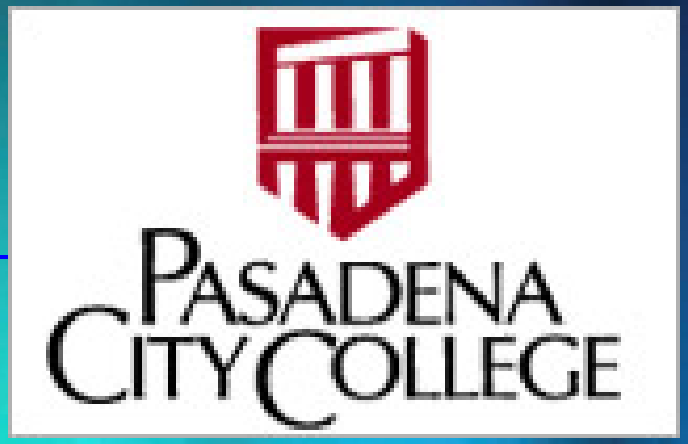
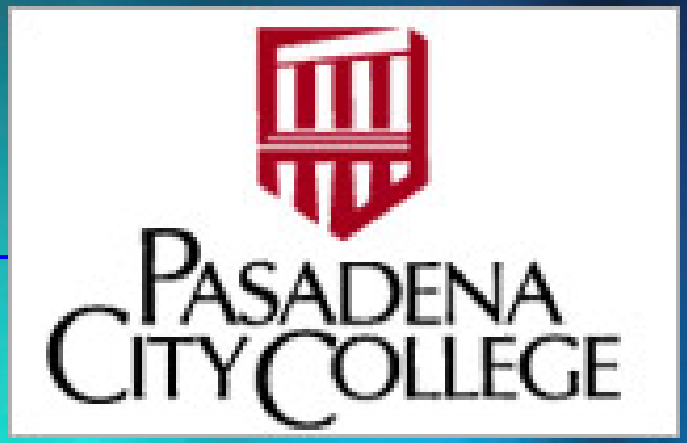
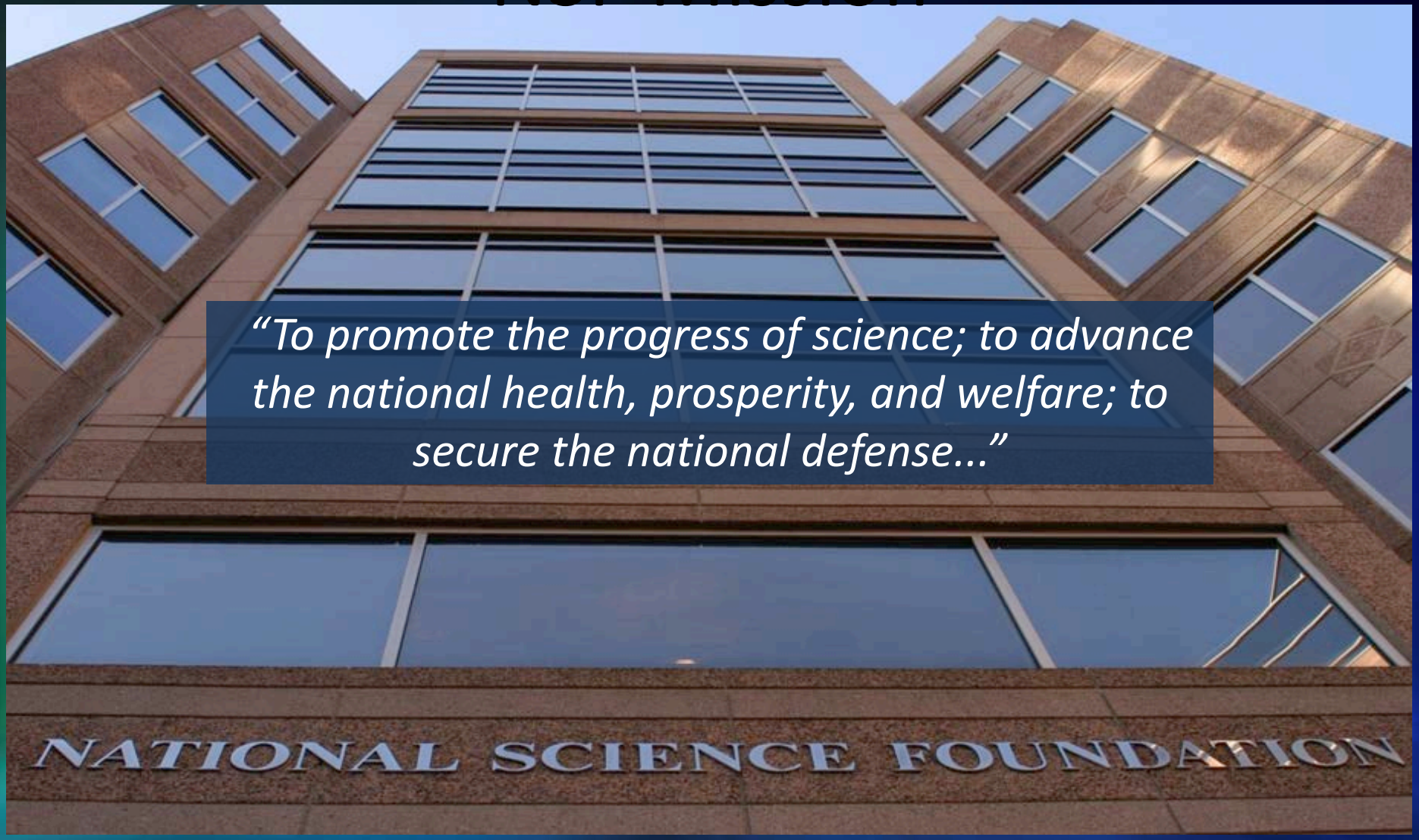
Welcome to NSF Day!



Welcome to NSF Day!



NSF Mission

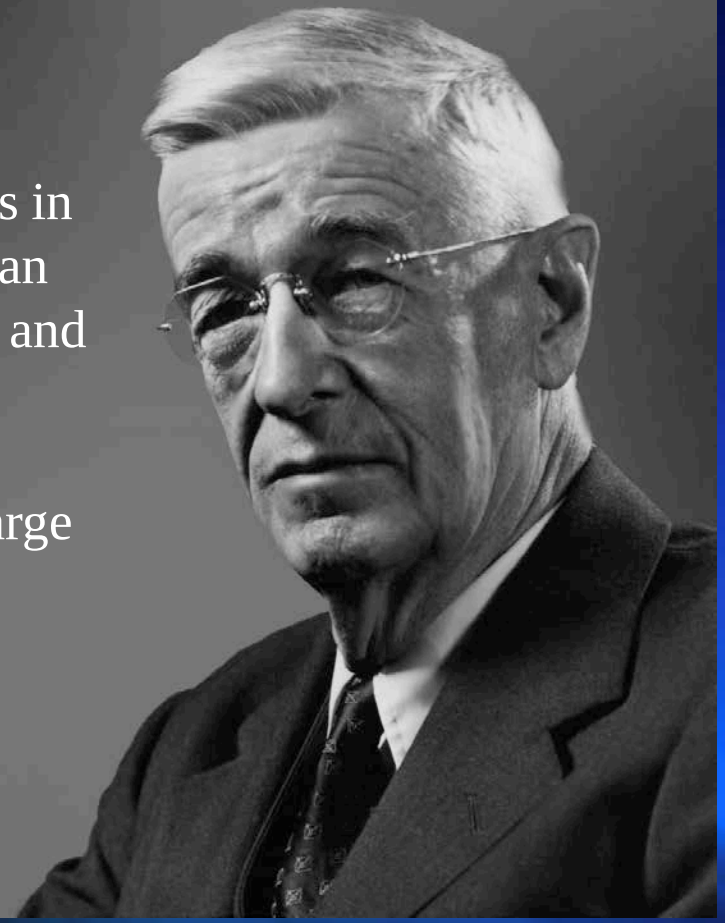


"To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense..."

We carry out our mission by supporting basic research

Basic research … results in general knowledge and an understanding of nature and its laws. This general knowledge provides the means of answering a large number of important practical problems ….

- Vannevar Bush



NSF by the Numbers

Characteristics of NSF: Ubiquity, Urgency, and Engagement

Ubiquity

Advances in science and engineering are permeating the way we work, communicate, learn, and discover.

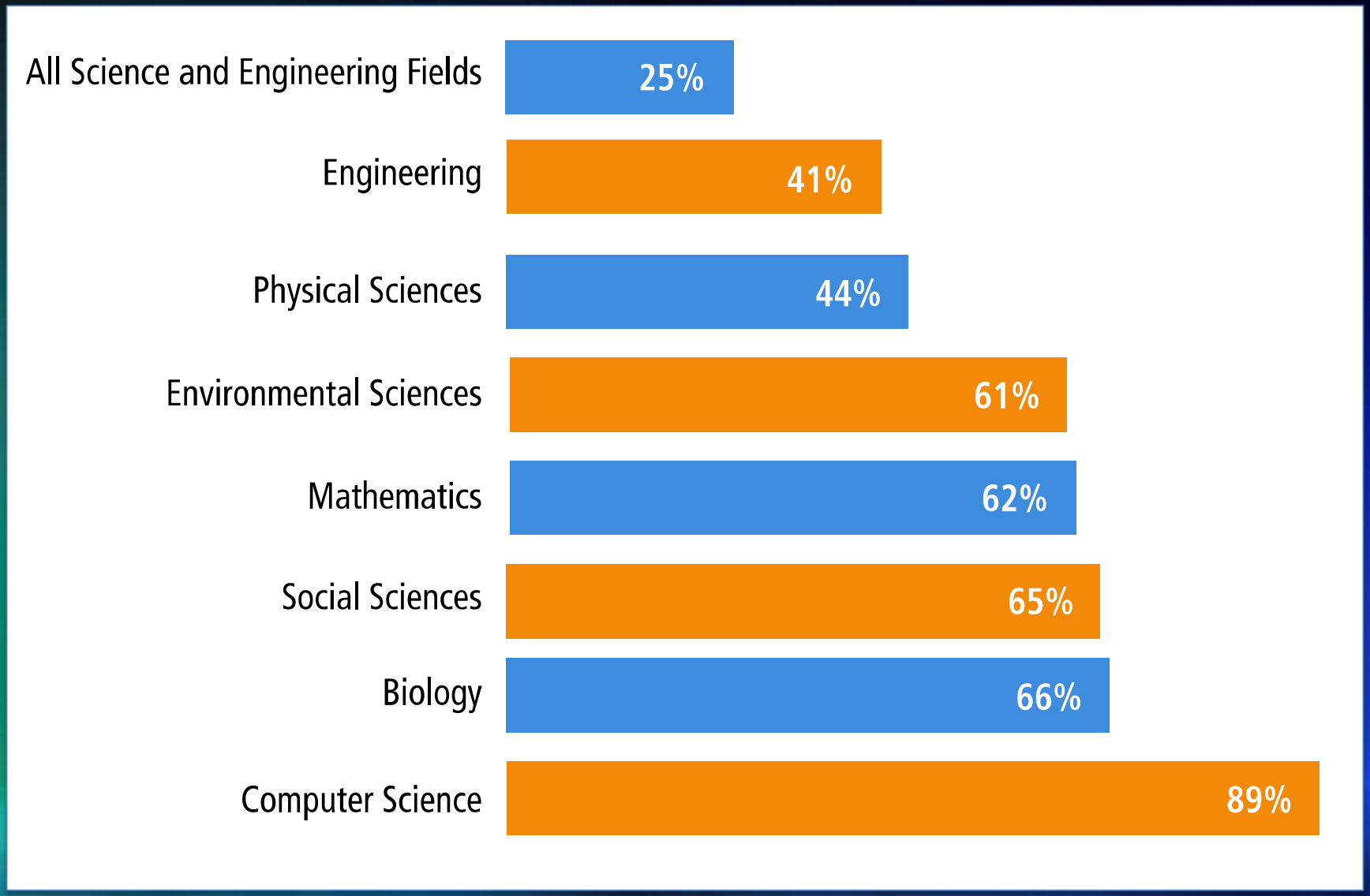
Urgency

NSF research and education are rapidly evolving and accelerating the pace of discovery and innovation, with profound societal and economic impact.

Engagement

The key strength and asset of NSF is the scientific community and the general public and their engagement.

NSF Funding: As a percentage of total federal support

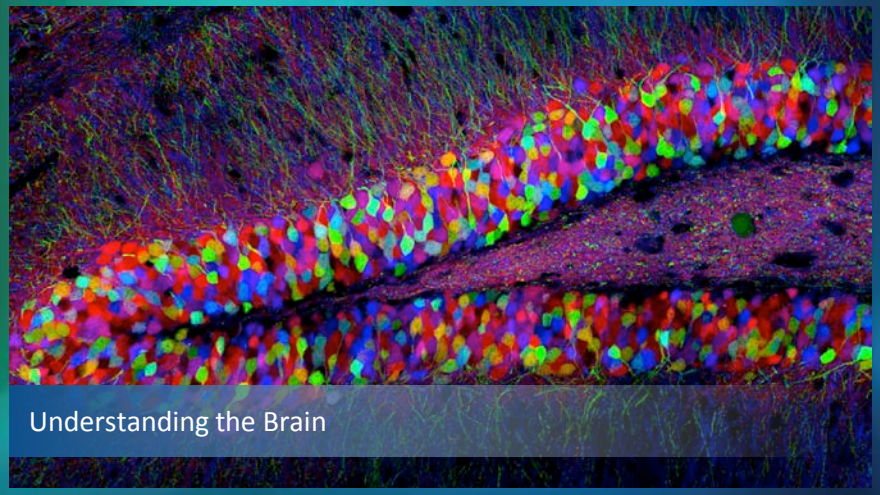


Source: NSF/NCSES, "Survey of Federal Funds for Research& Development, FY 2013. From NSF *FY2016 Budget Request to Congress Request*

Addressing National Priorities

Food/Energy/Water

Risk and Resilience



Understanding the Brain

INCLUDES

1950s 1960s 1970s 1980s 1990s 2000s 2010s

1953
RESEARCH STATISTICS COLLECTED

1956
ASTRONOMY TRANSFORMED

1957
SCIENTISTS FROM AROUND THE WORLD UNITED BY IGY**

1965
AMERICAN SIGN LANGUAGE CATALOGED

1970s
BAR CODES POPULARIZED

1981
FOUNDATION FOR THE INTERNET LAID BY CSNET*

1985
SUPERCOMPUTING CENTERS BOOTED UP

1986
OZONE HOLE LINKED TO CFCs

1990
PLANT GENOMES DECODED

1990s
IMPROVED INTERNET SEARCH

Google

1995
DOPPLER RADAR WENT MOBILE

1998
LIGHT SHONE ON DARK ENERGY

2000
ROBOTS SERVED THE SICK

2005
THE AFRICAN SUPERPLUME SURVEYED

2009
CHANGES IN OCEAN CHEMISTRY CONFIRMED

2010
ECONOMIC THEORY MATCHED KIDNEY TRANSPLANTS

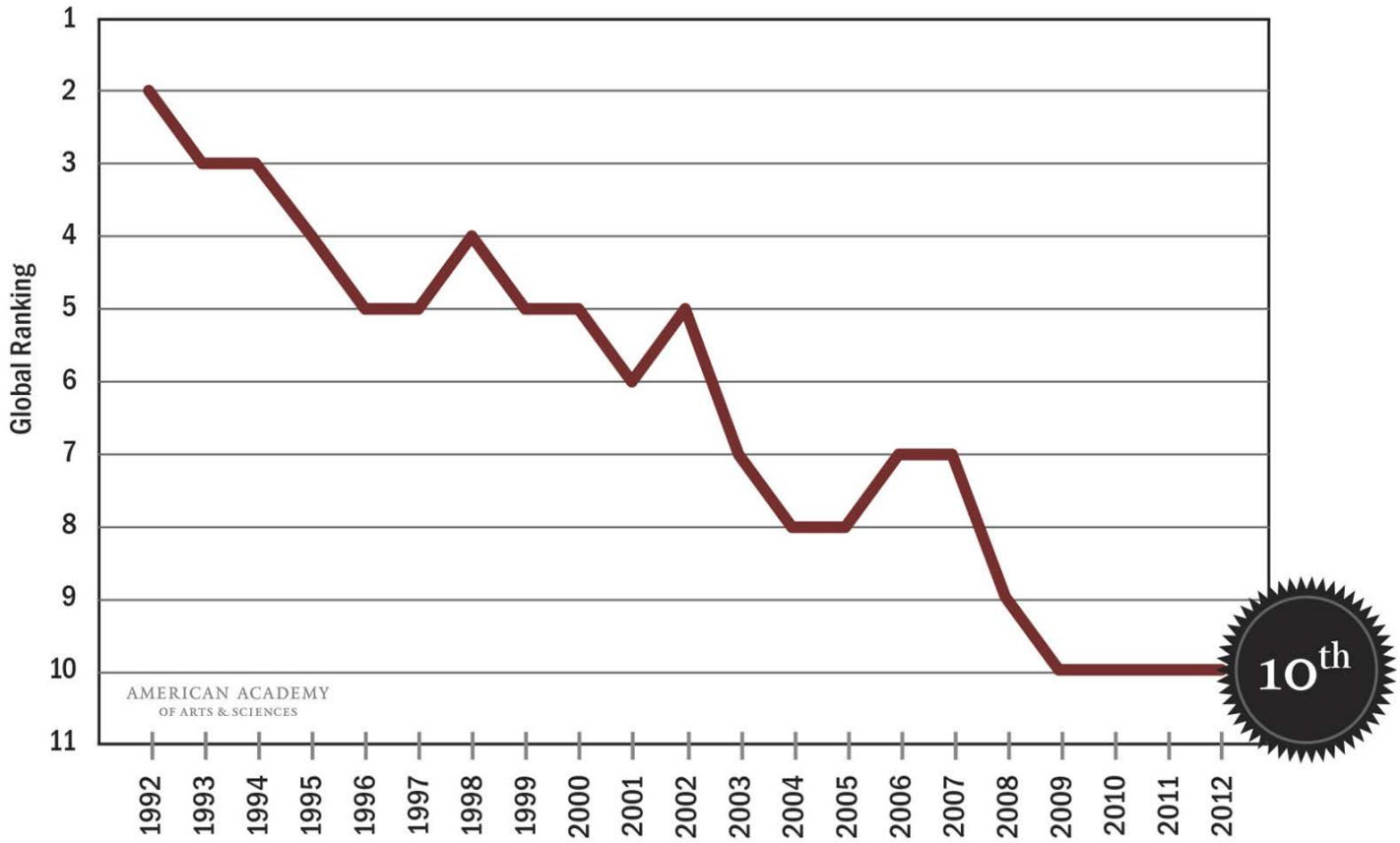
2012
COMPUTERS WENT QUANTUM

WHAT'S NEXT ?

- Data science to mine Big Data in all fields
- Smart & connected cities
- Ubiquitous computing & communications
- Optimizing decision making through data and computer modeling
- Quantum X (computing, algorithms, sensors/detectors)
- Dark Universe
- Gravity and the Standard Model
- Matter-Antimatter
- Understanding the Brain
- Biologically inspired nano-engineering
- Clean energy technologies
- Prediction of and resilience to disasters, through robust infrastructure
- Human behavior and game theory in engineered systems and design of technology
- Promise and peril of gene editing
- New innovations for translating research to market
- New approaches to inclusion across the Nation

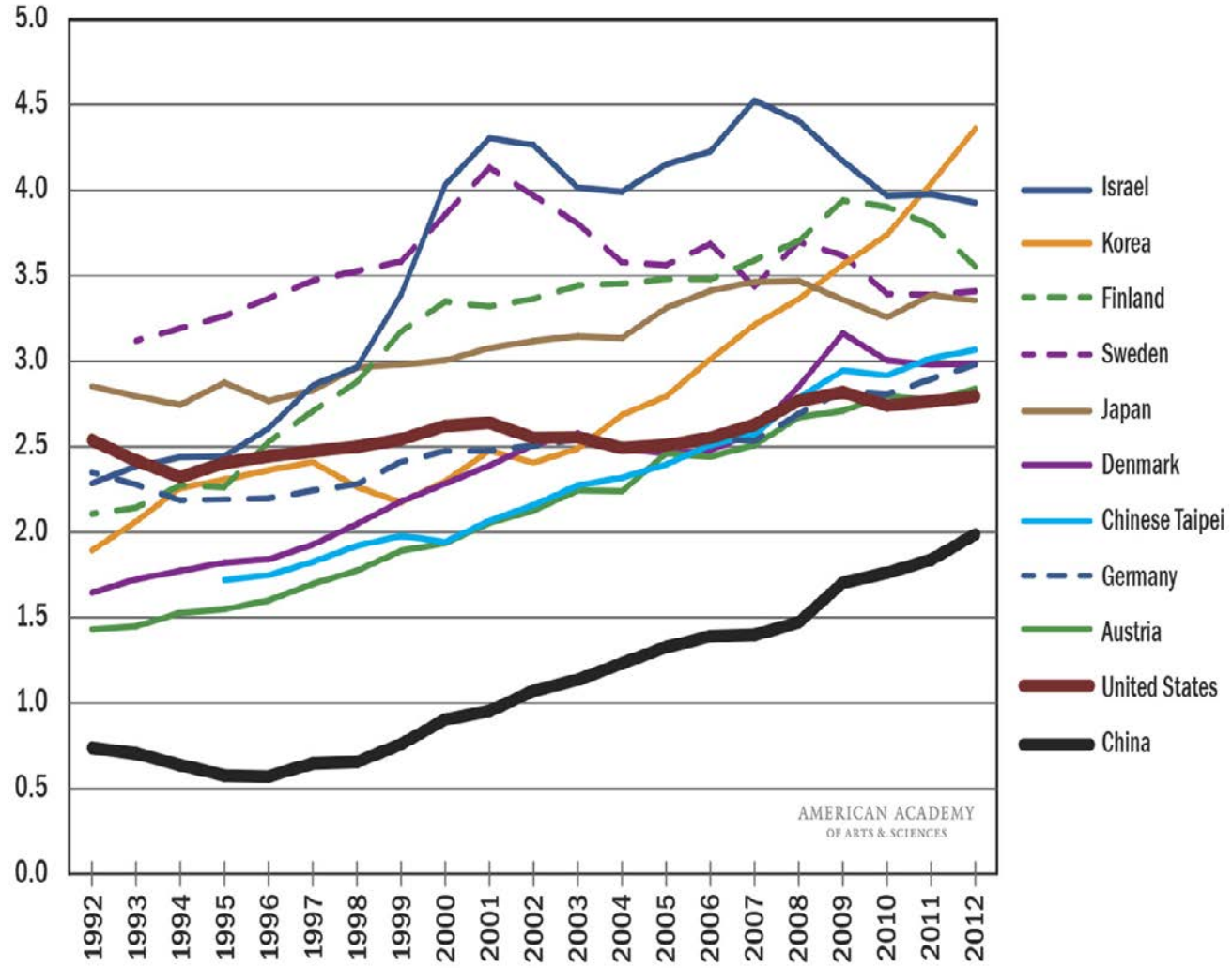
The U.S. has Fallen to 10th place in R&D Investment

U.S. ranking among OECD nations by national R&D investment as a percentage of GDP



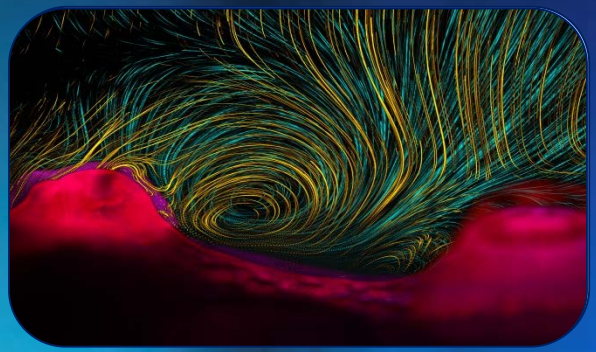
National R&D Investment

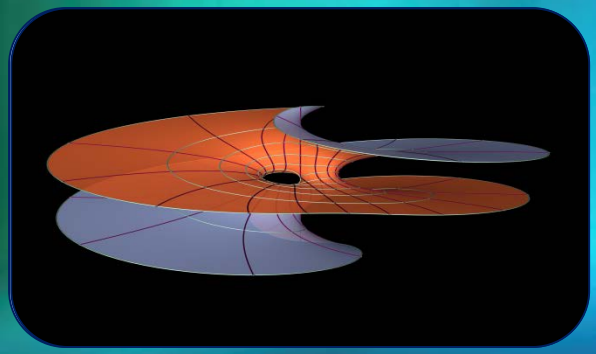
as a percentage of GDP

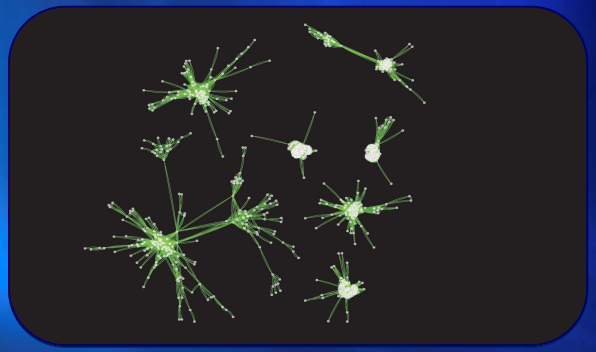


NSF's Organization

The NSF Directorates & Offices







Biological Sciences (BIO)

Christopher Meyer
Division of Biological Infrastructure (DBI)
cmeyer@nsf.gov

Works with variety of programs: REU, RCN-UBE, iCORPS, NRT and Broadening Participation

California State University, Fullerton: faculty, chemistry and biochemistry faculty and department chair

PI and Mentor for an NSF Ideas Lab

Biological Sciences (BIO)

James Olds, Assistant Director
Jane Silverthorne, Deputy Assistant Director

Emerging Frontiers (EF)

Division of Biological Infrastructure (DBI)

Muriel Poston, Division Director
James Deshler, Deputy Division Director

Division of Molecular and Cellular Biosciences (MCB)

Linda Hyman, Division Director
Theresa Good, Deputy Division Director

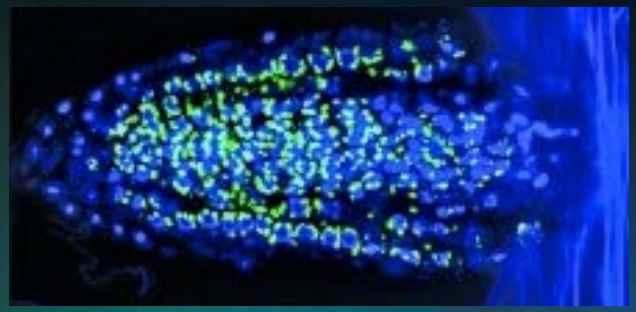
Division of Environmental Biology (DEB)

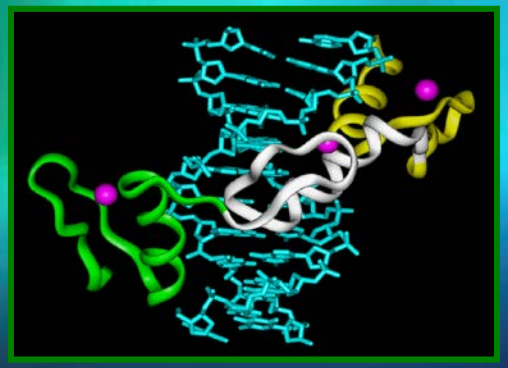
Paula Mabee, Acting Division Director
Alan Tessier, Deputy Division Director

Division of Integrative Organismal Systems (IOS)

Heinz Gert de Couet, Division Director
Rob Miller, Deputy Division Director

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)

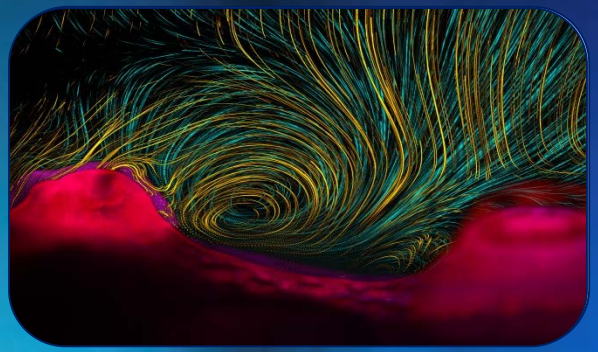
Dimensions of Biodiversity

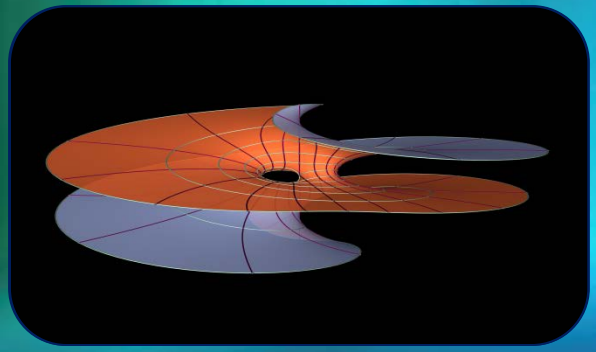
Projects at interface of biology, mathematics, and engineering (BIOMAPS)

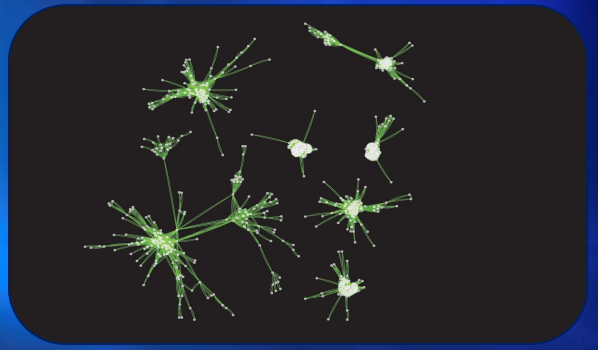
NEW: Enabling Discovery through Genomic Tools (EDGE)

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

The NSF Directorates & Offices







Computer & Information Science & Engineering (CISE)

Tatiana (Tanya) Korelsky
Information Intelligence Systems (IIS) Division
tkorelsk@nsf.gov

Robust Intelligence Program Director

Expertise in Human Languages Technologies: natural language and speech analysis and synthesis, dialogue systems

Engaged in cross-directorate programs involving Cyber-learning, Science of Learning, the National Robotics Initiative and Smart and Connected Health

Computer & Information Science & Engineering (CISE)

James F. Kurose, Assistant Director
Erwin Gianchandani, Deputy Assistant Director (Acting)

Division of Advanced Cyberinfrastructure (ACI)

Irene M. Qualters, Division Director
Amy Apon, Deputy Division Director (Acting)

Division of Information and Intelligent Systems (IIS)

Lynne Parker, Division Director
Deborah F. Lockhart, Deputy Division Director

Division of Computing and Communication Foundations (CCF)

S. Rao Kosaraju, Division Director
James J. Donlon, Deputy Division Director

Division of Computer and Network Systems (CNS)

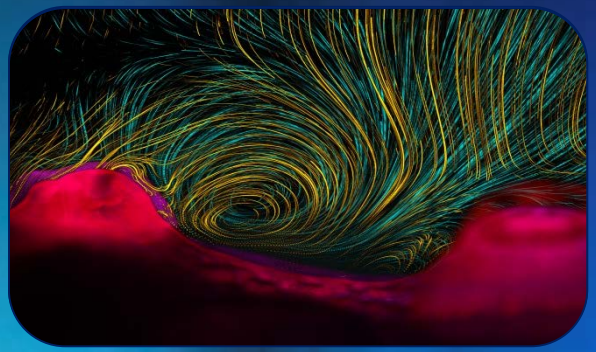
Peter Arzberger, Div. Director (Acting)
Phillip Regalia, Deputy Division Director (Acting)

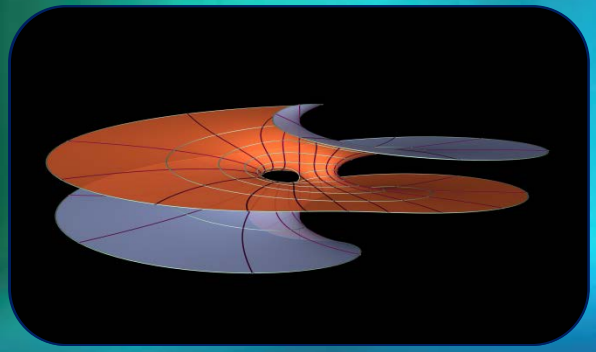
Computer & Information Science & Engineering (CISE)

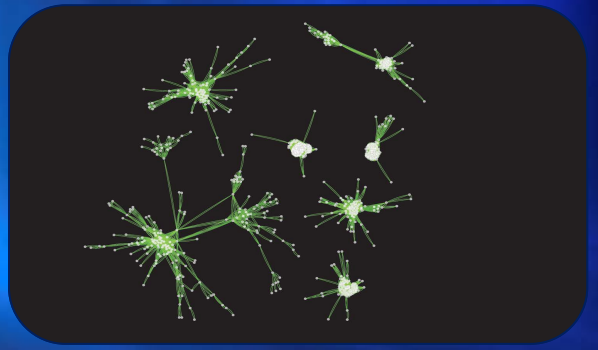
Directorate Priorities

- 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

The NSF Directorates & Offices







Education & Human Resources (EHR)

Tom Higgins
Division of Undergraduate Education
thhiggins@nsf.gov

- Distinguished award winning Professor of Chemistry, Harold Washington College, Chicago, IL
- Chair, Physical Sciences
- Active member, American Chemical Society, Society Committee on Education, Two-Year College Chemistry Consortium

Education & Human Resources (EHR)

Dr. Joan Ferrini-Mundy
Assistant Director

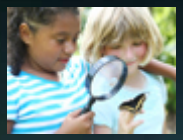
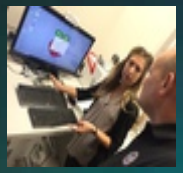
Division of Graduate Education (DGE)
Dean Evasius
Division Director

Division of Human Resource Development (HRD)
Sylvia M. James
Division Director

Division of Research on Learning in Formal and Informal Settings (DRL)
Evan Heit
Division Director

Division of Undergraduate Education (DUE)
Susan R. Singer
Division Director

Education & Human Resources (EHR)

Learning and learning environments

- Cognitive and non-cognitive foundations of STEM
- Creative uses of formal and informal STEM learning

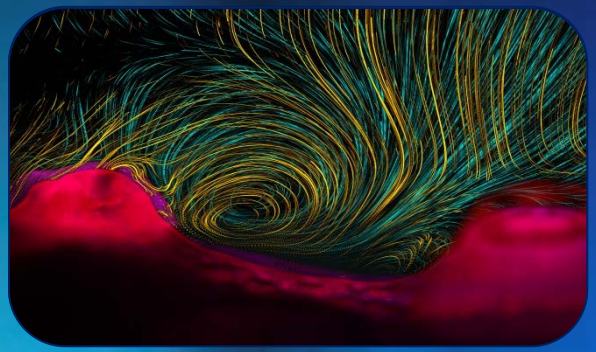
Broadening participation in STEM

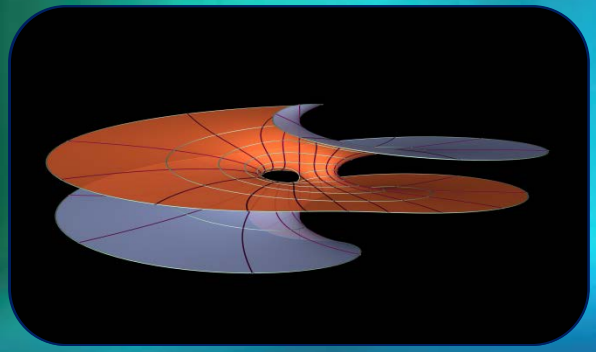
- Access to and success in high-quality STEM education for underrepresented groups

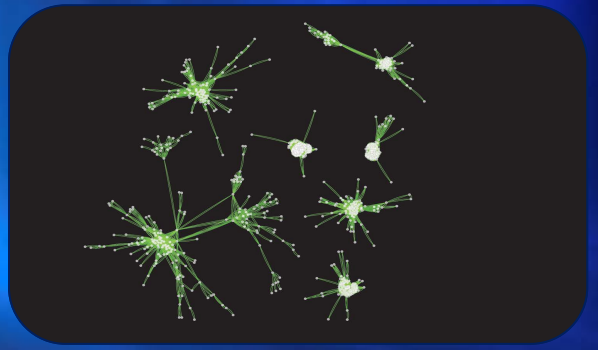
STEM professional workforce development

- Capitalize on scientific advances
- Address not yet imagined global, social & econ challenges

The NSF Directorates and Offices







Engineering (ENG)

Zhijian (ZJ) Pei
ENG / CBET
aleoness@nsf.gov

Manufacturing Machines and Equipment program director

Professor, Department of Industrial and Manufacturing Systems Engineering, Kansas State University

Received Director's Award for Excellence

NSF CAREER Awardee, initiated CAREER Proposal Writing Workshop

Engineering (ENG)

Emerging Frontiers in Research and Innovation (EFRI)
Sohi Rastegar

Innovation Corps
Babu DasGupta

Pramod Khargonekar, Assistant Director
Grace Wang, Deputy Assistant Director

Senior Advisor for Nanotechnology
Mihail Roco

Program Director for Strategic Operations
Cheryl Albus

Program Director for Evaluation & Assessment
Alexandra Medina-Borja

Engineering Education and Centers (EEC)

Mario Rotea, Division Director

Chemical, Bioengineering, Environmental, and Transport Systems (CBET)

JoAnn Lighty, Division Director

Civil, Mechanical, and Manufacturing Innovation (CMMI)

Deborah Goodings, Division Director

Electrical, Communications, and Cyber Systems (ECCS)

Samir El-Ghazaly, Division Director

Industrial Innovation and Partnerships (IIP)

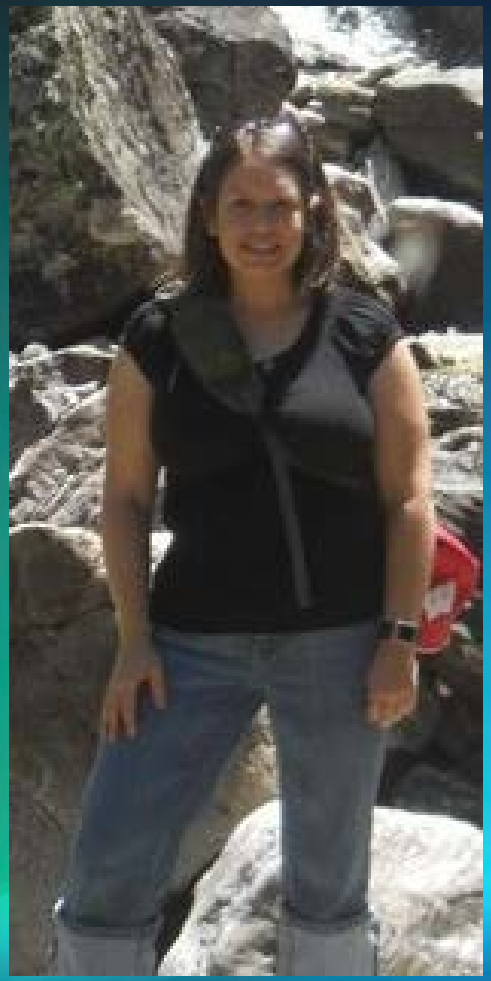
Barry Johnson, Division Director

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)



Manda Adams

Division of Atmospheric and Geospace Sciences

amadams@nsf.gov

Education and Cross-Cutting Programs

- Research Experiences for Undergraduates (REU)
- NSF Research Traineeship (NRT)
- Postdoctoral Research Fellowships (AGS-PRF)
- Pathways into the Geosciences (IUSE:GEOPATHS)
- GEO Opportunities for Leadership in Diversity (GOLD)
- Dynamics of Coupled Natural and Human Systems (CNH)
- National Center for Atmospheric Research (NCAR)

Former faculty member:
University of North Carolina-Charlotte (tenure track)
Madison Area Technical College (adjunct)

Board of Directors, Earth Science Women's Network

Research interests in mesoscale modeling, boundary layer processes, wind energy, atmosphere-energy system interactions and workforce capacity building

Geosciences (GEO)

Dr. Roger Wakimoto, Assistant Director
Dr. Margaret Cavanaugh, Deputy Assistant Director

Division of Atmospheric and Geospace Sciences (AGS)

Paul Shepson, Division Director

Division of Ocean Sciences (OCE)

Rick Murray, Division Director

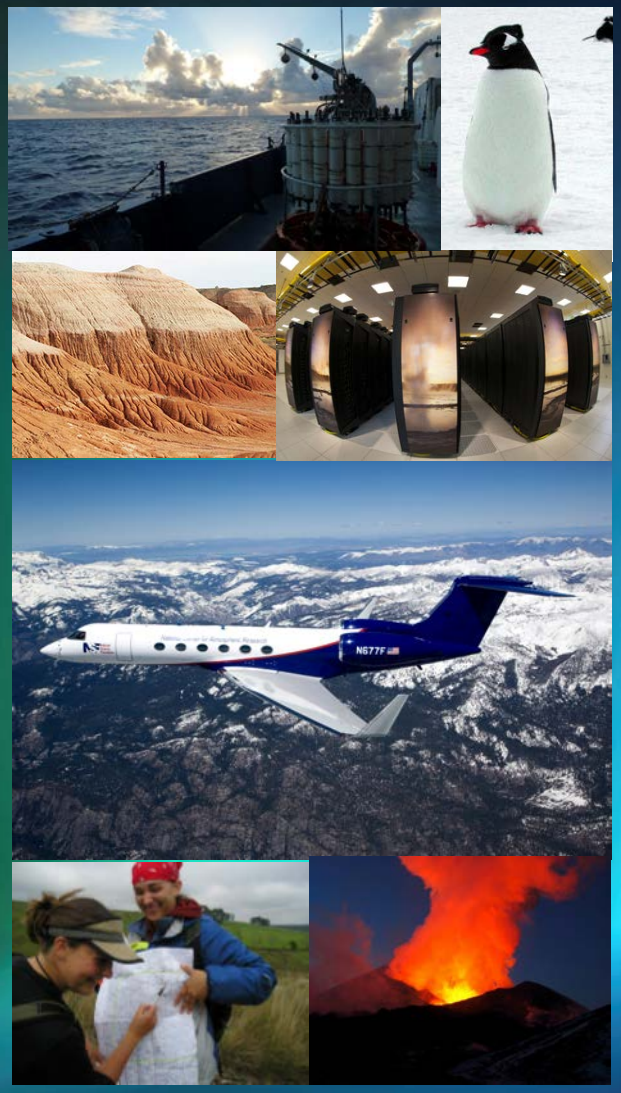
Division of Polar Programs (PLR)

Kelly Falkner, Division Director

Division of Earth Sciences (EAR)

Carol Frost, Division Director

Geosciences (GEO)

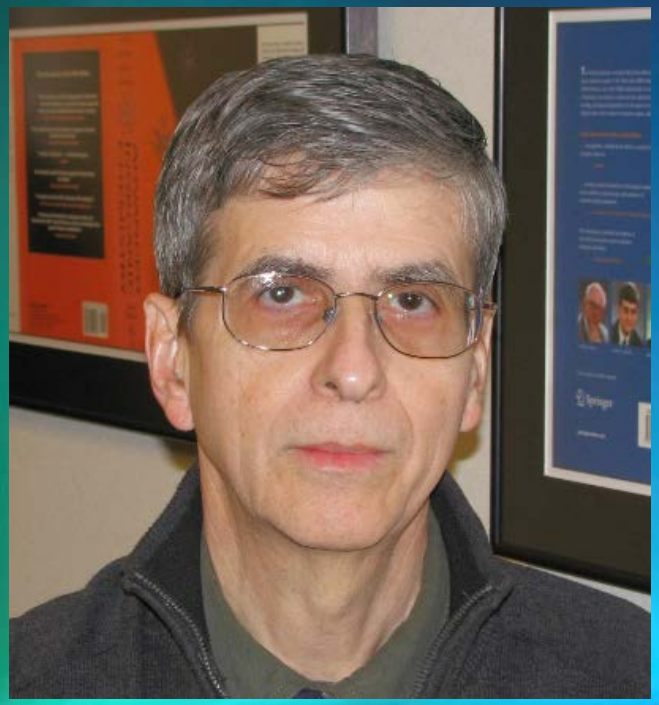


Directorate Priorities

- 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)

Carlos Murillo
Chemistry Division
cmurillo@nsf.gov



Interested in compounds with metal-to-metal-bonds

Adjunct Professor at Texas A&M University and the University of Texas at El Paso

Charter member, Costa Rican Academy of Sciences

Fellow, AAAS

Mathematical & Physical Sciences (MPS)

F. Fleming Crim, Assistant Director
Clifford Gabriel, Deputy Assistant Director (Acting)

Office of Multidisciplinary Activities (OMA)
Clark Cooper

Division of Astronomical Sciences (AST)

James Ulvestad, Division Director
Patricia Knezek, Deputy Division Director

Division of Materials Research (DMR)

Linda Sapochak, Division Director (Acting)
Charles Ying, Deputy Division Director (Acting)

Division of Physics (PHY)

Denise Caldwell, Division Director
Bradley Keister, Deputy Division Director

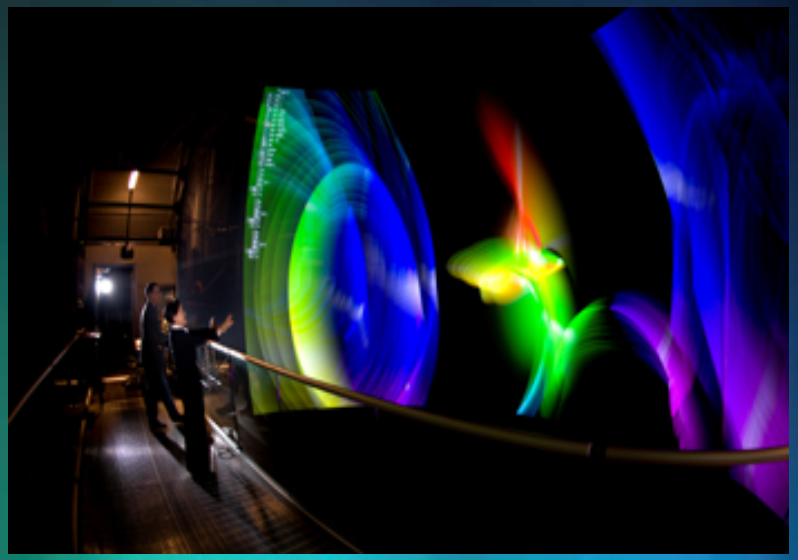
Division of Chemistry (CHE)

Carol Bessel, Division Director (Acting)
Angela Wilson, Upcoming Division Director
Timothy Patten, Deputy Division Director (Acting)

Division of Mathematical Sciences (DMS)

Michael Vogelius, Division Director
Jennifer Pearl, Deputy Division Director (Acting)

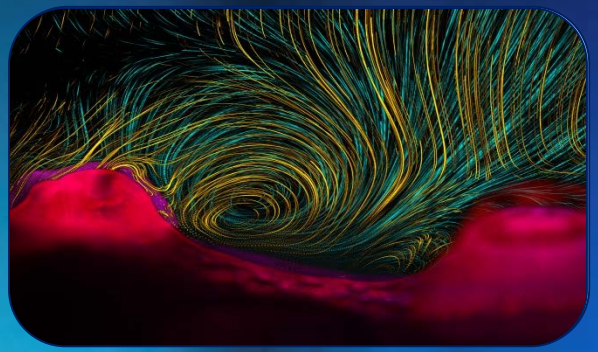
Mathematical & Physical Sciences (MPS)

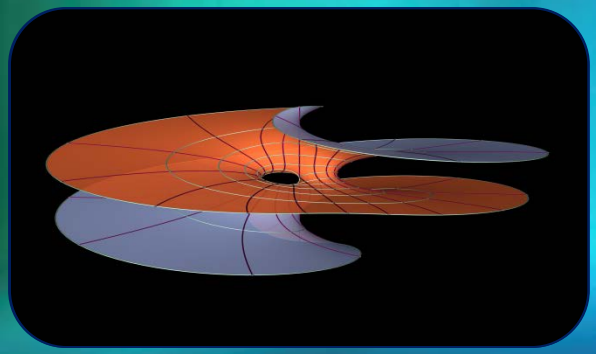


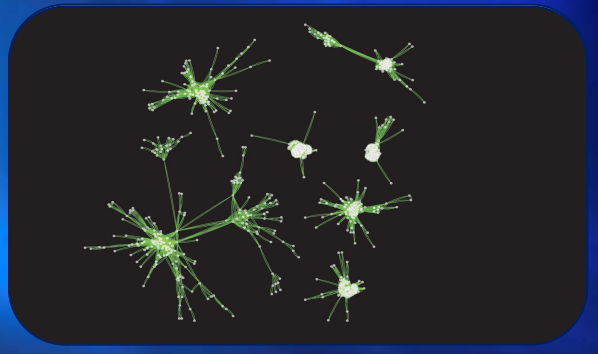
Emphasis Areas

- 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

The NSF Directorates and Offices







Social, Behavioral, and Economic Science (SBE)

Thomas J. Baerwald
Division of Behavioral and Cognitive Sciences
tbaerwal@nsf.gov

Senior Science Advisor
Program Director
- Geography and Spatial Sciences (GSS)
- Dynamics of Coupled Natural and Human Systems (CNH)
- Interdisciplinary Behavioral and Social Science Research (IBSS)

28 years of service at NSF

Go Twins, Nationals, Vikings, Gophers, Valpo, and Boise State!

Social, Behavioral and Economic Sciences

SBE Office of Multidisciplinary Activities (SMA)

Science of Learning
Science of Science and innovation Policy
Interdisciplinary Behavioral and Social Sciences
Resource Implementation for Data Intensive Research in SBE

Fay Lomax Cook, Assistant Director
Kellina Craig-Henderson, Deputy Assistant Director

Behavioral and Cognitive Sciences (BCS)

Howard Nusbaum, Division Director
Amber Story, Deputy Division Director

Archeology and Archaeometry
Biological Anthropology
Cultural Anthropology
Geography and Spatial Sciences
Cognitive Neuroscience
Developmental and Learning Sciences
Documenting Endangered Languages
Linguistics
Perception, Action and Cognition
Social Psychology

Social and Economic Sciences (SES)

Alan Tomkins, Acting Division Director
Kay Meyer, Acting Deputy Division Director

Decision Risk and Management Sciences
Economics
Law and Social Sciences
Methodology, Measurement, and Statistics
Political Science
Science of Organizations
Science, Technology, and Society
Secure and Trustworthy Cyberspace
Sociology

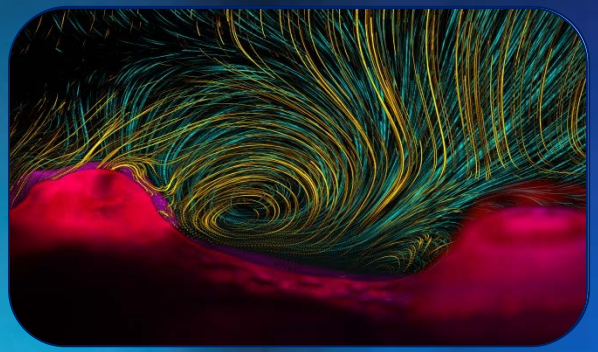
National Center for Science and Engineering Statistics (NCSES)

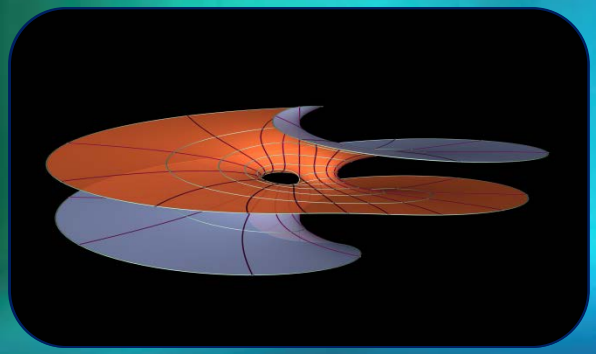
John Gawalt, Division Director
Jeri Mulrow, Deputy Division Director

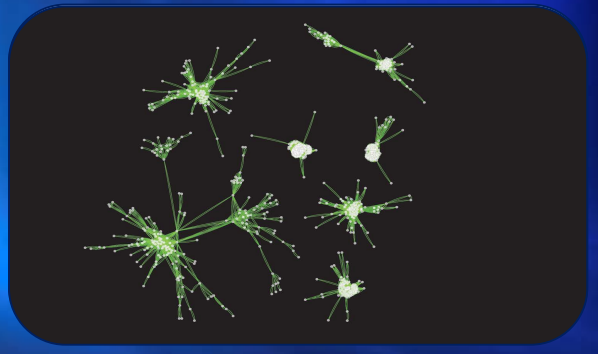
SBE-Related Cross-Directorate Initiatives

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

The NSF Directorates and Offices







Office of International Science and Engineering (OD/OISE)

Anne Emig
Office of International Science & Engineering
aemig@nsf.gov

NSF program manager since 2005

Manages funding opportunities to support graduate student international research experiences

Facilitates international collaborations in East Asia, Latin America and elsewhere

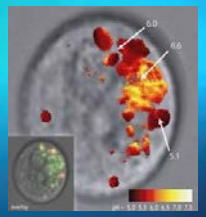
Past director of NSF Tokyo Regional Office

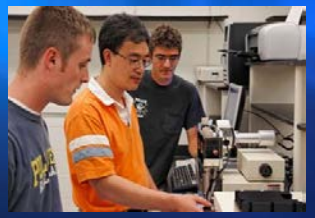
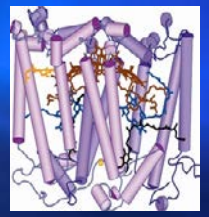
Research and project management in universities and multilateral organizations

International Science and Engineering (ISE)

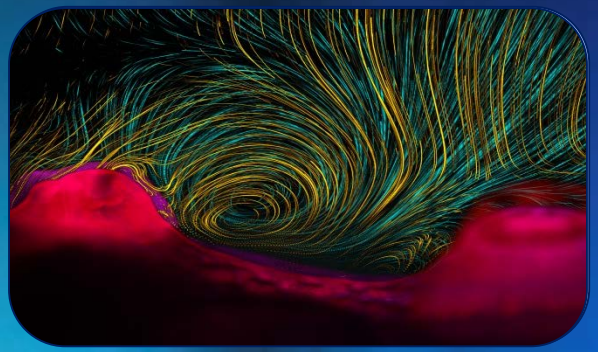
Priorities

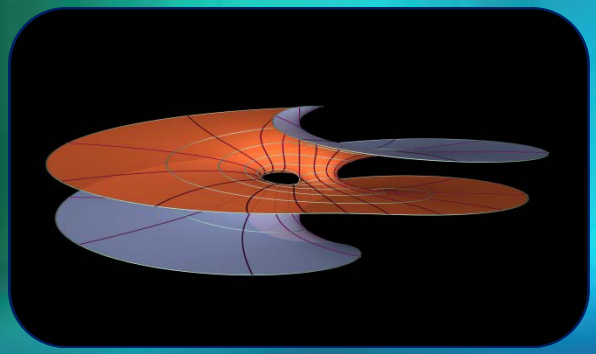
- **Advance the FRONTIERS of S&E via international collaboration**
- **Prepare a GLOBALLY-ENGAGED U.S. S&E workforce**
- **Develop GLOBAL KNOWLEDGE NETWORKS that link U.S. faculty and students to the world**
- **Leverage RESOURCES, EXPERTISE, FACILITIES around the globe**

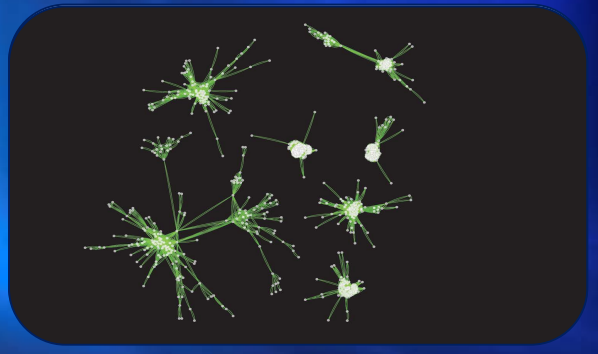


The NSF Directorates and Offices







Budget, Finance & Award Management (BFA)

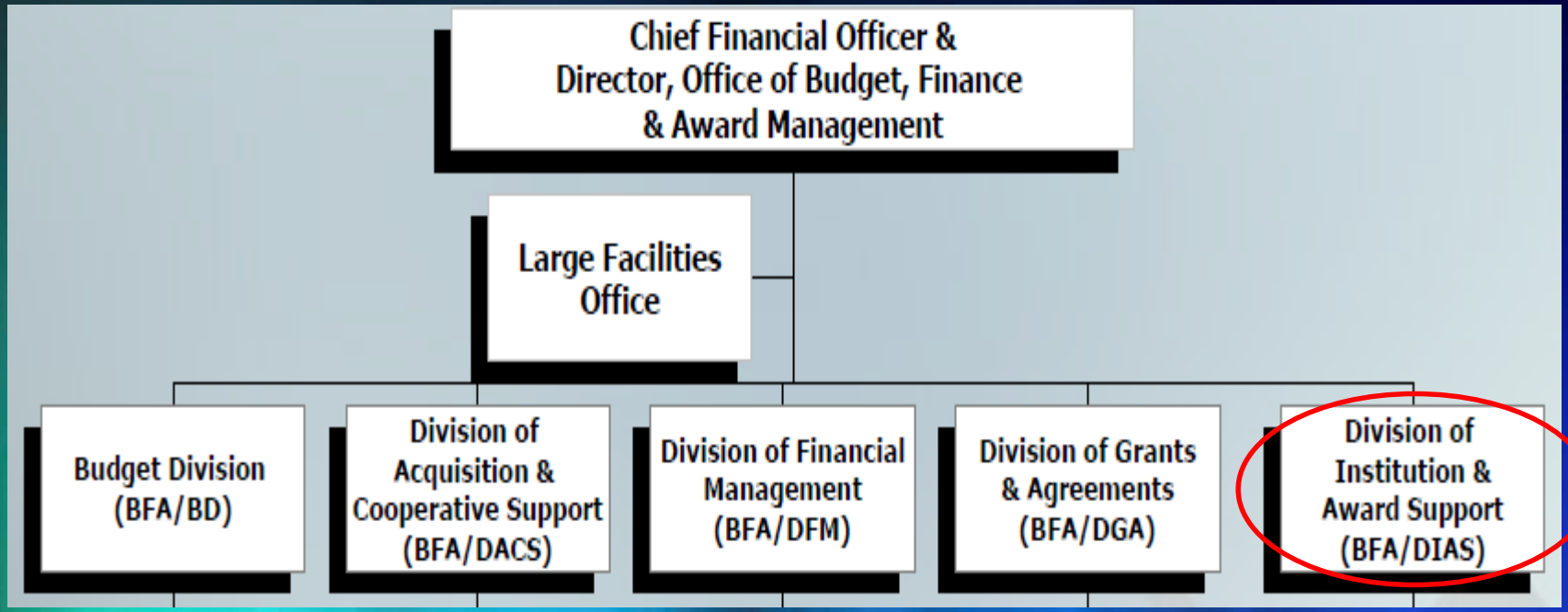
Anne Doyle
Policy Office
Division of Institution & Award Support
adoyle@nsf.gov

Senior policy specialist for proposal & award policy

Coordinates the review and approval of funding opportunity documents and other documents issued by NSF

Serves as the executive secretary of the Director's Review Board

Budget, Finance & Award Management (BFA)

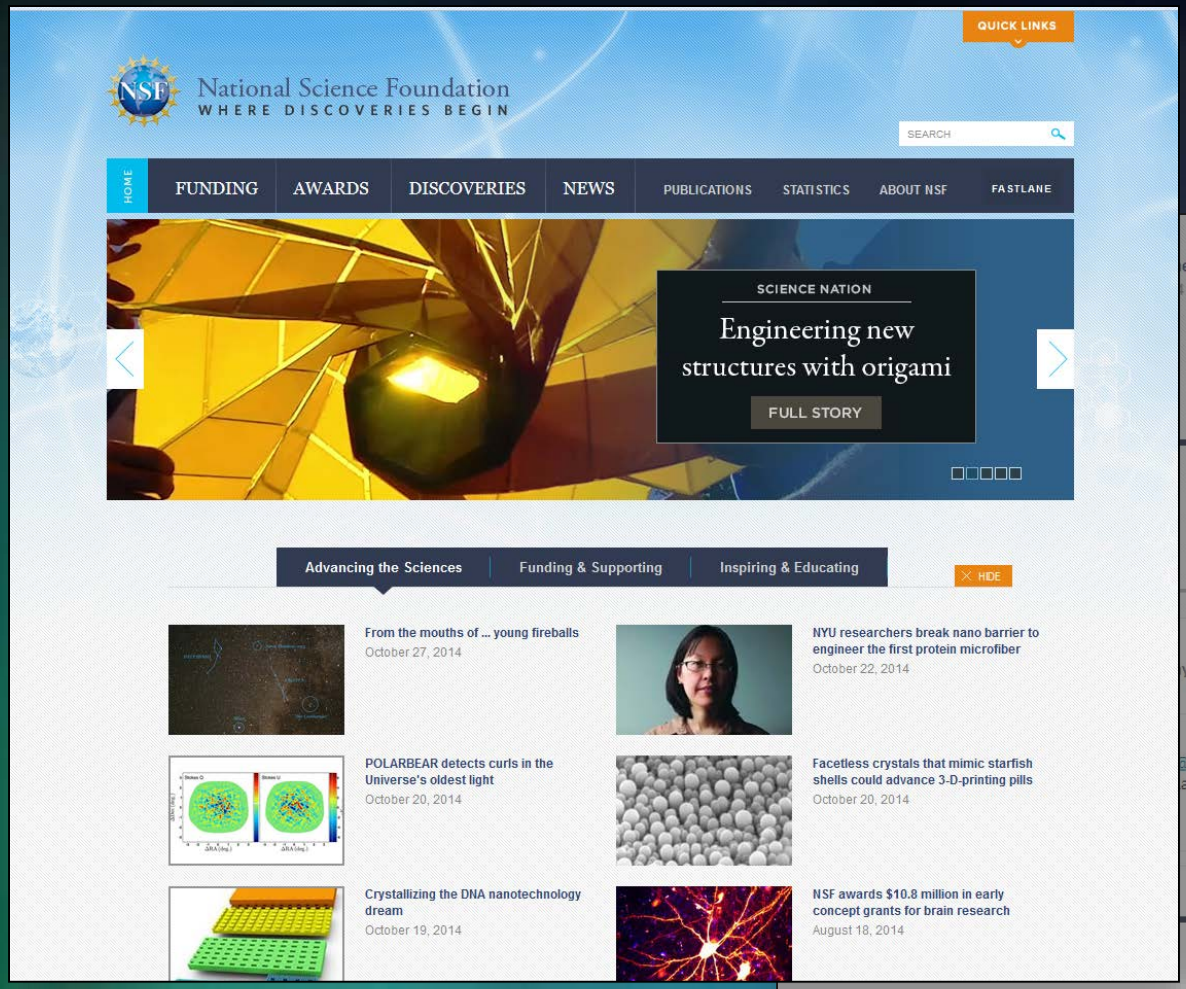


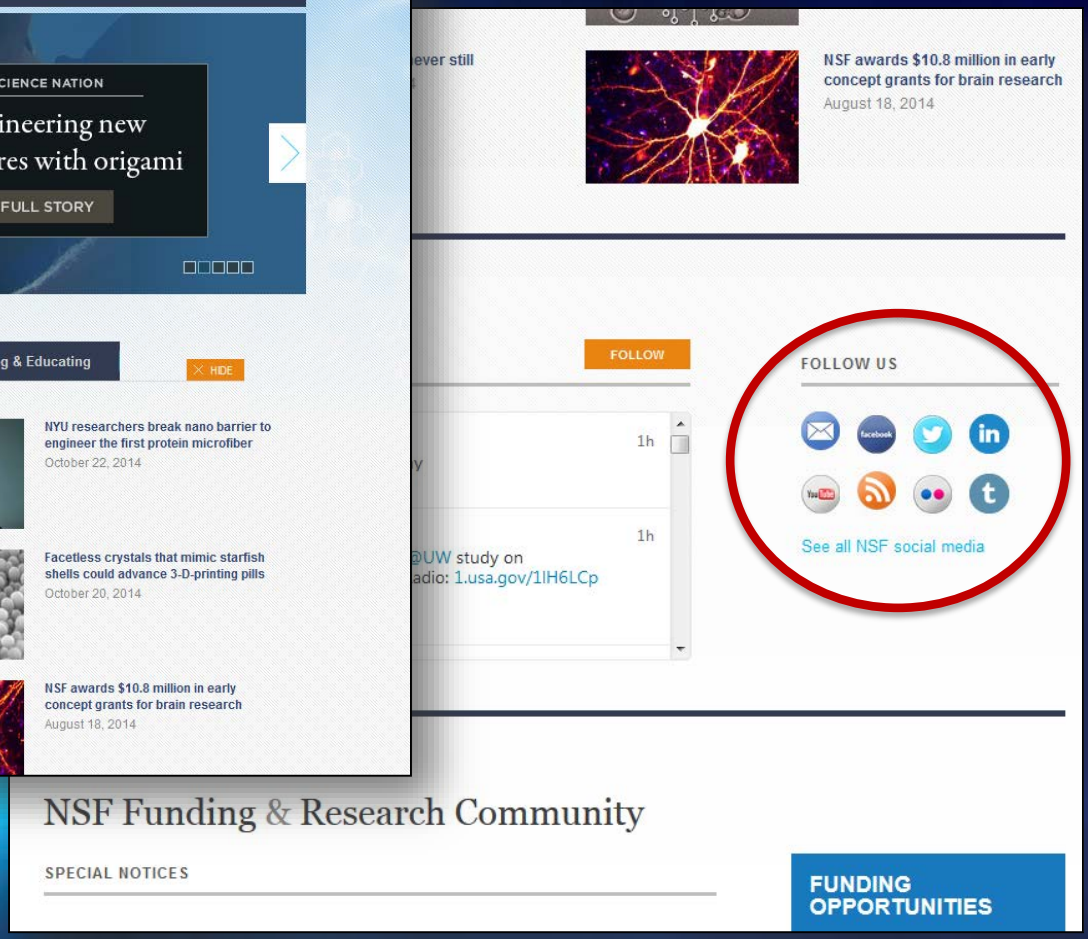
Questions?

Break

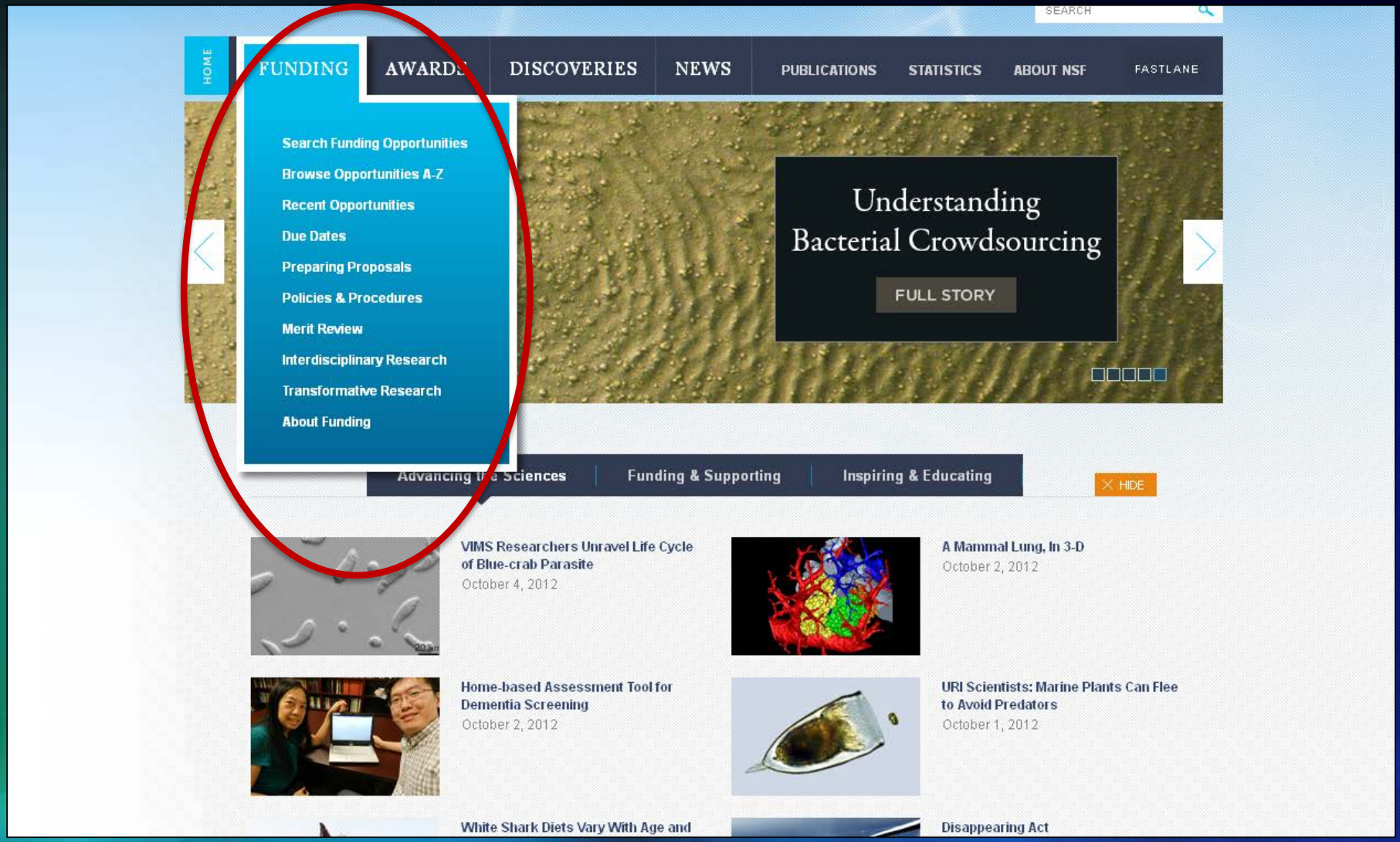
Getting Started
The Essentials

www.NSF.gov

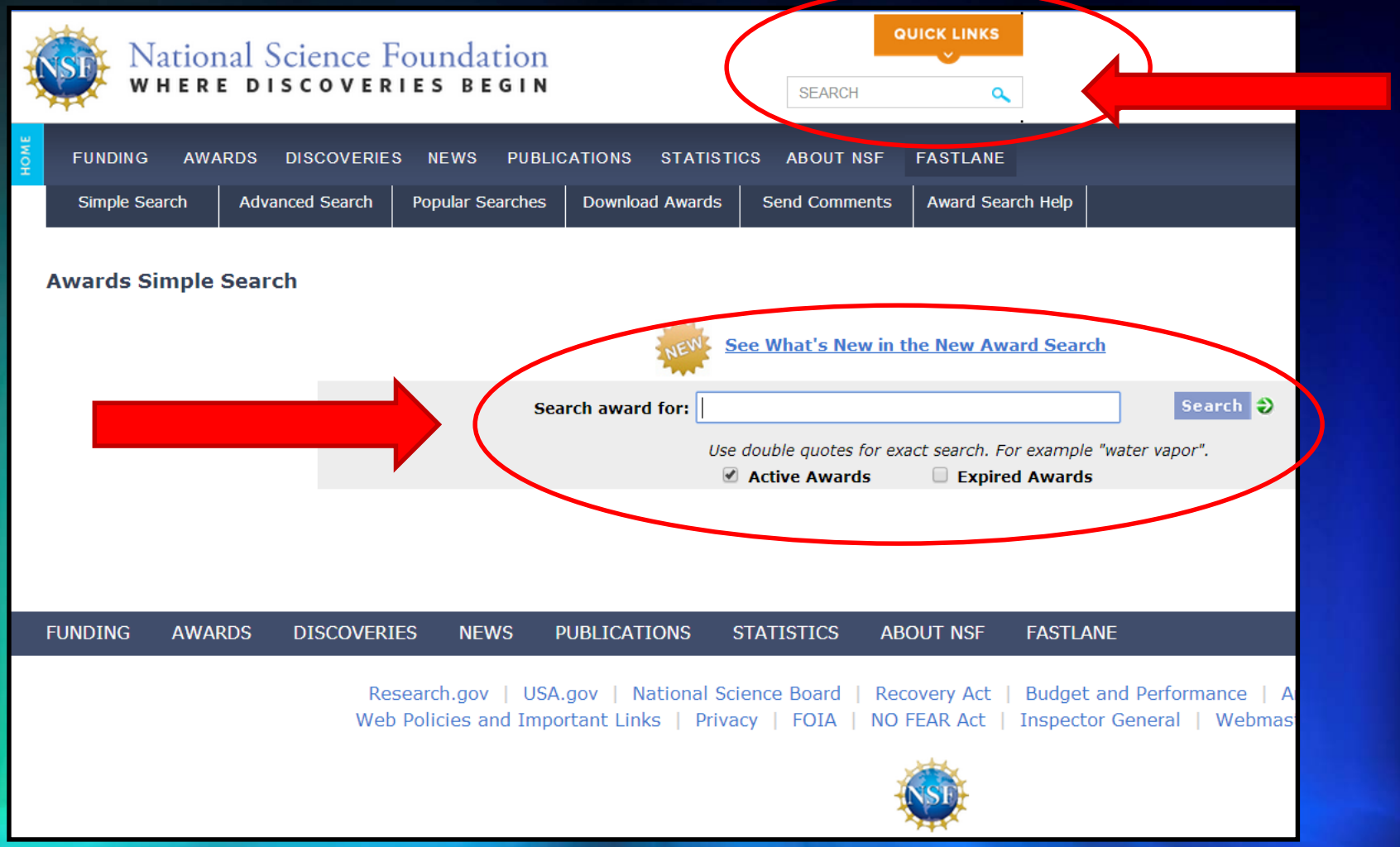

QUICK LINKS
National Science Foundation
WHERE DISCOVERIES BEGIN
SEARCH
HOME
FUNDING
AWARDS
DISCOVERIES
NEWS
PUBLICATIONS
STATISTICS
ABOUT NSF
FASTLANE
SCIENCE NATION
Engineering new structures with origami
FULL STORY
Advancing the Sciences
Funding & Supporting
Inspiring & Educating
HIDE
From the mouths of ... young fireballs
October 27, 2014
NYU researchers break nano barrier to engineer the first protein microfiber
October 22, 2014
POLARBEAR detects curls in the Universe's oldest light
October 20, 2014
Facetless crystals that mimic starfish shells could advance 3-D-printing pills
October 20, 2014
Crystallizing the DNA nanotechnology dream
October 19, 2014
NSF awards $10.8 million in early concept grants for brain research
August 18, 2014


ever still
NSF awards $10.8 million in early concept grants for brain research
August 18, 2014
FOLLOW
1h
1h
@UW study on
adio: 1.usa.gov/1lH6LCp
FOLLOW US
See all NSF social media
NSF Funding & Research Community
SPECIAL NOTICES
FUNDING OPPORTUNITIES

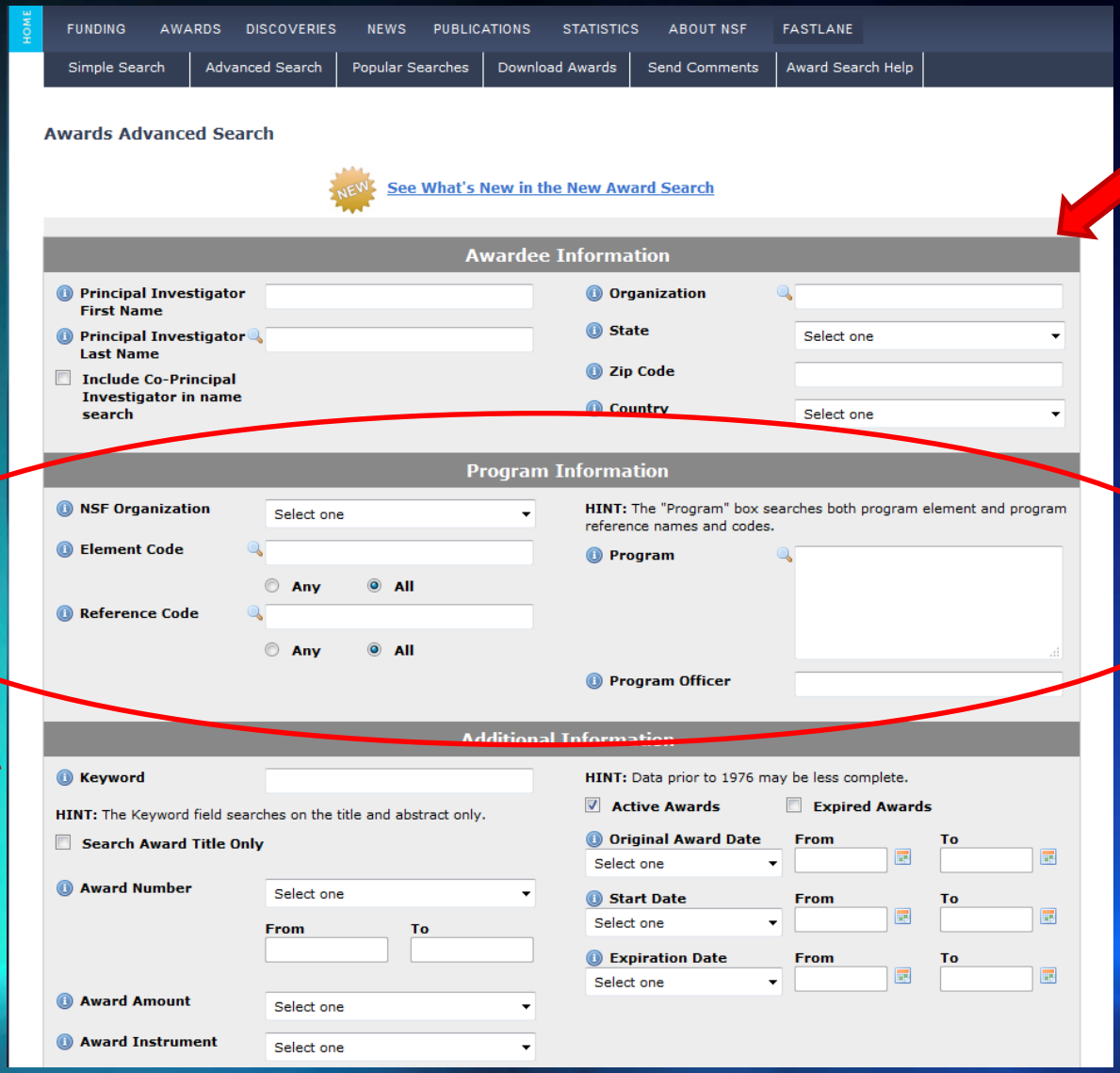
Navigating www.NSF.gov



Navigating www.NSF.gov



Navigating www.NSF.gov



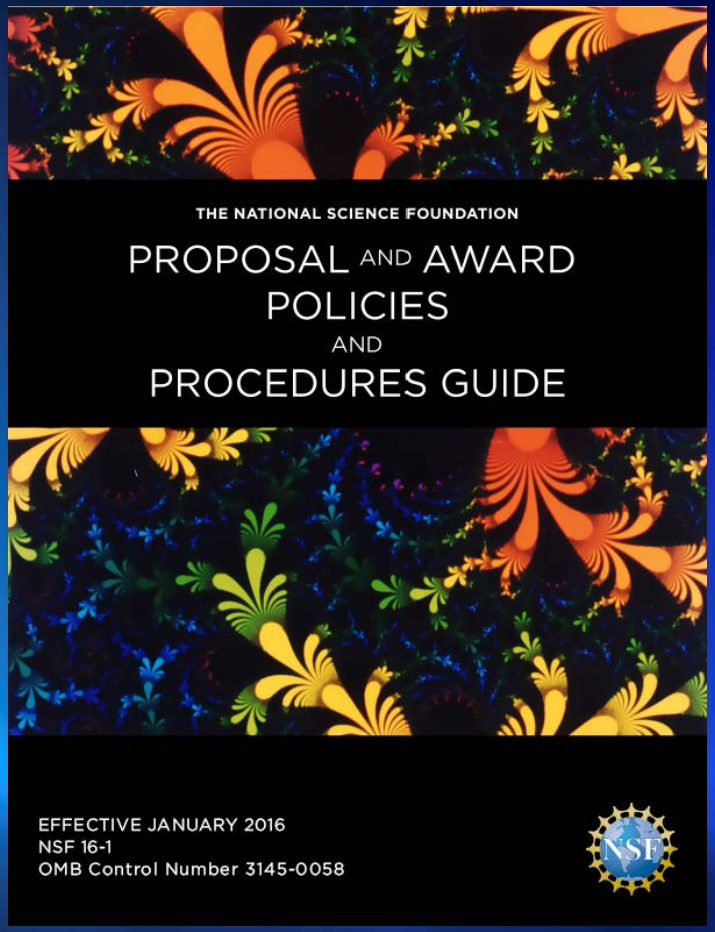
Additional Information on Resources

Join Directorate Specific Listserves!

Use Grants.gov's search feature

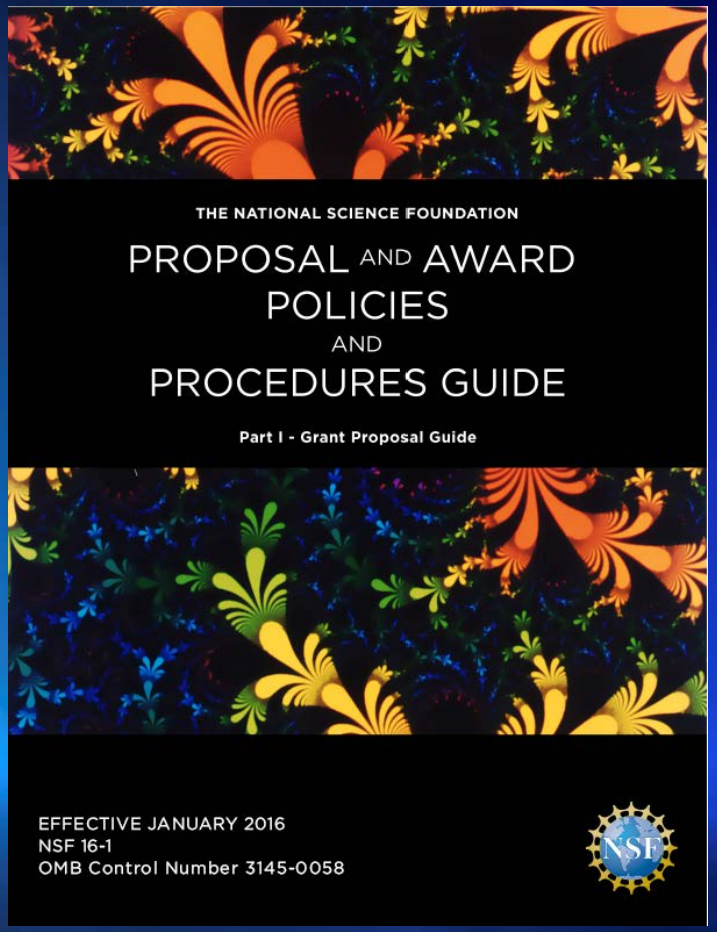
What is the Proposal & Award Policies & Procedures Guide?

The Proposal and Award Policies and Procedures Guide (PAPPG) contains documents relating to NSF's proposal and award process. It has been designed for use by both our customer community and NSF staff and consists of two parts:



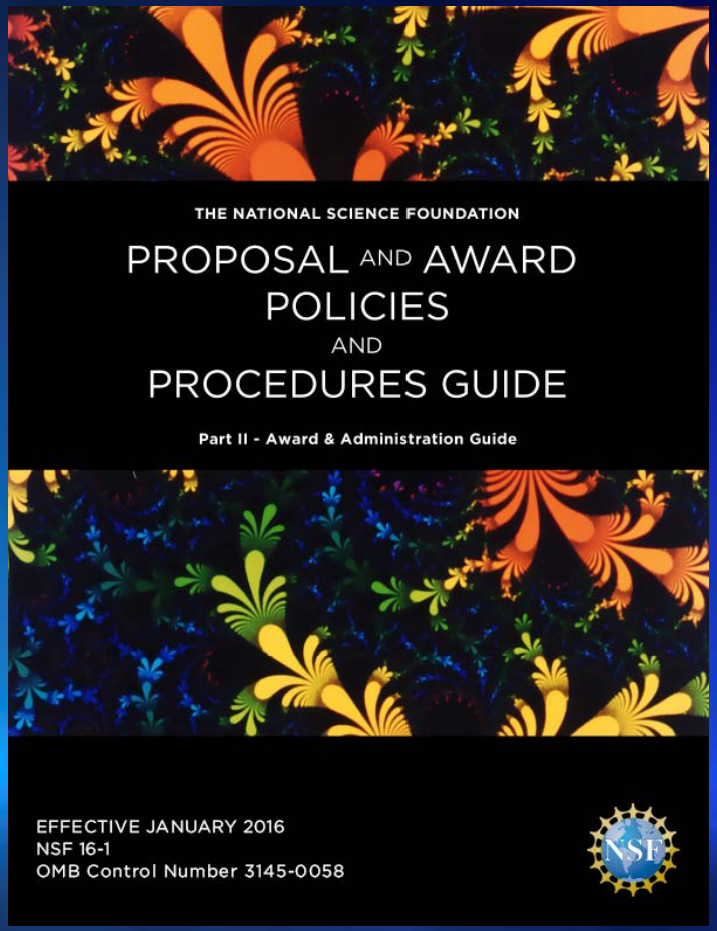
What is the Proposal & Award Policies & Procedures Guide?

Part I is NSF's proposal preparation and submission guidelines -- the NSF Grant Proposal Guide (GPG) and the NSF Grants.gov Application Guide.



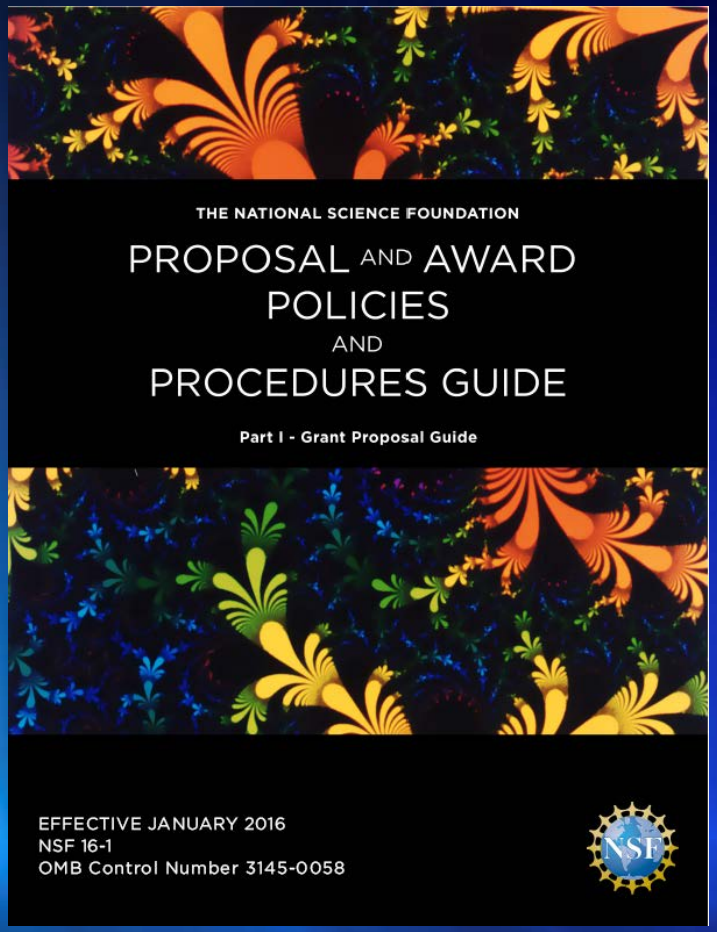
What is the Proposal & Award Policies & Procedures Guide?

Part II is NSF's award and administration guidelines -- the documents used to guide, manage, and monitor the award and administration of grants and cooperative agreements made by NSF.



Grant Proposal Guide

- Provides guidance for preparation and submission of proposals to NSF
- Describes process – and criteria – by which proposals will be reviewed
- Outlines reasons why a proposal may not be accepted or may be returned without review
- Describes process for withdrawals, returns, and declinations
- Describes the NSF Reconsideration Process



Types of Funding Opportunities

Program Descriptions

Proposals for a **Program Description** must follow the instructions in the GPG.

Program Announcements

Proposals for a **Program Announcement** must follow the instructions in the GPG.

Program Solicitations

Proposals must follow the instructions in the **Program Solicitation**; the instructions in the GPG apply unless otherwise stated in the solicitation.

Dear Colleague Letters

Dear Colleague Letters are notifications of opportunities or special competitions for supplements to existing NSF awards.

Navigating a Program Description

Division of Mathematical Sciences

Algebra and Number Theory

CONTACTS

Name	Email	Phone	Room
Tie Luo	tluo@nsf.gov	(703) 292-8448	1025 N
J. Matthew Douglass	mdouglas@nsf.gov	(703) 292-2467	1025 N
Andrew Pollington	adpollin@nsf.gov	(703) 292-4878	1025 N
Victoria Powers	vpowers@nsf.gov	(703) 292-2113	1025 N

PROGRAM GUIDELINES

Apply to PD 10-1264 as follows:

For full proposals submitted via FastLane: standard *Grant Proposal Guide* proposal preparation guidelines apply.
For full proposals submitted via Grants.gov: the *NSF Grants.gov Application Guide; A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines* applies. (Note: The *NSF Grants.gov Application Guide* is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)

Important Information for Proposers

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 15-1), is effective for proposals submitted, or due, on or after December 26, 2014. The PAPPG is consistent with, and, implements the new Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) (2 CFR § 200). Please be advised that the guidelines contained in NSF 15-1 apply to proposals submitted in response to this funding opportunity.

DUE DATES

Full Proposal Target Date: October 9, 2015
Second Friday of October
Second Friday in October, Annually Thereafter

Research proposals (as opposed to conference proposals) are expected to be submitted by the target date. An extension may be granted under unusual extenuating circumstances, provided that approval is obtained from the cognizant Program Director prior to the target date.

SYNOPSIS

The Algebra and Number Theory program supports research in algebra, algebraic and arithmetic geometry, number theory, and representation theory.

Conferences

Principal Investigators should carefully read the program solicitation "Conferences and Workshops in the Mathematical Sciences" (link below) to obtain important information regarding the substance of proposals for conferences, workshops, summer/winter schools, and similar activities.

For conference proposals with budgets not exceeding $50,000, which in accordance with NSF policy can be reviewed internally at NSF, the following target dates are in effect: For an event that will take place at some time prior to October 1 during a given year, the proposal should be submitted in October of the previous year. For an event that will occur in the period October 1 through December 31 of a given year, the proposal should be submitted in May of that year. A conference proposal with a budget request exceeding $50,000 should be submitted roughly seven months before the event is scheduled to take place, in order to allow time for external review.

RELATED PROGRAMS

Focused Research Groups in the Mathematical Sciences
Research Training Groups in the Mathematical Sciences
Faculty Early Career Development Program
Mathematical Sciences Postdoctoral Research Fellowships
NSF Graduate Research Fellowship Program

RELATED URLS

Conferences and Workshops in the Mathematical Sciences

THIS PROGRAM IS PART OF

Disciplinary Research Programs

What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)

Map of Recent Awards Made Through This Program

News

Navigating a Program Solicitation

Enhancing Access to the Radio Spectrum (EARS)

PROGRAM SOLICITATION
NSF 15-550

REPLACES DOCUMENT(S):
NSF 14-529

National Science Foundation

Directorate for Mathematical & Physical Sciences
Division of Astronomical Sciences

Directorate for Engineering
Division of Electrical, Communications and Cyber Systems

Directorate for Computer & Information Science & Engineering
Division of Computer and Network Systems

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

June 02, 2015

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 15-1), which is effective for proposals submitted, or due, on or after December 26, 2014. The PAPPG is consistent with, and, implements the new Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) (2 CFR § 200).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Enhancing Access to the Radio Spectrum (EARS)
Opportunities for interdisciplinary research that increases the efficiency of the radio spectrum, expanding the access to wireless-enabled services for all Americans.

Synopsis of Program:

The National Science Foundation's Directorates for Mathematical and Physical Sciences (MPS), Engineering (ENG), and Computer and Information Science and Engineering (CISE) are coordinating efforts to identify bold new concepts with the potential to

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 20 to 25

Each proposal may request up to $750,000 in total funding over a period of up to three years.

Anticipated Funding Amount: $15,000,000

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI:

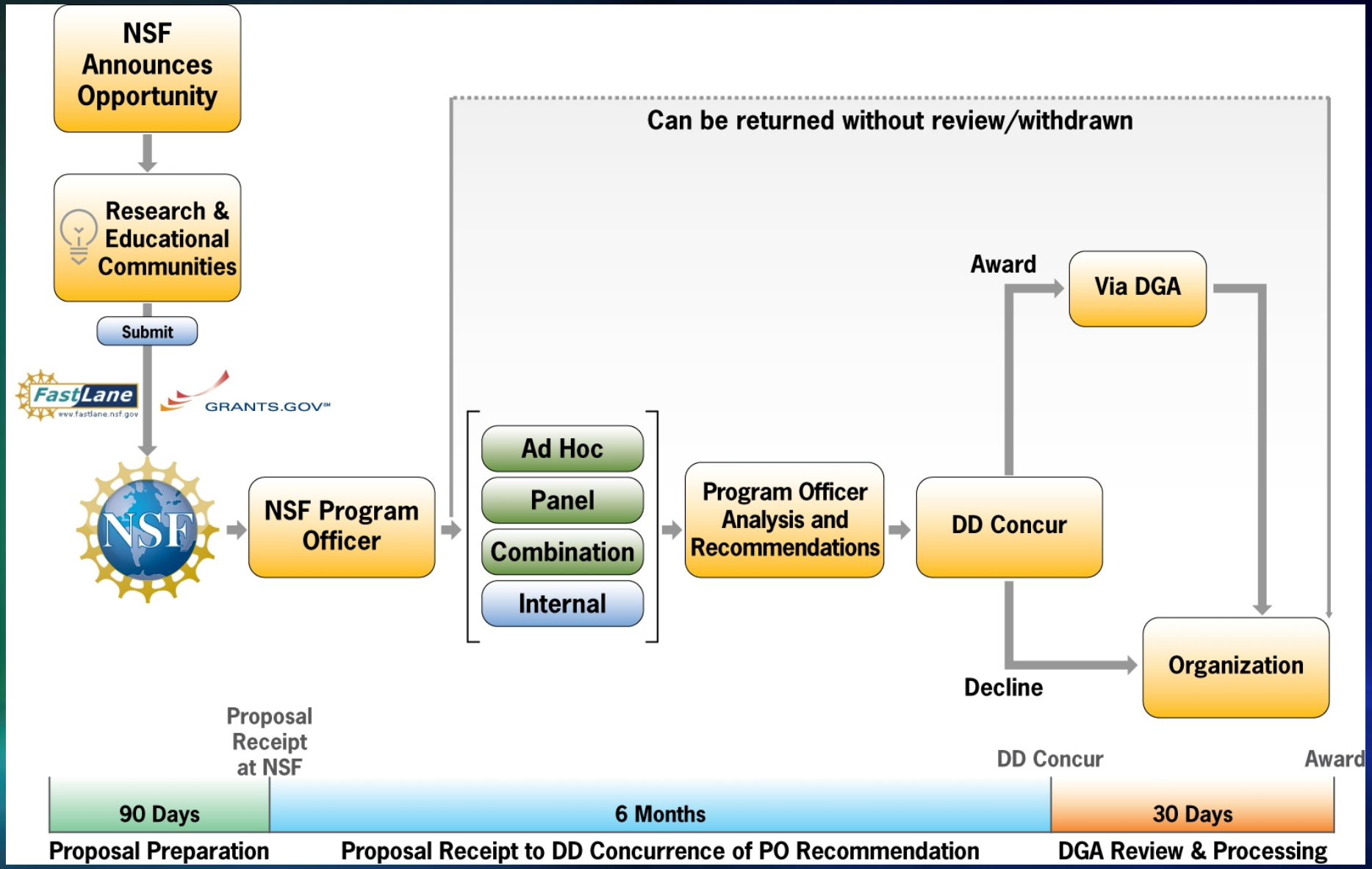
A proposer may be a Principal Investigator (PI) or co-PI on up to two proposals.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**
  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete

NSF Proposal & Award Process Timeline



Types of Proposal Submissions

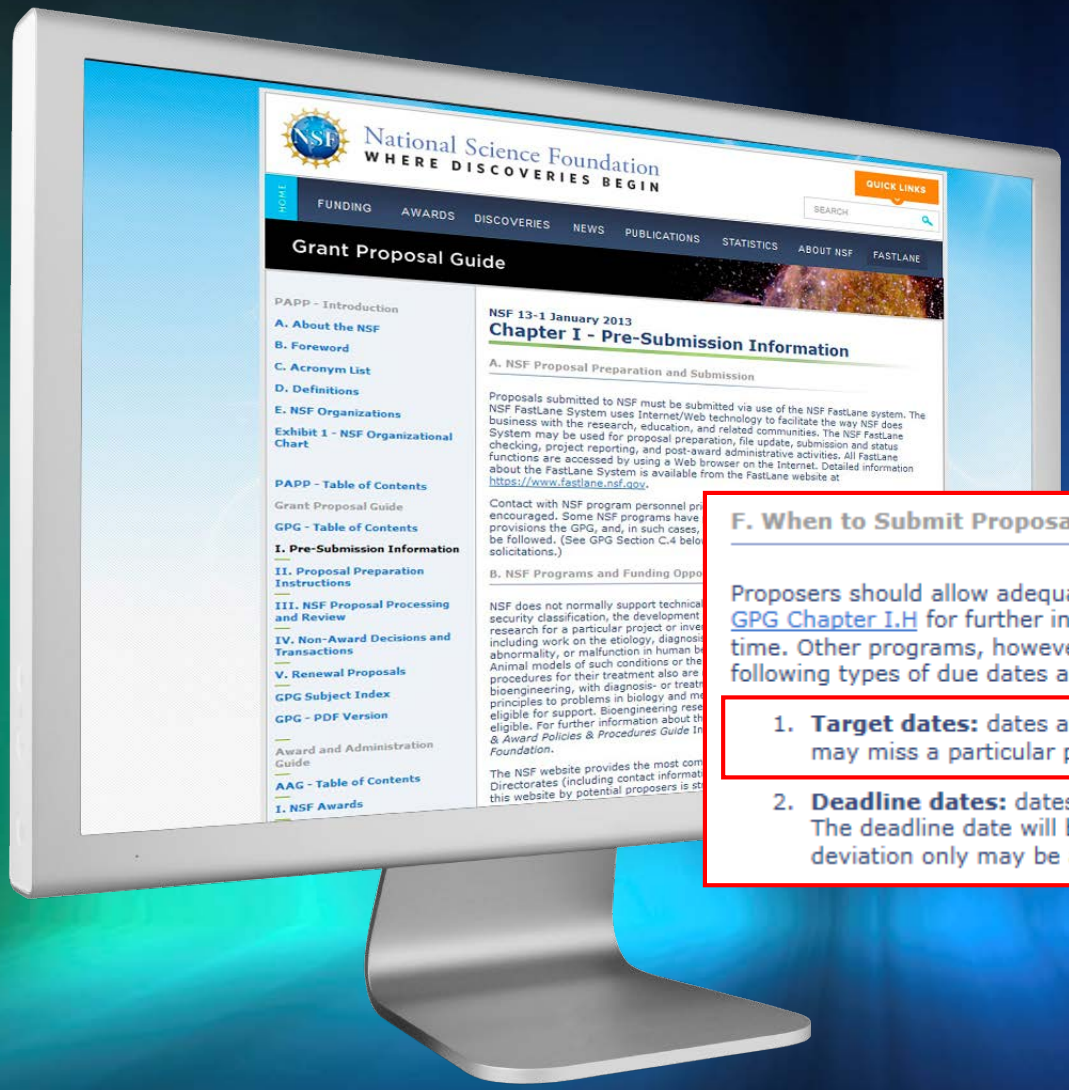
No Deadlines – Proposals may be submitted at any time

F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see GPG Chapter I.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. **Target dates:** dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.
2. **Deadline dates:** dates after which proposals be returned without review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with GPG Chapter II.A.

Types of Proposal Submissions



Target Dates –
Talk to the Program Office if you think you might miss the date

F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see GPG Chapter I.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

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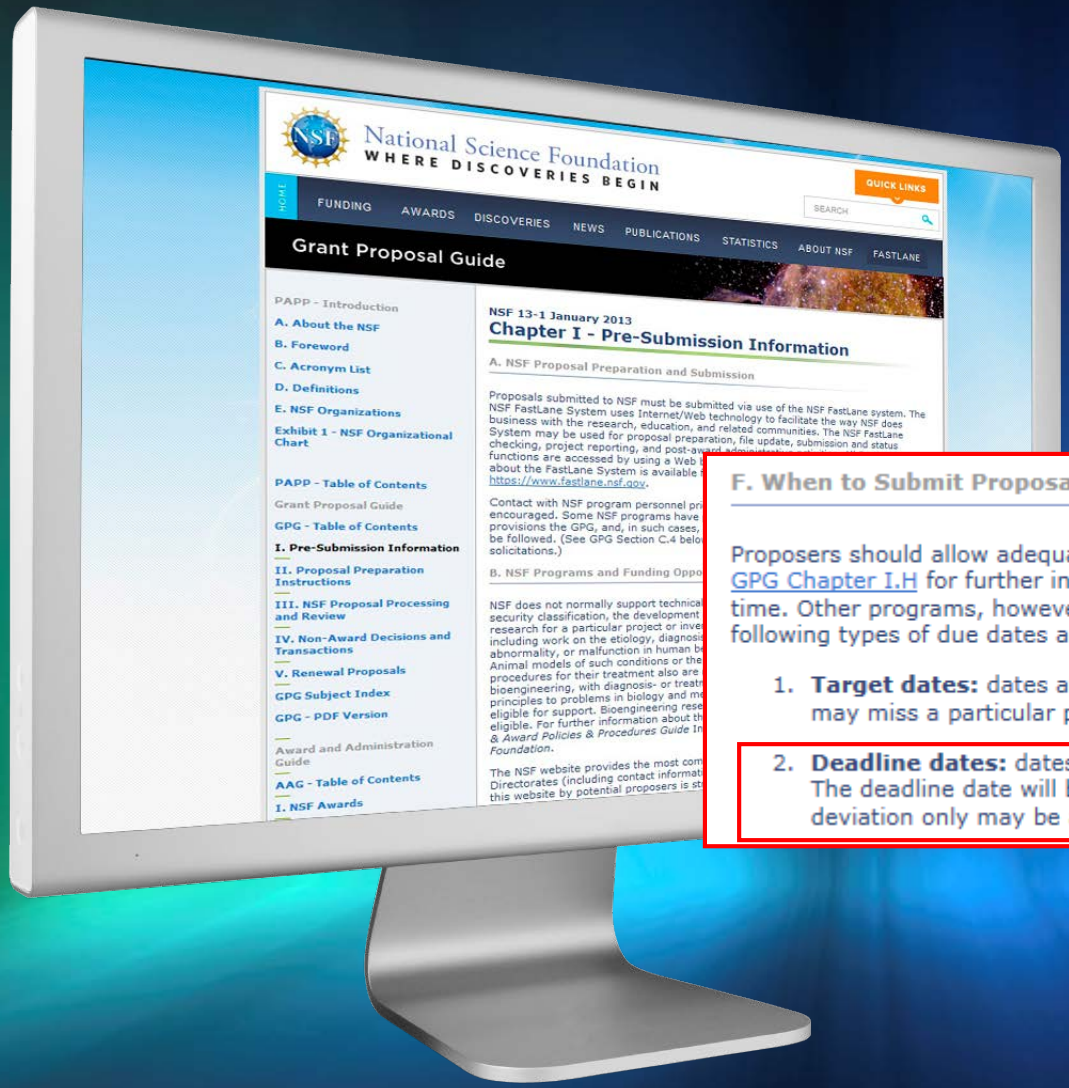
Types of Proposal Submissions



Deadline Dates – Proposals will not be accepted after this date and time (5 pm submitter's local time)

F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see GPG Chapter I.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

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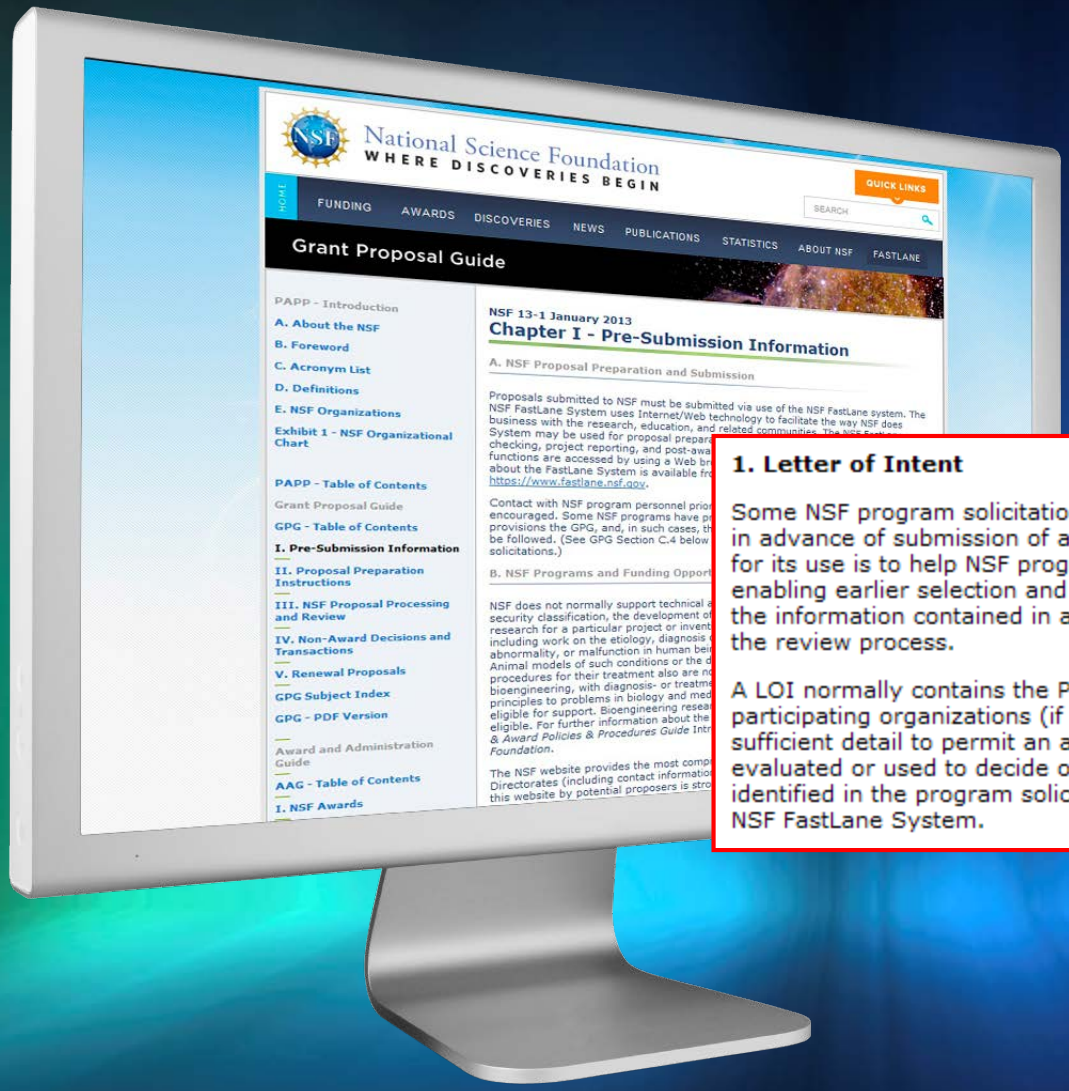
Types of Proposal Submissions

Submission Windows – Closing date converts to a deadline date

3. **Submission windows:** designated periods of time during which proposals will be accepted for review by NSF. It is NSF's policy that the end date of a submission window converts to, and is subject to, the same policies as a deadline date.

Types of Proposal Submissions



Letters of Intent –
Enables better management of reviewers and panelists

1. Letter of Intent

Some NSF program solicitations require or request submission of a letter of intent (LOI) in advance of submission of a full proposal. A LOI is not binding. The predominant reason for its use is to help NSF program staff to gauge the size and range of the competition, enabling earlier selection and better management of reviewers and panelists. In addition, the information contained in a LOI is used to help avoid potential conflicts of interest in the review process.

A LOI normally contains the PI's and co-PI's names, a proposed title, a list of possible participating organizations (if applicable), and a synopsis that describes the work in sufficient detail to permit an appropriate selection of reviewers. A LOI is not externally evaluated or used to decide on funding. The requirement to submit a LOI will be identified in the program solicitation, and such letters are submitted electronically via the NSF FastLane System.

Types of Proposal Submissions

Preliminary Proposals – Sometimes required, sometimes optional

2. Preliminary Proposal

Some NSF program solicitations require or request submission of a preliminary proposal in advance of submission of a full proposal. The two predominant reasons for requiring submission of a preliminary proposal are to:

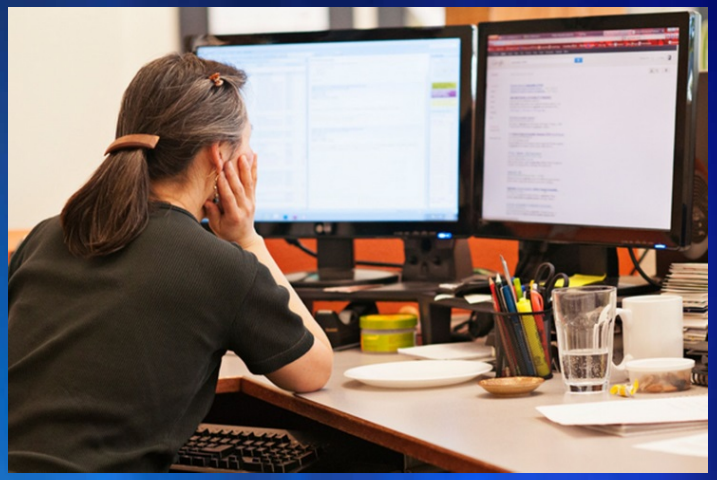
- reduce the proposers' unnecessary effort in proposal preparation when the chance of success is very small. This is particularly true of exploratory initiatives where the community senses that a major new direction is being identified, or competitions that will result in a small number of actual awards; and
- increase the overall quality of the full submission.

Types of Proposals

- RAPID
- EAGER
- Research (Other than RAPID or EAGER_
- Ideas Lab
- Equipment
- Conference
- International Travel
- Fellowship
- Facility/Center

Questions on Funding Opportunities?

Contact your NSF program officer



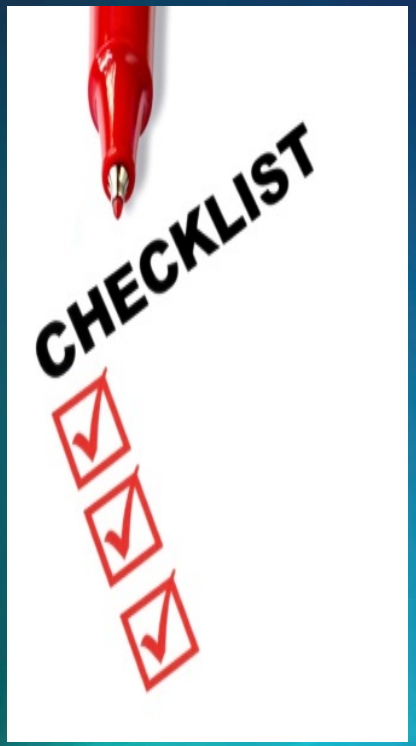
Work with your organization's sponsored projects office

Ask early, ask often

policy@nsf.gov

Things to Consider Before Applying…

Five Key Elements



1. Great idea
2. Fit with current research expertise and career development plans
3. Ability to devise a strategy including benchmarks, timelines, and metrics
4. Adequate resources to accomplish your project
5. Assessment Plan

Developing your Proposal

Key Questions for Prospective Investigators

- What has already been done?
- What do you intend to do?
- Why is the work important?
- How is the work unique or cutting edge?
- How are you going to do the work?
- Do you have the right team?

Proposal Development Strategies:

What Do You Need Besides $???

- Prepare to do the project
  - Realistically assess needs
  - Determine available resources
  - Develop preliminary data
  - Present to colleagues/mentors/students
- Determine possible funding sources (NSF may not be the right or the only one)

Proposal Development Strategies:

What details should you glean from the solicitation?

- Overall scope and mission
- Instructions (deviations from the GPG)
- How your proposed project fits with the solicitation
- Review procedures and criteria
- Deadlines

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

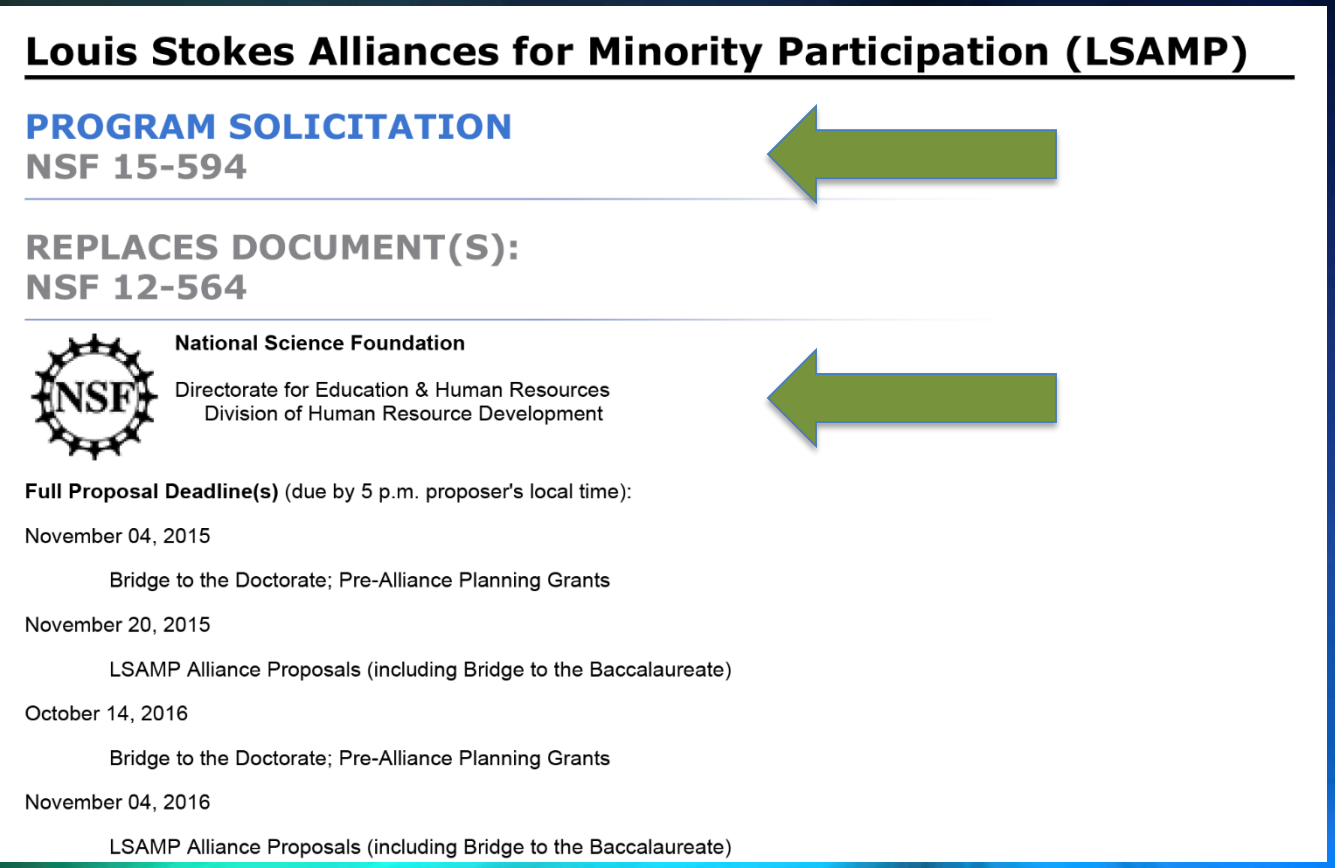
  e.g. institutional Animal Care and Use Committee (IACUC) approvals

So You Want to Write a Proposal…

What to Look for in a Program Announcement or Solicitation

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

Sample Cover Page of a Solicitation



Louis Stokes Alliances for Minority Participation (LSAMP)

PROGRAM SOLICITATION
NSF 15-594

REPLACES DOCUMENT(S):
NSF 12-564

National Science Foundation

Directorate for Education & Human Resources
Division of Human Resource Development

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

November 04, 2015

Bridge to the Doctorate; Pre-Alliance Planning Grants

November 20, 2015

LSAMP Alliance Proposals (including Bridge to the Baccalaureate)

October 14, 2016

Bridge to the Doctorate; Pre-Alliance Planning Grants

November 04, 2016

LSAMP Alliance Proposals (including Bridge to the Baccalaureate)

Program Solicitation Number

NSF Directorates and Offices providing funding for this opportunity

Solicitation — Award Information

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 37 to 38

37 in FY2016 and 38 in FY2017; The anticipated number of new awards to be made across fiscal years 2016 and 2017 is 75. Award sizes and durations vary for the different LSAMP award types.

The estimated number of awards by type is as follows:

Alliances. 19 alliance grants in FY2016 and 18 in FY2017.

Awards for alliances will be made as Continuing Grants. The progress and plans of each alliance will be reviewed annually by NSF, prior to approving continued NSF support. Alliances that are not meeting the expectations set forth in this solicitation may have their level of funding reduced or may be terminated.

Bridge to the Doctorate. 10 BD grants in FY2016 and 10 in FY2017.

Pre-Alliance Planning Grants. 8 planning grants in FY2016 and 10 in FY2017.

Anticipated Funding Amount: $45,600,000

Annually for new **and** continuing awards

Approximately $32 million, pending availability of funds, for new awards in FY2016 to support Alliances (including Bridge to the Baccalaureate), Bridge to the Doctorate, Pre-Alliance Planning grants, and other funding opportunities.

Expected number of awards funded by the program per year

Expected funds available to the program per year

Sample Cover Page — Eligibility

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

Who May Serve as PI:

The Principal Investigator (PI) for **Alliances (including B2B)** should be the President, Chancellor, or Provost of the lead institution. A full justification is needed for a PI designation in variance with this requirement. Co-principal investigators (Co-PIs) from partner institutions may be designated, as appropriate, for the project. At least one of the Co-PIs must have expertise in social science or education research for proposals from alliances funded more than 10 years.

The Principal Investigator for a **Bridge to the Doctorate** activity should be on the leadership team at the lead institution and listed as one of the Co-PIs of the alliance. One or more of the listed Co-PIs must be from the host institution (site of the BD activity).

The Principal Investigator for a **Pre-Alliance Planning** grant should be the key personnel that will be responsible for organizing and implementing the planning activities.

Limit on Number of Proposals per Organization:

Alliances (including B2B): Only one proposal may be submitted by an eligible (lead) institution. Alliances may hold only one active award at a time, not including BD awards. Institutions partnering in an alliance may not be a formal partner in more than one alliance at the same time. See Section II (Program Description 1. Alliances, Special Conditions for Alliances funded more than 10 years) for an exception.

Bridge to the Doctorate (BD): Only one proposal for BD support may be submitted by an eligible lead institution of an alliance. See Section II, Program Description 2. Bridge to the Doctorate, for eligibility criteria.

Pre-Alliance Planning: Only one proposal may be submitted by an eligible institution.

Limit on Number of Proposals per PI or Co-PI:

Alliances (including B2B) and **Pre-Alliance Planning:** 1

Bridge to the Doctorate (BD): 1

Exception: Alliances funded more than 10 years are allowed to submit an alliance proposal as well as a BD proposal.

Eligibility information for institutions/PIs submitting proposals

Parts of a Proposal

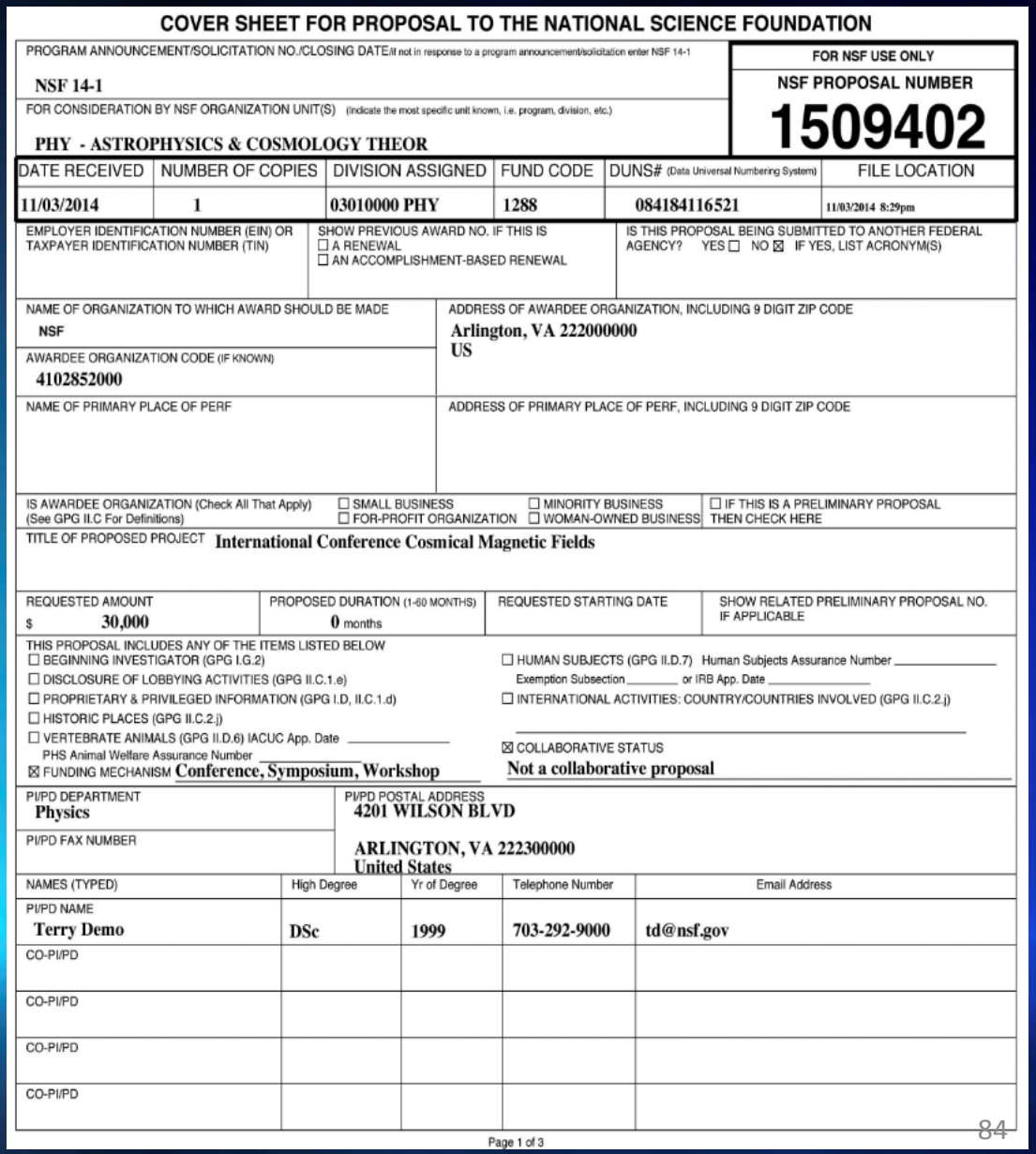
NSF PROPOSAL INGREDIENTS

- ❑ Cover Page
- ❑ Project Summary (1 page)
- ❑ Table of Contents (auto-generated)
- ❑ Project Description (15 pages)
- ❑ References Cited
- ❑ Biographical Sketches (for all senior personnel)
- ❑ Budget
- ❑ Current and Pending Support
- ❑ Facilities, Equipment, and Other Resources
- ❑ Post-doctoral mentoring plan (if applicable)
- ❑ Data management plan
- ❑ Supplementary Documentation (if applicable)

Parts of an NSF Proposal

Cover Sheet

Many of the boxes on the cover sheet are electronically prefilled as part of the FastLane login process.



COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION

PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE (If not in response to a program announcement/solicitation enter NSF 14-1)
NSF 14-1

FOR NSF USE ONLY
NSF PROPOSAL NUMBER
1509402

FOR CONSIDERATION BY NSF ORGANIZATION UNIT(S) (Indicate the most specific unit known, i.e. program, division, etc.)
PHY - ASTROPHYSICS & COSMOLOGY THEOR

DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS# (Data Universal Numbering System)	FILE LOCATION
11/03/2014	1	03010000 PHY	1288	084184116521	11/03/2014 8:29pm

EMPLOYER IDENTIFICATION NUMBER (EIN) OR TAXPAYER IDENTIFICATION NUMBER (TIN)

SHOW PREVIOUS AWARD NO. IF THIS IS
☐ A RENEWAL
☐ AN ACCOMPLISHMENT-BASED RENEWAL

IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? YES ☐ NO ☒ IF YES, LIST ACRONYM(S)

NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE
NSF

ADDRESS OF AWARDEE ORGANIZATION, INCLUDING 9 DIGIT ZIP CODE
Arlington, VA 222000000
US

AWARDEE ORGANIZATION CODE (IF KNOWN)
4102852000

NAME OF PRIMARY PLACE OF PERF

ADDRESS OF PRIMARY PLACE OF PERF, INCLUDING 9 DIGIT ZIP CODE

IS AWARDEE ORGANIZATION (Check All That Apply) (See GPG II.C For Definitions)
☐ SMALL BUSINESS ☐ MINORITY BUSINESS ☐ IF THIS IS A PRELIMINARY PROPOSAL
☐ FOR-PROFIT ORGANIZATION ☐ WOMAN-OWNED BUSINESS THEN CHECK HERE

TITLE OF PROPOSED PROJECT International Conference Cosmical Magnetic Fields

REQUESTED AMOUNT	PROPOSED DURATION (1-60 MONTHS)	REQUESTED STARTING DATE	SHOW RELATED PRELIMINARY PROPOSAL NO. IF APPLICABLE
$ 30,000	0 months		

THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW
☐ BEGINNING INVESTIGATOR (GPG I.G.2)
☐ DISCLOSURE OF LOBBYING ACTIVITIES (GPG II.C.1.e)
☐ PROPRIETARY & PRIVILEGED INFORMATION (GPG I.D, II.C.1.d)
☐ HISTORIC PLACES (GPG II.C.2.j)
☐ VERTEBRATE ANIMALS (GPG II.D.6) IACUC App. Date
PHS Animal Welfare Assurance Number
☒ FUNDING MECHANISM Conference, Symposium, Workshop
☐ HUMAN SUBJECTS (GPG II.D.7) Human Subjects Assurance Number
Exemption Subsection or IRB App. Date
☐ INTERNATIONAL ACTIVITIES: COUNTRY/COUNTRIES INVOLVED (GPG II.C.2.j)
☒ COLLABORATIVE STATUS
Not a collaborative proposal

PI/PD DEPARTMENT
Physics

PI/PD POSTAL ADDRESS
4201 WILSON BLVD
ARLINGTON, VA 222300000
United States

PI/PD FAX NUMBER

NAMES (TYPED)	High Degree	Yr of Degree	Telephone Number	Email Address
PI/PD NAME Terry Demo	DSc	1999	703-292-9000	td@nsf.gov
CO-PI/PD				
CO-PI/PD				
CO-PI/PD				
CO-PI/PD				

Page 1 of 3

Parts of an NSF Proposal

Project Summary Requirements:

Overview

Statement on Intellectual Merit

Statement of Broader Impacts

Special characters (e.g., formulas) may be uploaded as a PDF

Project Description Addresses:

What you want to do

Why you want to do it

How you plan to do it

How you measure success

What are the benefits

Results from prior NSF support

Parts of an NSF Proposal

A separate section,
***Broader Impacts of the Proposal Work*,**
must be completed

Budgetary Guidelines

Amounts should be:

- **Realistic and reasonable**
- **Well-justified and should establish need**
- **Consistent w/program guidelines in solicitation, GPG, and in Award and Administration Guide (AAG)**

Eligible costs consist of:

- **Personnel**
- **Equipment**
- **Travel**
- **Participant support**
- **Other** (e.g., subawards, consultant and computer services, publications costs)
- **Indirect costs** (as appropriate)

NSF Cost Sharing Policy

Inclusion of ***voluntary committed*** cost sharing is <u>prohibited</u> in the budget of solicited & unsolicited proposals.

Organizations may, at their own discretion, continue to contribute voluntary uncommitted cost sharing to NSF-sponsored projects as part of the section for Facilities, Equipment, and Other Resources.

Sections of an NSF Proposal

Facilities, Equipment, and Other Resources

Used to assess the adequacy of the organizational resources available to perform the effort proposed. Should not contain quantifiable financial information.

Current and Pending Support

This section of the proposal requires reporting on all current and pending support for ongoing projects and proposals from any funding source.

Special Information and Supplementary Documentation

Letters of support versus letters of commitment

Postdoctoral mentoring plans

Data management plans

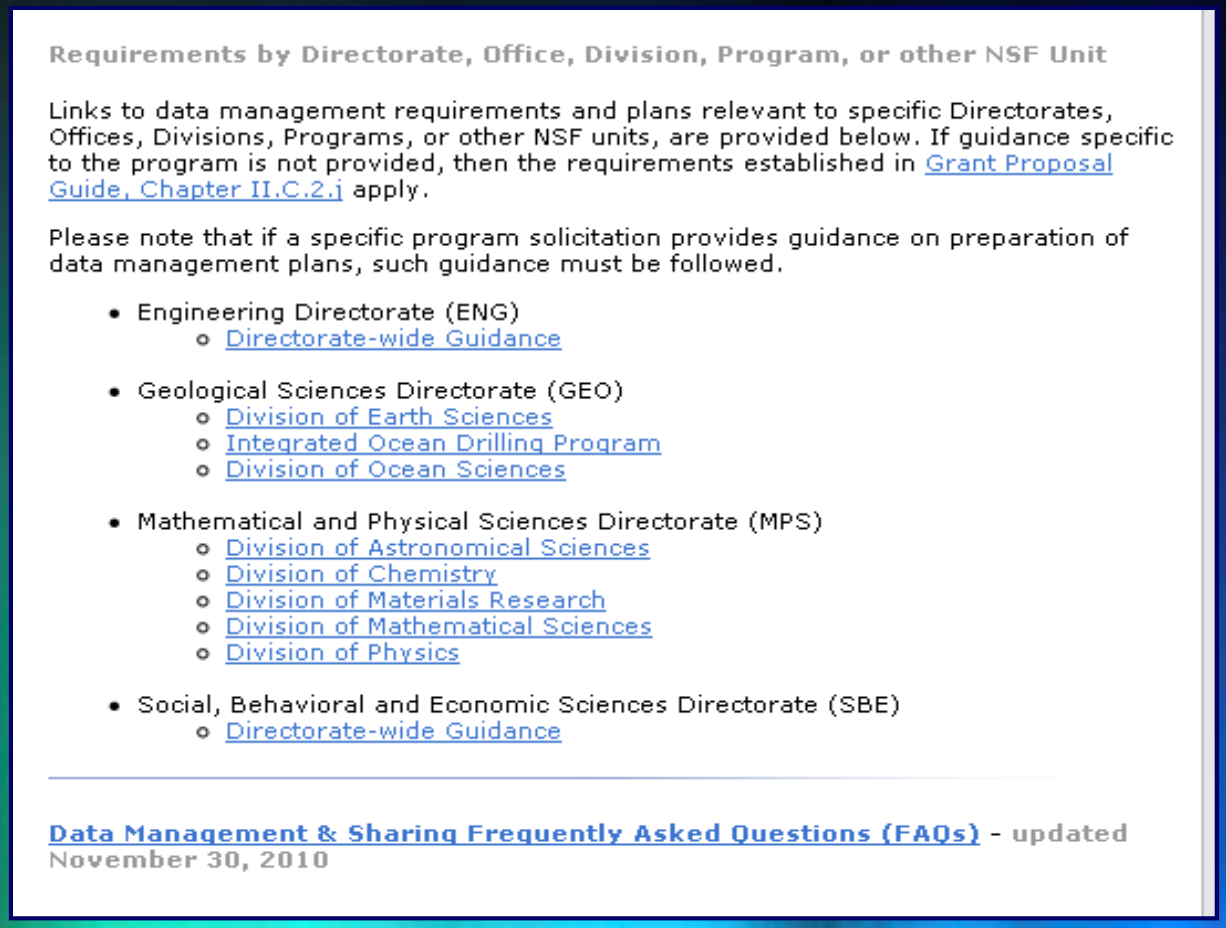
You should alert NSF officials to unusual circumstances that require special handling (i.e. proprietary information)

Solicitations may specify what is and is not allowed to be submitted

Mentoring for Postdoctoral Researchers

- Explicit description of the mentoring activities
- Must include a mentoring plan as a supplementary document (maximum one-page)
- For collaborative proposals, lead organization must submit a single mentoring plan for all postdoctoral researchers supported under the entire project.

Data Management Plan Requirements



Requirements by Directorate, Office, Division, Program, or other NSF Unit

Links to data management requirements and plans relevant to specific Directorates, Offices, Divisions, Programs, or other NSF units, are provided below. If guidance specific to the program is not provided, then the requirements established in Grant Proposal Guide, Chapter II.C.2.j apply.

Please note that if a specific program solicitation provides guidance on preparation of data management plans, such guidance must be followed.

- Engineering Directorate (ENG)
  - Directorate-wide Guidance
- Geological Sciences Directorate (GEO)
  - Division of Earth Sciences
  - Integrated Ocean Drilling Program
  - Division of Ocean Sciences
- Mathematical and Physical Sciences Directorate (MPS)
  - Division of Astronomical Sciences
  - Division of Chemistry
  - Division of Materials Research
  - Division of Mathematical Sciences
  - Division of Physics
- Social, Behavioral and Economic Sciences Directorate (SBE)
  - Directorate-wide Guidance

Data Management & Sharing Frequently Asked Questions (FAQs) - updated November 30, 2010

Requirements may vary by Directorate or Office

nsf.gov/bfa/dias/policy/dmp.jsp

Questions?

The Merit Review Process

Video

http://www.nsf.gov/news/mmg/mmg_disp.jsp?med_id=76467

NSF's Proposal & Award Process Timeline

Black Box?

MERIT REVIEW CRITERIA

Intellectual Merit:

the potential to advance knowledge

Broader Impacts:

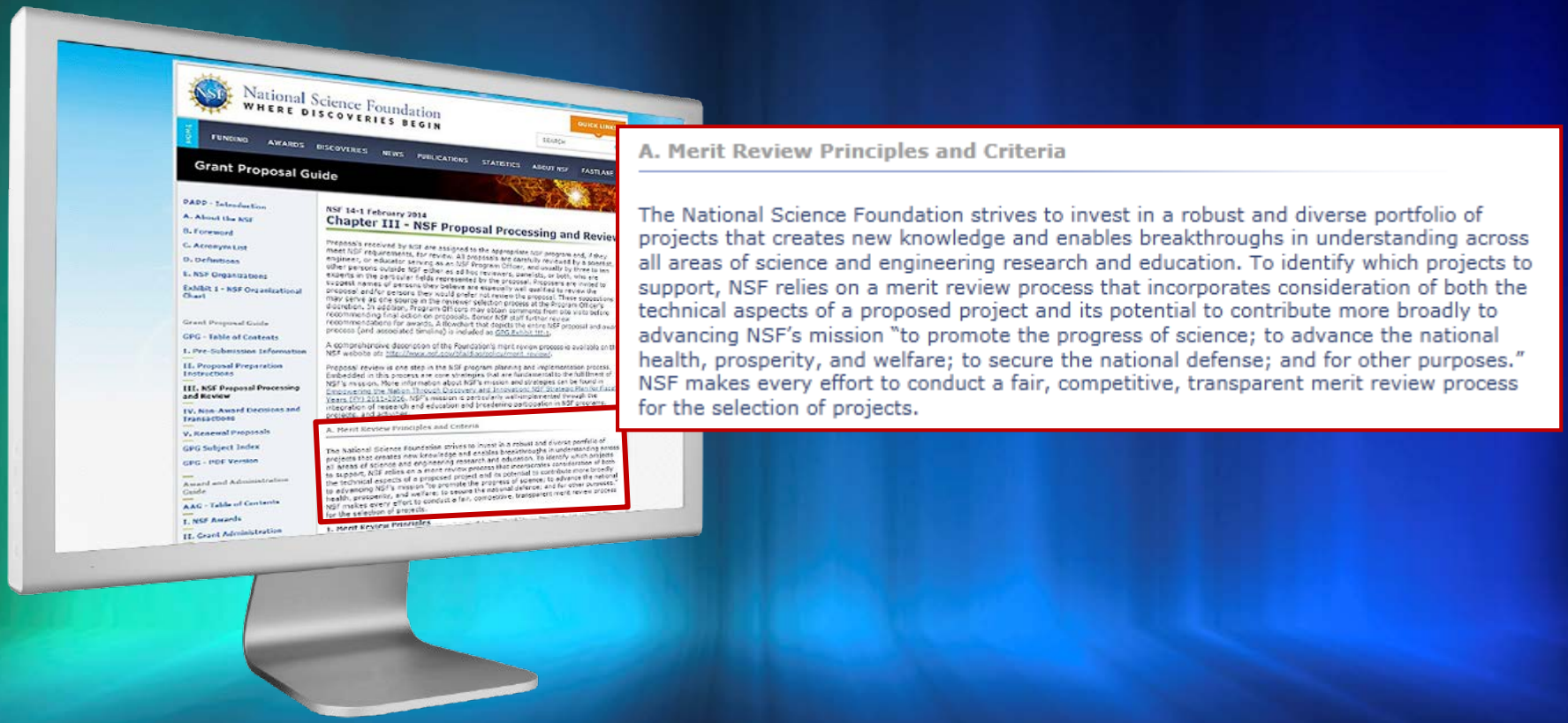
the potential to benefit society and contribute to the achievement of specific, desired societal outcomes

When Preparing Proposals

- Read the funding opportunity; ask a Program Officer for clarifications if needed
- Address all the proposal review criteria
- Understand the NSF merit review process
- Avoid omissions and mistakes
- Check your proposal to verify that it is complete!
- Double Check that the proposal NSF receives is the one you intended to send

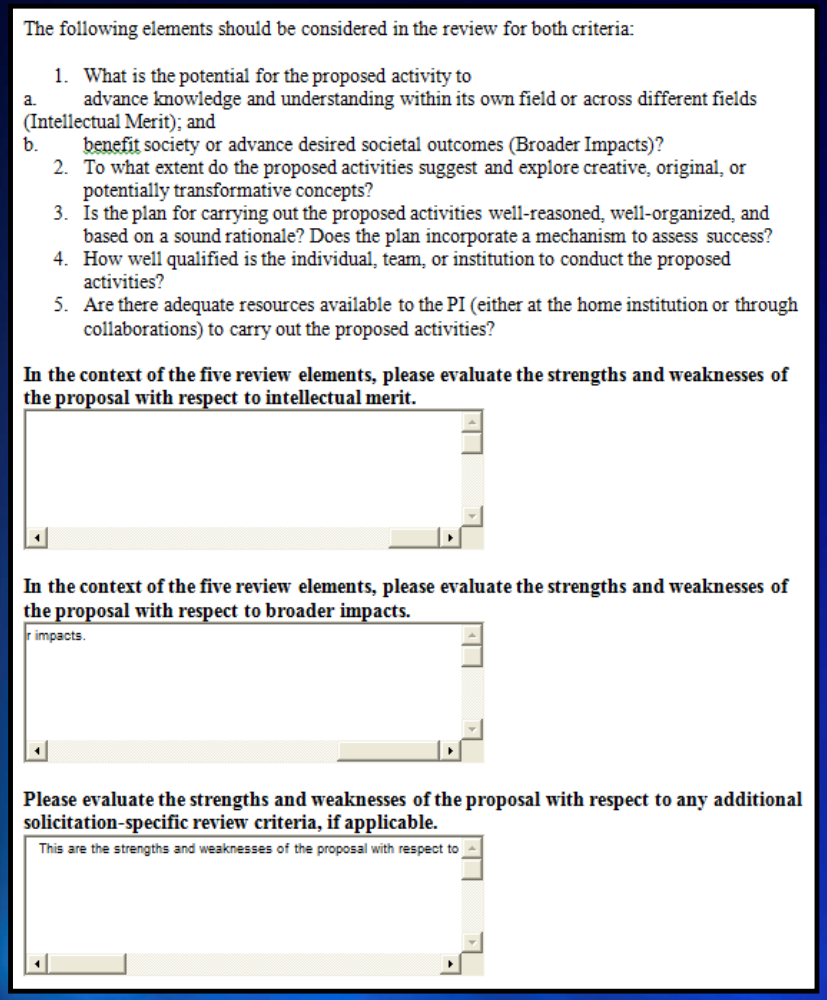
Merit Review Guiding Principles & Criteria

The Grant Proposal Guide (GPG) contains a description of the Merit Review Criteria



Review Format in FastLane

- Reviewers provide feedback to NSF based on the Review Criteria and the Review Elements
- Review Criteria and Elements are available as reviewers provide feedback



The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
a. advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
b. benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or institution to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?

In the context of the five review elements, please evaluate the strengths and weaknesses of the proposal with respect to intellectual merit.

In the context of the five review elements, please evaluate the strengths and weaknesses of the proposal with respect to broader impacts.

r impacts.

Please evaluate the strengths and weaknesses of the proposal with respect to any additional solicitation-specific review criteria, if applicable.

This are the strengths and weaknesses of the proposal with respect to

Over 2,000 proposals were RWR in FY 2014

6 most common reasons why

1. Not responsive to the GPG or program announcement/solicitation (960)
2. Does not meet an announced proposal deadline date and time (171)
3. It is inappropriate for NSF funding (74)
4. Duplicative or substantially similar to a proposal already under consideration (66)
5. Not substantively revised from a proposal that was previously reviewed and declined (37)
6. Duplicates another proposal that was already awarded (24)

Types of Reviews

- Ad Hoc
  - Proposals are sent out for review
- Panel
  - Face-to-Face sessions conducted with reviewers. Held at NSF, or virtually via assistive technologies such as WebEx or BlueJeans
- Combination
  - Some proposals may undergo supplemental ad hoc reviews before or after a panel review
- Internal
  - Reviewed by NSF Program Officers

How are Reviewers Selected?

- **Three or more external reviewers per proposal are selected**
- **Types of Reviewers Recruited**
  - Specific content expertise
  - General science or education expertise
- **Sources of Reviewers**
  - Former reviewers
  - Program Officer's knowledge of the research area
  - References listed in proposal
  - Recent professional society programs
  - S&E journal articles related to the proposal
  - Reviewer recommendations included in proposal

What is the Role of the Reviewer?

- **Review all proposal material and consider**
  - The two NSF merit review criteria and any program specific criteria
  - Adequacy of the proposed project plan- including the budget, resources, and timeline
  - Priorities of the scientific field and of the NSF program
  - Potential risks and benefits of the project
- **Make independent written comments on the quality of the proposal content**

What is the Role of the Review Panel?

- Discuss the merits of the proposal with the other panelists
- Write a summary based on that discussion
- Provide some indication of the relative merits of different proposals considered

Why Serve on an NSF Panel?

- Gain first-hand knowledge of the merit review process
- Learn about common problems with proposals

- Discover proposal writing strategies
- Meet colleagues and NSF Program Officers managing the programs related to your research

How Do I Become a Reviewer?

Contact the NSF Program Officer(s) of the program(s) that fit your expertise

- Introduce yourself as a strong potential reviewer based on your research experience
- Offer to send a 2-page CV with current contact information
- Stay in touch if you don't hear back right away

Conflicts of Interest (COI)

What is a COI?

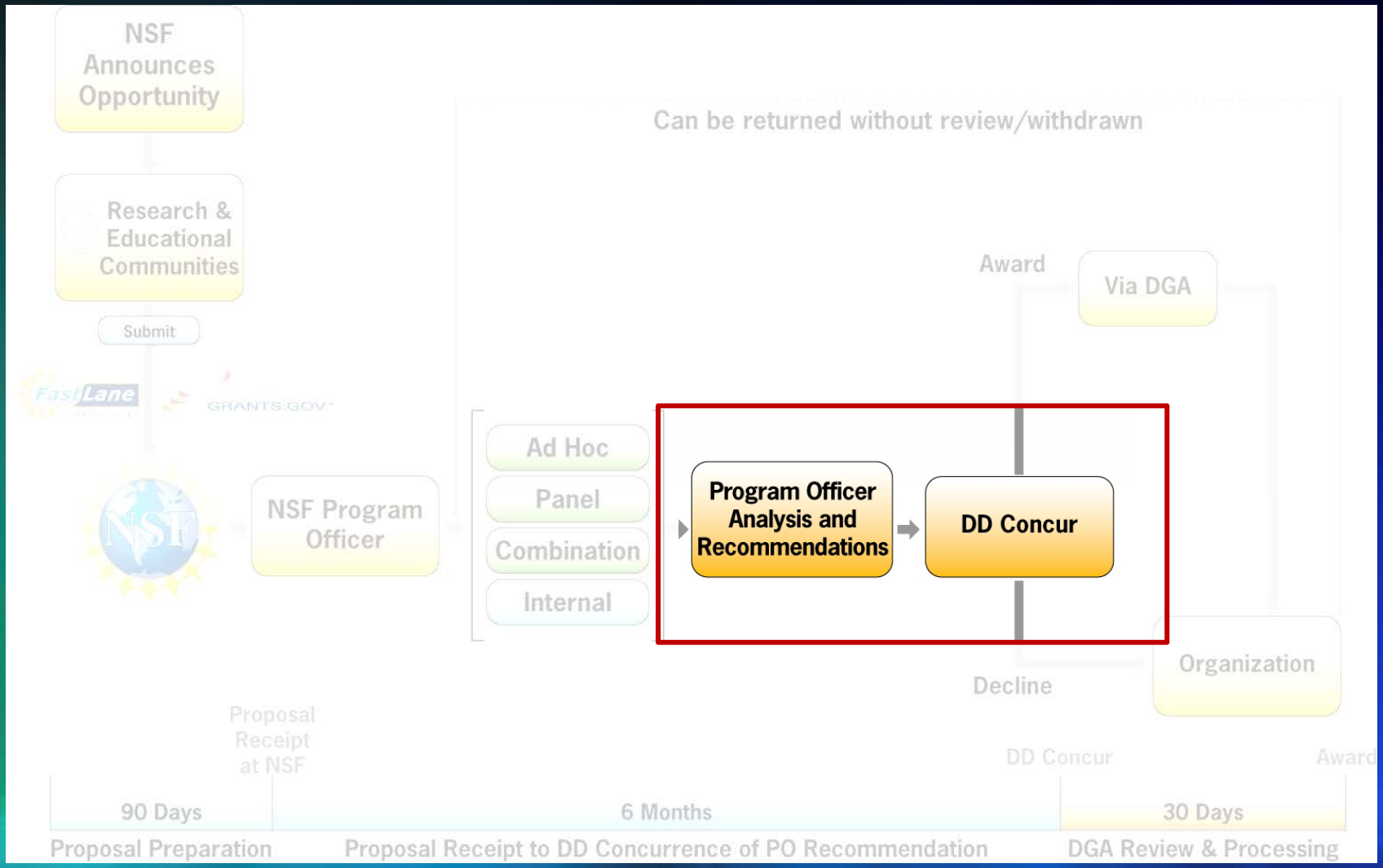
How we address conflict of interest

NSF checks and avoids COIs in the review process

Institutional COIs

Personal COIs

Proposal Review and Processing



Funding Decisions
Reviews are Advisory to NSF

- **The merit review process provides:**
  - Review of the proposal and a recommendation on funding.
  - Feedback (strengths and weaknesses) to the proposers.
- **NSF Program Officers make funding recommendations guided by program goals and portfolio considerations.**
- **NSF Division Directors either concur or reject the Program Officers' funding recommendations.**

Feedback from Merit Review

- Reviewer ratings (such as: E, V, G, F, P)
- Analysis of how well proposal addresses both review criteria: Intellectual Merit and Broader Impacts
- Proposal strengths and weaknesses
- Reasons for decline (if applicable)
- If you have any questions, contact the cognizant Program Officer.

Documentation from Merit Review

- Verbatim copies of individual reviews, excluding reviewer identities
- Panel summary or summaries (if panel review was used)
- Context statement (usually)

- Program Officer to Principal Investigator comments (formal or informal, written, email or verbal) as necessary to explain a decision

Examples of Reasons for Declines

- Not considered competitive based on merit review criteria and program office concurrence
- Flaws or issues identified by the Program Officer
- Funds were not adequate to fund all competitive proposals

Revisions and Resubmissions

- Do the reviewers and the NSF Program Officer identify significant strengths in your proposal?
- Can you address the identified weaknesses?
- Can the proposal be **significantly** revised?
- Are there other ways your colleagues or you think a resubmission can be strengthened?

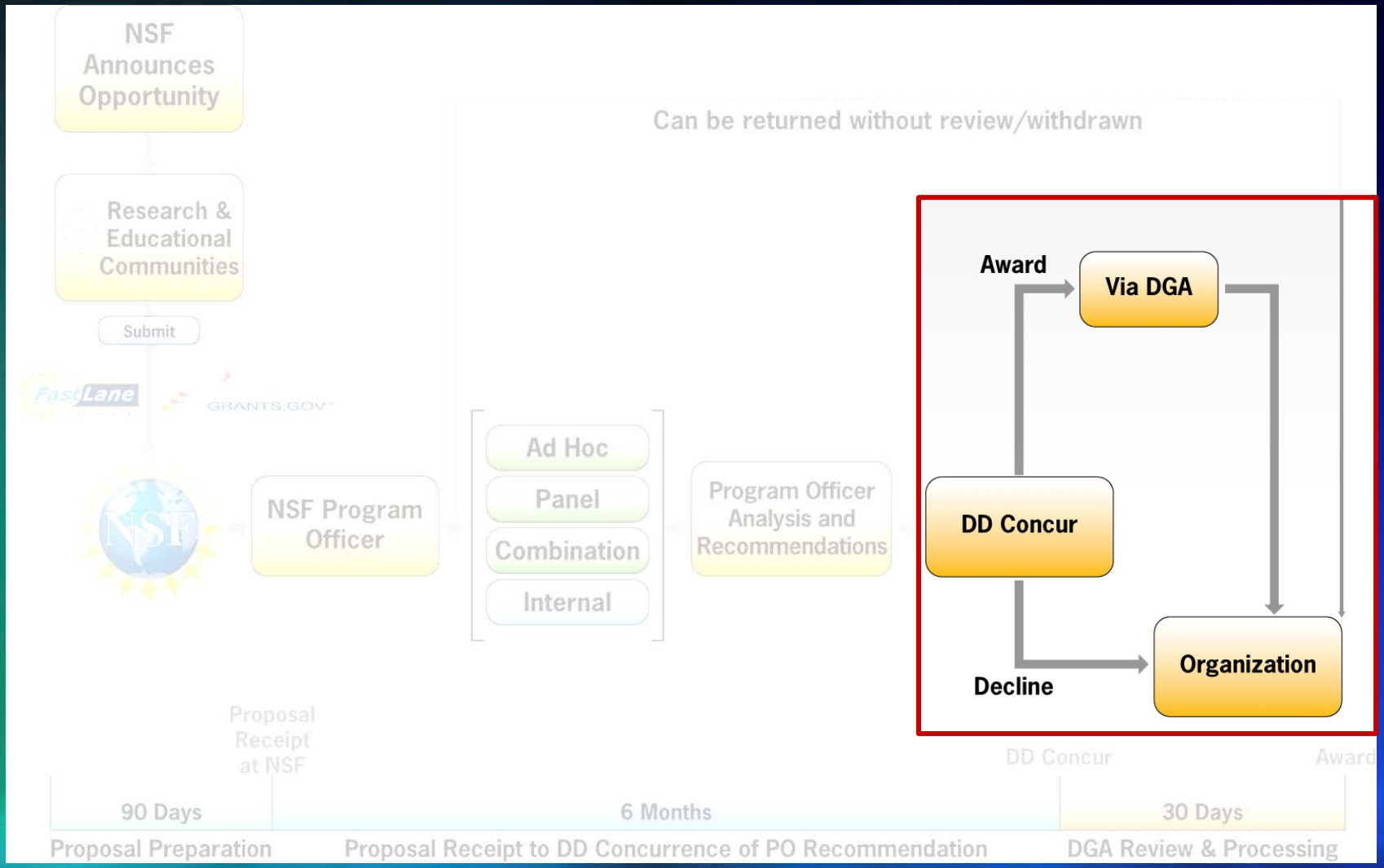
Questions?

Contact your cognizant Program Officer!

Possible Considerations for Funding a Competitive Proposal

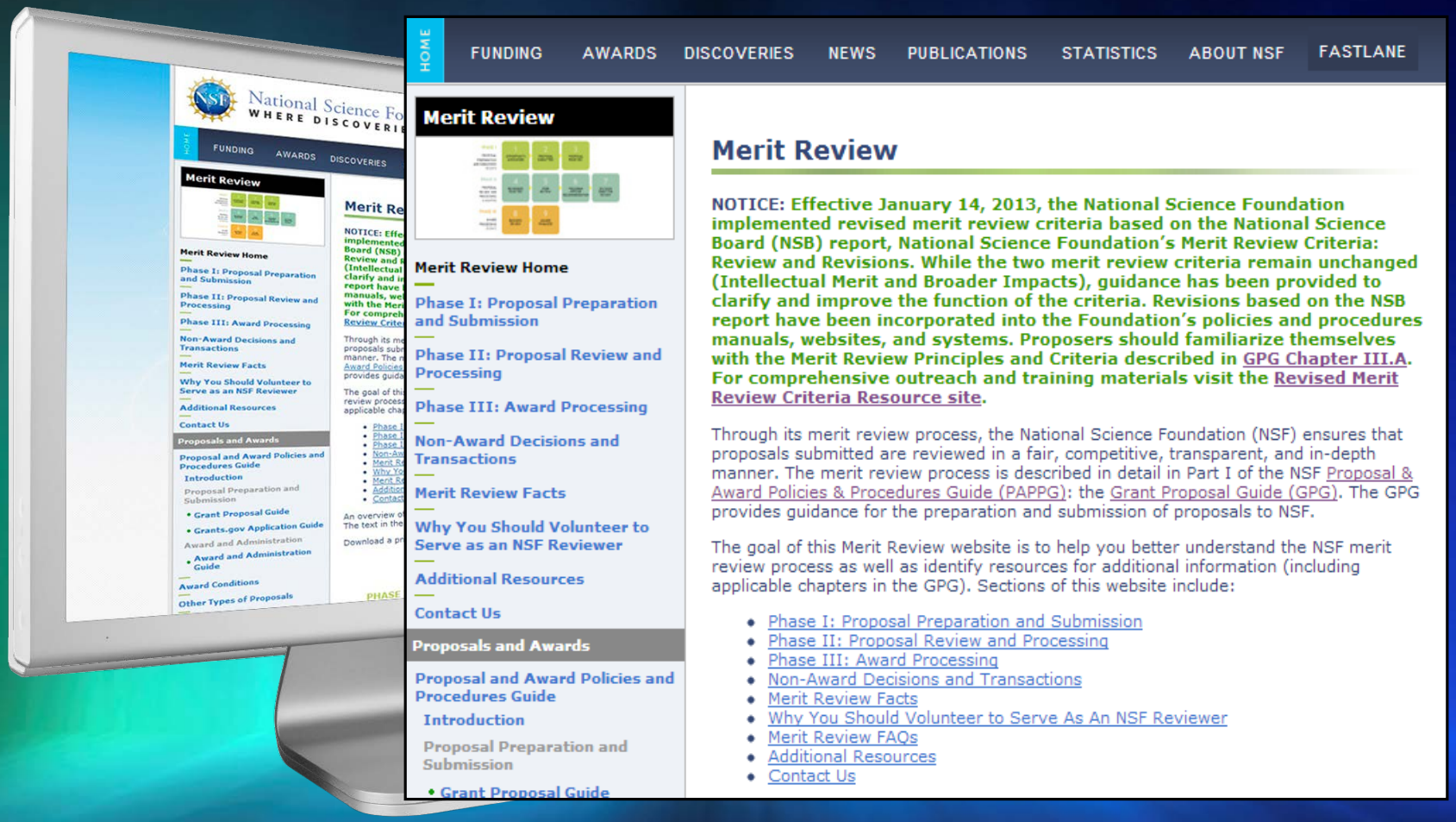
- Addresses all review criteria
- Likely high impact
- Broadening participation
- Educational impact
- Impact on institution/state
- Special programmatic considerations (e.g. CAREER/RUI/EPSCoR)
- Other support for PI
- "Launching" versus "Maintaining"
- Portfolio balance

Proposal Review and Processing



For More Information

Go to NSF's Home Page (http://www.nsf.gov)



Ask Early, Ask Often!

Contact the cognizant Program Officer

Lunch

Directorate Sessions

Crosscutting & NSF-wide Opportunities

What Is meant by crosscutting?

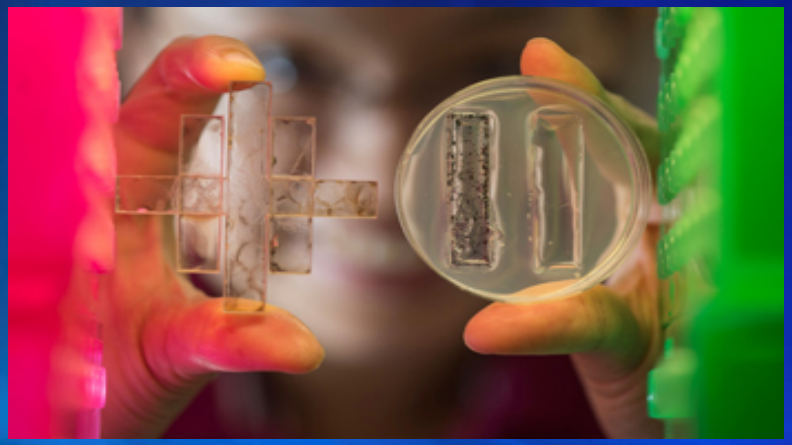
Sponsored by >1 NSF unit….

Cuts across NSF in different ways...

Collaborative with other
U.S. government agencies…

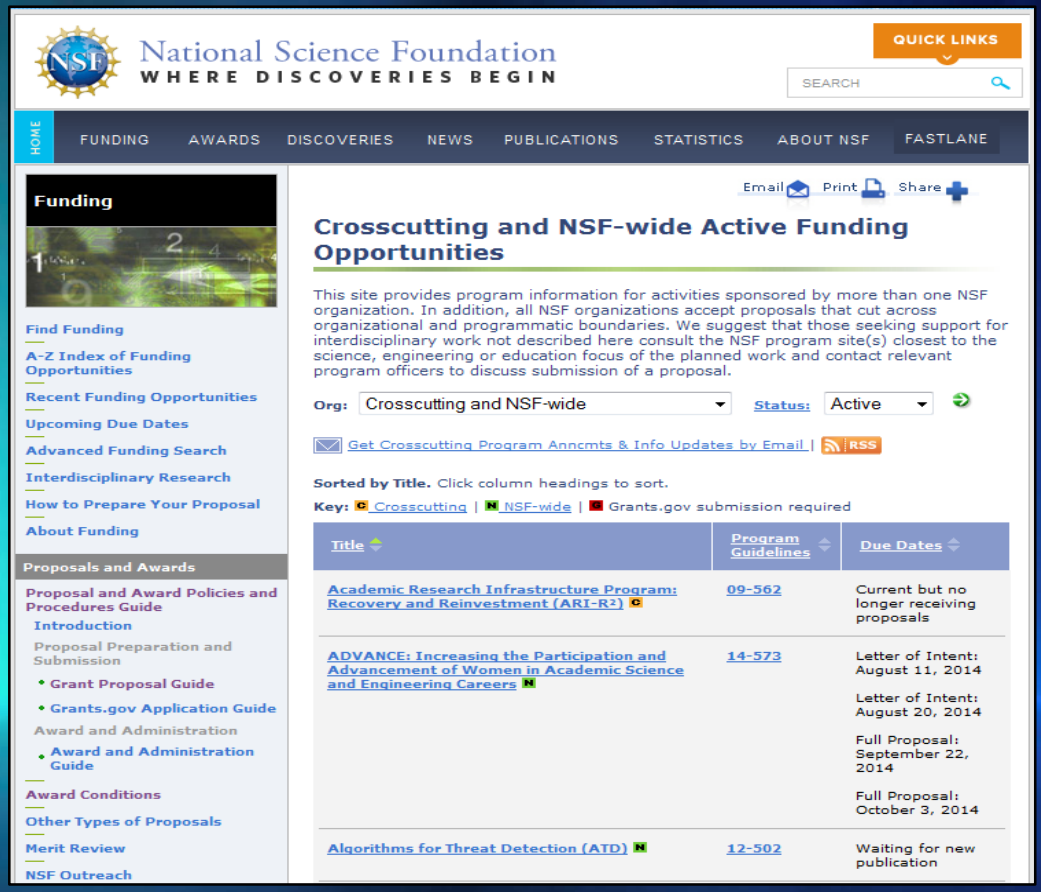
Types of Crosscutting Activities

- International
- Interdisciplinary research – theme-based (e.g., Designing Materials, Hazards and Disasters)
- People-oriented (e.g., ADVANCE, CAREER, REU, Work-Life Balance)
- Infrastructure (e.g., MRI)
- Translational (ICorps, SBIR)
- Institutional, Centers (e.g., IUCRC, STC)



Find Funding for NSFwide and Crosscutting Opportunities

Go to: www.nsf.gov/funding/pgm.list.jsp?type=xcut



RAPID/ EAGER

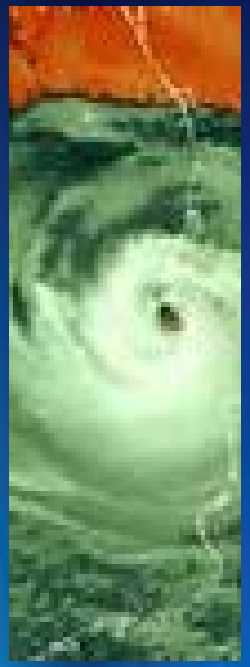
Grants for Rapid Response Research (RAPID)

Severe Urgency

Up to $200K/one year

Brief project description

Internal review



EArly-concept Grants for Exploratory Research (EAGER)

Potentially transformative

Up to $300K/one year

“High risk-high payoff"

Internal review

Rare but occasional external review

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

Deadlines (All Proposals):
16 May 2016
September 2016 (?)

Design and Development (Strand 2)

Two Types

Up to $1M
Up to 5 yrs

Up to $5M
Up to 5 yrs

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)

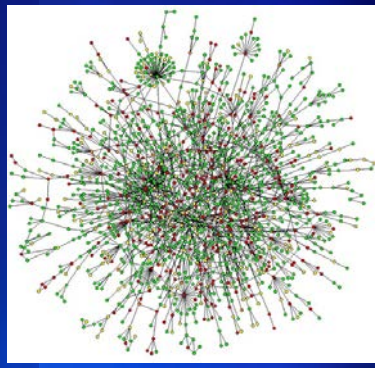
- Goal: "focus on any topic likely to lead to improved participation, learning, or assessment in undergraduate biology curricula"
  - active and inquiry-based learning
  - engage faculty in professional development
  - incorporate new fields into the biology curriculum
  - improve assessment of student 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.

RCN UBE

How do they differ from “regular” grants?

- Supports projects to build communities of biology faculty (“We” instead of “I”)—to accomplish more than any one person could achieve
- RCNs foster networking activities (such as conferences, workshops, student and faculty exchanges) and will not **directly** support…laboratory and field research.
- Incubator awards (up to $50,000 for one year) to fund formation of new teams (up to 8 pages)
- Full awards (up to $500K for five years) fund more mature projects (15 pages)



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

Pre-Alliance Planning Grants
18-month projects for new alliances, regional outreach, or centers.
Up to $125k for 18 months

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

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

129

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

ATE Centers

Three Types

National

Up to $4M
5 yrs

Regional

Up to $3M
4 yrs

Support Centers

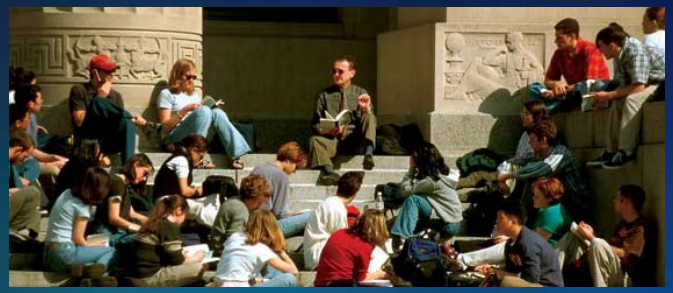
Up to $1.6M
4 yrs

Targeted Research in Technician Education

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

Deadlines (All Proposals):
6 October 2016

Support for Undergraduates
RUI, ROA for PUIs



RUIs and ROAs support research by faculty members at PUIs.

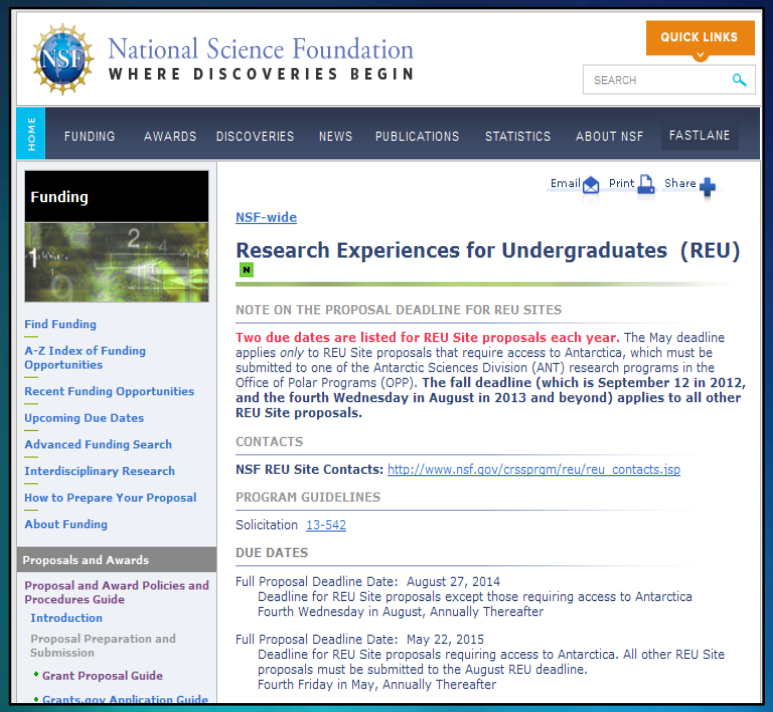
PUIs = accredited institutions that award Associate's, Bachelor's, and/or Master's degrees but have not awarded > 20 Ph.D./D.Sci. degrees in all NSF-supported fields during the combined previous two academic years.

ALL NSF directorates evaluate and fund RUIs and ROAs

They are funded within R & E program allocations

Directorate contacts found at : http://www.nsf.gov/crsspgrm/rui_roa/contacts.jsp

Research Experiences for Undergraduates


National Science Foundation
WHERE DISCOVERIES BEGIN

QUICK LINKS

SEARCH

HOME | FUNDING | AWARDS | DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS | ABOUT NSF | FASTLANE

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
Grants.gov Application Guide

Email Print Share

NSF-wide

Research Experiences for Undergraduates (REU)

NOTE ON THE PROPOSAL DEADLINE FOR REU SITES

Two due dates are listed for REU Site proposals each year. The May deadline applies *only* to REU Site proposals that require access to Antarctica, which must be submitted to one of the Antarctic Sciences Division (ANT) research programs in the Office of Polar Programs (OPP). **The fall deadline (which is September 12 in 2012, and the fourth Wednesday in August in 2013 and beyond) applies to all other REU Site proposals.**

CONTACTS

NSF REU Site Contacts: http://www.nsf.gov/crssprgm/reu/reu_contacts.jsp

PROGRAM GUIDELINES

Solicitation 13-542

DUE DATES

Full Proposal Deadline Date: August 27, 2014
Deadline for REU Site proposals except those requiring access to Antarctica
Fourth Wednesday in August, Annually Thereafter

Full Proposal Deadline Date: May 22, 2015
Deadline for REU Site proposals requiring access to Antarctica. All other REU Site proposals must be submitted to the August REU deadline.
Fourth Friday in May, Annually Thereafter

REU in BIO is administered through DBI; (typical programs include 10 students for 10 weeks

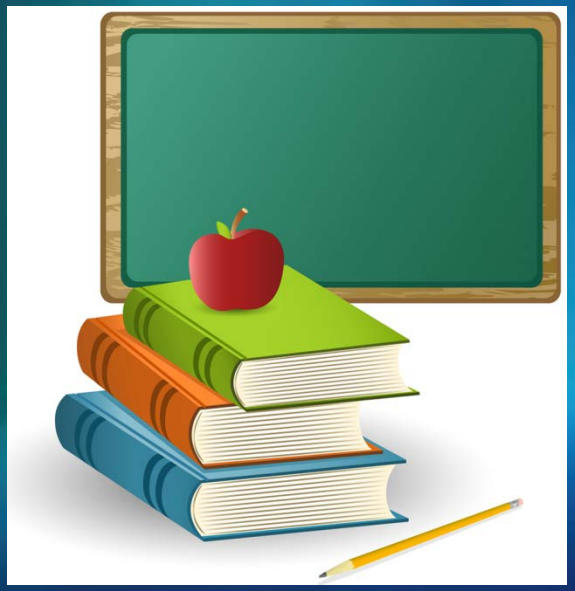
REU Goals:

- Initiate and conduct projects that engage a number of undergraduate students in summer research.
- Involve students who might not otherwise have the opportunity, particularly those from academic institutions where research programs are limited; applications from younger students (rising sophomores) are encouraged

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

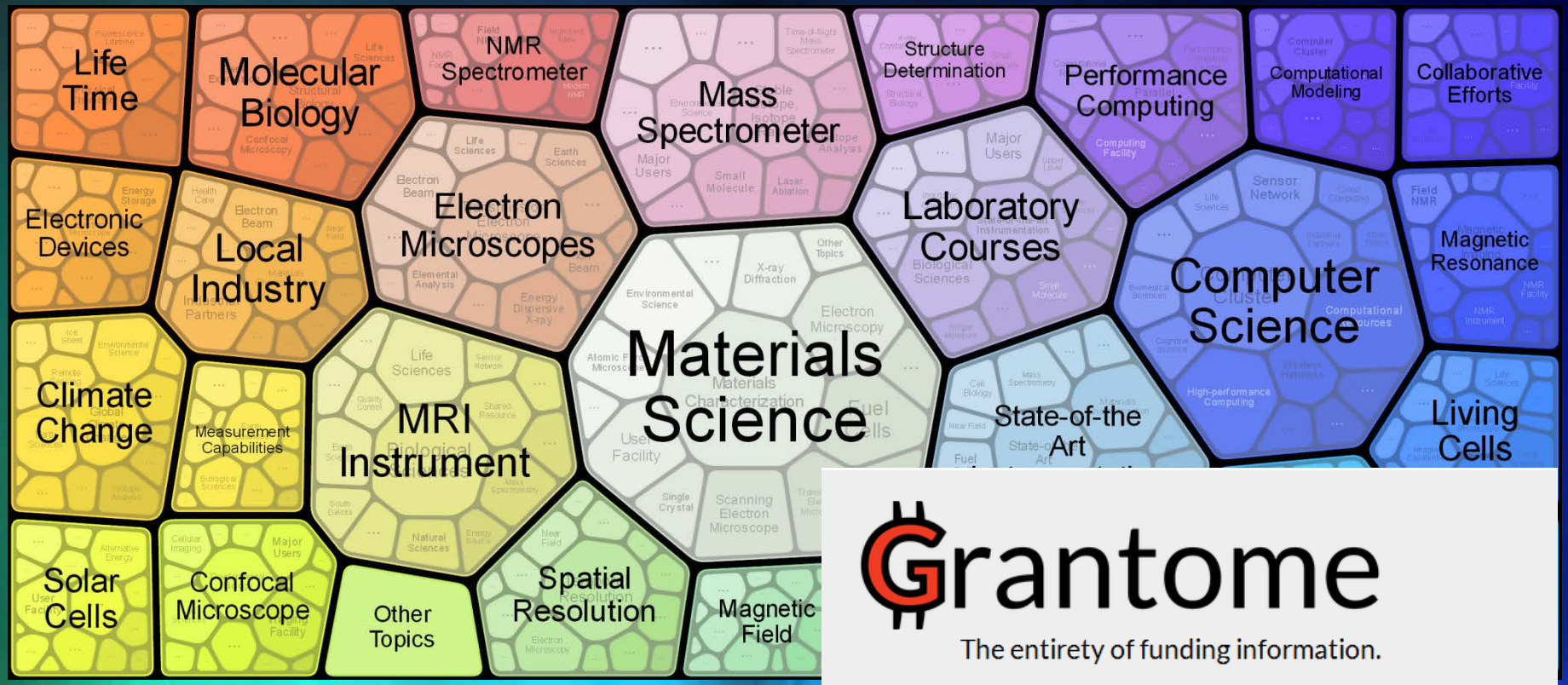
Major Research Instrumentation (MRI)

Goals:

- Support acquisition of major state-of-the-art instrumentation
- Foster development of the next generation of major instrumentation
- Integrate research with education
- Use, advance, expand the nation's cyber-infrastructure and/or high performance computing capability
- Promote academic & private sector instrument development partnerships

Major Research Instrumentation (MRI)

Thematic Areas:



Grantome

The entirety of funding information.

The competition for securing research funding has never been so intense. Increase your chance of getting grants by using our tools to discover the most important factors underlying funded research in your area.

Graduate Research Fellowship Program

Goals:

- Select, recognize, and financially support early in their careers individuals with the demonstrated potential to be high achieving scientists and engineers

- Broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities, and veterans

GRFP
NSF GRADUATE RESEARCH FELLOWSHIP PROGRAM

5 Year Award = $138,000

$34,000/year for 3 years +

+

$12,000 Educational allowance to institution

Professional Development Opportunities:

GROW: International Research

GRIP: Internships

Supercomputer access: XSEDE

Career Life Balance (family leave)

RESOURCES:

Solicitation and links
www.nsf.gov/grfp

NSF GRFP FastLane Website
www.fastlane.nsf.gov/grfp

Application, guides, announcements
GRFP Website, www.nsfgrfp.org

Current & former Fellows
866-NSF-GRFP, info@nsfgrfp.org

SBIR/STTR Phase II-CC

Supplemental funding opportunity for existing SBIR/STTR awardees to partner with a community college.

Award: up to $40,000

- 75% must be subaward to the community college

Goals:

- To increase the participation of underrepresented groups in both academic and small business research.
- Give small businesses access to faculty and students capable of contributing to the scientific research.
- Give faculty and students experience working on research projects that lead to commercial products and processes.

International - A Crosscutting Portfolio

International activities at NSF

- Span all NSF Directorates and Offices
- Globalize NSF research and education
- Strengthen partnerships with foreign counterpart funders
- Involve cooperation with other U.S. government agencies, private foundations

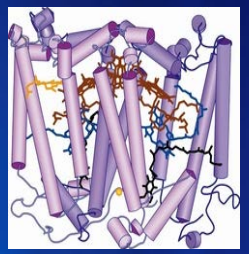
International - A Crosscutting Portfolio

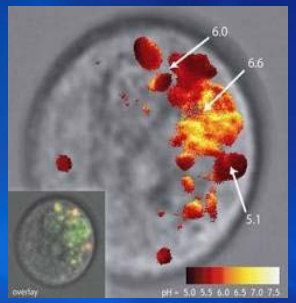
International activities at NSF

- Span all NSF Directorates and Offices
- Globalize NSF research and education
- Strengthen partnerships with international funding agencies
- Cooperate with other U.S. government agencies, private foundations

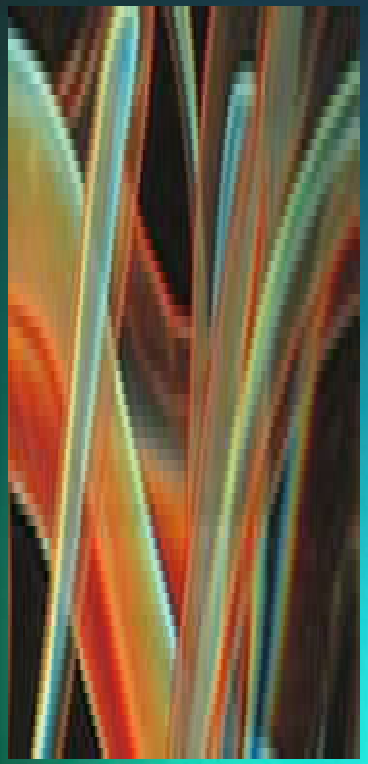
Examples of Support for International Activities

- Partnerships for International Research and Education (PIRE)
- Partnerships for Enhanced Engagement in Research (PEER) – with USAID
- International Research Experiences for Students (IRES)
- East Asia Pacific Summer Institutes for Graduate Students (EAPSI)
- (International) Postdoctoral Research Fellowship Program
- Science Across Virtual Institutes (SAVI)
- Graduate Research Opportunities Worldwide (GROW)





Office of Integrative Activities (OD/OIA)



Office Priorities

- IA: Science and Technology Centers (STC)
- IA: Major Research Instrumentation (MRI)
- IA: Integrated NSF Support Promoting Inter-disciplinary Research and Education (INSPIRE)
- EPSCoR: Research Infrastructure Improvement (RII)

Questions?

Faculty Early Career Development program "CAREER"

http://www.nsf.gov/career

CAREER Awards

Solicitation 15-555

Due Dates:

July 20, 2016	BIO, CISE, EHR
July 21, 2016	ENG
July 22, 2016	GEO, MPS, SBE

http://www.nsf.gov/career

CAREER Awards

Foundation wide

Supports junior faculty

Research and education integration

PECASE *(Presidential Early Career Award for Scientists and Engineers)*

eligibility

http://www.nsf.gov/career

CAREER Awards

Stable support for 5 years

NSF wide: 400 per year

> $400K – CISE, EHR, MPS, SBE

> $500K - ENG, BIO, GEO/PLR

CAREER eligible investigators must:

Hold PhD (by proposal deadline)

Be employed in a tenure-track (or equivalent) position at an eligible institution as an Assistant Professor (until Oct 1st following deadline)

An eligible institution must be:

An academic institution in the U.S., its territories or possessions, and the Commonwealth of Puerto Rico that award degrees in fields supported by NSF.

An eligible institution may also be:

Non-profit, non-degree-granting (e.g. a museum, observatory or lab) if the eligibility requirements of the PI are satisfied.

NSF encourages proposals from different institutional types, including minority serving and undergraduate institutions

CAREER eligible investigators may NOT:

- Receive tenure before Oct 1st following proposal deadline
- Have previously received a CAREER award
- Have had more than two CAREER proposals reviewed
- Be an untenured associate professor

CAREER varies across NSF

- Number of submitted CAREER proposals
- Review and Funding methods
- Other Proposals with which CAREERs compete

NSF CAREER Coordinating Committee Sets NSF-wide goals

http://www.nsf.gov/career

CAREER Proposals

Contact program manager liaison* and ask about:

- **Expectations for scope of research and education**
- **Assessment of 2-page departmental letter**
- **Funding rate trend for regular proposals in the program of interest**

*** see http://www.nsf.gov/crssprgm/career/contacts.jsp**

Are CAREER awards right for you?

Yes, if:

Your proposed research is innovative, ambitious and within NSF's the purview of research and education supported

You have support from your department/ organization, mentors.

You are at the right stage of your career.

CAREER Personnel and Budgets

YES

Consultants, subawards, unpaid collaborators

Academic year buyouts for teaching intensive institutions

NO

Co-PI, senior personnel

CAREER Departmental 2 Page Letter

- Statement of PI CAREER program eligibility
- Support for PI's s proposed research and education activities
- Description of how the PIs career goals and responsibilities mesh with that of the organization and department
- Commitment to support professional development and mentoring of the PI
- NOT a letter of recommendation or endorsement of the PI or the research project

CAREER Awards Urban Myths

"You cannot apply because you have another NSF award. . ."

"It is an entry program, so you must first apply to CAREER. . ."

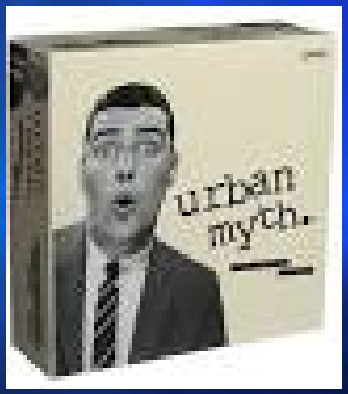
"I need to see a successful proposal to write a successful proposal. . ."

"You have no chance, if you are not from a research intensive institution. . ."

"CAREER proposals are more portable than other NSF funding."

"The education component does not matter.

"I read on the web that to succeed, I have to...."



Traits of a Successful CAREER Proposal

High quality -- This is a highly competitive program!

Matches disciplinary program expectations

Includes an appropriate scope of activities for a 5-year plan, not one's whole life!

Goes outside the education box of regular research proposals in the field

Strikes a balance between doable research activities and more risky pursuits

PECASE:
Presidential Early Career Awards for Science and Engineering
April 18, 2014

CAREER Awards Resources:

- Program Solicitation - NSF 15-555
- Frequently Asked Questions - NSF 15-057
- CAREER Directorate/Division Contacts
  - http://www.nsf.gov/crssprgm/career/contacts.jsp
- Links to recent CAREER and PECASE awards

Questions?

Break

Directorate Sessions

Thank you for Attending!

Please Complete Your Evaluation!