Broadening Participation in Computing (BPC)

PROGRAM SOLICITATION
NSF 21-571

REPLACES DOCUMENT(S):
NSF 09-534

National Science Foundation
Directorate for Computer and Information Science and Engineering
    Division of Computer and Network Systems
    Division of Computing and Communication Foundations
    Division of Information and Intelligent Systems

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

    June 14, 2021

    January 20, 2022

    Third Thursday in January, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES

- Demonstration Projects are expected to contribute evidence-based findings on teaching diverse student populations in computing.
- The budget limits for Alliance Extension and Demonstration Projects have been revised.
- Supplement awards have been added to extend the reach of broadening participation plans implemented as part of a CISE Core Medium or Large project.

Any proposal submitted in response to this solicitation should be submitted in accordance with the *NSF Proposal & Award Policies & Procedures Guide (PAPPG)* that is in effect for the relevant due date to which the proposal is being submitted. The NSF PAPPG is regularly revised and it is the responsibility of the proposer to ensure that the proposal meets the requirements specified in this solicitation and the applicable version of the PAPPG. Submitting a proposal prior to a specified deadline does not negate this requirement.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

    Broadening Participation in Computing (BPC)

Synopsis of Program:

The Broadening Participation in Computing program (BPC) aims to significantly increase the number of U.S. citizens and permanent residents receiving post-secondary degrees in the computing disciplines, and to encourage participation of other underrepresented groups in the discipline. These groups may include women, persons with disabilities, Blacks and African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, and Pacific Islanders. With this solicitation, the BPC program seeks to engage the computing community to develop and implement innovative methods, frameworks, and strategies to improve recruitment and retention of these students through undergraduate and graduate degrees. Projects that target stages of the academic pipeline through faculty ranks are encouraged. All BPC projects must have the potential for widespread, national impact. That is, they should either develop an effective practice that could be widely deployed, or they should deploy existing effective practices to reach larger audiences.

The BPC program will support three categories of awards: Alliances, Demonstration Projects, and Supplements.

Alliances are broad coalitions of academic institutions of higher learning, K-12 schools, government, industry, professional

societies, and other not-for-profit organizations that design and carry out comprehensive programs addressing underrepresentation in the computing disciplines. They have a large regional or national scope. Alliances operate across multiple stages of the academic pipeline and address one or several intended groups that are underrepresented. Collectively, Alliances serve as a national resource for achieving the transformation of computing education.

Existing Alliances with documented evidence of national impact on broadening participation in computing may apply for additional funding. An Alliance Extension increases the duration of the Alliance award as well as its scope, introducing additional student groups to be reached, partners, and/or projects with the intended purpose of significant impact to the populations served.

Demonstration Projects (DPs) are more focused than Alliance projects. Typical DPs pilot innovative programs that, once fully developed, could be incorporated into the activities of an existing or new Alliance, or otherwise scaled up for widespread impact. Examples include projects proposed by a single institution or those that focus on a single underrepresented community, a single point in the academic pathway, or a single impediment to full participation in computing. Demonstration projects should contribute knowledge to our understanding of effective teaching and learning of computing for students from groups underrepresented in computing.

Both Alliances and Demonstration Projects have significant evaluation efforts with both formative and summative components. Competitive projects will have significant impact both in the quality of opportunities afforded to participants and in the number of participants potentially served.

Supplements to existing CISE research awards are intended to engage more members of the computing research community in significant BPC efforts as part of a project's BPC plan.

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.

- Jeffrey Forbes, Program Director, CISE/CNS, telephone: (703) 292-8950, email: jforbes@nsf.gov

- Fay Cobb Payton, Program Director, CISE/CNS, telephone: (703) 292-7939, email: fpayton@nsf.gov

- Allyson Kennedy, Program Director, CISE/CNS, telephone: (703) 292-8950, email: aykenned@nsf.gov

- Michelle L. Rogers, Program Director, CISE/CNS, telephone: (703) 292-7786, email: mlrogers@nsf.gov

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

- 47.070 --- Computer and Information Science and Engineering

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 21 to 30

Anticipated Funding Amount: $12,750,000

Subject to the availability of funds and the number and quality of submitted proposals for each competition.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.
- 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.
- State and Local Governments: State educational offices or organizations and local school districts.

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 Research.gov: *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:**

  Not Applicable

C. Due Dates

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

  > June 14, 2021

  > January 20, 2022

  > Third Thursday in January, Annually Thereafter

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review criteria apply. Please see the full text of this solicitation for further information.

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

Information Technology (IT) innovation is a major driver of our economy, and it is critical to our national security. If the U.S. is to remain globally competitive, it must increase the participation of domestic students receiving undergraduate and graduate degrees in the computing disciplines. This increase must occur across all segments of our population, but it is particularly important among those groups that have historically participated only at low rates: women, persons with disabilities, Blacks and African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, and Pacific Islanders. The lower participation of these groups results in opportunity losses to individuals and workforce talent, negatively impacts our global competitiveness and results in a lack of diverse perspectives and creativity that are needed to shape the future of technology (Committee on Equal Opportunities in Science and Engineering (CEOSE), 2017-2018; Biennial Report to Congress: Broadening Participation in America's STEM Workforce, National Science Board, 2019).

As noted in the National Science Board (NSB), 2019 report, *The Skilled Technical Workforce*, broadening participation, or the lack thereof, raises issues central to national competitiveness, security, and STEM-capable workforce issues. Computing talent is undoubtedly critical to the issues raised by the NSB. To address these gaps, NSB recommends building strategic partnerships; leveraging NSF investments for education, data collection, research and other areas; and focusing on data for educational, skills and workforce characteristics. The CISE BPC program is one mechanism to address the above issues and others impacting underrepresentation in the discipline.

II. PROGRAM DESCRIPTION

The BPC program is intended to significantly increase the number of domestic students receiving post-secondary degrees in the computing disciplines, with an emphasis on students from those groups that participate in computing at rates well below their proportionate representation in higher education. These groups that are underrepresented are women, persons with disabilities, Blacks and African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, and Pacific Islanders. Without their participation, talents, and creativity, our nation cannot meet its imperative for a globally competitive and computationally savvy workforce. Without impactful and intentional interventions, such as the BPC program, we cannot hope to achieve the appropriate scientific, technological and economic innovations that are needed for an inclusive computing field, in particular, and broader society, in general.

Specifically, the BPC program aims to develop, implement and evaluate innovative models, frameworks, and strategies for the inclusion of groups that are underrepresented from K-12 through the computing workforce, with an emphasis on transformational efforts that lead to more inclusive organizational structures and practices. Activities should have significant impact both in the **quality** of opportunities afforded to participants and in the number of participants potentially served. While the emphasis is on the implementation of programs, BPC projects may include complementary, focused research that has the potential for enhancing project activities and meeting project goals along with helping to build a repository of knowledge to grow national impact. Thus, PIs are encouraged to include scientists with appropriate expertise in any research, evaluation, and assessment activities.

Institutions with documented success in awarding computing-related degrees to students from groups underrepresented in computing are

strongly encouraged to participate. Partnerships with Minority-Serving Institutions, Community Colleges, and institutions with strong programs serving persons with disabilities are also encouraged. Where appropriate, and particularly at the K-12 level, BPC projects should partner with community and national organizations that provide formal or informal education activities.

To be competitive, all BPC proposals must include evaluation and assessment components that can effectively document both successes and failures. Awardees must set (and meet) measurable goals and collect evidence to determine progress toward those goals. Awardees must also participate in a BPC program-level evaluation, supplying data that is disaggregated by ethnicity, gender, and discipline (but **not** further disaggregate d to the individual level; NSF does not seek data on individuals).

NSF intends to support a portfolio of projects under the BPC program that serve as effective models for addressing issues of underrepresentation in computing, with an emphasis on widely deploying effective practices for maximum impact. Under this solicitation, the program has three categories: *Alliances*, *Demonstration Projects*, and *Supplements*. Projects involving broadening participation efforts in any of the computing fields normally supported by CISE are of interest.

Alliances

The BPC Alliances, in aggregate, work to transform computing education and address the longstanding underrepresentation of many groups in the computing discipline. Collectively, the BPC Alliances are expected to serve as the following:

- **Testbeds:** BPC Alliances should develop, test, and deploy interventions aimed at supporting students and faculty. These efforts should also focus on sustaining institutional transformation and inclusive practices at the departmental and organizational levels.
- **National Resources:** BPC Alliances should collect, vet, and disseminate best and promising practices for addressing underrepresentation to inform, educate, and connect the broader computing community. They should actively engage in motivating the community to help drive the changes needed at the federal, state, local, and institutional levels to transform computing education for all students.
- **A locus**: BPC Alliances are expected to serve the academic computing community. They should facilitate formation of public/private partnerships, act as a distribution point for educational reforms, and provide a foundation by which demonstration and other projects with organizations and stakeholders may build upon. **Importantly, they should participate in a network of peer alliances to help achieve long-term goals of the NSF CISE BPC Strategic Plan:**
    1. CISE will take a leadership role in calling the computing community to action on issues of underrepresentation;
    2. CISE will raise the awareness of issues of underrepresentation among and diversity of its staff, reviewers, panelists, and awardees; and
    3. CISE will address broadening participation programmatically both through focused activities and through the inclusion of broadening participation efforts as an accepted and expected part of its research and education award portfolios.

Alliances are strongly encouraged to have at least one participating partner that is a degree-granting, academic institution of higher learning located in the U.S., its territories or possessions, or a consortium of such institutions. One participant must be designated as the lead for the project. Institutions and organizations can be added over the course of the project.

Alliances that leverage existing broadening participation efforts both across and within communities underrepresented in computing are strongly encouraged.

Alliance proposals must have detailed evaluation plans overseen by an independent evaluator. PIs are encouraged to include social scientists in their evaluation and assessment efforts. To build and sustain a network of BPC Alliances to help achieve the long-term goals of the NSF CISE BPC Strategic Plan, proposed projects proposals should have a reasonable and appropriate plan to connect, contribute and grow the existing network of peer BPC Alliances. Proposals must also include detailed *management*, *evaluation*, *sustainability*, and comprehensive *dissemination* plans.

Existing Alliances with documented evidence of national impact on broadening participation in computing may apply for an **Alliance Extension** to be funded for up to five years. In order to document national impact, existing alliances must specifically provide evidence for the following questions:

1. What has been the impact of the Alliance on K-20 participants and professionals?
    - How has your Alliance addressed longstanding underrepresentation of multiple groups (or one particular underrepresented group) in the K-20 academic pathways for computing?
    - How have Alliance activities directly and indirectly impacted K-20 students from groups that are underrepresented? How are you able to document (with data) the impact on students reached directly or indirectly?
    - What have been your strategies, and how have they resulted in differential outcomes for a particular population(s)? How have you used disaggregated data to systematically examine the influence of your interventions on a specific subgroup(s) of underrepresented population(s)?
    - How have your research results been adopted or implemented?
2. What is the impact of your Alliance across the BPC Alliances via collaboration and partnerships?
3. How do partners within the Alliance demonstrate the following element of collective impact: a common agenda, shared measurement systems, mutually reinforced activities, and continuous communication?

New Alliance proposals may request up to $750,000 per year for up to 3 years, while existing Alliances may request up to $1,200,000 per year for up to 5 years with evidence of national impact.

Demonstration Projects

Demonstration Projects (DPs) implement promising small-scale interventions in order to study the efficacy of those interventions with particular groups underrepresented in computing educational and workforce settings. DPs are smaller in scope and narrower in focus than Alliance projects. Typically, DPs will be pilots of innovative programs that, once fully developed, could either grow into an Alliance or be incorporated into the activities of an existing Alliance. Projects can, for example, be proposed by a single institution, or might focus on a specific underrepresented community in a region, a specific point in the academic pathway, or on a specific impediment to full participation in computing. Where appropriate, DPs can be proposed in the context of an existing Alliance. In this case, the proposal should document the collaboration on the part of the Alliance. It is permissible to request funding to support the collaboration with the Alliance.

DPs are not intended to serve as scholarship or fellowship programs, nor are they intended to serve as travel grants for student conference participation.

Unlike the Alliance awards, they may involve a single institution or organization. Like Alliances, projects must have clearly defined objectives and strategies with respect to groups that are underrepresented being served, and they must include strong evaluation and assessment components, including both formative and summative components, that document their successes and failures. The interventions and evaluations should be designed to contribute evidence-based findings to the body of knowledge on teaching diverse student populations.

DPs may request up to $300,000 for up to 2 years.

Supplements

As part of the CISE BPC Pilot, broadening participation activities are an accepted and, in some cases, expected part of the CISE research award portfolio. Certain awards for many CISE research programs require a meaningful BPC plan. Supplements to existing Medium and Large CISE Core Programs awards may be made in order to engage more members of the computing research community in significant BPC efforts as part of a project's BPC plan. These supplements will increase underrepresented community participation in specific research areas. Supplemental funding requests for an existing BPC plan should either:

1. Extend the reach of current BPC activities that have some evidence of effectiveness to more participants or institutions; or
2. Coordinate and institutionalize BPC activities within a department or similar unit.

Like Alliances and Demonstration Projects, BPC Supplements should seek to address the longstanding underrepresentation in computing. The proposed supplement project description should include the following information:

- objectives and strategies for the proposed activities along with a timeline,
- an evaluation and assessment plan that describes how to measure the outcomes of the proposed activities, and
- the results of past BPC activities on this project.

The current approved BPC plan must be uploaded as a Supplementary Document.

Supplemental funding requests must: (a) be less than 20% of the original award amount; and (b) not exceed $200,000 in direct costs. Supplements will not be given if they would require an extension beyond the expiration date of the original grant.

III. AWARD INFORMATION

Anticipated Type of Award: Continuing Grant or Standard Grant

Estimated Number of Awards: 21 to 30

Anticipated Funding Amount:$12,750,000

and the number and quality of submitted proposals for each competition.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch

Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.

- 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.
- State and Local Governments: State educational offices or organizations and local school districts.

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.

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 Research.gov or Grants.gov.

- Full Proposals submitted via Research.gov: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal and Award Policies and 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) 292-8134 or by e-mail from nsfpubs@nsf.gov. The Prepare New Proposal setup will prompt you for the program solicitation number.
- 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) 292-8134 or by e-mail from nsfpubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via Research.gov. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

See PAPPG Chapter II.C.2 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.

The following instructions supplement the PAPPG or NSF Grants.gov Application Guide guidelines.

I. Instructions for Alliance and Demonstration Projects

Cover Page.

Proposal Title. To assist NSF staff in sorting proposals for review, proposal titles should begin with an acronym that identifies the solicitation being addressed.

- "BPC-A:" for Alliances,
- "BPC-AE:" for extensions of existing Alliances, and
- "BPC-DP:" for Demonstration Projects.

Renewal. Alliance Extension proposals must have the "Renewal" box on the cover page checked. These are "traditional" renewals, and the proposed work must be described fully, covering all of the information needed for a new proposal.

Project Description Page Limit. Standard page limits of up to 15 pages apply for Alliance and Demonstration Projects. The body of the Project Description of an Alliance Extension proposal must fit within the standard 15-page limit, but an additional 1 to 5 pages can be included for Results from Prior NSF support.

Project Description Content. Project descriptions should clearly detail their objectives and strategies with respect to broadening participation. They should demonstrate an understanding of the issues impacting underrepresentation and a commitment to address these issues.

A. Required Project Description Content for Alliance and Alliance Extension Proposals

- **Project Goals and Outcomes.** Clearly describe the goals and anticipated outcomes of the proposed project. Demonstrate the participating organizations' knowledge of factors affecting the successful recruitment and retention of students from the underrepresented communities at the relevant stages of the academic pipeline. Alliance Extensions should also describe the accomplishments of the existing Alliance, clear distinctions and impact of the new proposed work, and sustainability as follows:
    - Extent of "Alliance" (to what degree have partners formed a collaborative, impactful alliance that is more than just a sum of its parts, that is, what does their close collaboration enable);
    - Scope (in terms of geographic region served, intended participants, range across the computing pipeline and/or pathways, etc.);
    - Degree of impact (in terms of numbers affected as well as rigor of the intervention);
    - Evidence of effectiveness (rigorous evaluation results);
    - Extent of external collaborations;
    - Contributions to larger BP community, including dissemination of results and materials, contributions to the knowledge base, etc.;
    - Extent to which activities have been institutionalized by Alliance partners;
    - Financial support outside of NSF; and
    - Stability of infrastructure and/or organizational structure
- **Implementation Plan.** Describe in detail the activities to be undertaken to realize the project goals and anticipated outcomes:
    - Highlight the potential for successfully aligning with similar programs and efforts (NSF-supported or otherwise) within and across the targeted communities to ensure a comprehensive, integrated effort;
    - Describe the creative, strategic actions that promise significant improvements in the intended group participation and retention in computing disciplines;
    - Describe the research base on which the project builds and how the Alliance activities and goals will further contribute to the knowledge base associated with increasing the participation of groups that are underrepresented in computing; and
    - Describe plans to disseminate the results of the project, both positive and negative.
- **Partnership Plan.** Proposals that are submitted by a partnership must provide evidence of the following:
    - The participating organizations will work together to realize the project goals and that all key stakeholders (including faculty, administrators, and evaluators) participated in project planning and design;
    - The individual and collective institutional and organizational commitments to the project goals;
    - The participating organizations' experiences with the non-academic, holistic components of undergraduate and graduate education that are necessary to ensure the success of women, persons with disabilities, Blacks and African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians, and Pacific Islanders in obtaining computing degrees; and
    - The commitment of the participating organizations to sustain the proposed institutional and organizational change.
- **Management Plan.** Alliance proposals are required to have a management plan that details the organizational structures, mechanisms for communication, and responsibilities of PIs, co-PIs, and Senior Personnel.
- **Evaluation Plan.** Describe the evaluation plan that will guide the project progress and impact, including a description of the instruments/metrics by which the project leaders will measure, document, and report. The purpose of the evaluation plan is to provide feedback on progress towards meeting BPC Alliance goals and impact as well as collaboration with peer Alliances and/or BP stakeholders. The evaluation plan should:
    - Include formative aspects that allow the Alliance to make evidence-based decisions about changes in its activities, and the summative aspects should provide confirmation of impact regarding the intended population served by the Alliance;
    - Describe metrics and capture disaggregated data by race, ethnicity, gender, disability status, and discipline;
    - Identify the person(s) who will lead the BPC Alliance evaluation and describe their academic training and professional experience that qualifies this person(s) to serve as an evaluator(s).
    - Include outcomes, performance measures, benchmarks, and an evaluation timetable, as well as a description of how formative evaluation will improve practice; and
    - Specify the research and educational activities being addressed, and include a plan to share insights, practices, and findings broadly. Ultimately, evaluation plans should generate evidence that will inform and document program sustainability.

- **Sustainability Plan.** Alliance proposals are required to have a plan to build and manage sustainable change. The plan should include mechanisms to further the work by connecting expertise from multiple sectors and other private and public funders.

- **Broader Impacts.** Provide a discussion of the broader impact of the proposed activities as described in Chapter II.C.2.d(i) of the

Proposal & Awards Policies & Procedures Guide.

B. Required Project Description Content for Demonstration Projects:

- **Project Goals and Outcomes.** Clearly describe the goals and anticipated outcomes of the proposed project. Describe how the project will advance our understanding of broadening participating in computing.

- **Implementation Plan.** Describe in detail the activities to be undertaken to realize the project goals and anticipated outcomes. Highlight the potential for successfully aligning the work with other similar programs, projects and efforts (NSF-supported or otherwise). Describe the plans to disseminate the results of the project.

- **Evaluation Plan.** Describe the evaluation plan that will guide the project progress and impact, including a description of the instruments/metrics by which the project leaders will measure, document, and report. Projects are expected to document, and report progress toward the accomplishment of its goals. Evaluation methodology should be included, and data should be disaggregated by gender, ethnicity, and disability status as appropriate. Proposals must include plans for soliciting—and addressing—objective external feedback (e.g., through an advisory board, independent evaluator, peer review, or other mechanism).

- **Broader Impacts.** Provide a discussion of the broader impact of the proposed activities as described in Chapter II.C.2.d(i) of the Proposal & Awards Policies & Procedures Guide.

Supplementary Documents.

- All partnerships should be documented in the proposal and letters of collaboration should be included as Supplementary Documents for any partners not explicitly represented by the PIs, co-PIs, and Senior Personnel.
- *A list of Project Personnel and Partner Organizations (required) (Note: In collaborative proposals, the lead organization should provide this information for all participants):* Provide current, accurate information for all personnel and organizations involved in the project. NSF staff will use this information in the merit review process to manage reviewer selection. The list **must** include all PIs, co-PIs, Senior Personnel, paid/unpaid Consultants or Collaborators, Subawardees, Postdocs, and project-level advisory committee members. This list should be numbered and include (in this order) Full name, Organization(s), and Role in the project, with each item separated by a semi-colon. Each person listed should start a new numbered line. For example:

  - Mary Smith; XYZ University; PI
  - John Jones; University of PQR; Senior Personnel
  - Jane Brown; XYZ University; Postdoctoral Researcher
  - Bob Adams; ABC Community College; Paid Consultant
  - Susan White; DEF Corporation; Unpaid Collaborator
  - Tim Green; ZZZ University; Subawardee

II. Instructions for Supplements

Eligible Principal Investigators are strongly encouraged to contact both their cognizant NSF Program Director(s) and the BPC team at cise-bpc@nsf.gov at least four weeks prior to the deadline at the top of this solicitation to discuss their supplemental funding requests prior to submitting to NSF.

The request for supplemental funding must include "BPC Supplement" in the first sentence of the Summary of the Proposed Work. Additional guidance on preparing and submitting a supplemental funding request may be found in Chapter VI.E.4 of the NSF Proposal & Award Policies & Procedures Guide.

The Justification for Supplement of the proposed work must include the following information:

- objectives and strategies for the proposed activities along with a timeline;
- an evaluation and assessment plan that describes how to measure the outcomes of the proposed activities; and
- the results of past BPC activities on this project.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

C. Due Dates

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

June 14, 2021

January 20, 2022

Third Thursday in January, Annually Thereafter

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For Research.gov user support, call the Research.gov Help Desk at 1-800-673-6188 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov 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: https://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 Research.gov for further processing.

The NSF Grants.gov Proposal Processing in Research.gov informational page provides submission guidance to applicants and links to helpful resources including the NSF Grants.gov Application Guide, Grants.gov Proposal Processing in Research.gov how-to guide, and Grants.gov Submitted Proposals Frequently Asked Questions. Grants.gov proposals must pass all NSF pre-check and post-check validations in order to be accepted by Research.gov at NSF.

When submitting via Grants.gov, NSF strongly recommends applicants initiate proposal submission at least five business days in advance of a deadline to allow adequate time to address NSF compliance errors and resubmissions by 5:00 p.m. submitting organization's local time on the deadline. Please note that some errors cannot be corrected in Grants.gov. Once a proposal passes pre-checks but fails any post-check, an applicant can only correct and submit the in-progress proposal in Research.gov.

Proposers that submitted via Research.gov may use Research.gov 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 *Building the Future: Investing in Discovery and Innovation - NSF Strategic Plan for Fiscal Years (FY) 2018 – 2022*. 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 other underrepresented groups 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

This program solicitation is particularly interested in broadening participation in computing for groups traditionally underrepresented in CISE disciplines. In addition to considering the two general NSF Merit Review Criteria, reviewers will also be asked to evaluate the following:

1. Does the proposal identify the characteristics and needs of the identified underrepresented or underserved groups to be addressed?
2. Does the proposal include specific plans or strategies for addressing or accommodating the particular needs of participants of the identified groups that are underrepresented?

For extensions of previously funded BPC Alliances, reviewers will be asked to evaluate the effectiveness of the previous Alliance award(s) and results from prior support.

B. Review and Selection Process

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

Full Proposals submitted in response to this program solicitation will be reviewed by Ad Hoc and/or Panel Review**.** Alliance proposals may have a second phase with a reverse site visit with an expert review panel comprising of internal and/or external reviewers.

Supplemental funding requests will be reviewed internally by BPC program officers in collaboration with the cognizant CISE program officer for the given award.

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 or the Division of Acquisition and Cooperative Support 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 an NSF Grants and Agreements Officer. 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) 292-8134 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.

Administrative and National Policy Requirements

Build America, Buy America

As expressed in Executive Order 14005, Ensuring the Future is Made in All of America by All of America's Workers (86 FR 7475), it is the policy of the executive branch to use terms and conditions of Federal financial assistance awards to maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States.

Consistent with the requirements of the Build America, Buy America Act (Pub. L. 117-58, Division G, Title IX, Subtitle A, November 15, 2021), no funding made available through this funding opportunity may be obligated for an award unless all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For additional information, visit NSF's Build America, Buy America webpage.

Special Award Conditions:

Projects will be required to maintain a website and attend annual PI meetings.

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.

Additional Reporting Requirements:

BPC awards require the following additional reporting requirements. These requirements are currently undergoing the information collection review process and the clearance number will be included with the reporting requirements. For updated information, PIs are encouraged to contact the cognizant NSF Program Officer listed in the award notice.

Awardees must participate in BPC program-level evaluation by which NSF can assess quantitative gains in relevant measures for students from the underrepresented communities, supplying data that is disaggregated by race, ethnicity, gender, disability status, and discipline (but **not** further disaggregate d to the individual level; NSF does not seek data on individuals). Alliance grantees will be required to make qualitative assessments of the process of change. BPC projects are expected to have the capability of collecting and analyzing data for these program evaluation activities.

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:

- Jeffrey Forbes, Program Director, CISE/CNS, telephone: (703) 292-8950, email: jforbes@nsf.gov

- Fay Cobb Payton, Program Director, CISE/CNS, telephone: (703) 292-7939, email: fpayton@nsf.gov

- Allyson Kennedy, Program Director, CISE/CNS, telephone: (703) 292-8950, email: aykenned@nsf.gov

- Michelle L. Rogers, Program Director, CISE/CNS, telephone: (703) 292-7786, email: mlrogers@nsf.gov

For questions related to the use of FastLane or Research.gov, contact:

- FastLane and Research.gov Help Desk: 1-800-673-6188
- FastLane Help Desk e-mail: fastlane@nsf.gov.
- Research.gov Help Desk e-mail: rgov@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.

General inquiries may be addressed to cise-bpc@nsf.gov.

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 https://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 (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:**   2415 Eisenhower Avenue, Alexandria, VA 22314

- **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) 292-8143

- **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 System of Record Notices, NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." 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
Policy Office, Division of Institution and Award Support
Office of Budget, Finance, and Award Management
National Science Foundation
Alexandria, VA 22314