

# Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE) to support bold interdisciplinary projects in all NSF-supported areas of science, engineering, and education research

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## PROGRAM SOLICITATION NSF 13-518



### National Science Foundation

Office of International and Integrative Activities

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences

Directorate for Mathematical & Physical Sciences

Directorate for Social, Behavioral & Economic Sciences

### Letter of Intent Due Date(s) (*required*) (due by 5 p.m. proposer's local time):

December 10, 2012 - February 20, 2013

INSPIRE Track 2 Inquiries

December 10, 2012 - March 29, 2013

INSPIRE Track 1 Inquiries

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

May 13, 2013

INSPIRE Track 2 Full Proposals

May 29, 2013

INSPIRE Track 1 Full Proposals

May 29, 2013

Director's INSPIRE Awards Full Proposals

## IMPORTANT INFORMATION AND REVISION NOTES

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*For all funding opportunities under this solicitation, full proposal submission is by invitation only, based on evaluation by NSF staff of the required Letter of Intent.*

## SUMMARY OF PROGRAM REQUIREMENTS

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### General Information

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#### Program Title:

Integrated NSF Support Promoting Interdisciplinary Research and Education (INSPIRE) to support bold interdisciplinary projects in all NSF-supported areas of science, engineering, and education research

#### Synopsis of Program:

The INSPIRE awards program was established to address some of the most complicated and pressing scientific problems that lie at the intersection of traditional disciplines. It is intended to encourage investigators to submit bold, exceptional proposals that some may consider to be at a disadvantage in a standard NSF review process; it is *not* intended for proposals that are more appropriate for existing award mechanisms. INSPIRE is open to interdisciplinary proposals on any NSF-supported topic, submitted *by invitation only* after a preliminary inquiry process initiated by submission of a required Letter of Intent. In fiscal year 2013, INSPIRE provides support

through the following three pilot grant mechanisms:

- **INSPIRE Track 1.** This is essentially a continuation of the pilot CREATIV mechanism from FY 2012, which was detailed for 2012 in [Dear Colleague Letter NSF 12-011](#).
- **INSPIRE Track 2.** These are "mid-scale" research awards at a larger scale than Track 1, allowing for requests of up to \$3,000,000 over a duration of up to five years. Expectations for cross-cutting advances and for broader impacts are greater than in Track 1, and the review process includes external review.
- **Director's INSPIRE Awards.** These are prestigious individual awards to single-investigator proposals that present ideas for interdisciplinary advances with unusually strong, exciting transformative potential.

All NSF directorates and programmatic offices participated in INSPIRE in FY 2012 and are continuing their participation in FY 2013.

#### **Cognizant Program Officer(s):**

*Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.*

- Jessica H. Robin, telephone: (703) 292-8706, email: [jrobin@nsf.gov](mailto:jrobin@nsf.gov)
- Richard A. Behnke, GEO, telephone: (703) 292-8518, email: [rbehnke@nsf.gov](mailto:rbehnke@nsf.gov)

#### **Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):**

- 47.041 --- Engineering
- 47.049 --- Mathematical and Physical Sciences
- 47.050 --- Geosciences
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences
- 47.075 --- Social Behavioral and Economic Sciences
- 47.076 --- Education and Human Resources
- 47.079 --- International and Integrative Activities (IIA)
- 47.081 --- Office of Experimental Program to Stimulate Competitive Research

## **Award Information**

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

**Estimated Number of Awards:** 45 to 60

- **INSPIRE Track 1 Awards:** 30 to 40
- **INSPIRE Track 2 Awards:** 10 to 15
- **Director's INSPIRE Awards:** 3 to 7

**Anticipated Funding Amount:** \$63,000,000 pending availability of funds.

## **Eligibility Information**

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#### **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.
- NSF-sponsored Federally Funded Research and Development Centers may submit. Non-NSF-sponsored FFRDCs are not permitted to submit proposals under this solicitation.

#### **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: 1**

An individual may be the PI on a total of one Letter of Intent (LOI) to all INSPIRE funding opportunities in FY 2013. A PI on one LOI may be a collaborator on other LOIs.

## **Proposal Preparation and Submission Instructions**

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#### **A. Proposal Preparation Instructions**

- **Letters of Intent:** Submission of Letters of Intent is required. Please see the full text of this solicitation for further information.
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**

- o Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).
- o Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (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](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)).

#### B. Budgetary Information

- **Cost Sharing Requirements:** Inclusion of voluntary committed cost sharing is prohibited.
- **Indirect Cost (F&A) Limitations:** Not Applicable
- **Other Budgetary Limitations:** Not Applicable

#### C. Due Dates

- **Letter of Intent Due Date(s) (required)** (due by 5 p.m. proposer's local time):

December 10, 2012 - February 20, 2013

INSPIRE Track 2 Inquiries

December 10, 2012 - March 29, 2013

INSPIRE Track 1 Inquiries

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

May 13, 2013

INSPIRE Track 2 Full Proposals

May 29, 2013

INSPIRE Track 1 Full Proposals

May 29, 2013

Director's INSPIRE Awards Full Proposals

### Proposal Review Information Criteria

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**Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

### Award Administration Information

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**Award Conditions:** Standard NSF award conditions apply.

**Reporting Requirements:** Standard NSF reporting requirements apply.

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# I. INTRODUCTION

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The INSPIRE initiative was introduced by NSF Director Subra Suresh with the fiscal year 2012 NSF budget request to Congress. From his remarks ([http://www.nsf.gov/news/speeches/suresh/11/ss110214\\_nsfbudget.jsp](http://www.nsf.gov/news/speeches/suresh/11/ss110214_nsfbudget.jsp)): "INSPIRE is aimed ... to encourage cross-disciplinary science.... INSPIRE will help to break down any disciplinary barriers that may exist within NSF and encourage its program managers to use new tools, collaboration modes and techniques in the merit-review process to widen the pool of prospective discoveries that may be hidden from or circumvented by traditional means."

Under INSPIRE, the CREATIV (Creative Research Awards for Transformative Interdisciplinary Ventures) pilot award mechanism was launched in November 2011. In brief, its distinguishing characteristics were: *only internal merit review was required; proposals were required to be interdisciplinary and potentially transformative; requests could be up to \$1,000,000 and up to five years duration.* Forty INSPIRE awards totaling approximately \$30,700,000 were made through this mechanism in fiscal year 2012. A list of these awards can be found at <http://nsf.gov/awardsearch/progSearch.do?ProgEleCode=8078>, and a graphical representation of the awards' interdisciplinary connections among all NSF research directorates and programmatic offices may be seen at [http://www.nsf.gov/od/ia/creativ/inspire\\_links.pdf](http://www.nsf.gov/od/ia/creativ/inspire_links.pdf). For fiscal year 2013, this solicitation announces a similar mechanism under the name "INSPIRE Track 1", along with two new INSPIRE award types. The funding for INSPIRE in future years is expected to increase substantially, reaching a steady state in FY 2016.

# II. PROGRAM DESCRIPTION

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**Program goals.** The INSPIRE awards program is intended to encourage investigators to submit bold, exceptional proposals that some may consider to be at a disadvantage in a standard NSF review process. Specifically, INSPIRE seeks to:

- Create new interdisciplinary opportunities that are not perceived to exist presently.
- Attract unusually creative high-risk / high-reward interdisciplinary proposals.
- Provide sufficient funding to pursue the novel idea beyond the exploratory stage.
- Recognize and encourage innovative interdisciplinary research by unusually creative individual investigators, especially at early- to mid-career stages.
- Designate no favored topics; be open to all NSF-supported areas of science, engineering, and education research.

**Funding opportunities.** In pursuit of these goals, INSPIRE offers the following three pilot grant mechanisms for FY 2013. Proposals on any NSF-supported topic will be accepted.

- **INSPIRE Track 1.** This is essentially a continuation of the FY 2012 CREATIV mechanism, which was detailed for 2012 in [Dear Colleague Letter NSF 12-011](#). Scientifically and in terms of award specifications, INSPIRE Track 1 is the same; in particular, as described in Section I above, proposals must be interdisciplinary and potentially transformative, the maximum award size is \$1,000,000, the maximum duration is five years, and only internal merit review is required. Track 1 awards will generally support an individual PI or a small team. A Track 1 award must be substantially co-funded by two or more intellectually distinct NSF divisions or programs. For two co-funding programs, the maximum total award is \$800,000; for three or more co-funding programs, the maximum is \$1,000,000. There will be a single deadline (March 29, 2013) for Track 1 Letters of Intent (LOIs), leading to a single round of invitations (April 29, 2013) to submit full proposals by a subsequent deadline (May 29, 2013). Individual principal investigators with appropriate bold, interdisciplinary project ideas, especially individuals at early- to mid-career stages, are encouraged to submit INSPIRE Track 1 LOIs. This is also the means of entry for consideration for the Director's INSPIRE Awards (see below).
- **INSPIRE Track 2.** With a larger magnitude than Track 1, INSPIRE Track 2 awards are "mid-scale" research projects that can request budgets up to \$3,000,000 over a duration of up to five years. In addition to the larger scale relative to Track 1, Track 2 projects must be substantially co-funded by at least *three* intellectually distinct NSF divisions or programs whose research communities do not have a well-established history of collaboration. Also, the expectations for significant broader impacts (e.g., unique interdisciplinary training opportunities, international collaboration, broadening participation considerations, outreach to facilitate societal benefit of the research) will be higher than for Track 1. The process begins with Letters of Intent (deadline February 20, 2013) that are internally reviewed to determine invitations (March 29, 2013) to submit full proposals (deadline May 13, 2013), which are then evaluated by a combination of internal and external review as detailed in Section VI. The external review will include a high-level panel of broad scientific thinkers who will seek to identify proposals with particularly strong impact and transformative potential. (*Note: INSPIRE Track 2 directly addresses mid-scale research, not mid-scale instrumentation. INSPIRE Track 2 proposals can request substantial funding for instrumentation if this is justified by the needs of the research, and if the instrumentation itself yields highly innovative capabilities to push the boundaries of science in a new direction.*)
- **Director's INSPIRE Awards.** These are prestigious individual awards of up to \$1,500,000 (a fixed amount of \$500,000 added to a Track 1 project budget of up to \$1,000,000) to single-investigator proposals that present ideas for interdisciplinary advances with unusually strong, exciting transformative potential. There is no direct submission for Director's INSPIRE Awards; the individual submits an INSPIRE Track 1 Letter of Intent by the deadline (March 29, 2013) and is nominated for Director's INSPIRE Award consideration (April 29, 2013) by program directors from at least two intellectually distinct NSF divisions or programs. The invited full proposal (deadline May 29, 2013) is similar to a Track 1 full proposal with some additional features described in Section V.A. under Proposal Preparation and Submission Instructions. The candidacy for a Director's INSPIRE Award is evaluated by a combination of internal and external review as in INSPIRE Track 2 and as detailed in Section VI. Invited candidates who do not win a Director's INSPIRE Award remain eligible to be supported through Track 1 on the basis of the invited full proposal.

**Appropriateness for the INSPIRE grant mechanisms.** *The INSPIRE program comprises grant mechanisms for special types of proposals and is NOT intended to handle proposals that are more appropriate for existing mechanisms.* In particular, proposals of the following types should be submitted to and reviewed conventionally through existing programs or solicitations, and are not appropriate for submission through the INSPIRE grant mechanisms:

- Projects in which the scientific advances lie primarily within the scope of one program or discipline, such that substantial co-funding from another distinct program or discipline is unlikely.
- Projects that, in the judgment of cognizant program directors, can be expected to receive an appropriate evaluation through external review in regular programs.
- Projects that continue well-established lines of research, in accordance with expected progress in their fields.

### III. AWARD INFORMATION

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

**Estimated Number of Awards:** 45 to 60

- **INSPIRE Track 1 Awards:** 30 to 40
- **INSPIRE Track 2 Awards:** 10 to 15
- **Director's INSPIRE Awards:** 3 to 7

**Anticipated Funding Amount:** \$63,000,000 pending availability of funds.

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

### IV. ELIGIBILITY INFORMATION

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**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.
- NSF-sponsored Federally Funded Research and Development Centers may submit. Non-NSF-sponsored FFRDCs are not permitted to submit proposals under this solicitation.

**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: 1**

An individual may be the PI on a total of one Letter of Intent (LOI) to all INSPIRE funding opportunities in FY 2013. A PI on one LOI may be a collaborator on other LOIs.

**Additional Eligibility Info:**

Other types of organizations may be included in an INSPIRE proposal as subawardees.

NSF will not accept collaborative INSPIRE proposals for a single project submitted separately from multiple organizations. A multi-organization INSPIRE project must be submitted as a single proposal requesting a single award to a U.S. academic institution, a U.S. non-profit, non-academic organization, or an NSF-sponsored FFRDC, with subawards administered by the lead organization.

### V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

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#### A. Proposal Preparation Instructions

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**Letters of Intent (required):**

**Full proposals to the INSPIRE funding opportunities are submitted *by invitation only*, based on a required inquiry process that begins with a FastLane Letter of Intent (LOI).**

- **INSPIRE Track 1** (Letter of Intent deadline March 29, 2013, 5:00pm proposer's local time)
  - Potential proposers must begin the process by submitting a formal inquiry, in the form of a FastLane Letter of Intent (LOI), by March 29.
  - The objective of an INSPIRE Track 1 LOI is to obtain written authorization to submit a Track 1 full proposal by NSF program directors from at least two intellectually distinct divisions or programs. Upon submission, the LOI will be forwarded to the program directors listed on it. (These should be people whose title on the NSF staff directory pages will generally be "Program Director", and who will be listed as "Contacts" on program web pages. They should **not** be senior managers.) They will consider the extent to which the research could impact their programs,

and the extent to which the LOI meets the INSPIRE review criteria described below in Section VI.A. under Additional Solicitation Specific Review Criteria. The "Synopsis" and "Other Comments" data fields of the LOI, and the further information on the optional INSPIRE Letter of Intent Supplemental Form [http://www.nsf.gov/od/iaa/inspire/LOI\\_supplement.docx](http://www.nsf.gov/od/iaa/inspire/LOI_supplement.docx) (available on the NSF web site) as explained below, are the means of making this case.

- o In the FastLane Letters of Intent interface, for Program Solicitation ID, enter this solicitation's NSF document number (NSF 13-518) to obtain the LOI form that is specific to INSPIRE.
- o For INSPIRE Track 1, in the "INSPIRE Track; Estimated Total Funding Request" data field of the LOI, write "Track 1" and an amount up to \$1,000,000.
- o The LOI contains "Synopsis" and "Other Comments" text data fields, each of which is limited by FastLane to 2,500 characters. The PI may use these fields to describe the prospective project. Beyond this limit, to provide more extensive offline information about the project *after submission of the FastLane LOI*, the PI is encouraged to use the INSPIRE Letter of Intent Supplemental Form, as elaborated below.
- o The LOI must list at least two NSF program directors who represent intellectually distinct programs that could have scientific interest in the proposed research. Proposers are encouraged to study program web pages to identify appropriate program directors. More-specific suggestions are on the FAQ page (NSF 13-040, <http://www.nsf.gov/pubs/2013/nsf13040/nsf13040.jsp>), including the NSF interdisciplinary points of contact on the IDR web site ([http://nsf.gov/od/iaa/additional\\_resources/interdisciplinary\\_research/](http://nsf.gov/od/iaa/additional_resources/interdisciplinary_research/)). It is in the proposer's interest to list the most appropriate possible program directors.
- o The person named in the "Managing NSF Program Director" data field of the LOI will be initially responsible for coordinating the evaluation of the LOI, working with the person(s) named in the "Other NSF Program Director(s)" data field. The submitted LOI will be forwarded to these program directors.
- o When the LOI is submitted, FastLane will assign an LOI ID consisting of 9 characters: "L" followed by 8 digits. With this LOI ID, the PI can use the INSPIRE Letter of Intent Supplemental Form ([http://www.nsf.gov/od/iaa/inspire/LOI\\_supplement.docx](http://www.nsf.gov/od/iaa/inspire/LOI_supplement.docx)), available on the NSF web site, to provide more extensive information about the project. The Form includes a template keyed to the INSPIRE review criteria. For INSPIRE Track 1, enter the 9-character LOI ID ("L" followed by 8 digits) in the "LOI ID" data field and enter "1" in the "INSPIRE Track" data field. The supplemental information, organized around the template, will be limited to 10,000 characters, exclusive of spaces. Send the completed Form as an e-mail attachment to [inspire@nsf.gov](mailto:inspire@nsf.gov), with the 9-character LOI ID in the Subject field. It will be forwarded to the program directors named on the corresponding LOI. The text in the document must be machine-readable and searchable; in particular, **do not** scan the completed form into a bit-mapped PDF.
- o If the program directors find that the proposal idea is more appropriate for a regular review process than for INSPIRE, or that the idea does not appear to be a promising fit for the INSPIRE criteria, they will so inform the PI, and the inquiry will be closed.
- **INSPIRE Track 2** (Letter of Intent deadline February 20, 2013, 5:00pm proposer's local time)
  - o Potential proposers must begin the process by submitting a formal inquiry, in the form of a FastLane Letter of Intent (LOI), by February 20.
  - o The objective of an INSPIRE Track 2 LOI is to obtain an invitation from the NSF INSPIRE Management Team to submit a Track 2 full proposal. Upon submission, the LOI will be forwarded to the INSPIRE Management Team. Invitations will only be extended to LOIs that attract substantial potential support from a range of intellectually distinct programs and NSF organizations, such that a full proposal that fulfills the promise of the LOI has a reasonable prospect of being awarded at or near the LOI's estimated budget level. The Management Team will coordinate the process of contacting appropriate program directors and NSF organizations, aided by the PI's identifications of program directors on the LOI. Program directors and organizations will consider the extent to which the research could impact their programs, and the extent to which the LOI meets the INSPIRE review criteria described below in Section VI.A. under Additional Solicitation Specific Review Criteria. If favorably inclined, they will determine levels of tentative potential support that they find to be appropriate. The "Synopsis" and "Other Comments" data fields of the LOI, and the further information on the optional INSPIRE Letter of Intent Supplemental Form [http://www.nsf.gov/od/iaa/inspire/LOI\\_supplement.docx](http://www.nsf.gov/od/iaa/inspire/LOI_supplement.docx) (available on the NSF web site) as explained below, are the means of making this case to program directors and organizations.
  - o In the FastLane Letters of Intent interface, for Program Solicitation ID, enter this solicitation's NSF document number (NSF 13-518) to obtain the LOI form that is specific to INSPIRE.
  - o For INSPIRE Track 2, in the "INSPIRE Track; Estimated Total Funding Request" data field of the LOI, write "Track 2" and an amount up to \$3,000,000.
  - o The LOI contains "Synopsis" and "Other Comments" text data fields, each of which is limited by FastLane to 2,500 characters. The PI may use these fields to describe the prospective project. Beyond this limit, to provide more extensive offline information about the project *after submission of the FastLane LOI*, the PI is encouraged to use the INSPIRE Letter of Intent Supplemental Form, as elaborated below.
  - o The LOI must list at least three NSF program directors who represent intellectually distinct programs that could have scientific interest in the proposed research. Proposers are encouraged to study program web pages to identify appropriate program directors. More-specific suggestions are on the FAQ page (NSF 13-040, <http://www.nsf.gov/pubs/2013/nsf13040/nsf13040.jsp>), including the NSF interdisciplinary points of contact on the IDR web site ([http://nsf.gov/od/iaa/additional\\_resources/interdisciplinary\\_research/](http://nsf.gov/od/iaa/additional_resources/interdisciplinary_research/)). It is in the proposer's interest to list the most appropriate possible program directors.
  - o When the LOI is submitted, FastLane will assign an LOI ID consisting of 9 characters: "L" followed by 8 digits. With this LOI ID, the PI can use the INSPIRE Letter of Intent Supplemental Form ([http://www.nsf.gov/od/iaa/inspire/LOI\\_supplement.docx](http://www.nsf.gov/od/iaa/inspire/LOI_supplement.docx)), available on the NSF web site, to provide more extensive information about the project. The Form includes a template keyed to the INSPIRE review criteria. For INSPIRE Track 2, enter the 9-character LOI ID ("L" followed by 8 digits) in the "LOI ID" data field and enter "2" in the "INSPIRE Track" data field. The supplemental information, organized around the template, will be limited to 15,000 characters, exclusive of spaces. Send the completed Form as an e-mail attachment to [inspire@nsf.gov](mailto:inspire@nsf.gov), with the 9-character LOI ID in the Subject field. The text in the document must be machine-readable and searchable; in particular, **do not** scan the completed form into a bit-mapped PDF.
  - o With the aid of the PI's identifications of program directors on the LOI, the INSPIRE Management Team will coordinate the forwarding of the LOI and the Supplemental Form to appropriate program directors and NSF organizations.
  - o If the LOI does not attract sufficiently large and broad potential support to warrant an invitation, or if it is considered to be more appropriate for a regular review process than for INSPIRE, or if it does not appear to be a promising fit for the INSPIRE criteria, a coordinating program director will so inform the PI, and the inquiry will be closed.
- **Director's INSPIRE Awards** (Letter of Intent deadline March 29, 2013, 5:00pm proposer's local time)
  - o Work through the INSPIRE Track 1 process above, as explained in the Funding Opportunities subsection of Section II.

#### Letter of Intent Preparation Instructions:

When submitting a Letter of Intent through FastLane in response to this Program Solicitation please note the conditions outlined

below:

- Sponsored Projects Office (SPO) Submission is not required when submitting Letters of Intent
- A Minimum of 0 and Maximum of 4 Other Senior Project Personnel are allowed
- A Minimum of 0 and Maximum of 4 Other Participating Organizations are allowed
- INSPIRE Track (write "Track 1" or "Track 2"); Estimated Total Funding Request is required when submitting Letters of Intent
- Managing NSF Program Director (last name, first name, NSF division, NSF program) is required when submitting Letters of Intent
- Other NSF Program Director(s) (at least one for Track 1; at least 2 for Track 2) is required when submitting Letters of Intent
- Submission of multiple Letters of Intent is not allowed

**Full Proposal Preparation Instructions:** Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov). Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of 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](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

**Important Proposal Preparation Information:** FastLane will check for required sections of the proposal, in accordance with *Grant Proposal Guide* (GPG) instructions described in Chapter II.C.2. The GPG requires submission of: Project Summary; Project Description; References Cited; Biographical Sketch(es); Budget; Budget Justification; Current and Pending Support; Facilities, Equipment & Other Resources; Data Management Plan; and Postdoctoral Mentoring Plan, if applicable. If a required section is missing, **FastLane will not accept the proposal.**

Please note that the proposal preparation instructions provided in this program solicitation may deviate from the GPG instructions. If the solicitation instructions do not require a GPG-required section to be included in the proposal, insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.

**Additional Full Proposal Preparation Instructions** (by invitation only):

- **INSPIRE Track 1** (full proposal deadline May 29, 2013, 5:00pm proposer's local time)
  - To submit a full proposal, the PI must have authorization through the inquiry process initiated by submission of a Letter of Intent (see Letter of Intent Instructions above). The written authorization by NSF program directors from at least two intellectually distinct divisions or programs must be submitted with the proposal in the Supplementary Documents section of the proposal. This documentation represents the program directors' preliminary judgment that the project could be appropriate for consideration under the INSPIRE Track 1 grant mechanism; it is not a commitment to recommend support of the proposal. A Track 1 proposal submitted without the required documentation will be returned without review.
  - The proposal will be submitted electronically via FastLane or Grants.gov to one of the prospective co-funding programs, with the other program(s) identified on the proposal Cover Sheet.
  - The project title will be preceded by the prefix "INSPIRE Track 1:", to distinguish the submission from a regular proposal that would go to a regular review process.
  - Compliance with the Grant Proposal Guide ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)) is required. Depending on the circumstances, the Project Description may be significantly shorter than the GPG maximum of 15 pages.
- **INSPIRE Track 2** (full proposal deadline May 13, 2013, 5:00pm proposer's local time)
  - To submit a full proposal, the PI must have an invitation from the INSPIRE Management Team through the inquiry process initiated by submission of a Letter of Intent (see Letter of Intent Instructions above). The invitation from the INSPIRE Management Team must be submitted with the proposal in the Supplementary Documents section of the proposal. This documentation represents the Foundation's preliminary judgment that the project could be appropriate for consideration under the INSPIRE Track 2 grant mechanism; it is not a commitment to recommend support of the proposal. A Track 2 proposal submitted without the required documentation will be returned without review.
  - The proposal will be submitted electronically via FastLane or Grants.gov to the INSPIRE program under the Office of International and Integrative Activities (IIA), with the prospective co-funding programs identified on the proposal Cover Sheet.
  - The project title will be preceded by the prefix "INSPIRE Track 2:", to distinguish the submission from a regular proposal that would go to a regular review process.
  - Compliance with the Grant Proposal Guide ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)) is required.
- **Director's INSPIRE Awards** (full proposal deadline May 29, 2013, 5:00pm proposer's local time)
  - In addition to the elements of an INSPIRE Track 1 proposal that addresses the Track 1 review criteria, an individual's proposal as a candidate for a Director's INSPIRE Award should contain the following, which are uploaded in FastLane as Supplementary Documents and do not count toward the 15-page limit on the Project Description:
    - **Vision statement.** A Supplementary Document, limited to a maximum of 3 pages, that discusses the individual's plans and anticipated accomplishments over the years of the proposed project, and describes the further plans and accomplishments that would be made possible by the additional \$500,000 provided by a Director's INSPIRE Award.
    - **Letters of collaboration.** If there are other researchers whose scientific contributions and/or resources

are essential to achievement of the vision, their commitments to work with the individual should be included as Supplementary Documents.

- **Interdisciplinary publication** (optional). One publication exemplary of the individual's interdisciplinary scientific work, to be included as a Supplementary Document.
- Aside from these deviations, compliance with the Grant Proposal Guide ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)) is required.

## B. Budgetary Information

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**Cost Sharing:** Inclusion of voluntary committed cost sharing is prohibited.

## C. Due Dates

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- **Letter of Intent Due Date(s) (required)** (due by 5 p.m. proposer's local time):

December 10, 2012 - February 20, 2013

INSPIRE Track 2 Inquiries

December 10, 2012 - March 29, 2013

INSPIRE Track 1 Inquiries

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

May 13, 2013

INSPIRE Track 2 Full Proposals

May 29, 2013

INSPIRE Track 1 Full Proposals

May 29, 2013

Director's INSPIRE Awards Full Proposals

Full proposal submission is by invitation only, based on evaluation by NSF staff of the required Letter of Intent.

## D. FastLane/Grants.gov Requirements

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### For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at:

<https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

### For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage:

<http://www.grants.gov/web/grants/applicants.html>. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: [support@grants.gov](mailto:support@grants.gov). The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

**Submitting the Proposal:** Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

Proposers that submitted via FastLane are strongly encouraged to use FastLane to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

## VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

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Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the



Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as [Exhibit III-1](#).

A comprehensive description of the Foundation's merit review process is available on the NSF website at: [http://nsf.gov/bfa/dias/policy/merit\\_review/](http://nsf.gov/bfa/dias/policy/merit_review/).

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

## A. Merit Review Principles and Criteria

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The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

### 1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

### 2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. ([GPG Chapter II.C.2.d.i.](#) contains additional information for use by proposers in development of the Project Description section of the proposal.) Reviewers are strongly encouraged to review the criteria, including [GPG Chapter II.C.2.d.i.](#), prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

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 organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

#### Additional Solicitation Specific Review Criteria

- The two standard NSB-approved merit review criteria of intellectual merit and broader impacts apply, as augmented in what follows.
- **INSPIRE Track 1**
  - *Intellectual merit (interdisciplinarity)*: An INSPIRE Track 1 award must integrate across multiple disciplines, as opposed to incorporating disciplinary contributions additively. The proposal must identify and justify how the project is interdisciplinary, for example by:
    - Combining concepts/methods from multiple fields in new, surprising ways;
    - Proposing problem-driven research that requires a comprehensive and integrative approach to a grand challenge issue;
    - Raising new fundamental questions or interesting new directions for research at the interface of disciplines; or
    - Making major changes in understanding or use of existing concepts or methods to address complex phenomena.
  - *Intellectual merit (transformative potential)*: A Track 1 award must be potentially transformative. The proposal must identify and justify what is potentially transformative in the project, by showing specifically how at least one of the following characteristics is fulfilled:
    - Challenges conventional wisdom;
    - Leads to insights that enable new techniques or methodologies; or
    - Redefines the boundaries among disciplines of science, engineering, or education.

The justification must be specific, e.g., for the first characteristic, what form of conventional wisdom is being challenged, and how the proposal has potential for overturning it.
  - *Broader impacts*: Unusual promise for societal benefit is highly valued in a Track 1 proposal, in the spirit of the NSF strategic plan ([http://www.nsf.gov/news/strategicplan/nsfstrategicplan\\_2011\\_2016.pdf](http://www.nsf.gov/news/strategicplan/nsfstrategicplan_2011_2016.pdf)) goal to innovate for society.
  - The proposal must address how the project is better suited for INSPIRE than for a regular NSF review process. For example, if the project is of such a high-risk nature that it could meet resistance from conventional reviewers, this could be explained and justified.
- **INSPIRE Track 2**
  - The INSPIRE Track 1 additional review criteria, listed immediately above, apply.
  - An INSPIRE Track 2 project must be supported by at least *three* intellectually distinct NSF divisions or programs whose research communities do not have a well-established history of collaboration. The proposal must address this issue of building new bridges between communities.
  - Expectations of significant broader impacts are substantially higher for Track 2 projects. For example, a proposal could make a strong case for unique interdisciplinary training opportunities, or for new international connections, or for innovative outreach to facilitate societal benefit of the research, or for many other possibilities.
  - Viewed from a broad scientific perspective, a Track 2 project should have unusually strong impact and transformative potential that will stand out to leaders in scientific fields that may not be directly impacted by the project.
- **Director's INSPIRE Awards**
  - The INSPIRE Track 1 additional review criteria, listed above, apply.
  - Based on the candidate's vision, the proposal should convey great potential for exciting, transformative advances that transcend single disciplines and will be broadly appreciated.

## B. Review and Selection Process

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Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review, Internal NSF Review, or Reverse Site Review.

- **INSPIRE Track 1**
  - Only internal merit review is required and typically expected for INSPIRE Track 1 proposals. If program directors elect to obtain external reviews to inform their decision, then the PI will be so informed in the interest of maintaining the transparency of the review and recommendation process.
  - On the basis of the criteria outlined above in Section VI.A., the cognizant program directors will decide whether to recommend a Track 1 proposal for co-funding from their programs.
  - A decision and feedback will be sent to the principal investigator(s), generally within two to three months after proposal submission. The feedback will typically be in the form of a Context Statement and a PO Comment in FastLane, explaining the rationale for the decision.
  - No reconsideration of declined Track 1 proposals is allowed. By submitting a proposal to the pilot Track 1 grant mechanism, with "INSPIRE Track 1:" in the proposal title, the principal investigator chooses an alternative review process and waives the option of reconsideration. This is analogous to the GPG provision for the existing RAPID and EAGER mechanisms.

- **INSPIRE Track 2**

- To evaluate the high-level scientific impact, excitement, transformative potential, and interdisciplinarity of INSPIRE Track 2 full proposals, NSF will convene a blue-ribbon panel of broad-thinking scientific leaders. This panel will advise the Foundation on the extent of these big-picture strengths of the proposed projects.
- To assess concurrently the more specialized novelty, strengths, and weaknesses of the proposed projects, program directors will coordinate internal review and, as they may deem necessary for particular expertise, external *ad hoc* review.
- After the blue-ribbon panel, if there are unresolved issues for certain proposals such that elaboration by PIs could be helpful, program directors or members of the INSPIRE Management Team may conduct virtual reverse site visits for such proposals.
- On the basis of the criteria and processes outlined above in Section VI.A., the cognizant program directors and NSF organizations will decide whether to recommend a Track 2 proposal for co-funding from their programs and other available funds. Centralized funds under the management of the INSPIRE Management Team will be prioritized primarily on the basis of the findings of the blue-ribbon panel.
- A Track 2 award will move ahead only if sufficient funds are committed from all sources to support the scientific scope essentially as proposed. Absence of such commitments will be sufficient justification for a declination.
- A decision and feedback will be sent to the principal investigator(s), generally within three to four months after proposal submission. The internal feedback will typically be in the form of a Context Statement and a PO Comment in FastLane, explaining the rationale for the decision; the external feedback will consist of the blue-ribbon panel summary, panel reviews, and (if applicable) *ad hoc* reviews.
- No reconsideration of declined Track 2 proposals is allowed. By submitting a proposal to the pilot Track 2 grant mechanism, with "INSPIRE Track 2:" in the proposal title, the principal investigator chooses an alternative review process and waives the option of reconsideration. This is analogous to the GPG provision for the existing RAPID and EAGER mechanisms.

- **Director's INSPIRE Awards**

- The INSPIRE Track 2 blue-ribbon panel will also evaluate the proposals of the candidates for Director's INSPIRE Awards, from the same high-level perspective.
- Concurrently, program directors will evaluate Director's INSPIRE Award proposals for potential support as INSPIRE Track 1 awards from their programs.
- Based on the combined assessments, the INSPIRE Management Team will nominate prospective Director's INSPIRE Awardees, and the Director will make the final selections. Candidates who do not win Director's INSPIRE Awards will be eligible for Track 1 awards, as in the INSPIRE Track 1 process outlined above.

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will be completed and submitted by each reviewer. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

## VII. AWARD ADMINISTRATION INFORMATION

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### A. Notification of the Award

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Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process).

### B. Award Conditions

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An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award notice; (4) the applicable award conditions, such as Grant General Conditions (GC-1)\*; or Research Terms and Conditions\* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

\*These documents may be accessed electronically on NSF's Website at [http://www.nsf.gov/awards/managing/award\\_conditions.jsp](http://www.nsf.gov/awards/managing/award_conditions.jsp)

org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the *NSF Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=aag](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag).

## C. Reporting Requirements

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For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). Within 90 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=aag](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag).

## VIII. AGENCY CONTACTS

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*Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.*

General inquiries regarding this program should be made to:

- Jessica H. Robin, telephone: (703) 292-8706, email: [jrobin@nsf.gov](mailto:jrobin@nsf.gov)
- Richard A. Behnke, GEO, telephone: (703) 292-8518, email: [rbehnke@nsf.gov](mailto:rbehnke@nsf.gov)

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: [support@grants.gov](mailto:support@grants.gov).

**Contacts at the NSF directorate and office level:** The interdisciplinary research Points of Contact may be helpful, as elaborated in the next note.

**Note to all prospective INSPIRE principal investigators about contacts at NSF:** As explained in greater detail in the solicitation, before writing or submitting an INSPIRE proposal, PIs must make a formal inquiry by submitting a FastLane Letter of Intent (LOI), and must obtain a full-proposal invitation authorized by the INSPIRE Management Team on the basis of evaluation of the LOI by NSF staff. All invitations will reflect interest in considering a full proposal by at least two NSF program directors (PDs) from intellectually distinct NSF divisions or programs. The LOI must list at least two or three PDs, depending on the PI's choice of funding opportunity. It is in the PI's interest to list the most appropriate possible PDs. The PDs should **not** be senior managers (director, deputy director, office head, office director, assistant director, deputy assistant director, division director, deputy division director, section head). PIs are encouraged to study program web pages to identify appropriate PDs. Some keyword searching of the NSF web site may be helpful in finding appropriate NSF divisions and programs, for example by using the "Search Funding Opportunities" box in the left-hand column of the home page <http://www.nsf.gov/>, or the "Search Award For" box in the Award Search database <http://www.nsf.gov/awardsearch/>. The interdisciplinary research Points of Contact [http://www.nsf.gov/od/iaa/additional\\_resources/interdisciplinary\\_research/poc.jsp](http://www.nsf.gov/od/iaa/additional_resources/interdisciplinary_research/poc.jsp) may also be helpful at the directorate and office level.

### WEBCAST

An informational INSPIRE webcast was held on Tuesday, January 29, 2013. During the webcast the INSPIRE funding mechanism, the current INSPIRE solicitation (NSF 13-518), and the FY2013 INSPIRE competition were discussed. INSPIRE Program Officers addressed frequently asked questions (FAQs) and answered questions submitted by the online audience. The webcast has been archived and is available through the TV Worldwide [webpage](#). Registration is required to view the archived webcast.

## IX. OTHER INFORMATION

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The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "NSF Update" is

an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF [Grants Conferences](#). Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website at [https://public.govdelivery.com/accounts/USNSF/subscriber/new?topic\\_id=USNSF\\_179](https://public.govdelivery.com/accounts/USNSF/subscriber/new?topic_id=USNSF_179).

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at <http://www.grants.gov>.

## ABOUT THE NATIONAL SCIENCE FOUNDATION

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The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

*Facilitation Awards for Scientists and Engineers with Disabilities* provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at <http://www.nsf.gov>

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information** (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
  - Send an e-mail to: [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov)
  - or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS


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