# Research Coordination Networks (RCN)

## PROGRAM SOLICITATION
## NSF 15-527

## REPLACES DOCUMENT(S):
## NSF 13-520

**National Science Foundation**

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences

Directorate for Social, Behavioral & Economic Sciences

Office of Integrative Activities

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

March 02, 2015

RCN-UBE & UBE Incubator Track

January 06, 2016

RCN-UBE & UBE Incubator Track

January 18, 2017

RCN UBE & UBE Incubator Track

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

Proposals Accepted Anytime

General (non-targeted) RCN proposals should be submitted to a particular program according to the program's submission dates. PIs are encouraged (for CISE required) to discuss suitability of an RCN topic with the P.O.s that manage the appropriate program.

## IMPORTANT INFORMATION AND REVISION NOTES

Please note that this program solicitation may contain supplemental proposal preparation guidance and/or guidance that deviates from the guidelines established in the Grant Proposal Guide.

This revision of the RCN solicitation announces:

- A new submission opportunity for the Targeted RCN-UBE & UBE Incubator track proposals, with submission deadlines in 2015, 2016, and 2017.
- The Directorate for Computer & Information Science & Engineering (CISE) will now accept general RCN proposals.
- Removal of the RCN SEES Track.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 17-1), which is effective for proposals submitted, or due, on or after January 30, 2017.

## SUMMARY OF PROGRAM REQUIREMENTS

## General Information

**Program Title:**

Research Coordination Networks (RCN)

**Synopsis of Program:**

The goal of the RCN program is to advance a field or create new directions in research or education by supporting groups of investigators to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic and international boundaries. RCN provides opportunities to foster new collaborations, including international partnerships, and address interdisciplinary topics. Innovative ideas for implementing novel networking strategies, collaborative technologies, and development of community standards for data and meta-data are especially encouraged. RCN awards are not meant to support existing networks; nor are they meant to support the activities of established collaborations. RCN awards do not support primary research. RCN supports the means by which investigators can share information and ideas, coordinate ongoing or planned research activities, foster synthesis and new collaborations, develop community standards, and in other ways advance science and education through communication and sharing of ideas.

Proposed networking activities directed to the RCN program should focus on a theme to give coherence to the collaboration, such as a broad research question or particular technologies or approaches.

Participating core programs in the Directorates for Biological Sciences (BIO), Computer and Information Science and Engineering (CISE), Geosciences (GEO), Engineering (ENG) and Social, Behavioral and Economic Sciences (SBE) will accept General (non-targeted) RCN proposals. Some submission deadlines for the general RCN proposals vary by program; consult program websites. BIO is joined by the Directorate for Education and Human Resources (EHR) in the Undergraduate Biology Education (RCN-UBE) track described below.

The following targeted track within the RCN programs is intended to foster linkages between BIO and EHR.

- RCN-UBE: The Undergraduate Biology Education track focuses on any topic likely to lead to improved participation, learning, or assessment in undergraduate biology education and follows the same guidelines outlined below for the general RCN program.

  Note: Because it addresses undergraduate biology education, the RCN-UBE track is offered in alignment with the NSF-wide undergraduate STEM education initiative, Improving Undergraduate STEM Education (IUSE). More information about IUSE can be found in the Program Description section of this solicitation.

Several other NSF solicitations accept RCN proposals, or support research networking activities if appropriate to the solicitation. Please see section **IX. Other Information** of this solicitation for a listing of these programs.

**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.*

- Peter H. McCartney, telephone: (703) 292-8470, email: pmccartn@nsf.gov
- Christopher R. Meyer, telephone: (703)292-2273, email: cmeyer@nsf.gov

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

- 47.041 --- Engineering
- 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
- 47.083 --- Office of Integrative Activities (OIA)

## Award Information

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

**Estimated Number of Awards:** 15 to 25

The actual number of awards varies across disciplinary research programs and RCN tracks.

**Anticipated Funding Amount:** $7,500,000 to $12,500,000

Pending availability of funding. Varies across disciplinary research programs and RCN tracks.

## 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:**

There are no restrictions or limits.

## 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* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
  - 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: https://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:**

  Other budgetary limitations apply. Please see the full text of this solicitation for further information.

**C. Due Dates**

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

  March 02, 2015

  RCN-UBE & UBE Incubator Track

  January 06, 2016

  RCN-UBE & UBE Incubator Track

  January 18, 2017

  RCN UBE & UBE Incubator Track

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

  Proposals Accepted Anytime

  General (non-targeted) RCN proposals should be submitted to a particular program according to the program's submission dates. PIs are encouraged (for CISE required) to discuss suitability of an RCN topic with the P.O.s that manage the appropriate program.

## Proposal Review Information Criteria

**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

**Award Conditions:**

Standard NSF award conditions apply.

**Reporting Requirements:**

Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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## I. INTRODUCTION

The National Science Foundation announces plans to continue its support of research coordination networks designed to foster communication and promote **new** collaboration among scientists, engineers and educators with diverse expertise and who share a common interest in a new or developing area of science or engineering. By encouraging the formation of new groups and networks, the RCN program will advance fields and create novel directions and opportunities for research and science education. It is anticipated that this program will contribute to further progress in all areas of science, education and engineering, and strengthen collaborative and interdisciplinary research and international partnerships. However, RCNs are intended to foster networking activities and thus will not directly support costs related to primary research. RCNs can be used for synthesis activities where existing data and collaboration are utilized to advance knowledge in disciplinary and cross-disciplinary areas. Past RCN awards can be found on the RCN program page at: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11691&org=DBI&from=home .

## II. PROGRAM DESCRIPTION

Support will be provided for groups of investigators to communicate and coordinate their efforts across disciplinary, organizational,

institutional, geographical and/or international boundaries. The objectives are to facilitate open communication and exchange of information and resources, to integrate research, education, and/or cyberinfrastructure activities of scientists, educators, and engineers working independently on topics of common interest, to nurture a sense of community among young scientists, educators, and engineers, and to minimize isolation and maximize cooperation so as to eliminate unnecessary duplication of efforts.

**There are 2 different types of RCN proposals:**

1. **General RCN proposals.** General RCN proposals should focus on a research question, topic or particular technologies, approaches, or development of standards relevant to one or more participating units. For the general RCN program, consideration will be given to all well-justified, cohesive proposals advancing research coordination in a field or combination of fields under the purview of the NSF Directorates and Offices listed under the Summary for Program Requirements, or interdisciplinary networks that cross between Directorates. In addition, EHR and BIO are supporting proposals submitted to the Undergraduate Biology Education (RCN-UBE) track.

   General RCN proposals can be up to 5 years in duration and budgets should not exceed $500,000. Investigators should consult program descriptions on the NSF website and are strongly encouraged to contact appropriate program directors to discuss suitability of an RCN idea prior to submitting a proposal. If an RCN project is relevant to multiple programs, divisions, or directorates, before submitting a proposal the investigator should consult with program directors in those programs for guidance on suitability for co-review among programs and instructions on how to submit.

2. **Targeted Undergraduate Biology Education track.** BIO and EHR (Division of Undergraduate Education-DUE) have developed a targeted Undergraduate Biology Education track (RCN-UBE) in recognition of the importance of networking activities to advance biology education. Although the primary focus is on undergraduate education, novel ideas for graduate education will also be considered. RCN-UBE proposals could focus on improving learning in "gateway" courses (e.g., exploring the use of methods that foster active learning or inquiry-based learning), improving learning through the use of emerging technologies in the biology curriculum, strategies and approaches for engaging biology faculty in professional development activities related to undergraduate education, incorporating emerging sub-disciplines into the biology curriculum (e.g., informatics research, proteomics, systems and computational biology), improving assessment of student learning, improving the transition of students from two-year to four-year institutions, or incorporating authentic research experiences in undergraduate laboratory courses, with an emphasis on introductory and lower division courses.

   RCN-UBE proposals can be up to 5 years in duration and budgets should not exceed $500,000. To assist initial networking efforts of scientists and educators who are developing innovative proposals for the RCN-UBE track, the RCN-UBE track will accept Incubator proposals for up to $50,000 for one year.

   ***The following text regarding IUSE applies only to the RCN-UBE track and does not apply to any other type of RCN proposal.***

   The National Science Foundation (NSF) *Improving Undergraduate STEM Education* (IUSE) initiative is a comprehensive, Foundation-wide effort to accelerate the quality and effectiveness of the education of undergraduates in all of the STEM fields by investing over $100M in FY 2015 through coordinated investments across directorates within a coherent framework for improving undergraduate STEM learning. The *IUSE Framework* promotes new and exciting approaches to using research on STEM learning and education to address challenges across undergraduate STEM education, as well as within specific disciplines. The goals of the program are to: 1) Improve STEM learning and learning environments, 2) Broaden participation and STEM institutional capacity for STEM learning, and 3) build the professional STEM workforce for tomorrow. The framework draws upon a knowledge base accumulated from decades of research, development, and best practices across the nation in STEM undergraduate education. NSF expects that investments within the IUSE portfolio will integrate theories and findings from education research with attention to the needs and directions of frontier science and engineering research. New knowledge about learning and implementation will be developed across all IUSE investments. Investments will include foundational and exploratory research, design and development research, and impact research.

   In FY 2015, NSF-IUSE serves as the framework for all investments in research and development that are critical for **curricular** improvement in undergraduate STEM education, within formal and informal learning environments. FY 2015 IUSE programs call for proposals to:

   - use and build evidence about improved STEM instructional practices;
   - design and study innovative learning opportunities, including cyberlearning;
   - create, implement, and test program, curricular, course, and technology-driven models
   - develop, implement, and test creative approaches for adoption of education research in to disciplinary teachings;
   - develop and validate assessments/metrics for undergraduate STEM learning and instructional practice; and
   - conduct fundamental research on issues of undergraduate STEM teaching and learning.

**All RCN proposals (including RCN-UBE) must conform to the following 7 guidance items:**

1. Topic/focus of research coordination. For all tracks, research coordination network (RCN) proposals should identify a clear theme as the focus of its activities. RCN proposals should spell out the theoretical and/or methodological foundations of the network's proposed activities, and should specify what activities will be undertaken, what new groups of investigators will be brought together, what products will be generated by network activities, and how information about the network and opportunities to participate will be disseminated. The proposal should also outline the expected benefits of the network's activities in moving a field forward and the implications for the broader community of researchers, educators and engineers.

2. Principal investigator (PI). Although research coordination networks are expected to involve investigators from multiple sites, a single organization must serve as the submitting organization for each proposal. Of the two types of collaborative proposal formats described in the *Grant Proposal Guide*, this solicitation allows only a single proposal submission with subawards administered by that lead organization. The PI is the designated contact person for the project and is expected to provide leadership in fully coordinating and integrating the activities of the network. Strong, central leadership and clear lines of responsibility are essential for successful networking.

3. Steering committee. Members of the steering committee will be network participants that assume key roles in the leadership and/or management of the project. The steering committee should be representative of the communities of participants that will be brought together through the RCN. It must include all Co-PIs, if any are listed on the cover page of the proposal, and any other senior personnel, including any foreign collaborators involved as leaders or otherwise considered senior personnel. **Therefore, the steering committee constitutes all the senior personnel for the RCN proposal.** The name and home organization of each steering committee member should be listed in the project summary. As these individuals are all senior personnel, their Biographical Sketches and Current and Pending Support statements must be included in the appropriate sections of the proposal.

4. Network participants. The size of a network is expected to vary depending on the theme and the needs of the proposed activity. The network may be regional, national, or international. It is expected that a proposed network will involve investigators at diverse organizations. The inclusion of new researchers, post-docs, graduate students, and undergraduates is encouraged. Specific efforts to increase participation of underrepresented groups (women, underrepresented minorities, and persons with disabilities) must be included. In the proposal, an initial network of likely participants should be identified. However, there should be clearly developed mechanisms to maintain openness, ensure access, and actively promote participation by interested parties outside of the initial participants in the proposed network.

5. Coordination/management mechanism. The proposal should include a clearly defined management plan. The plan should include a description of the specific roles and responsibilities of the PI and the steering committee. Mechanisms for allocating funds, such as support for the work of a steering committee, should be clearly articulated. The plan should include provisions for flexibility to allow the structure of the participant group to change over time as membership and the network's foci evolve. Mechanisms for assessing progress and the effectiveness of the networking activities should be part of the management plan.

6. Information and material sharing. The goals of this program are to promote effective communication and to enhance opportunities for collaboration. Proposers are expected to develop and present a clearly delineated understanding of individual member's rights to ideas, information, data and materials produced as a result of the award that is consistent with the goals of the program. Infrastructure plans to support the communication and collaboration should be described. When the proposed activity involves generation of community resources such as databases or unique materials, a plan for their timely release and the mechanism of sharing beyond the membership of the RCN must be described in the Data Management Plan, a required Supplementary Document. In addition, a plan for long-term maintenance of such resources must be described without assuming continued support from NSF.

7. International participation. NSF encourages international collaboration, and we anticipate that many RCN projects will include participants, including steering committee members, from outside the US. International collaborations should clearly strengthen the proposed project activities. As NSF funding predominantly supports participation by US participants, network participants from institutions outside the US are encouraged to seek support from their respective funding organizations, notably participants from developed countries. NSF funds may not be used to support the expenses of the international scientists and students at their home organization. For RCN projects that involve international partners, NSF funds may be used for the following:

   Travel expenses for US scientists and students participating in exchange visits integral to the RCN project

   RCN-related expenses for international partners to participate in networking activities while in the US.

   RCN-related expenses for US participants to conduct networking activities in the international partner's home laboratory.

## III. AWARD INFORMATION

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

**Estimated Number of Awards:** 15 to 25; varies across disciplinary research programs and RCN tracks.

**Anticipated Funding Amount:** $7,500,000 to $12,500,000 Pending availability of funding. Varies across disciplinary research programs and RCN tracks.

## IV. 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:**

There are no restrictions or limits.

**Additional Eligibility Info:**

**Organization Limit:** Although the research coordination networks are expected to be multi-organizational, a single organization must serve as the lead and all other organizations as subawardees. Organizations ineligible to submit to this program solicitation may not receive subawards. If they are part of the proposed network, their participation is expected to be supported by non-NSF sources.

## V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

### A. Proposal Preparation Instructions

**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 Proposal & Award Policies & Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from 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: (https://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.

See Chapter II.C.2 of the PAPPG for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

Proposers interested in submitting RCN proposals are strongly encouraged to contact the NSF program officer in their area of research/education prior to proposal submission for guidance on program participation and to determine project suitability. For proposals submitted to the CISE Directorate, the investigator must consult with a CISE Program Officer relevant to the topic and obtain permission to submit a proposal (see instructions below).

The following exceptions and additions apply to proposals submitted to this Program:

**Before submitting a General or Targeted RCN proposal:** Read this entire solicitation and identify the programs that overlap your discipline or the area of potential research. Use the NSF organization listing at https://www.nsf.gov/staff/orglist.jsp to narrow the directorate, division, and program where you need to apply. You are strongly encouraged to discuss your proposal with the appropriate program officer (and proposers to CISE are required to do so as noted in the next section) to determine whether the proposed project is within the scope of the RCN, and to identify applicable submission deadlines. This step is especially important for cross-disciplinary proposals. Note that several other NSF solicitations accept RCN proposals (see section **IX. Other Information** of this solicitation) and if you are applying to one of these you should submit directly to that solicitation.

**Cover Sheet:** Select **this program solicitation** number from the pulldown list. (Grants.gov Users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page.)

Proposers wishing to submit as a General RCN proposal:

- For BIO and SBE - proposers should select the Division and program or cluster appropriate to the proposal topic from the drop down menus during submission via Fastlane. Programs within the Division that you selected will appear automatically in the "Current List of NSF Selected Units" at the bottom of the screen.
- For ENG and GEO - proposers will note only a limited list of programs in FastLane; proposals received by the selected units in

these directorates will be directed to appropriate participating programs.
- For proposals submitted to the CISE Directorate, the investigator must consult with a CISE Program Officer relevant to the topic and obtain permission to submit a proposal. Email documentation from at least one CISE Program Officer confirming approval to submit a proposal must be provided in the Special Information and Supplementary Documentation section of the proposal.

Proposers wishing to submit to the RCN-UBE or RCN-UBE Incubator tracks should first select the Division of Biological Infrastructure and then select "Research Coordination Networks program" from the FastLane menu during online submission.

Grants.gov users should refer to Section VI.1.2. of the NSF Grants.gov Application Guide for specific instructions on how to designate the NSF Unit of Consideration.

An informative title for the proposed project, that begins with "RCN:", "RCN-UBE:", or "RCN-UBE Incubator:" as appropriate, must be provided.

Often proposals are co-reviewed by two or more NSF disciplinary units and, as appropriate, OIIA. For proposals with an international dimension, the country or countries involved should be reported on the cover sheet.

Entries on the FastLane Cover Sheet are limited to the principal investigator and a maximum of 4 co-principal investigators. Additional senior personnel, i.e., serving as other members of the steering committee, should be listed in the Overview section of the Project Summary page. These other senior personnel should also be entered into FastLane as Senior Investigators using the Add/Delete non-Co-PI Senior Personnel option on the FastLane Form Preparation screen (this latter provision allows their Biographical Sketches and Current and Pending Support statements to be included in the FastLane proposal).

For Grants.gov users - NSF allows one principal investigator/project director and a maximum of 4 co-principal investigators/project directors to be identified on a proposal. Instructions for entering additional senior project participants are included in Section V.5. of the NSF Grants.gov Application Guide.

For more FastLane and Grants.gov instructions see section D below.

**Project Summary:** May not be more than one page in length, and must consist of three parts: **(1)** an overview that includes a description of the proposed RCN activities and objectives, and a ***listing of steering committee members*** along with their home organizations; **(2)** a statement of the intellectual merit of the proposed RCN project, indicating how it will advance understanding in a field of science; and **(3)** the broader impacts of the proposed work, including mechanisms for actively promoting participation by all interested parties. The Project Summary should be written in the third person, informative to other persons working in the same or related fields, and, insofar as possible, understandable to a scientifically or technically literate lay reader. It should not be an abstract of the proposal. Proposals that do not contain the Project Summary, including an overview and separate statements on intellectual merit and broader impacts will not be accepted by FastLane or will be returned without review.

**Project Description (maximum 15 pages, or 8 pages for RCN-UBE Incubator):** The following exceptions and additional items should be noted.

1. "Results from Prior Support" need not be included unless the proposed activity is clearly a logical extension of an activity supported by NSF, in which case describe (up to 5 pages to be counted within the 15-page limit) the prior activity and how it relates to the proposed activity.

2. In addition to describing the RCN objectives, scientific rationale, specific networking activities, and the special features stated in Section II above, the project description should address aspects of network Management, Coordination, and Participant Diversity, within the 15 page project description, as described below. All major organizational collaborations should be described and justified in terms of how each serves the needs or enhances the goals of the network. Note: Management and Coordination plans are not required for RCN-UBE Incubator proposals.

**Management plan.** Describe plans and procedures for the development and assessment of the proposed activity. Include formal mechanisms to ensure fair and equitable allocation of group resources. Clearly define the responsibilities for leadership and the role of the PI and the steering committee. Delineate the procedures used for the selection of initial network participants, the plans for maintaining an appropriate degree of openness and for continually encouraging the involvement of additional interested parties. Means for self-evaluation of progress toward the network goals should be presented as an important part of the management plan.

**Coordination plan.** If the proposed network will interface with an established network or group, or if there is a similar activity being planned or ongoing in other countries, describe the plans for coordination and cooperation among the relevant networks.

**Increasing diversity.** A research coordination network is an important opportunity for encouraging the involvement of investigators from underrepresented groups (women, underrepresented minorities, and persons with disabilities), early-career investigators, and investigators located in a diverse range of organizations. Describe (1) a well designed plan to increase participation of members of under-represented groups that is specific to the proposed project; (2) a plan to involve investigators at a variety of organizational settings; (3) if applicable, a plan to include new researchers, post-docs, and students; and (4) how the plans for increasing diversity are integrated with the proposed project plan.

**Budget:** Provide yearly budgets for the duration of the proposed project. When subawards are involved yearly budgets are required for each subaward. FastLane or Grants.gov will generate cumulative budgets for the primary and subaward organizations. A budget justification (of up to three pages) is required. **Organizations ineligible to submit to this program solicitation may not receive subawards.** If they are part of the proposed network, their participation is expected to be supported by non-NSF sources. Allowable costs for international collaboration are described in Section II. Program Description.

Funds may be requested to promote collaborative activities, such as short visits among member laboratories, exchange visits of students, sharing of unique facilities, establishment of a public web site, network retreats, partial support of workshops uniquely tied to the network activities, etc. Any well-justified activity that fulfills the goals of the Program will be considered. Innovative ideas for implementing novel networking strategies to promote research collaborations and enable new research directions or advancement of a field are especially encouraged. Funds from this program may not support independent, individual research projects of the participants;

nor are they to be used as a mechanism for a mini-grant awarding program.

Note that funds requested to support activities of the network participants, such as participant travel, materials and supplies for the network projects, and network retreats should be listed as "participant support" in the proposed budget, and managed by the submitting organization. Please refer to the Grant Proposal Guide for guidance regarding proposed international travel.

**Special Information and Supplementary Documentation:** In addition to the applicable items described in the Grant Proposal Guide (and an email from a Program Director in CISE indicating approval to submit a proposal), include the following information, clearly labeled, in the Supplementary Docs section of the proposal (**No other material will be allowed**):

1. Conflicts of Interest list: Provide a list, in a single alphabetized table, with the full names and institutional affiliations of all people with conflicts of interest for all senior personnel (PI, Co-PIs if any, and steering committee members) and any named personnel whose salary is requested in the project budget. Conflicts to be identified are (1) PhD thesis advisors or advisees, (2) collaborators or co-authors, including postdocs, for the past 48 months, and (3) any other individuals or organizations with which the investigator has financial ties.

2. Data Management Plan: As specified in the NSF Grant Proposal Guide, all proposals must include a maximum 2-page Data Management Plan as a Supplementary Document. Although collection of new data is not supported in RCN projects, this plan should describe issues related to information exchange, intellectual property rights, derived products, databases, software, model output, and materials sharing. For example, if the proposed activity is expected to result in community resources (such as databases or collections of biological materials), the Data Management Plan should present a clear plan for sharing of these resources not only among the network participants but with the scientific community at large. The Data Management Plan should also address plans for determining authorship or proper attribution of credit for peer-reviewed or other publications, Internet resources, etc. that may be expected to result from the activity. General RCN proposals submitted to appropriate core programs should also ensure that they fulfill any program-specific guidelines for the Data Management Plan if applicable.

3. Postdoctoral Researcher Mentoring Plan. Each proposal that requests funding to support postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. Please be advised that if required, FastLane will not permit submission of a proposal that is missing a Postdoctoral Researcher Mentoring Plan. See Chapter II of the PAPPG for further information about the implementation of this requirement. The Postdoctoral Researcher Mentoring Plan is considered an integral part of the project and therefore subject to reviewer, panel, and program evaluation. Successful proposers will be expected to address this issue in annual and final project reports.

4. Letters of Collaboration. This section could include any letters of collaboration or commitment from individuals or organizations that are integral parts of the proposed project, such as the involvement of collaborator organizations that are not supported by subawards or documentation of permission to access materials, data or other associated project activities. Letters should focus solely on affirming that the individual or organization is willing to collaborate on the project as specified in the project description of the proposal. No additional text, especially elaboration of the nature of activities to be undertaken by the collaborator and endorsements of the potential value or significance of the project for the collaborator, may be included. The template that should be used for the preparation of letters of collaboration is provided below.

   Letters of collaboration should not be provided for any individual designated as a principal investigator or senior personnel (i.e., not required for any steering committee member), nor are letters of collaboration required for any organization that will be a subawardee in the proposal budget.

   Letters of collaboration are not required for potential participants in the RCN although such individuals might be mentioned in the project description. RCN participants are not necessarily collaborators in the overall RCN project; their level of involvement in the RCN is likely to change through time, and an up front commitment is neither necessary nor helpful to the review process.

   Each letter of collaboration must be signed by the designated collaborator. Requests to collaborators for letters of collaboration should be made by the PI well in advance of the proposal submission deadline, because they must be included at the time of the proposal submission. Letters deviating from this template are not accepted and may be grounds for returning the proposal without review.

   ***Template to be used for letters of collaboration***

   To: NSF RCN Program
   From: _____
   (*Printed name of the individual collaborator or name of the organization and name and position of the official submitting this memo*)

   By signing below (or transmitting electronically), I acknowledge that I am listed as a collaborator on this RCN proposal, entitled "_____(*proposal title*)_____," with _____(*PI name*)_____ as the Principal Investigator. I agree to undertake the tasks assigned to me or my organization, as described in the project description of the proposal, and I commit to provide or make available the resources specified therein.

   Signed: _____
   Organization: _____
   Date: _____

## B. Budgetary Information

**Cost Sharing:**

Inclusion of voluntary committed cost sharing is prohibited.

**Other Budgetary Limitations:**

Funds from this program may not support independent, individual research projects of the participants; nor are they to be used as a mechanism for a mini-grant awarding program.

General RCN proposals can be up to 5 years in duration and budgets should not exceed $500,000. Full RCN-UBE proposals can be for up to 5 years in duration and budgets should not exceed $500,000. RCN-UBE Incubator proposals can be for up to $50,000 for one year.

## C. Due Dates

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

  March 02, 2015

  RCN-UBE & UBE Incubator Track

  January 06, 2016

  RCN-UBE & UBE Incubator Track

  January 18, 2017

  RCN UBE & UBE Incubator Track

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

  Proposals Accepted Anytime

  General (non-targeted) RCN proposals should be submitted to a particular program according to the program's submission dates. PIs are encouraged (for CISE required) to discuss suitability of an RCN topic with the P.O.s that manage the appropriate program.

Refer to the previous section for Due Date Descriptions.

## D. FastLane / Grants.gov Requirements

**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. 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. 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

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 PAPPG Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: https://www.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

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. (PAPPG 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 PAPPG 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**

RCN proposals will be evaluated for their creativity, innovation, and potential to advance, transform, or establish new areas of science.

RCN proposals must establish the infrastructure to create new networks of scientists who have not previously worked together. RCNs cannot use resources to fund primary research or to sustain existing networks.

For all proposals involving international collaborations, reviewers will consider: mutual benefits, true intellectual collaboration with the foreign partner(s), benefits to be realized from the expertise and specialized skills, facilities, sites and/or resources of the international counterpart, and active engagement of U.S. students and early-career researchers in the RCN activities.

## B. Review and Selection Process

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

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 generally be completed and submitted by each reviewer and/or panel. 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

### A. Notification of the Award

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

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 https://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.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

### C. Reporting Requirements

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 no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 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 Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

PIs must provide the names and institutional affiliations of all RCN participants, including students, in FastLane project reports and must maintain a website for dissemination of RCN information, including opportunities for participation.

## VIII. AGENCY CONTACTS

*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:

- Peter H. McCartney, telephone: (703) 292-8470, email: pmccartn@nsf.gov
- Christopher R. Meyer, telephone: (703)292-2273, email: cmeyer@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: 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.

RCN Contacts available at https://www.nsf.gov/bio/ef/rcn_contacts.htm.

## IX. OTHER INFORMATION

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.

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.

Two other inter-directorate programs accept RCN proposals:

- Dynamics of Coupled Natural and Human Systems (CNH) Program https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13681
- Ecology and Evolution of Infectious Diseases (EEID) Program https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5269

For instructions on submitting RCN proposals to either of those programs please read the solicitation.

In addition to opportunities via the RCN solicitation, international RCN-like activities can be furthered via various NSF support programs within specific directorates. Further information can be found by referencing the following solicitations, which are given as examples.

International Collaboration in Chemistry between US Investigators and their Counterparts Abroad (ICC)

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13627&org=CHE&from=home

Materials World Network: Cooperative Activity in Materials Research between US Investigators and their Counterparts Abroad (MWN)

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12820&org=NSF&sel_org=NSF&from=fund

International Materials Institutes (IMI)

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5328&org=NSF&sel_org=NSF&from=fund

## ABOUT THE NATIONAL SCIENCE FOUNDATION

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* (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.E.6 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 https://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

  or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Office of the General Counsel
National Science Foundation
Arlington, VA 22230