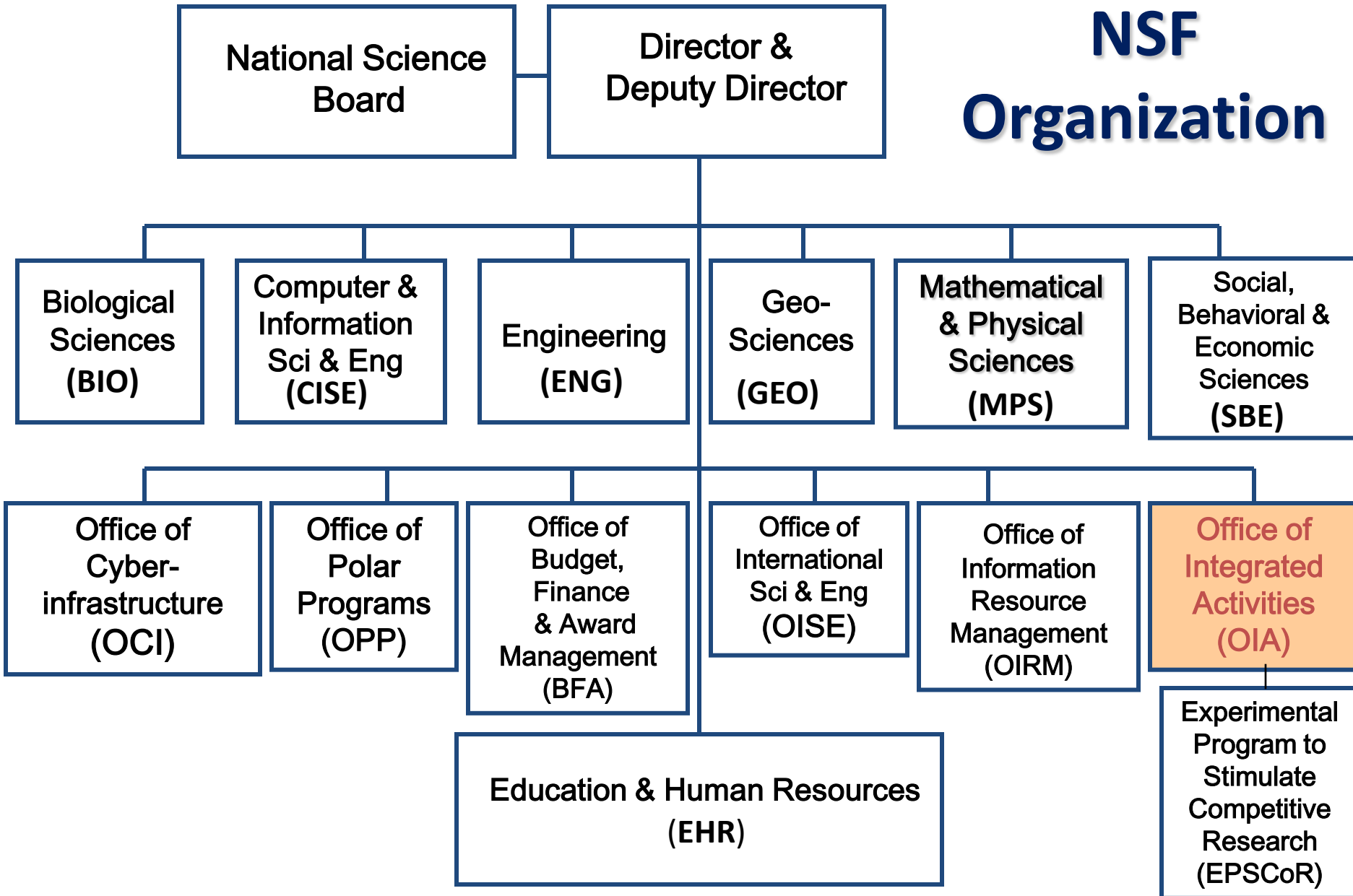


Crosscutting Programs at NSF

Steve Meacham
Office of Integrative Activities

Indiana, PA
September 21, 2011

NSF Organization



Interdisciplinary Research Portal

http://www.nsf.gov/od/oia/additional_resources/interdisciplinary_research/index.jsp

The screenshot shows the NSF Interdisciplinary Research Portal. At the top left is the NSF logo with the tagline "WHERE DISCOVERIES BEGIN". To the right is a search bar with "NSF Web Site" selected. Below the search bar is a navigation menu with links: HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FastLane. The main content area is titled "Introduction to Interdisciplinary Research". On the left side of this area is a sidebar with a "Interdisciplinary Research" header and a list of links: Introduction, Definition, Sources of Support, Contact Options, Points of Contact, What To Submit, and FAQs. The main text begins with "NSF has long recognized the value of interdisciplinary research in pushing fields forward and accelerating scientific discovery. Important research ideas often transcend the scope of a single discipline or program. NSF also understands that the integration of research and education through interdisciplinary training prepares a workforce that undertakes scientific challenges in innovative ways. Thus, NSF gives high priority to promoting interdisciplinary research and supports it through a number of specific solicitations. NSF also encourages researchers to submit unsolicited interdisciplinary proposals for ideas that are in novel or emerging areas extending beyond any particular current NSF program." Below this text is a paragraph: "This site is meant to be a guide to the different mechanisms through which NSF promotes and supports interdisciplinary research. Here we provide information on whom to contact for assistance in deciding where and how to submit an interdisciplinary proposal. A primary purpose of this site is to assist investigators in submitting an unsolicited interdisciplinary proposal for which there may not be a natural 'home' in one of the existing NSF programs." To the right of the text is a large image of a person interacting with a virtual reality wall displaying protein structures. Below this image is a caption: "A virtual reality wall displays interactive visualizations of proteins. Credit: Jurgen Schulze, UC-San Diego". At the bottom of the page is another image showing three people in a laboratory setting. Below this image is a caption: "PIRE Exchange Program with China. Credit: R. Sabinelli".

Go to www.nsf.gov, select “**Integrative Activities**” from the “Program Areas” pull-down menu on the left, then select “**Interdisciplinary Research**” from the list on the right under Additional OIA Resources.

Find Funding for Crosscutting Programs

The screenshot shows the NSF website's funding page. At the top left is the NSF logo with the tagline "WHERE DISCOVERIES BEGIN". To the right is a search bar with "NSF Web Site" selected. Below the logo is a navigation menu with links: HOME, FUNDING, AWARDS, DISCOVERIES, NEWS, PUBLICATIONS, STATISTICS, ABOUT, and FastLane. The main content area is titled "Crosscutting and NSF-wide Active Funding Opportunities". It includes a paragraph explaining that the site provides program information for activities sponsored by more than one NSF organization and that proposals should be submitted to the relevant NSF program site. Below this is a filter section with "Org: Crosscutting and NSF-wide" and "Status: Active". There are also links for "Get Crosscutting Program Announcements & Info Updates by Email" and "RSS". A sorting instruction says "Sorted by Title. Click column headings to sort." Below that is a key for "Crosscutting", "NSF-wide", and "Grants.gov submission required". At the bottom, a table lists funding opportunities with columns for Title, Program Guidelines, and Due Dates.

Funding

Crosscutting and NSF-wide Active Funding Opportunities

This site provides program information for activities sponsored by more than one NSF organization. In addition, all NSF organizations accept proposals that cut across organizational and programmatic boundaries. We suggest that those seeking support for interdisciplinary work not described here consult the NSF program site(s) closest to the science, engineering or education focus of the planned work and contact relevant program officers to discuss submission of a proposal.

Org: Crosscutting and NSF-wide Status: Active

[Get Crosscutting Program Announcements & Info Updates by Email](#) | [RSS](#)

Sorted by Title. Click column headings to sort.

Key: ■ Crosscutting | ■ NSF-wide | ■ Grants.gov submission required

Title	Program Guidelines	Due Dates
Academic Research Infrastructure Program: Recovery and Reinvestment (ARI-R²) ■	09-562	

Go to http://www.nsf.gov/funding/pgm_list.jsp?type=xcut

Funding Opportunities

- **Some cross-cutting and NSF-wide funding opportunities**
 - **ADVANCE**: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers
 - Cyberinfrastructure Framework for the 21st Century (**CIF21**)
 - Experimental Program to Stimulate Competitive Research (**EPSCoR**)
 - Grant Opportunities for Academic Liaison with Industry (**GOALI**)
 - NSF Innovation Corps (**I-Corps**)
 - Integrative Graduate Education & Research Traineeship Program (**IGERT**)
 - Integrated NSF Support Promoting Interdisciplinary Research and Education (**INSPIRE**)
 - Major Research Instrumentation (**MRI**)
 - Research Experiences for Undergraduates (**REU**)
 - Research in Undergraduate Institutions (**RUI**)
 - Science, Engineering, and Education for Sustainability (**SEES**)

ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers

The screenshot shows the NSF website with the following content:

- NSF Logo: National Science Foundation, WHERE DISCOVERIES BEGIN
- SEARCH: NSF Web Site
- Navigation: HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FastLane
- Left Sidebar: Funding, Find Funding, A-Z Index of Funding Opportunities, Recent Funding Opportunities, Upcoming Due Dates, Advanced Funding Search, How to Prepare Your Proposal, About Funding, Proposals and Awards, Proposal and Award Policies and Procedures Guide, Introduction, Proposal Preparation and Submission, Grant Proposal Guide
- Main Content: NSF-wide, ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers (ADVANCE), ADVANCE Program Update, ADVANCE Program Information, CONTACTS table, PROGRAM GUIDELINES

Name	Email	Phone	Room
Kelly Mack	ADVANCE@nsf.gov	(703) 292-8575	815.03

• Contact:

Kelly Mack (EHR)
(703) 292-8575
kmack@nsf.gov

Amy Rogers (EHR)
(703) 292-5178
arogers@nsf.gov

- Institutional Transformation (IT)
- Institutional Transformation Catalyst (ITC)
- Partnership for Adaption, Implementation, Dissemination (PAID)
- Current Solicitation: NSF 10-593
- Deadlines:
 - LOI: 10/3/11 (IT, ITC); past (PAID)
 - Full Proposal: 11/7/11 (IT, ITC); past (PAID)

ADVANCE

- **Program Goal:**
 - To increase the representation and advancement of women in academic science and engineering careers.
- **Characteristics:**
 - Both men and women may submit proposals to this program.
 - Supports strategies related to: institutional structure, equitable career support, work-life support, empowerment.
- **Projects Supported:**
 - Institutional Transformation (IT) Projects systemically and permanently change institutional policies/practices to promote women in STEM academics.
 - IT-Catalyst Projects support the evaluation of current institutional activities to identify areas for transformation and cultural change.
 - Partnerships for Adaptation, Implementation, and Diffusion (PAID) Projects adapt, implement, and/or distribute exemplary programs, policies, and practices to new institutions or settings; and support investigator-initiated social science research related to women in the academic STEM disciplines.

CIF21: Cyberinfrastructure Framework for the 21st Century



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 10-015

Dear Colleague,

Today, every discipline of science and engineering is being revolutionized by the widespread use of comprehensive cyberinfrastructure (CI). Computing power, data volumes, and network capacities are all on exponential growth paths, collaborations are growing dramatically, and all forms of CI---and multiple communities spanning multiple agencies and international domains--- often must be brought to bear to address a single complex grand challenge problem, such as climate change. All of these developments are part of a revolutionary new approach to scientific discovery in which advanced computational facilities (e.g., data systems, computing hardware, high speed networks) and instruments (e.g., telescopes, sensor networks, sequencers) are coupled to the development of quantifiable models, algorithms, software and other tools and services to provide unique insights into complex problems in science and engineering.

NSF has, for over two decades, been providing the scientific community with open access to high performance computing facilities and the associated user support so that those facilities could be used to enable state-of-the-art, often transformative, scientific investigations. The support began in the 1980's with the initial funding of the NSF supercomputer centers, followed by the Partnerships for Advanced Computational Infrastructure (PACI) program and finally the TeraGrid program. Along with these programs, there have been other important developments in cyberinfrastructure such as the Open Science Grid, the National Virtual Observatory, data activities, major collaborative projects such as Network for Earthquake Engineering Simulation (NEES), The National Ecological Observatory Network (NEON), Ocean Observatories Initiative (OOI), Large Hadron Collider (LHC) and many others too numerous to list here.

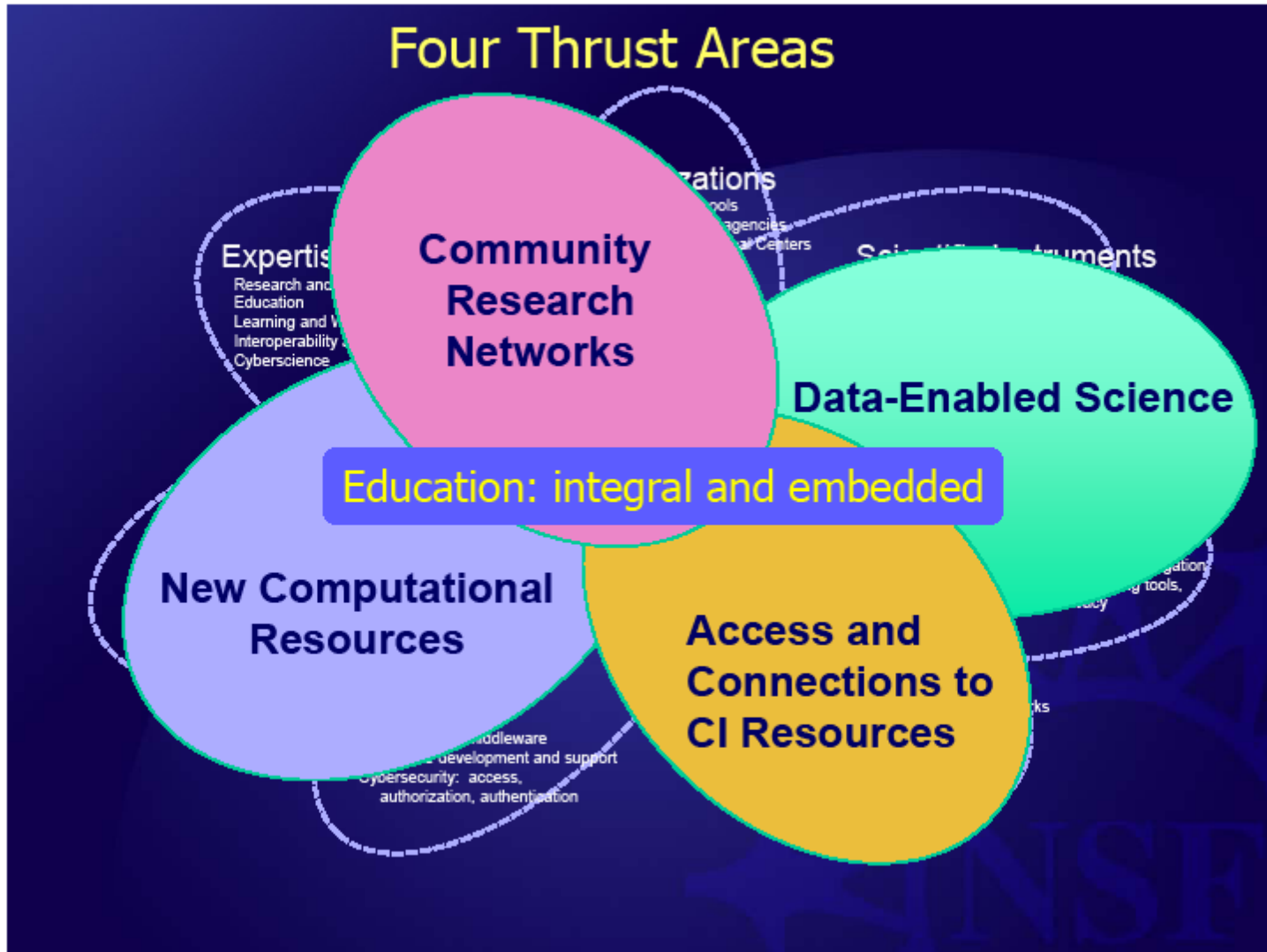
As a logical next step, it is imperative that NSF develop a strategic long term vision of what is being called a *Cyberinfrastructure Framework for 21st Century Science and Engineering (CF21)*.

- **Contact Information:**
 - (703) 292-8970
 - Rob Pennington

**Dear Colleague
Letter: 10-015**

Included in FY12 budget request.

Strengthening the Cyberinfrastructure Ecosystem for Science and Engineering Research



Campus
Bridging

Data &
Visualization

6 ACCI* Task Forces

Software

- . Advising NSF – to inform CIF21 programs & NSF CI Vision
- . Engaging broader academic community through workshops

Computing

***ACCI = Advisory Committee for Cyberinfrastructure**

Education &
Workforce

Grand Challenge
Communities/VO

CIF21

Examples of current framework elements:

- **SI² – Software Infrastructure for Sustained Innovation**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503489 and NSF 11-539 (old solicitation)

- **EarthCube:** <http://www.nsf.gov/geo/earthcube> and NSF 11-065 (Dear Colleague Letter)

- **Computational and Data-Enabled Science and Engineering in Mathematical and Statistical Sciences (CDS&E-MSS):**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504687 and PD 11-8069. Full proposal window: January 9 – January 23, 2012



EPSCoR

- State-based capacity-building program (includes PR and VI)
 - Target: Jurisdictions receiving lesser amounts of NSF research funding
 - Goal: Build sustainable capacity for research competitiveness in those jurisdictions
 - Governance led by jurisdiction's EPSCoR Committee; 20% cost-sharing
 - Alignment with jurisdiction's S&T plan
 - Economic development
- Multidisciplinary and multi-institutional
- Close interaction between NSF and the EPSCoR community
- Research driven: ***Science First! + Workforce development, Diversity, External Engagement***



NSF EPSCoR Jurisdictions

1980

Arkansas
Maine
Montana
South Carolina
West Virginia

2001

Hawaii
New Mexico

2002

U.S. Virgin Islands

1985

Alabama
Kentucky
Nevada
North Dakota
Oklahoma
Puerto Rico
Vermont
Wyoming

2003

Delaware

2004

New Hampshire
Rhode Island
Tennessee

2009

Iowa
Utah

1987

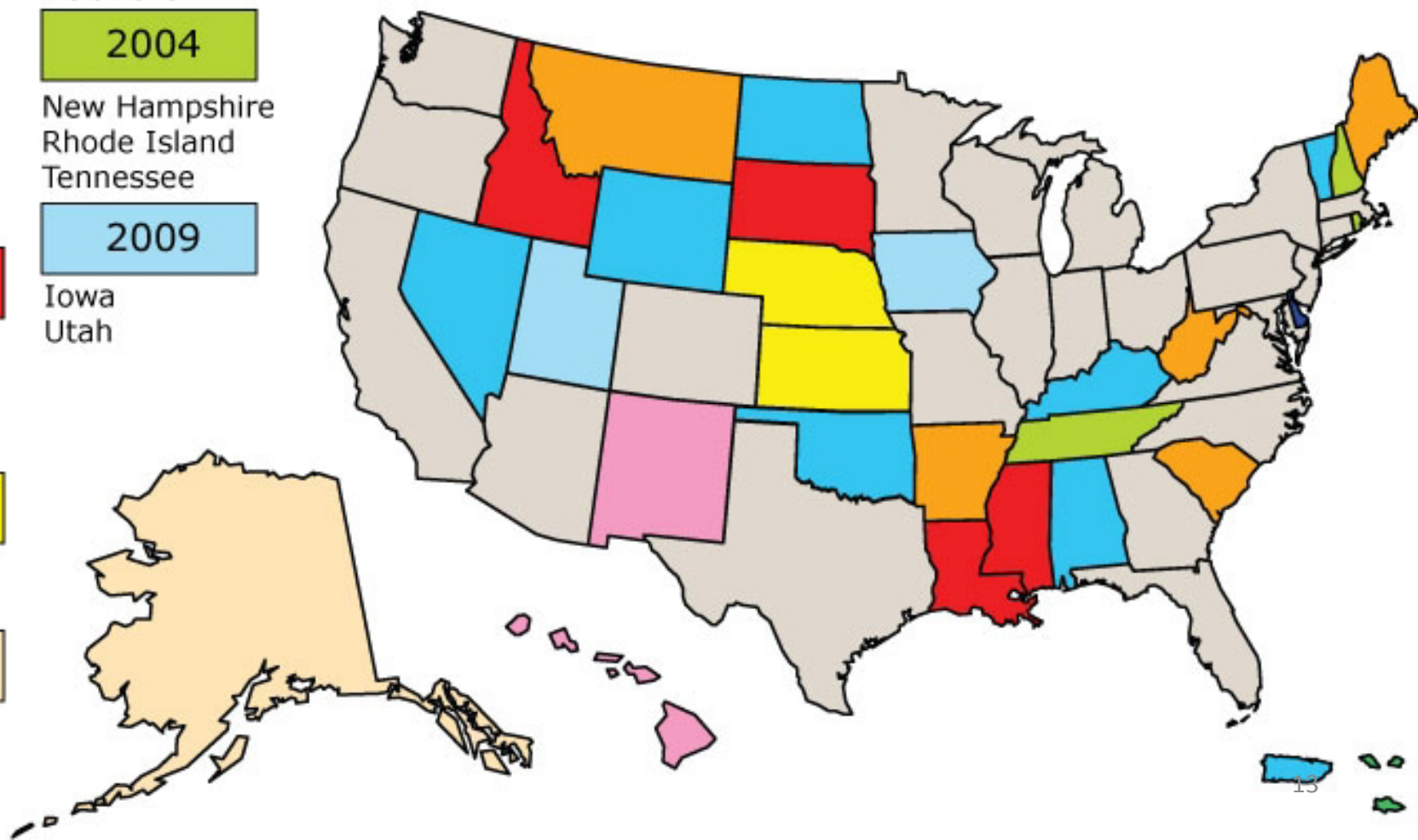
Idaho
Louisiana
Mississippi
South Dakota

1992

Kansas
Nebraska

2000

Alaska



Grant Opportunities for Academic Liaison with Industry (GOALI)

NSF National Science Foundation
WHERE DISCOVERIES BEGIN

SEARCH
NSF Web Site

HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FastLane

Funding

Grant Opportunities for Academic Liaison with Industry (GOALI)

CONTACTS

Name	Email	Phone	Room
Donald Senich	dsenich@nsf.gov	(703) 292-7082	550 S
John Cherniavsky	jchernia@nsf.gov	(703) 292-5136	855S
Frederica Darema	fdarema@nsf.gov	(703) 292-8900	
Leonard Johnson	lejohnso@nsf.gov	(703) 292-8559	
Glenn Larsen	glarsen@nsf.gov	(703) 292-8383	
Jacqueline Meszaros	jmeszaro@nsf.gov	(703) 292-7261	980.12
Diane Jofuku Okamura	dokamuro@nsf.gov	(703) 292-8470	
Sonia Ortega	sortega@nsf.gov	(703) 292-8697	
Celeste Rohlfing	crohlfm@nsf.gov	(703) 292-4962	1005N
Osman A. Shinalshin	oshinais@nsf.gov	(703) 292-7228	

PROGRAM GUIDELINES

Solicitation [09-516](#)

As announced on May 21st, proposers must prepare and submit proposals to the National Science Foundation (NSF) using the NSF FastLane system at <http://www.fastlane.nsf.gov/>. This approach is being taken to support efficient Grants.gov operations during this busy workload period and in response to OMB direction guidance issued March 9, 2009. NSF will continue to post information about available

- Contact disciplinary program office for deadlines and contact information
- Old solicitation number: 10-580
- New solicitation anticipated in FY12

GOALI

Program Goals:

- To promote university-industry partnerships by making project funds or fellowships/traineeships available.**
- To fund research that lies beyond that which industry would normally fund by themselves.**

GOALI

Number of Awards: ~70 in FY11

Typical Anticipated Funding Amount: \$5 million from all participating directorates

Targets high-risk/high-gain research with a focus on fundamental research, new approaches to solving generic problems, innovative collaborative industry-university educational programs, and direct transfer of new knowledge between academe and industry

- **Must have a signed Intellectual Property Agreement (IPA) between the University and the industrial partner;**
- **Proposals must be submitted to the discipline division for review – not the GOALI Program; and**
- **Proposals should be submitted in a timely manner, i.e., to meet any discipline program submission window or deadline.**

GOALI

- **Eligibility Information:**

- **Proposals may only be submitted by U.S. institutions of higher education that confer degrees in research areas normally supported by NSF:**
 - **Proposals may only be submitted on behalf of faculty members with full-time appointments.**
 - **Only one proposal to NSF per PI per fiscal year will be considered for GOALI**
 - **Federal laboratories and agencies, national labs, and non-profit organizations are encouraged to participate in three-way collaborations that also include a university and industry.**
 - **For fellowships/traineeships, only U.S. citizens, nationals, or permanent residents are eligible to apply for support.**

NSF Innovation Corps (I-Corps)

A new activity, announced July 28, 2011.

Funding

[Crosscutting](#)

Innovation Corps Program (I-Corps)

CONTACTS

Name	Dir/Div	Name	Dir/Div
Errol Arkilic		Rathindra DasGupta	
Richard Voyles			

PROGRAM GUIDELINES

Solicitation [11-560](#)

DUE DATES

Full Proposal Window: October 1, 2011 - December 15, 2011
October 1 - December 15, Annually Thereafter

Full Proposal Window: January 1, 2012 - March 15, 2012
January 1 - March 15, Annually Thereafter



Primary contact: Errol Arkilic

Solicitation: NSF 11-560

Submission windows:

October 01, 2011 - December 15, 2011

January 01, 2012 - March 15, 2012

April 01, 2012 - June 15, 2012

July 01, 2012 - September 15, 2012

Expected outcomes:

- New start-up businesses
- Licenses
- SBIR proposals
- Business plan suitable for investors
- Students with entrepreneurial skills
- New or enhanced curricula

I-Corps in A Nutshell

- **Transcending the “Ditch of Death”:** a public-private partnership to support the translation of NSF research into the development of technologies, products and processes
- **Increasing Network Opportunities:** aims to help create a national network of scientists, engineers, innovators, business leaders and entrepreneurs building on existing NSF grantee events
- **Supporting NSF Strategy:** I-Corps will enhance our nation’s economic competitiveness by “reaching out to a range of communities that play complementary roles in the innovation process and are essential to ensuring the impact of NSF Investments.” *

**From “Empowering the Nation through Discovery and Innovation” NSF Strategic Plan, April 2011*

I-Corps Projects are Team-Based

- **Team Composition:**
 - Entrepreneurial Lead: Post-doc or Student to move it forward
 - I-Corps Mentor: Domain-relevant volunteer guide
 - PI: Researcher with current or previous award
- **Program Outcomes**
 - Functioning network of Mentors/Advisors
 - Scientist and Engineers trained as Entrepreneurs
 - Increased impact of NSF-funded basic research



Credit: © 2011 JupiterImages Corp.

- 30 Hours of Curriculum
- \$50,000 per award
- F&A \$5,000 maximum
- 25 awards in FY2011
- 100 awards in FY2012

How you can contribute

Academic Institutions:

1. Get the President's office involved
2. Identify a well-connected I-Corps point of contact within the institution
3. Develop a pool of local/regional mentors
4. Get the Tech Transfer Office involved
5. Built upon/leverage common NSF I-Corps 245 (Opportunity Recognition) curriculum

Entrepreneurs: Identify yourself as a potential mentor

(Linkedin Group: Potential NSF I-Corps Mentors by invitation)

Investors: Identify yourself as a potential mentor

(Linkedin Group: Potential NSF I-Corps Mentors by invitation)

Contact: i-corps@nsf.gov for details

Additional Information: <http://www.nsf.gov/i-corps>

I-Corps

Participating Directorates/Offices: ENG, CISE, BIO, GEO, EHR, MPS, SBE, and OCI

Eligibility: Must have an active NSF award or one active within the previous 5 years.

Award Size and Duration: \$50,000 (F&A limited to \$5,000) for 6 months

I-Corps Program contacts:

- Errol Arkilic (ENG/IIP)
- Babu DasGupta (ENG/IIP)
- Richard Voyles (CISE/CNS)

Topic-specific Program Contacts: discuss prior research result and its readiness for I-Corps.

- BIO – Charles Liarakos
- CISE – Richard Voyles
- EHR – Don Millard
- ENG – Babu DasGupta
- GEO – David Verardo
- MPS – Mary Galvin-Donoghue
- OCI – Irene Qualters
- SBE – David Croson

Proposal Content:

- Team background and history together
- Project plan: including, lineage of the proposed innovation, product/service concept and demo, and potential commercial impact

Quarterly Submission Window.

Information: www.nsf.gov/i-corps and in informational webinars.

Integrative Graduate Education and Research Traineeship (IGERT)

The screenshot shows the NSF website for the Integrative Graduate Education and Research Traineeship Program (IGERT). The NSF logo is at the top left with the tagline "WHERE DISCOVERIES BEGIN". The page title is "Integrative Graduate Education and Research Traineeship Program (IGERT)".

Funding

- Find Funding
- A-Z Index of Funding Opportunities
- Recent Funding Opportunities
- Upcoming Due Dates
- Advanced Funding Search
- Interdisciplinary Research
- How to Prepare Your Proposal
- About Funding

Proposals and Awards

- Proposal and Award Policies and Procedures Guide
- Introduction
- Proposal Preparation and Submission
- Grant Proposal Guide

CONTACTS

Name	Email	Phone	Room
Melur K. Ramasubramanian	igert@nsf.gov	(703) 292-8696	875
Carol F. Stoal	igert@nsf.gov	(703) 292-8696	875

IGERT Coordinating Committee members are listed on the IGERT web page, at <http://www.nsf.gov/crssprgm/igert/cc.jsp>.

PROGRAM GUIDELINES

Solicitation [11-533](#)

DUE DATES

Letter of Intent Deadline Date: May 1, 2012

Full Proposal Deadline Date: July 2, 2012

SYNOPSIS

- **Deadlines:**
 - Letter of Intent: 5/1/2012
 - Full proposal: 7/2/2012
- **Current Solicitation: NSF 11-533**

- **Coordinating Committee members are listed at: <http://www.nsf.gov/crssprgm/igert/cc.jsp>**

IGERT

- **Program Goals:**
 - To prepare U.S. Ph.D. scientists and engineers for careers in research and education with interdisciplinary backgrounds, deep knowledge in chosen disciplines, and the technical, professional, and personal skills to become leaders and creative agents for change.
 - To catalyze a cultural change in graduate education for students, faculty, and institutions by establishing innovative models for graduate education and training in a fertile environment for collaborative research that transcends traditional disciplinary boundaries.
 - To contribute to a world-class, broadly inclusive, and globally engaged science and engineering workforce.
- **New emphasis:**
 - “innovation to learn through hands-on experience how the students’ own research may contribute in new ways to benefit society”

IGERT

Integrative Graduate Education and Research Traineeship Program (IGERT)

PROGRAM SOLICITATION
NSF 11-533

REPLACES DOCUMENT(S):
NSF 10-523



National Science Foundation

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Office of Cyberinfrastructure

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences

Office of Integrative Activities

Office of International Science and Engineering

Directorate for Mathematical & Physical Sciences

Office of Polar Programs

Directorate for Social, Behavioral & Economic Sciences

Estimated Number of Awards: 18

Anticipated Funding Total Amount: \$13.5 M

(up to \$3.3 M per award over 5 years)

IGERT

- **Eligibility Information:**
 - The PI must be on the faculty of the submitting institution.
 - There is a limit of one (1) proposal that may be submitted by an institution either as a single institution or as a lead institution in a multi-institution preliminary proposal.
 - Any given individual may participate as PI or co-PI in only one proposal submission. A PI or co-PI on one proposal may serve as a faculty participant on other proposals.
- **Important Resource:**
 - Award abstracts for all funded IGERTs are online. These show the types of applications that have been competitive in the past.
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12759

Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE)

Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE)

- New INSPIRE Awards Program
- Catalyze within U.S. research community and beyond
 - Reduce/eliminate barriers
 - Augment staff and reviewer training
 - Foster best practices

FY 2012 request: \$12 million, with additional cost-sharing from all directorates.



• Contacts:

Tom Russell (trussell@nsf.gov) and
Rich Behnke (rbehnke@nsf.gov)

• Goal:

To increase encouragement and support of potentially transformative, interdisciplinary research

• Forthcoming:

Dear Colleague Letter

• Included in FY12 funding request

Solicitation to follow

Major Research Instrumentation (MRI)

The screenshot shows the NSF OIA website. At the top, there is a navigation bar with links: HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT | FastLane. Below this is the NSF logo and the text "National Science Foundation OFFICE OF Integrative Activities (OIA)". A search bar is present with "NSF Web Site" entered. A secondary navigation bar includes: OIA Home | OIA Funding | OIA Awards | OIA Discoveries | OIA News | About OIA. The main content area features a sidebar on the left with links: OIA Home, About OIA, Funding Opportunities, Awards, News, Events, Discoveries, Publications, Career Opportunities, Interagency Coordinating Committee, Investment Strategies, and See Additional OIA Resources. The main text is titled "Major Research Instrumentation Program" and includes a paragraph: "The Major Research Instrumentation Program (MRI) catalyzes new knowledge and discoveries by empowering the Nation's scientists and engineers with state-of-the-art research instrumentation. The MRI Program enables research-intensive learning environments that promote the development of a diverse workforce and next generation instrumentation, as well as facilitates academic/private sector partnerships. Among the goals of the MRI Program are:" followed by a bulleted list of goals. To the right of the text is a graphic titled "NATIONAL SCIENCE FOUNDATION MAJOR RESEARCH INSTRUMENTATION" with "MRI GOALS" listed: Catalyzing new knowledge and discoveries; Empowering the Nation's scientists and engineers; Enabling academic departments, disciplinary and cross-disciplinary units, and multi-organization collaborations to create well-equipped research environments that integrate research with education; and Supporting the acquisition and development of instrumentation that contributes to, or takes advantage of, existing investments in cyberinfrastructure, while avoiding duplication of services already provisioned by NSF investments. The graphic also includes the URL "www.nsf.gov/od/oia/programs/mri".

• Contact Information:

- (703) 292-8040
- mri@nsf.gov
- www.nsf.gov/od/oia/programs/mri

- Current Solicitation :
NSF 11-503
- Deadline: 4th Thursday
in January
- Anticipate new solicitation
- Estimated Number of
Awards in FY2011: 175
- Anticipated Funding
Amount in FY2012:
\$90 million

MRI

- **Program Goals:**
 - **To increase access to scientific and engineering equipment for research and research training in U.S. institutions of higher education, research museums, and non-profit research organizations.**
 - **To improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments.**

MRI

- **Institutional Submission Limit:**
 - An organization may submit no more than three proposals.
 - If an organization submits or is included as a partner or subawardee in three proposals, at least one of the three proposals must be for instrument development.

MRI

- **Eligibility Information:**

U.S. organizations may submit proposals provided that they are located in the U.S., its territories, and possessions.

Specifically:

- **Institutions of higher education accredited in and having a campus in the U.S.**
- **Not-for-profit, non-degree-granting domestic U.S. organizations**
- **Consortia of organizations**
- **Commercial organizations**
 - May act as private sector partners with submitting organizations, BUT
 - May not submit proposals
- **Usually has complicated proposal requirements**
 - **Read the solicitation carefully!**

MRI

• Past Proposal Requirements:

– Cost-sharing:

- The America COMPETES Act directed NSF to require cost-sharing in the MRI Program
(this requirement remains in effect)
- Ph.D. granting¹ and non-degree-granting¹ institutions: 30% cost-sharing required on all proposals
- Non-Ph.D.-granting¹ institutions: no cost-sharing required

¹as defined by the MRI program

- More detailed format and supplemental documentation requirements
- More detailed eligibility requirements

Research Experiences for Undergraduates (REU)



The screenshot shows the National Science Foundation (NSF) website. The header includes the NSF logo and the tagline "WHERE DISCOVERIES BEGIN". A search bar is located in the top right. The main navigation bar contains links for HOME, FUNDING, AWARDS, DISCOVERIES, NEWS, PUBLICATIONS, STATISTICS, ABOUT, and FastLane. The left sidebar lists various funding and proposal-related links. The main content area is titled "Research Experiences for Undergraduates (REU)" and includes a "NOTE ON THE PROPOSAL DEADLINE FOR REU SITES" section. This note states that two due dates are listed for REU Site proposals each year: a June deadline for Antarctic sites and a fall deadline (October 22 in 2009, and the fourth Wednesday in August in 2010 and beyond) for all other REU Site proposals. Below the note are sections for "CONTACTS" and "PROGRAM GUIDELINES". The "CONTACTS" section provides the URL http://www.nsf.gov/crssprgm/reu/reu_contacts.jsp. The "PROGRAM GUIDELINES" section mentions Solicitation 09-598 and provides information about the proposal submission process, including the use of the NSF FastLane system and the PAPPG (Proposal & Award Policies & Procedures Guide).

- **Current deadlines (may change):**
 - Full proposal for REU sites (non-Antarctic): (4th Wed in August) 8/22/12
 - Full proposal for REU Sites (Antarctic): (1st Friday in June) 6/1/12
 - REU Supplements: Contact individual discipline
- **Current solicitation number: 09-598**
- **Will probably be revised**

• Contact Information:

http://www.nsf.gov/crssprgm/reu/reu_contacts.jsp

REU

- **REU Sites:**
 - **Program Goals:**
 - **To initiate and conduct projects that engage a number of undergraduate students in research.**
 - **To involve students in research who might not otherwise have the opportunity, particularly those from academic institutions where research programs are limited.**
 - **Recruitment:**
 - **Significant percentage of students from outside host institution**

REU

- **REU Supplements:**
 - **Program Goal:**

To provide support for one or two undergraduate students to participate in research, as part of a new or ongoing NSF-funded research project.
- **REU Special Opportunities:**
 - **Partnership with the Department of Defense**
 - **Cyberinfrastructure**
 - **International Projects**
 - **Ethics in Science and Engineering**
 - **Research Experiences for Teachers**
 - **REU Supplements for Evaluative Research Experiences**
 - **Partnership with the DoE Geothermal Technologies Program**

REU

Research Experiences for Undergraduates (REU)

Sites and Supplements

PROGRAM SOLICITATION

NSF 09-598

REPLACES DOCUMENT(S):

NSF 07-569



National Science Foundation

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences

Directorate for Mathematical & Physical Sciences

Directorate for Social, Behavioral & Economic Sciences

Office of Cyberinfrastructure

Office of International Science and Engineering

Office of Polar Programs

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

Deadline for REU Site proposals *except* those requiring access to Antarctica:

October 22, 2009

- REU activity may be funded in several different ways:
 - A standard or continuing grant (for REU Sites)
 - A supplement to an existing award
 - A component of a new or renewal grant or cooperative agreement

- **Estimated Number of Awards: approximately 1,800**
 - Estimate includes approximately 170 new site awards and 1,600 new supplement awards.
- **Anticipated Funding Amount for FY2012: \$66 million**
 - Estimate includes both sites and supplements.

Research in Undergraduate Institutions (RUI)

National Science Foundation
WHERE DISCOVERIES BEGIN

SEARCH
NSF Web Site

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Funding

Research in Undergraduate Institutions (RUI)

CONTACTS

Name	Dir/Div	Name	Dir/Div
Carol Bessel	MPS/CHE	Henry N. Blount	OIA/EPSCoR
Deborah L. Crawford	CISE/OAD	Richard J. Fragaszy	ENG/EFRI
Jill L. Karsten	GEO/OAD	Michael Mishkind	BIO/IOS
Julie M. Palais	OD/OPP		

PROGRAM GUIDELINES

Announcement [00-144](#)

As announced on May 21st, proposers must prepare and submit proposals to the National Science Foundation (NSF) using the NSF FastLane system at <http://www.fastlane.nsf.gov/>. This approach is being taken to support efficient Grants.gov operations during this busy workload period and in response to OMB direction guidance issued March 9, 2009. NSF will continue to post information about available funding opportunities to Grants.gov FIND and will continue to collaborate with institutions who have invested in system-to-system submission functionality as their preferred proposal submission method. NSF remains committed to the long-standing goal of streamlined grants processing and plans to provide a web services interface for those institutions that want to use their existing grants management systems to directly submit proposals to NSF.

Please be advised that the NSF Proposal & Award Policies & Procedures Guide (PAPPG) includes revised guidelines to implement the mentoring provisions of the America COMPETES Act (ACA) (Pub. L. No. 110-69, Aug. 9, 2007.) As

- Contact discipline for deadlines and contact information.
- Current Program Announcement: NSF 00-144
- Likely to be revised in the next few months

RUI

- **Program Goals:**

- To support high quality research with active involvement of undergraduates.
- To strengthen the research environment in undergraduate institutions.
- To promote integration of research and education in undergraduate institutions.

- **Proposal Types:**

- Regular research
- Research opportunity awards (ROA) - great opportunity for PUI faculty

- **Eligibility Information:**

- Institutions that award an average of 10 or fewer Ph.D. or D.Sc. Degrees per year in all NSF-supportable disciplines are eligible → RUI Certification
- 5-page RUI Impact Statement

- **No fenced funds**

- Compete against non-RUI proposals in specific programs
- Important to consult Program Officer before submitting

SEES: Science, Engineering, and Education for Sustainability

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National Science Foundation
Environmental Research & Education (ERE)

SEARCH
NSF Web Site

ERE Home | ERE Funding | ERE Awards | ERE Discoveries | ERE News | About ERE

Environmental Research and Education

Science, Engineering and Education for Sustainability (SEES) NSF-Wide Investment

NSF established the Science, Engineering, and Education for Sustainability (SEES) investment area in FY 2010 in order to address challenges in climate and energy research and education using a systems-based approach to understanding, predicting, and reacting to change in the linked natural, social, and built environment. Initial efforts were focused on coordination of a suite of research and education programs at the intersection of climate and environment, including specific attention to incorporating human dimensions.

SEES is expected to be a 5-year effort, extending through FY15. Continuing efforts will focus on supporting research that facilitates global community sustainability, specifically through building connections between current projects, creating new nodes of activity, and developing personnel needed to solve sustainability issues. Future efforts will be expanded to include sustainable energy research in science and engineering, and its socioeconomic and environmental implications.

[SEES News & Updates](#)
[SEES News Releases](#)
[SEES FY 2011 Activities](#)
[SEES FY 2010 Activities](#)
[SEES Portfolio & Highlights](#)

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Proposals and Awards
[Proposal and Award Policies and Procedures Guide](#)
Introduction
Proposal Preparation and Submission
• [Grant Proposal Guide](#)
• [Grants.gov Application Guide](#)
Award and Administration
• [Award and Administration Guide](#)
[Award Conditions](#)

- **Contact Information:**
 - (703) 292-8710
 - jrobin@nsf.gov
- **Dear Colleague Letters: 10-040 & 11-022**
- **FAQs: 11-039**
- **5-year investment area: new and existing activities**

<http://www.nsf.gov/sees/>

SEES

Program Goals:

- To address challenges in climate and energy research and education using a systems-based approach to understanding, predicting, and reacting to change in the linked natural, social, and built environment.
- To support research that facilitates global community sustainability, specifically through building connections between current projects, creating new nodes of activity, and developing personnel needed to solve sustainability issues.
- To contribute to sustainable energy research in science and engineering, and its socioeconomic and environmental implications.

SEES

FY10: (Dear Colleague Letter - NSF 10-040)

Water Sustainability and Climate (WSC) (NSF 10-524)

Ocean Acidification (OA) (NSF 10-530)

Climate Change Education Partnership (CCEP) (NSF 10-542)

Decadal and Regional Climate Prediction Using Earth System Models (EaSM) (NSF 10-554)

Dimensions of Biodiversity (NSF 10-548)

FY11: (Dear Colleague Letter - NSF 11-022)

- **sustainable energy**: novel energy storage ;ecosystem impacts of energy technologies; improving the efficiency and yield of energy systems; novel energy sources, e.g. biofuels, ocean/kinetic power; energy-intelligent performance in computer and network systems; energy efficiency in manufacturing and materials.
- climate change**: interactions between the climate, human and natural systems; feedbacks in the climate and carbon cycles; impacts of ice-sheet dynamics on climate and sea level rise; regional climate variation and causes; risk-based approaches to decision-making; adaptive and mitigating strategies; effects of behavioral changes on energy consumption and climate.

SEES – Recent funding opportunities

[Sustainability Research Networks](#) (NSF 11-574)

Preliminary Proposal Deadline: December 1, 2011

Full Proposal Deadline: April 1, 2012

[Science, Engineering and Education for Sustainability Fellows \(SEES Fellows\)](#) (NSF 11-575)

Deadline: December 5, 2011

[Water, Sustainability and Climate](#) (NSF 11-551)

Deadline: October 19, 2011

[Dynamics of Coupled Natural and Human Systems](#) (NSF 11-612)

Deadline: November 15, 2011

[Partnerships for International Research and Education \(PIRE\)](#) (NSF 11-025 & 11-564)

Preliminary Proposal Deadline: October 19, 2011

Full Proposal Deadline: May 15, 2012

[Research Coordination Networks \(RCN\)](#) (NSF 11-531)

Deadlines (SEES Track): May 24, 2011; February 3, 2012

+ [Dimensions of Biodiversity](#) (NSF 11-518), [Ocean Acidification](#) (NSF 10-530), [Climate Change Education Partnerships](#) (NSF 10-542), [Regional & Decadal Earth System Modeling](#) (NSF 10-554)

SEES FY 2012

- ✧ **Sustainability Research Networks**
- ✧ **SEES Fellows**
- ✧ **Sustainable Energy Pathways**
- ✧ ***PIRE – SEES projects***
- ✧ ***RCN – SEES track***
- ✧ ***CNH – SEES projects***
- ✧ ***Climate-related competitions
continue***

NSF Proposal and Award Policies and Procedures Guide (PAPPG)

<http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/>

Chapter II C.2.j – Special Information and Supplementary Documentation

- All proposals submitted on or after January 18, 2011 must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans.
- Fastlane will not permit submission of a proposal that is missing the Data Management Plan.
- The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate.
- Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units are available on the NSF website at: <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>.

For More Information

ADVANCE

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383

CIF21

<http://www.nsf.gov/dir/index.jsp?org=OCI>

EPSCoR

<http://www.nsf.gov/div/index.jsp?org=EPSC>

GOALI

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13706

I-Corps

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504672

IGERT

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12759

For More Information

MRI

<http://www.nsf.gov/od/oia/programs/mri/>

REU

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517

RUI

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518

SEES

<http://www.nsf.gov/sees>

<http://www.nsf.gov/staff>

<http://www.nsf.gov/staff/orglist.jsp>

Ask Early, Ask Often!