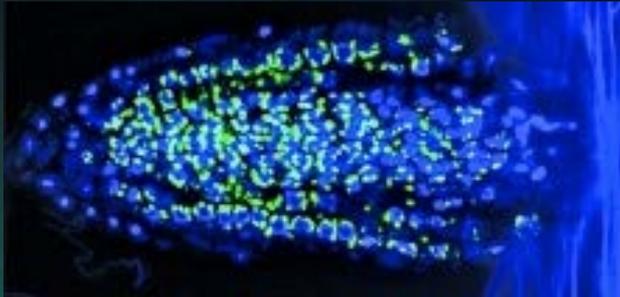


Biological Sciences (BIO)



Priorities

Investigator-driven projects in all areas of
Biological Research

Brain Research through Advancing

Innovative Neurotechnologies (BRAIN)

National Ecological Observatory Network
(NEON)

Plant Genome Research Program (PGRP)

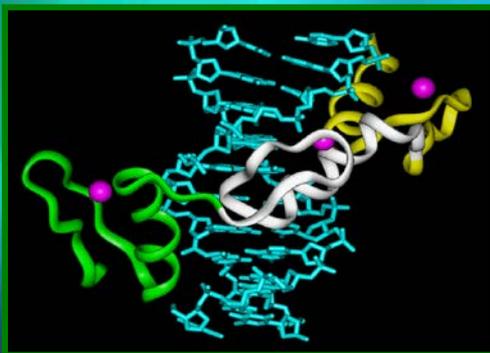
Dimensions of Biodiversity

Projects at interface of biology,

mathematics, and engineering (BIOMAPS)

NEW: Enabling Discovery through Genomic
Tools (EDGE)

Crosscutting: Innovations at the Nexus of
Food , Energy, and Water Systems (INFEWS)



Computer & Information Science & Engineering (CISE)

Directorate Priorities

- Core research programs across computer science (CS)
- Cross-directorate and cross-NSF programs (e.g., BRAIN, Cyberlearning, Secure and Trustworthy Cyberspace, Cyber-Physical Systems, NRI, BIG DATA, Smart and Connected Health)
- CS education – STEM+C
- Building cyber infrastructure for science and engineering



Education & Human Resources (EHR)



Learning and learning environments

Cognitive and non-cognitive foundations of STEM

Creative uses of formal and informal STEM learning



Broadening participation in STEM

Access to and success in high-quality

STEM education for underrepresented groups



STEM professional workforce development

Capitalize on scientific advances

Address not yet imagined global, social & econ challenges



ENG Initiatives and Priorities

Address National Interests

- INFEWS
- Risk and Resilience:
CRISP
- Urban Science
- Clean Energy Technology*
- Cyber-Enabled Materials, Manufacturing, and Smart Systems - Advanced Manufacturing*
- Optics and Photonics
- Understanding the Brain
- Education and Broadening Participation: INCLUDES
 - Innovation Corps
 - Emerging Frontiers in Research and Innovation
 - Research Centers
 - National Nanotechnology Initiative*
- Communications and Cyberinfrastructure

* National Initiatives

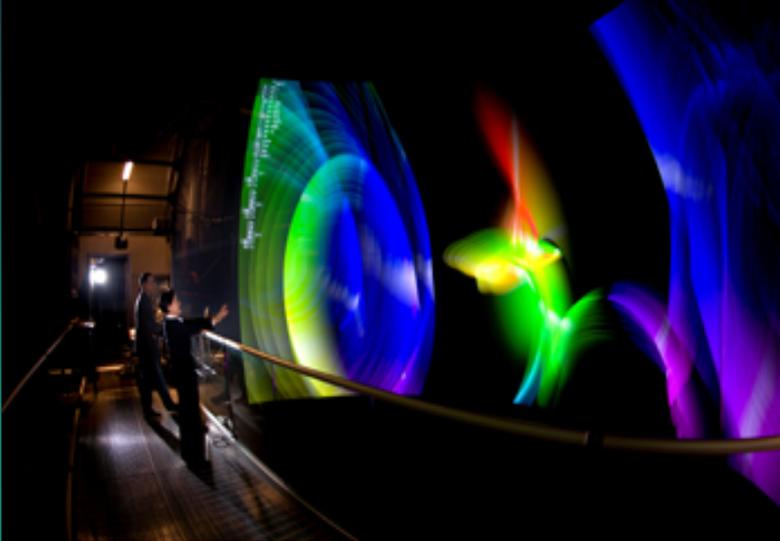
Geosciences (GEO)

Directorate Priorities



- Support basic research in atmosphere, earth, ocean sciences, and polar studies
- Support research facilities and infrastructure (NCAR, research vessels, Antarctic base, Geochronology, EarthScope)
- Develop community-driven cyber-infrastructure
- Promote education and diversity in geosciences
- Initiatives in hazards and resilience and the water cycle (PREevents, INFEWS)

Mathematical & Physical Sciences (MPS)



Emphasis Areas

- ❖ Physical sciences at the nanoscale
- ❖ Advances in optics and photonics
 - ❖ Materials by design
 - ❖ Physics of the universe
- ❖ World-class, shared-use Facilities
- ❖ Quantum information science
 - ❖ Complex systems (multi-scale, emergent phenomena)
- ❖ Innovations at the Nexus of Food, Energy and Water Systems
 - ❖ Sustainability (energy, environment, climate)
- ❖ Interfaces between the mathematical, physical, & life sciences



SBE-Related Cross-Directorate Initiatives

Science of Broadening Participation & INCLUDES
Understanding the Brain
Forensic Sciences
Big Data
Coupled Natural and Human Systems
Interdependent Infrastructure Systems and Processes
Food, Energy, and Water Systems



Navigating www.NSF.gov

The screenshot displays the NSF.gov website interface. At the top, a search bar is visible on the right. Below it, a dark navigation bar contains the following menu items: HOME, FUNDING, AWARDS, DISCOVERIES, NEWS, PUBLICATIONS, STATISTICS, ABOUT NSF, and FASTLANE. The 'FUNDING' menu is expanded, showing a list of options: Search Funding Opportunities, Browse Opportunities A-Z, Recent Opportunities, Due Dates, Preparing Proposals, Policies & Procedures, Merit Review, Interdisciplinary Research, Transformative Research, and About Funding. A red circle highlights this expanded menu. Below the navigation bar, a large banner features a microscopic image of a textured surface. The banner includes the text 'Understanding Bacterial Crowdsourcing' and a 'FULL STORY' button. A yellow speech bubble icon is positioned in the center of the banner. Below the banner, a dark bar contains the text 'Advancing the Sciences | Funding & Supporting | Inspiring & Educating' and a 'HIDE' button. The main content area displays several featured articles, each with a thumbnail image, a title, and a date:

- VIMS Researchers Unravel Life Cycle of Blue-crab Parasite** (October 4, 2012)
- A Mammal Lung, In 3-D** (October 2, 2012)
- Home-based Assessment Tool for Dementia Screening** (October 2, 2012)
- URI Scientists: Marine Plants Can Flee to Avoid Predators** (October 1, 2012)
- White Shark Diets Vary With Age and**
- Disappearing Act**

Navigating www.NSF.gov

The screenshot displays the NSF.gov website interface. At the top left is the NSF logo and the text "National Science Foundation WHERE DISCOVERIES BEGIN". A "QUICK LINKS" dropdown menu is highlighted with a red circle, and a red arrow points to a search box within it. Below the header is a navigation bar with links: HOME, FUNDING, AWARDS, DISCOVERIES, NEWS, PUBLICATIONS, STATISTICS, ABOUT NSF, and FASTLANE. A secondary navigation bar contains links for Simple Search, Advanced Search, Popular Searches, Download Awards, Send Comments, and Award Search Help. The main content area is titled "Awards Simple Search". A red arrow points to a search box labeled "Search award for:" which is also circled in red. Above this search box is a "NEW" badge and a link "See What's New in the New Award Search". Below the search box is a help icon and the text "Use double quotes for exact search. For example 'water vapor'." There are two checkboxes: "Active Awards" (checked) and "Expired Awards" (unchecked). A "Search" button with a green arrow is to the right of the search box. At the bottom of the page is a footer with various links: Research.gov, USA.gov, National Science Board, Recovery Act, Budget and Performance, Web Policies and Important Links, Privacy, FOIA, NO FEAR Act, Inspector General, and Webmas. The NSF logo is also present in the footer.

Navigating www.NSF.gov

HOME | [FUNDING](#) | [AWARDS](#) | [DISCOVERIES](#) | [NEWS](#) | [PUBLICATIONS](#) | [STATISTICS](#) | [ABOUT NSF](#) | [FASTLANE](#)

[Simple Search](#) | [Advanced Search](#) | [Popular Searches](#) | [Download Awards](#) | [Send Comments](#) | [Award Search Help](#)

Awards Advanced Search

NEW [See What's New in the New Award Search](#)

Awardee Information

Principal Investigator First Name Organization

Principal Investigator Last Name State Select one
 Include Co-Principal Investigator in name search

Zip Code

Country Select one

Program Information

NSF Organization Select one HINT: The "Program" box searches both program element and program reference names and codes.

Element Code Program
 Any All

Reference Code
 Any All

Program Officer

Additional Information

Keyword HINT: Data prior to 1976 may be less complete.
HINT: The Keyword field searches on the title and abstract only.
 Search Award Title Only
 Active Awards Expired Awards

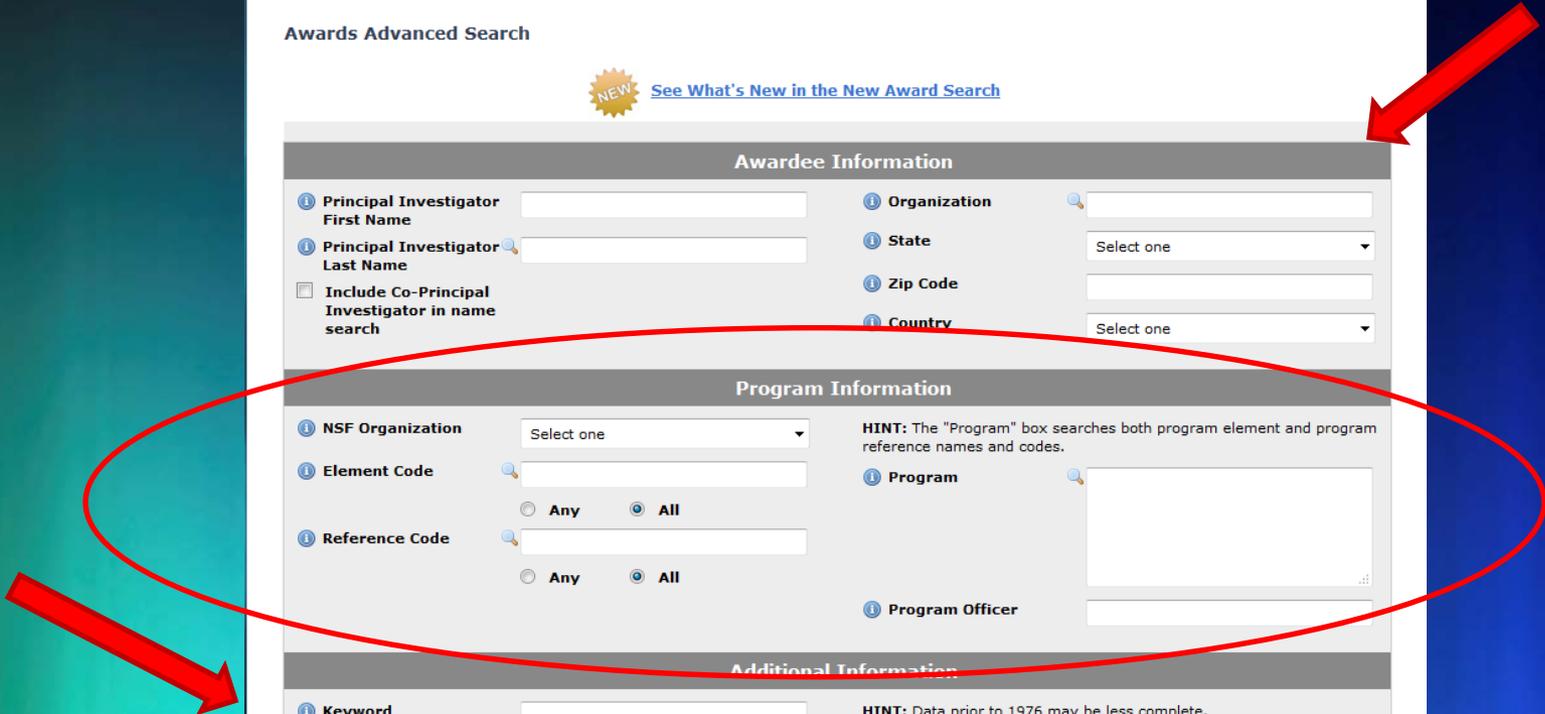
Original Award Date From To
Select one

Start Date From To
Select one

Expiration Date From To
Select one

Award Number From To
Select one

Award Amount
Select one
Award Instrument
Select one



Proposal Development Strategies:

Who Should You Talk To?

NSF Program Officer

- Your proposed project
- Clarifications on specific program requirements/limitations
- Current program patterns

Your Organization's Sponsored Projects Office

- University guidelines for applications
- Institutional Review Board "IRB" Approvals
 - e.g. institutional Animal Care and Use Committee (IACUC) approvals

What to Look for in a Program Announcement or Solicitation

- **Goals**
- **Eligibility Requirements**
- **Special proposal preparation and/or award requirements**
- **Review Criteria**



S-STEM

Two Program Tracks

Institutional Capacity Building (Strand 1)

Up to \$650k
Up to 5 yrs

For institutions with limited experience in implementing effective curricular and co-curricular activities

Design and Development (Strand 2)

Two Types



Up to \$1M
Up to 5 yrs



Up to \$5M
Up to 5 yrs

Deadlines (All Proposals):

16 May 2016

September 2016 (?)

Seeks to leverage S-STEM funds with institutional efforts and infrastructure to increase and understand impacts

Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)

- Goal: “focus on any topic likely to lead to improved participation, learning, or assessment in undergraduate biology curricula”
 - active and inquiry-based learning
 - engage faculty in professional development
 - incorporate new fields into the biology curriculum
 - improve assessment of student learning
 - **improve transition from 2-year to 4 year institutions**
 - incorporate authentic research experiences into undergraduate laboratory courses
- Incubator awards (\$50 K) and Full awards (up to \$500K for five years)

Current solicitation is NSF 15-527.

LSAMP

Louis Stokes Alliance for Minority Participation

Four Award Types

Alliances

Multi-institutional
5-year projects focused
on undergraduate
recruitment and retention.
Up to \$1M per year for 5 yrs

Bridge to Baccalaureate (B2B)

Community College Led
3-year projects focused
on educational preparation and
transfer of community college students.
Up to \$500k per year for 3 yrs

Pre-Alliance Planning Grants

18-month projects for new
alliances, regional
outreach, or centers.
Up to \$125k for 18 months

Bridge to Doctorate (BD)

Selective Eligibility
2-year projects focused
on post-baccalaureate success.
Up to \$1.075M for 2 yrs

Deadlines

B2D and Planning: 14 October 2016
B2B and Alliances: 4 November 2016

ATE

Three Program Tracks

ATE Projects

Up to \$900K, Up to 3 yrs
except
Small/New to ATE:
Up to \$200k for 4 yrs
Coordination Networks:
Up to \$800k for 4 yrs

Targeted Research in Technician Education

From \$150k, Up to 2 yrs
to \$800k, Up to 3 yrs

ATE Centers

Three Types

National

Up to \$4M
5 yrs

Regional

Up to \$3M
4 yrs

Support Centers

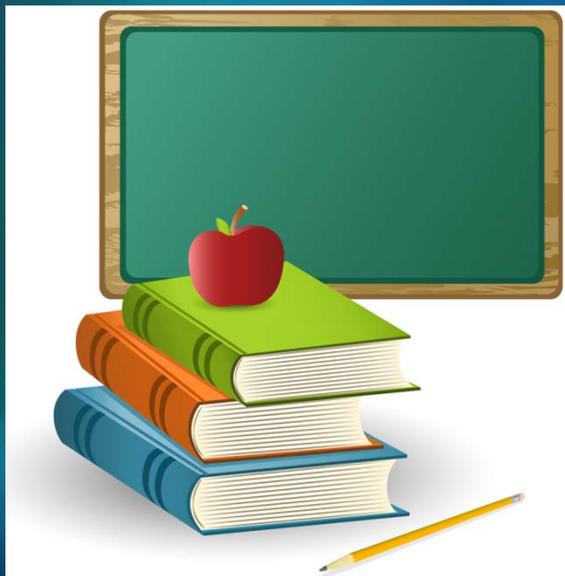
Up to \$1.6M
4 yrs

**Deadlines (All Proposals):
6 October 2016**

Research Experiences for Teachers

RET Goals:

Enable K-12 teachers and community college faculty to engage in STEM research and then adapt knowledge into their teaching



- RET Sites and Supplements
- May be included in REU proposals
- Check Directorates for specific mechanisms