Faculty Early Career Development (CAREER) Program
Includes the description of NSF 's Presidential Early Career Awards for Scientists and Engineers (PECASE)

PROGRAM SOLICITATION
NSF 11-690

REPLACES DOCUMENT(S):
NSF 08-557

National Science Foundation

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering
    Division of Advanced Cyberinfrastructure

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences
    Division of Polar Programs

Directorate for Mathematical & Physical Sciences

Directorate for Social, Behavioral & Economic Sciences

Office of International and Integrative Activities

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

July 25, 2011

    BIO, CISE, EHR, OCI

July 26, 2011

    ENG

July 27, 2011

    GEO, MPS, SBE, OPP

July 23, 2012

    BIO, CISE, EHR, OCI

July 24, 2012

    ENG

July 25, 2012

    GEO, MPS, SBE, OPP

July 22, 2013

    BIO, CISE, EHR, OCI

July 23, 2013

    ENG

July 24, 2013

    GEO, MPS, SBE, OPP

IMPORTANT INFORMATION AND REVISION NOTES

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), NSF 13-1, was issued on October 4, 2012 and is effective for proposals submitted, or due, on or after January 14, 2013. Please be advised that the guidelines contained in NSF 13-1 apply to proposals submitted in response to this funding opportunity.

Please be aware that significant changes have been made to the PAPPG to implement revised merit review criteria based on the

National Science Board (NSB) report, *National Science Foundation's Merit Review Criteria: Review and Revisions*. While the two merit review criteria remain unchanged (Intellectual Merit and Broader Impacts), guidance has been provided to clarify and improve the function of the criteria. Changes will affect the project summary and project description sections of proposals. Annual and final reports also will be affected.

A by-chapter summary of this and other significant changes is provided at the beginning of both the *Grant Proposal Guide* and the *Award & Administration Guide*.

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.

Revision Summary

- Cover sheet requiring certification of eligibility for this program has been removed
- Restriction placed on the content allowed in the Letters of Collaboration
- Length of Departmental Letter extended to two (2) pages
- Raise in the minimum budget allowed for the Office of Polar Program (OPP) to $500,000
- More details on how to include International/Global Dimensions and Cross-Disciplinary activities in the proposal
- Removal of the award reporting requirement to have a yearly Departmental Letter submitted with every Annual Report.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Faculty Early Career Development (CAREER) Program
Includes the description of the NSF component of the Presidential Early Career Awards for Scientists and Engineers (PECASE)

Synopsis of Program:

CAREER: The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations. Such activities should build a firm foundation for a lifetime of leadership in integrating education and research. NSF encourages submission of CAREER proposals from junior faculty members at all CAREER-eligible organizations and especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply.

PECASE: Each year NSF selects nominees for the Presidential Early Career Awards for Scientists and Engineers (PECASE) from among the most meritorious recent CAREER awardees. Selection for this award is based on two important criteria: 1) innovative research at the frontiers of science and technology that is relevant to the mission of the sponsoring organization or agency, and 2) community service demonstrated through scientific leadership, education or community outreach. These awards foster innovative developments in science and technology, increase awareness of careers in science and engineering, give recognition to the scientific missions of the participating agencies, enhance connections between fundamental research and national goals, and highlight the importance of science and technology for the Nation's future. Individuals cannot apply for PECASE. These awards are initiated by the participating federal agencies. At NSF, up to twenty nominees for this award are selected each year from among the PECASE-eligible CAREER awardees who are most likely to become the leaders of academic research and education in the twenty-first century. The White House Office of Science and Technology Policy makes the final selection and announcement of the awardees.

Cognizant Program Officer(s):

- Division CAREER contacts listed on the CAREER web page at: http://www.nsf.gov/crssprgm/career/contacts.jsp

- See Contacts listing, NSF, telephone: (703) 292-5111, email: info@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

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 600 per year

Anticipated Funding Amount: $220,000,000 per year to new and continuing CAREER awards. This amount is approximate, includes new and continuing increments, and is subject to availability of funds. Funding for CAREER awards is contained within research and education program allocations.

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- All academic institutions accredited and located in the U.S., its territories or possessions, and the Commonwealth of Puerto Rico that award degrees in fields supported by NSF; or,

  Non-profit, non-degree-granting organizations such as museums, observatories or research laboratories, provided that the eligibility requirements for the PI's position are also satisfied.

PI Limit:

A Principal Investigator may submit only one CAREER proposal per annual competition. In addition, a Principal Investigator may not participate in more than three CAREER competitions. Proposals that are not reviewed (i.e., are withdrawn before review or are returned without review) do not count toward the three-competition limit.

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI: 1

A Principal Investigator is allowed only one submission per competition.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable

- **Preliminary Proposal Submission:** Not Applicable

- **Full Proposals:**
    - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
    - 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)

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. proposer's local time):

  July 25, 2011

  > BIO, CISE, EHR, OCI

  July 26, 2011

  > ENG

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  July 23, 2013

  > ENG

July 24, 2013

GEO, MPS, SBE, OPP

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria apply.

Award Administration Information

Award Conditions: Additional award conditions apply. Please see the full text of this solicitation for further information.

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

TABLE OF CONTENTS

I. INTRODUCTION

This program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards for faculty members beginning their independent careers. The intent of the program is to provide stable support at a sufficient level and duration to enable awardees to develop careers as outstanding researchers and educators who effectively integrate teaching, learning and discovery. NSF encourages submission of CAREER proposals from eligible junior faculty at all CAREER-eligible organizations, especially women, members of underrepresented minority groups, and persons with disabilities.

II. PROGRAM DESCRIPTION

A. CAREER Program

This premier program emphasizes the importance the Foundation places on the early development of academic careers dedicated to stimulating the discovery process in which the excitement of research is enhanced by inspired teaching and enthusiastic learning. Effective integration of research and education generates a synergy in which the process of discovery stimulates learning, and assures that the findings and methods of research and education are quickly and effectively communicated in a broader context and to a larger audience.

The CAREER program embodies NSF's commitment to encourage faculty and academic institutions to value and support the integration of research and education. Successful PIs will propose creative, integrative and effective research and education plans, developed within the context of the mission, goals, and resources of their organizations, while building a firm foundation for a lifetime of contributions to research, education and their integration.

Integration of Research and Education - All CAREER proposals must have an integrated research and education plan at their

core. NSF recognizes that there is no single approach to an integrated research and education plan, but encourages all applicants to think creatively about how their research will impact their education goals and, conversely, how their education activities will feed back into their research. These plans should reflect both the proposer's own disciplinary and educational interests and goals, as well as the needs and context of his or her organization. Because there may be different expectations within different disciplinary fields and/or different organizations, a wide range of research and education activities may be appropriate for the CAREER program. Proposers are encouraged to communicate with the CAREER contact or cognizant Program Officer in the Division closest to their area of research to discuss the expectations and approaches that are most appropriate for that area (see http://www.nsf.gov/crssprgm/career/contacts.jsp for a list of CAREER contacts by division).

All proposals submitted to the National Science Foundation are evaluated through the use of two merit review criteria, which they must address explicitly in the Project Summary and Project Description. One relates to intellectual merit and the other relates to broader impacts of the activities. The following URL contains examples illustrating activities that are likely to demonstrate the broader impacts: http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf. CAREER proposers may find these examples useful as they develop their proposals.

B. Presidential Early Career Award for Scientists and Engineers (PECASE)

The Presidential Early Career Award for Scientists and Engineers (PECASE) is the highest honor bestowed by the United States Government on outstanding scientists and engineers beginning their independent research careers. Selection for this award is based on two important criteria: 1) innovative research at the frontiers of science and technology that is relevant to the mission of the sponsoring organization or agency, and 2) community service demonstrated through scientific leadership, education and/or community outreach. These awards foster innovative developments in science and technology, increase awareness of careers in science and engineering, give recognition to the scientific missions of the participating agencies, enhance connections between fundamental research and national goals, and highlight the importance of science and technology for the Nation's future. Please note that individuals cannot apply for a PECASE. Rather, these awards are initiated by participating federal agencies. At NSF, up to twenty nominees for this award are selected each year from among recent CAREER awardees deemed most likely to become the leaders of academic research and education for the twenty-first century. The White House Office of Science and Technology Policy (OSTP) makes the final selection and announcement of the awardees.

III. AWARD INFORMATION

The minimum CAREER award, including indirect costs, will total $400,000 for the 5-year duration with the following exception: proposers to the Directorate of Biological Sciences (BIO) or the Office of Polar Programs (OPP) must submit budget requests for a minimum of $500,000 for the 5-year duration. The PECASE award is an honorary award for all NSF recipients and does not provide additional funds. CAREER awards are eligible for supplemental funding as described in the NSF Award & Administration Guide (AAG), Chapter I.E.4.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- All academic institutions accredited and located in the U.S., its territories or possessions, and the Commonwealth of Puerto Rico that award degrees in fields supported by NSF; or,

    Non-profit, non-degree-granting organizations such as museums, observatories or research laboratories, provided that the eligibility requirements for the PI's position are also satisfied.

PI Limit:

A Principal Investigator may submit only one CAREER proposal per annual competition. In addition, a Principal Investigator may not participate in more than three CAREER competitions. Proposals that are not reviewed (i.e., are withdrawn before review or are returned without review) do not count toward the three-competition limit.

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI: 1

A Principal Investigator is allowed only one submission per competition.

Additional Eligibility Info:

A. CAREER Program

By the Directorate's deadline for submission of CAREER proposals, proposers must meet all of the following eligibility requirements:

- Hold a doctoral degree by the deadline date in a field supported by NSF;
- Be untenured until October 1 following the deadline; and
- Have not previously received a CAREER award (prior or concurrent Federal support for other types of awards or for non-duplicative research does not preclude eligibility);

AND

By October 1st following the deadline for submission of CAREER proposals:

- Be employed in a tenure-track (or tenure-track-equivalent) position as an assistant professor (or

equivalent title) at an accredited institution located in the U.S., its territories, or possessions, or the Commonwealth of Puerto Rico, that awards degrees in a field supported by NSF;

OR

- Be employed in a tenure-track position (or tenure-track-equivalent position) as an assistant professor (or equivalent title) at an organization located in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico, that is a non-profit, non-degree-granting organization such as a museum, observatory, or research lab.

Tenure-Track Equivalency - For a position to be considered a tenure-track-equivalent position, it must meet all of the following requirements: (1) the employing department or organization does not offer tenure-track positions to any new hires; (2) the employee is engaged in research in an area of science or engineering supported by NSF; (3) the employee has a continuing appointment that is expected to last the five years of the grant; (4) the appointment has substantial educational responsibilities; and (5) the proposed project relates to the employee's career goals and job responsibilities as well as to the goals of the department or organization.

Note that PIs that are Associate Professors or in equivalent appointments, with or without tenure, are not eligible for the CAREER program.

NO EXEMPTIONS FROM THESE ELIGIBILITY CRITERIA WILL BE GRANTED.

B. PECASE

PECASE eligibility requires that the applicant be a U.S. citizen, U.S. national, or U.S. permanent resident by the time of nomination by NSF. Only recent CAREER awardees are considered as potential PECASE nominees by NSF. Although persons who have received PECASE awards through other agencies may be eligible for CAREER, they will not be eligible to be nominated by NSF for another PECASE award.

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 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. 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. 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). 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.

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.

Proposal Contents

This program solicitation contains supplemental instructions to the Grant Proposal Guide (GPG) and NSF Grants.gov Application Guide. All standard sections of the proposal are required (i.e., the cover sheet, project summary, table of contents, project description, references cited, biographical sketch, budget, budget justification, current and pending support, facilities/equipment/other resources, and supplementary documentation). The following instructions supplement the guidelines in the GPG and NSF Grants.gov Application Guide for the specified sections.

The Cover Sheet:

- **Program Solicitation Number.** FastLane users: Select the CAREER program solicitation number shown at the beginning of this solicitation from the drop-down menu. Grants.gov users: The program solicitation will be pre-populated by Grants.gov on the NSF Grant Application Cover Page.
- **Unit of Consideration.** Select at least one specific disciplinary program from the drop-down list in FastLane as the unit of consideration. 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. For assistance in determining which program(s) to choose, refer to the NSF Guide to Programs, which provides descriptions of NSF's research-supporting programs. The applicable

deadline for the proposal is the deadline of the Directorate/Office that contains the lead disciplinary program chosen in the cover page. **Project Title.** The project title must begin with "CAREER:" and follow with an informative title.

- **Co-PIs.** No co-PIs are permitted.
- **PI eligibility information.** The Departmental Letter, to be included as a supplementary document in the proposal, should state that the PI is eligible to participate in this program.

Project Summary:

Summarize the research and education objectives, and plans for the integration of **education and research activities.** The Project Summary must clearly address in separate statements how the proposal meets both the Intellectual Merit and Broader Impact review criteria.

Project Description:

The Project Description section should contain a well-argued and specific proposal for activities that will, over a 5-year period, build a firm foundation for a lifetime of contributions to research and education in the context of the PI's organization. The Project Description may not exceed 15 pages.

The Project Description should be developed in consultation with the department head or equivalent organizational official and should include:

- a description of the proposed research project, including preliminary supporting data where appropriate, specific objectives, methods and procedures to be used, and expected significance of the results;
- a description of the proposed educational activities, including plans to evaluate their impact on students and other participants;
- a description of how the research and educational activities are integrated with one another; and
- results of prior NSF support, if applicable.

Successful applicants will propose creative, effective, integrated research and education plans, and indicate how they will assess these components. While excellence in both education and research is expected, activity of an intensity that leads to an unreasonable workload is not. The research and educational activities do not need to be addressed separately if the relationship between the two is such that the presentation of the integrated project is better served by interspersing the two throughout the Project Description.

Proposed research activities may be in any area of science, mathematics, engineering and education normally supported by NSF. To help determine the appropriateness of the project for NSF and identify the disciplinary program to which it should be submitted, proposers are urged to refer to the NSF Guide to Programs. Program information can also be found on Directorate web pages, which can be accessed from the NSF home page (http://www.nsf.gov/). Proposers are also encouraged to contact the appropriate NSF Program Director before submitting the proposal.

Cross-Disciplinary Perspectives - NSF recognizes disciplinary boundaries evolve with time and that inter-, multi-, trans-disciplinary approaches are often needed to push the frontiers of research and education. We invite proposals from early-career PIs that want to pursue research and education activities that cross disciplinary boundaries. Increasingly, CAREER proposals are co-reviewed between programs within a Division, a Directorate, or across Directorates/Offices. We encourage investigators to seek research and education collaborations with partners in other areas of academia as well as from other sectors (for example, partnerships with industry, national laboratories, or schools and school districts, museums). Investigators have the option of including the associated costs in the budget line items of the proposal, or in subawards to another institution for all necessary research and educational activities (for example, hiring an external evaluator, or securing time at a shared research facility). Because the CAREER program is designed to foster individual career development, partners or collaborators may not be listed as co-principal investigators on the cover page or as senior personnel in the budget of subawards. Proposals submitted with co-principal investigators will be returned without review.

International/Global Dimensions - NSF encourages CAREER PIs to include international/global dimensions in their projects. As appropriate, the CAREER proposal should delineate how its activities fit within the context of expertise, facilities, data, and other resources that are being applied globally in relevant areas of research and education, and how the CAREER award would position the PI and his/her organization to take a leadership role. If applicable, the proposal should clearly state how the research and education activities will be enhanced by international engagements, and should describe the benefits to participants in the U.S. and abroad. If an international component is included, proposers are encouraged to contact the relevant country program officer in the Office of International Science and Engineering (OISE) listed in http://www.nsf.gov/od/oise/country-list.jsp.

Field Work in the Polar Regions - For guidance on submitting information about field work proposed in the Arctic or Antarctica, proposers should contact the program officer in the Office of Polar Programs (http://www.nsf.gov/dir/index.jsp?org=OPP) who is associated with the program most closely aligned with the research being proposed.

Education Activities - Proposed education activities may be in a broad range of areas and may be directed to any level: K-12 students, undergraduates, graduate students, and/or the general public, but should be related to the proposed research. Some examples are: designing innovative courses or curricula; supporting teacher preparation and enhancement; conducting outreach and mentoring activities to enhance scientific literacy or involve students from groups that have been traditionally underrepresented in science; researching students' learning and conceptual development in the discipline; incorporating research activities into undergraduate courses; providing mentored international research experiences for U.S. students; linking education activities to industrial, international, or cross-disciplinary work; and implementing innovative methods for evaluation and assessment. Education activities may also include designing new or adapting and implementing effective educational materials and practices. Such activities should be consistent with research and best practices in curriculum, pedagogy, and evaluation. Proposers may build on NSF-supported activities or other educational projects ongoing on campus. The following resources may be helpful in developing the educational activities.

National Research Council. (2000). *How People Learn: Brain, Mind, Experience, and School*. Committee on Developments in the Science of Learning. Bransford, J.D., Brown, A.L., Cocking, R.R., Editors. with additional material from the Committee on Learning Research and Educational Practice. Donovan, M.S., Bransford, J.D., and Pellegrino, J.W., Editors.

National Research Council. (2001). *Adding it up: Helping children learn mathematics*. Mathematics Learning Study Committee. Kilpatrick, J., Swafford, J., and Findell, B., Editors.

National Research Council. (2001). *Knowing what students know: The science and design of educational assessment*. Committee on the Foundations of Assessment. Pellegrino, J., Chudowsky, N., and Glaser, R., Editors

National Research Council. (2002). *Scientific research in education*. Committee on Scientific Principles for

Education Research. Shavelson, R.J., and Towne, L., Editors.

National Research Council. (2007). *Taking Science to School: Learning and Teaching Science In Grades K-8*. Duschl, R. A, Schweingruber, H. A, and Shouse, A. W., Editors.

National Research Council. (2009). *Learning in Informal Environments: People, Places, and Pursuits.* Bell, P., Lewenstein, B., Shouse, A. W., and Feder, M. A., *Editors*.

National Research Council. (2010). *Surrounded by Science: Learning Science in Informal Environments.* Fenichel, M. and Schweingruber, H.A., *Editors.*

Broadening Participation in Graduate Education (2009) - http://www.cgsnet.org/Default.aspx?tabid=365

National Lab Network - http://www.nationallabnetwork.org/

Broadening Participation in Computer Sciences portal - http://www.bpcportal.org/

A CAREER proposal must indicate the goals and objectives of the proposed education activities, how it will be integrated with the research component, and the criteria for assessing how these goals will be met. Principal investigators are strongly encouraged to describe how the impact of the educational activities will be assessed or evaluated. A helpful document for information on evaluating educational activities is the NSF publication *The 2002 User-Friendly Handbook for Project Evaluation* (NSF 02-057).

References Cited:

Provide references in support of both research and education aspects of the CAREER proposal. References cited should comply with the guidelines in the GPG (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).

Biographical Sketch of Principal Investigator:

The Biographical Sketch should be prepared following the instructions in the latest GPG (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg) and should include **both** research and education activities and accomplishments. The list of publications should include no more than ten publications, including up to five publications most closely related to the proposed research and educational activities and up to five other significant publications, whether or not they are related to the proposed project. The Biographical Sketch may not exceed two pages in length.

Supplementary Documentation:

Scan the signed original(s) of the following document(s) and upload the scans as a PDF file into the Supplementary Documents section of the proposal. Do not send paper copies to NSF. All documents must be submitted with the proposal in Fastlane or Grants.gov by the deadline.

1. Departmental Letter **(a proposal submitted without this Letter will be returned without review) -** In recognition of the teacher-scholar role of beginning faculty members, NSF encourages organizations to value and reward the integration of research and education. This integration of research and education requires close collaboration between the CAREER principal investigator (PI) and his/her organization throughout the duration of the award. To demonstrate the department's support of the integrated research and education plan of the CAREER awardee, the proposal must include one (and only one) letter from the PI's department head (or equivalent organizational official). If a proposer is in two departments, the letter should be signed by the Department Head in which tenure will be granted. In those cases where tenure is a joint decision, the letter should be signed by both Department Heads. The letter, which will be included as part of the consideration of the overall merits of the proposal, should demonstrate an understanding of, and a commitment to, the effective integration of research and education as a primary objective of the CAREER award. A letter that fails to acknowledge institutional commitment to the professional development and mentoring of the PI in both research and education may disadvantage an otherwise outstanding proposal.

The Departmental Letter should be no more than 2 pages in length, and include the department head's name and title, below the signature. The letter should contain the following elements:

- An indication that the PI's proposed CAREER research and education activities are supported by and integrated into the educational and research goals of the department and the organization, and that the department is committed to the support and professional development of the PI;
- A description of a) the relationship between the CAREER project, the PI's career goals and job responsibilities, and the goals of his/her department/organization, and b) the ways in which the department head (or equivalent) will ensure the appropriate mentoring of the PI, in the context of the PI's career development and his/her efforts to integrate research and education throughout the period of the award and beyond; and
- A statement to the effect that the PI is eligible for the CAREER program.

2. Letters of Collaboration - If applicable, the proposal should include short (1 page maximum) letters of collaboration that specify the nature of the collaboration, such as intellectual contributions to the project, permission to access a site, an instrument or facility, offer of samples and materials for research, logistical support to the research and education program, and mentoring of U.S. students at a foreign site. The letter(s) should NOT include a personal endorsement or recommendation of the investigator, but should be limited only to the description of the support that will be offered. The project description should document the nature and need for all collaborations. Requests for letters should be made by the PI well in advance of the proposal submission deadline, because they must be included at the time of submission. ***Please note that letters of recommendation for the PI are not permitted, and will be removed from the proposal prior to review.***

3. Postdoctoral Researcher Mentoring Plan - If the proposal requests funding for a post-doc, a one page mentoring plan must be included in the supplementary documents as per the Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).

4. Data Management Plan - As per the Grant Proposal Guide (*http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg***), all proposals must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans. FastLane will not permit submission of a proposal that is missing a Data Management Plan. Check the following website for additional information and a link to Frequently-Asked questions (FAQs)on this requirement: http://www.nsf.gov/bfa/dias/policy/dmp.jsp***

Appendices:

No appendices are permitted.

Pre-Submission Checklist:

All CAREER proposals will be checked for compliance with this CAREER program solicitation and the latest NSF Grant Proposal Guide (GPG) that can be found at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg

Make sure to use this CAREER Program Solicitation number in the cover sheet in order to have the proposal reviewed according to the current guidelines associated with the CAREER program. If the CAREER program solicitation number is not selected on the cover sheet, the proposal will not be reviewed as a CAREER proposal, and if awarded, it will not be as a CAREER award.

In addition, proposals that are non-compliant with the CAREER solicitation for the following reasons will be **returned without review:**

- Co-Principal Investigator(s) listed on the cover page
- Departmental Letter is missing (be careful to put the letter in the Supplementary Documents section, *not* the Single Copy Documents section)

In addition, according to the GPG, any proposal submitted to a program solicitation with a fixed proposal deadline must be submitted by that deadline date up to 5 p.m. proposer's local time in order to be accepted and reviewed. Program Directors will be instructed to return without review any CAREER proposal that arrives after the deadline for the appropriate Directorate/Office, unless there was a technical problem with the proposal submission (through either FastLane or Grants.gov) and the technical problem is supported by documentation from FastLane or Grants.gov at the time of submission and prior to the deadline. A possible slowdown of FastLane or Grants.gov due to volume is not a valid reason for an extension and PIs are *strongly encouraged* to submit their CAREER proposals in advance of the deadline to allow time to correct any problems that may occur in the submission process.

Program Officers will also return without review any proposal that is non-compliant with the GPG because:

- The proposed work duplicates, or is substantially similar to, a proposal already under consideration by NSF from the same submitter
- The proposal was previously declined and was not revised to take into account the major comments from the prior NSF review

The above list is not an all inclusive list of reasons that proposals are returned without review. For complete information on GPG proposal compliance refer to the full text of the GPG. Also consult the GPG Proposal Preparation Checklist (Exhibit II-1 of the GPG).

Post-Submission:

As soon as the proposal is submitted via FastLane or Grants.gov by your research office, make sure to print a final copy of the submitted version for your records. It is your responsibility, and that of your university research office, to ascertain that all of the proposal contents are there and that the proposal is compliant with the GPG and the CAREER solicitation. If mistakes or missing information/documentation are found *prior to the appropriate CAREER deadline*, you can submit a proposal file update that would be automatically accepted by NSF. Note that according to the GPG, file updates will NOT be allowed after the deadline, except to correct a technical problem with the proposal (i.e., PDF file formatting or print problems). If your CAREER deadline has passed and you discover a formatting or print problem, contact your disciplinary Program officer to discuss whether NSF will approve a proposal file update. You should thoroughly review your submitted proposal document in order to identify any PDF conversion or printing problems, leaving enough time to correct any problems prior to the deadline.

B. Budgetary Information

Cost Sharing: Inclusion of voluntary committed cost sharing is prohibited

Other Budgetary Limitations:

The minimum CAREER award size is $400,000 for a five-year period for all directorates except for the Directorate of Biological Sciences (BIO) and the Office of Polar Programs (OPP). For proposals submitted to BIO and OPP, the minimum award size is $500,000 over five years. Before preparing a CAREER proposal, PIs are strongly encouraged to contact their disciplinary program director or the appropriate CAREER contact to discuss budget requests for their proposed CAREER activities, and typical funding levels for their discipline. Many programs and Directorates prefer to make more awards by funding CAREER proposals closer to the minimum award size. Proposers should also review the list of recent CAREER awards made in their discipline for guidance on average award size. A list of CAREER Division/Directorate Contacts can be found on the CAREER web page at http://www.nsf.gov/home/crssprgm/career/contacts.htm.

Support for senior personnel is allowed only for the PI's salary. Support for other Senior Personnel (i.e., in the Budget Category A) is NOT permitted, either in the primary budget or in any subawards. All other allowable costs, as described in the Grant Proposal Guide, are permitted. Allowable costs include funds for postdoctoral fellows, graduate students, undergraduate students, summer salary, education or outreach activities, support for an evaluator, travel and subsistence expenses for the PI and U.S. participants when working abroad with foreign collaborators, and consultant expenses. In some cases, it may be appropriate to include academic year salary support for the PI on a CAREER budget (for example, PIs who have heavy teaching responsibilities or who must conduct field work during the academic year). Proposers should talk to the cognizant Program Director about their individual case.

Budget Preparation Instructions:

A Budget Justification (maximum of three pages) must be included as part of the CAREER proposal.

C. Due Dates

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

    July 25, 2011

        BIO, CISE, EHR, OCI

    July 26, 2011

        ENG

July 27, 2011

   GEO, MPS, SBE, OPP

July 23, 2012

   BIO, CISE, EHR, OCI

July 24, 2012

   ENG

July 25, 2012

   GEO, MPS, SBE, OPP

July 22, 2013

   BIO, CISE, EHR, OCI

July 23, 2013

   ENG

July 24, 2013

   GEO, MPS, SBE, OPP

All proposals are due by the deadline date of the appropriate Directorate or Office selected in cover sheet. For proposals that are to be co-reviewed between two or more programs in Directorates or Offices with different due dates, the deadline for the primary organization applies.

D. FastLane/Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

  Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are 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.

  Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: https://www.fastlane.nsf.gov/fastlane.jsp.

- **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://www07.grants.gov/applicants/app_help_reso.jsp. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding 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.

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 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/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Empowering the Nation Through Discovery and Innovation: NSF Strategic Plan for Fiscal Years (FY) 2011-2016*. 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 core strategies 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 provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students, and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the variety of learning perspectives.

Another core strategy in support of NSF's mission is broadening 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. (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.

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 formulate a recommendation to either support or decline each proposal. 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 is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, 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.

In all cases, 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 and 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.

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 letter, 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 letter; (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 letter. 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?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 *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

Special Award Conditions:

The CAREER award must be relinquished if the principal investigator:

- transfers at any time prior to or during the award period to a position that is not either tenured, tenure-track, or tenure-track equivalent; and/or
- the new organization is not CAREER-eligible.

In the event that any of the above occurs, the CAREER award would not be allowed to be transferred to a substitute PI. The cognizant Program Officer may approve a limited no-cost extension period to allow a student to finish his/her work.

Before transferring a CAREER award to a new organization, NSF will request documentation from the Principal Investigator's new organization, including a new Departmental letter. The new Departmental letter will have to document support for the research, education, and for the integration of education and research goals as described in the original proposal or in a revised scope, as well as provide a plan for the mentoring of the principal investigator.

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 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.

For CAREER awards, the annual and final reports should summarize progress in **both** research and education, and indicate how well these activities are being integrated and assessed. Instructions for preparing project reports can be found on the CAREER web page at http://www.nsf.gov/home/crssprgm/career/report.htm. For general information about preparing and submitting annual and final reports, refer to the Grant Proposal Guide.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Division CAREER contacts listed on the CAREER web page at: http://www.nsf.gov/crssprgm/career/contacts.jsp

- See Contacts listing, NSF, telephone: (703) 292-5111, email: info@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.

CAREER Directorate and Division Contacts:
http://www.nsf.gov/crssprgm/career/contacts.jsp

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, "My NSF" 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. "My NSF" also is available on NSF's website at http://www.nsf.gov/mynsf/.

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

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 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**   (703) 292-5111
  (NSF Information Center)**:**

- **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
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

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