



# Broader Impacts and Funding Opportunities

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*Where do funding opportunities come from?*

- National priorities
- White House, Congress
- Societal needs (and public perception)
- NSF Strategic Plan

[http://www.nsf.gov/news/strategicplan/nsfstrategicplan\\_2011\\_2016.pdf](http://www.nsf.gov/news/strategicplan/nsfstrategicplan_2011_2016.pdf)

# NSB/NSF Merit Review Criteria (1997, 2011)

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## Intellectual Merit:

the potential to advance knowledge

Potentially transformative concepts

## Broader Impacts:

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

- both criteria are important
- full consideration during review/decision-making
- Each is necessary - neither is sufficient



# Broader Impacts (BI)

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<http://www.nsf.gov/nsb/publications/2011/meritreviewcriteria.pdf>

“NSF projects should contribute broadly to achieving societal goals”

BI may be accomplished through:

- the research itself
- activities directly related to research projects
- activities supported by the project

# What are Societal Goals?

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**NSF 13-1 Grant Proposal Guide (GPG) [Jan 2013]:**

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

- Education
- Scientific Literacy
- Broadened Participation
- National Security
- Economic Competitiveness
- Quality of Life
- Workforce Development
- Research and Education Infrastructure
- Academic-Industry-Other Partnerships



# EPSCoR Review Criteria

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*Programs may employ additional review criteria*

- *Integration of Research and Education*
- Strategic Fidelity and Impact
- Value Added
- Diversity
- *Workforce Development*
- *Cyberinfrastructure*
- *External Engagement*
- Evaluation and Assessment
- Sustainability
- Management

# Find Funding ...



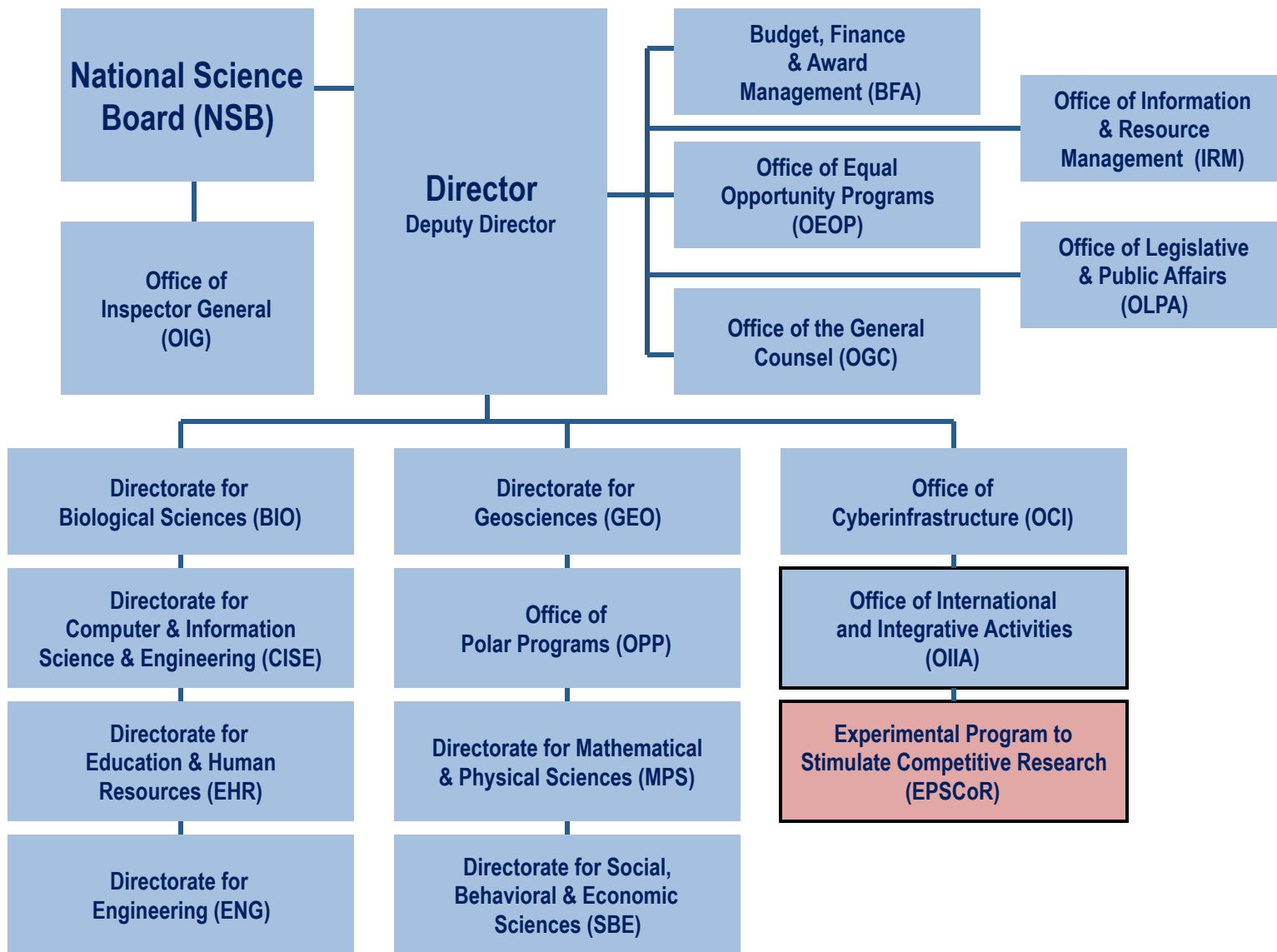
[http://www.nsf.gov/funding/pgm\\_list.jsp?type=xcut](http://www.nsf.gov/funding/pgm_list.jsp?type=xcut)

The screenshot shows the NSF website's 'Find Funding' page. The top navigation bar includes 'HOME', 'FUNDING', 'AWARDS', 'DISCOVERIES', 'NEWS', 'PUBLICATIONS', 'STATISTICS', 'ABOUT NSF', and 'FASTLANE'. The 'FUNDING' tab is selected. Below the navigation bar, there is a 'Funding' section with a 'Find Funding' link. The main content area is titled 'Find Funding' and includes a search bar with the text 'Get NSF funding information by email or RSS'. Below the search bar, there is a 'FUNDING OPPORTUNITY SEARCH' section with a 'Keyword:' field and a 'Search' button. A red arrow points to the 'Search' button with the word 'Select' next to it. The page also includes a sidebar with various links and a section for 'OTHER WAYS TO FIND FUNDING' with links to 'A-Z Index', 'Special Programs', and 'Program Areas'.

1. Go to NSF home page  
<http://www.nsf.gov>
2. Select “Funding” tab
3. Choose:  
“Search Funding Opportunities” from drop down menu



# NSF Organization





# Some Funding Opportunities ...

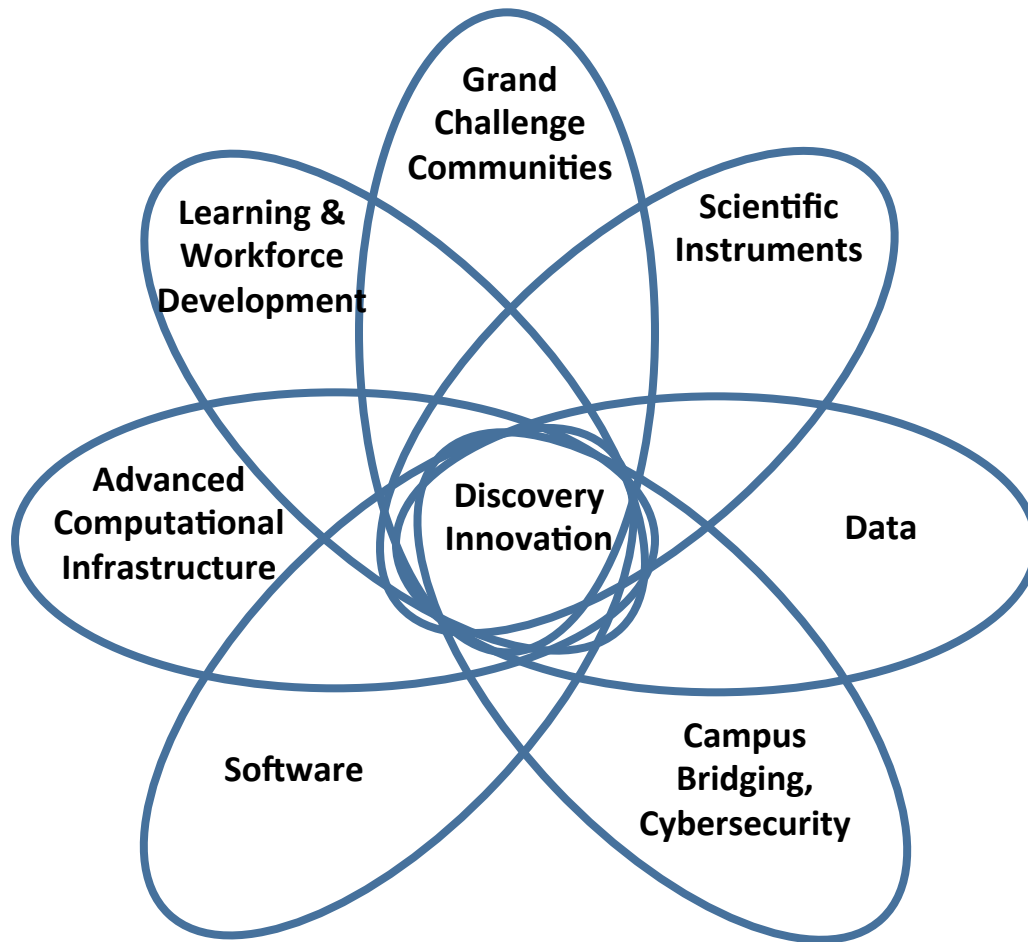
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- **CIF21** : Cyberinfrastructure Framework for the 21<sup>st</sup> Century  
<http://www.nsf.gov/cif21>
- **GOALI** : Grant Opportunities for Academic Liaison with Industry  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504699](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504699)
- **I-Corps** : Innovation Corps Program  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504672](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504672)
- **IGERT** : Integrative Graduate Education & Research Traineeship Program  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=12759](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12759)
- **REU** : Research Experiences for Undergraduates  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5517](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517)
- **RUI** : Research in Undergraduate Institutions  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5518](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518)
- **SEES** : Science, Engineering, and Education for Sustainability  
<http://www.nsf.gov/sees>



# Cyberinfrastructure Framework for the 21st Century (CIF21)

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<http://nsf.gov/cif21>

- FY 2012 budget: **\$78 million**
- FY 2013 request: **\$106 million**

# CIF-21 Background Information

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## OCI web-page:

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

## Advanced Computing Infrastructure – Strategic Plan:

[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf12051](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12051)

## CIF-21 task force reports:

<http://www.nsf.gov/od/oci/taskforces/index.jsp>

## IGERT CIF-21 track:

[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf12059](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12059)

## NSF/NIH BigData solicitation (NSF 12-499):

[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504767](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504767)

## Data-Intensive Data-Related Research:

[http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf12060](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf12060)

## EarthCube:

<http://www.nsf.gov/geo/earthcube>

# Grant Opportunities for Academic Liaison with Industry (GOALI)

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- **Promote university-industry partnerships:**
  - projects, fellowships/traineeships
  - Direct transfer of knowledge (commercialization)
- **Target high-risk/high-gain research (beyond what industry funds)**
- **Focus on:**
  - fundamental research
  - new approaches to solving generic problems
  - Innovative, collaborative educational programs
- **Anticipated funding: 60-80 awards, \$5M**
  - NSF funds go to academic institution
  - Industry partner facilitates commercialization
- **Submission to disciplinary program (not GOALI)**

# NSF Innovation Corps (I-Corps)

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- **Establish public-private partnerships**
- **Anticipated Program Outcomes**
  - Functioning network of Mentors/Advisors
  - Scientist and Engineers trained as Entrepreneurs
  - Increased impact of NSF-funded basic research
- **Projects are Team-based**
  - Entrepreneurial Lead: Post-doc or Student
  - I-Corps Mentor: Domain-relevant volunteer guide
  - PI: Researcher with current or previous award
- **Requires prior written authorization to submit a proposal**

# I-Corps

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- **Contacts:**

- Errol Arkilic: (703) 292-8095 [earkilic@nsf.gov](mailto:earkilic@nsf.gov)
- Rathindra DasGupta: (703) 292-8353 [rdasgupt@nsf.gov](mailto:rdasgupt@nsf.gov)
- Anita La Salle: (703) 292-5006 [alasalles@nsf.gov](mailto:alasalles@nsf.gov)

- **Submission Windows:**

Jan 1, 2013 – Mar 15, 2013

Apr 1, 2013 – June 17, 2013

Oct 1, 2013 – Dec 16, 2013

- **Current solicitation : NSF 12-602**
- **Anticipated Funding in FY 2013: \$18M**
- **Information webinars held on first Tuesday of each month**

# Integrative Graduate Education and Research Traineeship (IGERT)

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## Program Goals:

- Prepare graduate students for interdisciplinary research and education careers as leaders and agents for change
- innovative models for graduate education and training
- collaborative research that transcends traditional disciplinary boundaries
- **No active solicitation**  
check web site for 2013  
[igert@nsf.gov](mailto:igert@nsf.gov)

# Research Experiences for Undergraduates (REU)



## REU Sites

- Engage group of undergraduates in research
- Students who might not otherwise have opportunity
- Students from outside host institution
- Cohort experience; coherent intellectual theme
- Single discipline or interdisciplinary

## REU Supplement

- 1-2 undergraduates participate in new or ongoing NSF project
- number of students commensurate to size and nature of project
- Faculty/researcher mentors
- Access to facilities and professional development opportunities

**(REU)**

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## **Partnership opportunities:**

- Dept. of Defense, Dept. of Energy
- Cyberinfrastructure
- International Projects
- Research experiences for Teachers

## **Deadlines (13-542):**

- Sites: August 28, 2013
- Antarctic Sites: May 24, 2013
- Supplements: contact discipline Program Officer

**Anticipated Funding:** 1,750-1,800 awards (180 sites) for **\$68M**



# Research in Undergraduate Institutions (RUI)



**Support:** faculty at primarily undergraduate institutions (PUIs):

- 1) individual and collaborative research projects
  - 2) purchase of shared-use research instrumentation
  - 3) Research Opportunity Awards (ROA) for work with NSF-supported investigators at other institutions
- Support undergraduate involvement in high quality research
  - Strengthen research environment at PUIs
  - Promote integration of research and education at PUIs

Contact NSF program officers in discipline!

[NSF 00-144](#)

**PUIs:** Institutions that award 10 or fewer Ph.D. or D.Sc. per year

# Science, Engineering, and Education for Sustainability (SEES)

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**Mission:** *advance science, engineering, & education to inform the societal actions needed for environmental & economic sustainability & sustainable human well-being*

- Interdisciplinary research and education
- Systems thinking
- Partnerships and networks
- New participants
- Workforce and education

... All towards global sustainability

[nsf-sees-info@nsf.gov](mailto:nsf-sees-info@nsf.gov)

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

# SEES – New Opportunities

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[Small Business Technology Transfer Program Phase I \(STTR\)](#) (NSF 13-501)

LOI: **January 8, 2013** (required); Full Proposals: **February 6, 2013**

[Cyber-Enabled Sustainability Science and Engineering \(Cyber-SEES\)](#) (NSF 13-500)

LOI: **12/4/2012** (required); Full Proposals: **February 5, 2013**

[Interdisciplinary Research in Hazards and Disasters \(Hazards SEES\)](#) (NSF 12-610)

Full Proposals: **February 4, 2013**

[Science, Engineering and Education for Sustainability Fellows \(SEES Fellows\)](#) (NSF 12-601)

Deadline: **November 21, 2013**; Annually thereafter

[Coastal SEES](#) (NSF 12-594)

Full Proposals: **January 17, 2013**

RCN – SEES track (NSF 11-531)

CNH – SEES track (NSF 10-612)

Climate-related (CRI) competitions continue

**Check the SEES site often for updates and new deadlines**



**Thank You**