NSF 23-555: Centers of Research Excellence in Science and Technology (CREST) Postdoctoral Research Program (PRP) (CREST-PRP)

Program Solicitation

Document Information

Document History
- **Posted:** January 27, 2023
- **Replaces:** NSF 18-509

View the program page

National Science Foundation
Directorate for STEM Education
Division of Equity for Excellence in STEM

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

April 26, 2023

October 06, 2023

First Friday in October, Annually Thereafter

February 23, 2024

Last Friday in February, Annually Thereafter

📄 Table Of Contents

Important Information And Revision Notes

Proposals to the CREST-PRP must be submitted by the individual postdoctoral candidate. If an award is recommended, the proposal will be transferred to the proposed primary host institution where the postdoctoral scholar will be named as the project's PI. The award will be issued to and administered by the primary host institution.

This activity was previously included in NSF 18-509 and is now a separate program solicitation.

Proposals submitted in response to this program solicitation must be prepared and submitted via Research.gov or via Grants.gov. **Proposal preparation and submission through Research.gov is strongly encouraged because this solicitation contains unique requirements.**

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:

     Centers of Research Excellence in Science and Technology Postdoctoral Research Program (CREST-PRP)

Synopsis of Program:

     The Centers of Research Excellence in Science and Technology (CREST) program provides support to enhance the research capabilities of minority-serving institutions (MSIs) through the establishment of centers that effectively integrate education and research. CREST promotes the development of new knowledge, enhancements of the research productivity of individual faculty, and an expanded presence of students who are members of groups underrepresented in science, technology, engineering, and mathematics (STEM) disciplines.

The CREST Postdoctoral Research Program (CREST-PRP) awards are part of the overarching CREST program and provide two years of support for research experience and training for early career scientists at active CREST Centers. The goal of the CREST-PRP awards is to increase the workforce presence of individuals from groups underrepresented in STEM fields. CREST-PRP awards recognize investigators with significant potential and provide them with research experiences that broaden perspectives, facilitate interdisciplinary interactions, and prepare CREST-PRP scholars for positions of leadership within the scientific community. Postdoctoral scholars conduct research on topics aligned with the research focus of the host CREST Center. The awards are also designed to provide active mentoring to the postdoctoral scholars by the scientific mentor who, in turn, will benefit from the incorporation of these talented scientists into their research groups.

Proposals must be submitted by individual postdoctoral candidates. However, if an award is recommended, the award will be transferred to the host institution where the postdoctoral scholar will be named as the PI. The award will be issued to the host institution as a regular research award, and the award will be administered by the host institution.

Women, veterans, persons with disabilities, and members of groups underrepresented in STEM are especially encouraged to apply.

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.

- Luis A. Cubano, telephone: (703) 292-7941, email: lcubano@nsf.gov

- Regina Sievert, Program Director, telephone: (703) 292-2808, email: rsievert@nsf.gov

- Nicole E. Gass, Program Specialist, telephone: (703) 292-8378, email: ngass@nsf.gov

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

- 47.076 --- STEM Education

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 10

Up to ten awards will be made annually. The number of awards is subject to the availability of funds and the quality of proposals received.

Anticipated Funding Amount: $2,000,000

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- CREST Postdoctoral Research Program proposals are submitted directly by the fellowship candidate to NSF. Each fellowship candidate must identify in the proposal one or more scientific mentor(s) and must affiliate with a primary host institution that houses a CREST Center with whom the scientific mentor(s) is affiliated. See the CREST program website for a list of active centers.

Who May Serve as PI:

To be eligible to submit a proposal to the CREST-PRP, an individual must, as of the full proposal deadline date:

- Be a U.S. citizen, national, or permanent resident;
- Have earned the doctoral degree, or expect to have earned the doctoral degree, from an MSI (based on the most recent IPEDS data) prior to the required start date of the award;
- Submit a project plan that falls within the purview of the NSF CREST Center host institution's research priorities;
- Not have worked for more than a total of 24 full-time-equivalent months in positions that require the doctoral degree; and
- Not have previously been a principal investigator or co-principal investigator of an NSF award (other than an NSF Graduate Research Fellowship)

For the CREST-PRP, eligible institutions are MSIs that have undergraduate enrollments of 50% or more students (based on total student enrollment) who are members of minority groups underrepresented among those holding advanced degrees in science and engineering fields.

Eligibility may be determined by reference to the Integrated Postsecondary Education Data System (IPEDS) of the US Department of Education National Center for Education Statistics (http://nces.ed.gov/ipeds/).

Proposals that fail to meet eligibility requirements will be returned without review.

By signing and submitting the proposal, the proposer is certifying that they meet the eligibility criteria specified in this program solicitation. Willful provision of false information in this request and its supporting documents or in reports required under an ensuing award is a criminal offense (U.S. Code, Title 18, Section 1001).

Limit on Number of Proposals per Organization:

Only individuals may submit proposals. There is no limit on the number of individual postdoctoral fellowship proposers per institution.

Limit on Number of Proposals per PI or co-PI: 1

Eligible individuals may submit one CREST-PRP proposal per deadline date.

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):

    April 26, 2023

    October 06, 2023

    First Friday in October, Annually Thereafter

    February 23, 2024

    Last Friday in February, 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.

I. Introduction

In addition to bolstering the research infrastructure and research competitiveness of minority serving institutions (MSIs), the Centers of Research Excellence in Science and Technology (CREST) program seeks to increase the workforce presence of individuals from groups underrepresented in STEM fields. 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. Data from the National Center for Science and Engineering Statistics (NCSES) projects that close to 4 million additional people – specifically people who are underrepresented in STEM, – are needed in 2030 for the science and engineering workforce to be representative of the U.S. population. NSF is committed to reaching these individuals – the Missing Millions in STEM – and to the principle of diversity, which it deems central to the programs, projects, and activities it considers and supports. America's diversity is a great strength. Leveraging this strength to broaden participation in the U.S. science and engineering enterprise will be crucial to fostering individual opportunity and a thriving economy. Across the agency, and with guidance from the National Science Board, NSF is working to increase STEM skills and opportunities for all Americans. NSF also encourages the inclusion of veterans and persons with disabilities in its programs.

Attentiveness to career development of the individuals working with senior faculty researchers in all CREST Centers can play an important role in diversifying the national STEM workforce. To meet the challenge of creating an inclusive workforce that is representative of the nation's diversity, the CREST Postdoctoral Research Program (CREST-PRP) is partnering with the CREST community to support postdoctoral research scholars at CREST Centers.

CREST-PRP awards further the NSF goal of preparing tomorrow's innovation workforce that is enriched by the assets of diverse participants from a range of groups and communities. This STEM workforce will engage diverse teams that can offer new ways to solve problems and provide unique perspectives to improve performance and outcomes.

PRP scholars are encouraged to conduct research that aims to address a significant scientific challenge in an NSF-supported field, especially those of national interest such as data science and analytics; advanced materials, manufacturing, and robotics; cybersecurity; plant genetics/agricultural technologies; quantum information sciences; nanotechnology; semiconductors/microelectronics technologies; climate change and clean energy; and areas outlined in the resources below:

CHIPS and Science Act of 2022 https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/)

Industries of the Future (https://www.whitehouse.gov/wp-content/uploads/2022/04/04-2022-OSTP_IOTF_Report.pdf)

Understanding the Brain (https://www.nsf.gov/news/special_reports/brain/)

DOE Earthshots (https://www.energy.gov/policy/energy-earthshots-initiative)

The CREST-PRP encourages a close partnership between the postdoctoral scholar and the host institution, allows the postdoctoral scholar access to institutional benefits such as healthcare, and decreases the burden of grant management that is placed on the postdoctoral scholar when an award is made directly to an individual. Therefore, proposals are submitted by individuals, but all awards will be made to the primary host institution, using the Pre-award Transfer Process, after the review process is complete. Budgets and award documents will be adjusted to include institutional fringe and overhead costs. The postdoctoral scholar must be listed as the PI on the award.

II. Program Description

A. Description:

The CREST Postdoctoral Research Program (CREST-PRP) offers two-year awards to provide opportunities for postdoctoral scholars to obtain training beyond their graduate education. Postdoctoral scholars must affiliate with active CREST Centers and are expected to devote themselves full-time to the CREST-PRP activities during the term of the award.

The CREST-PRP is intended to recognize postdoctoral scholars with significant potential and provide them with research experiences that will broaden perspectives, facilitate interdisciplinary interactions, and prepare them for positions of leadership within the scientific community.

During the award, participants must conduct research on topics aligned with the research focus of the host CREST Center. The research and training plans must address important scientific questions within the scope of the CREST Center. The awards are also designed to provide active mentoring of the postdoctoral scholars by the scientific mentor(s) who will benefit from having these talented scientists in their research groups.

As a rough guideline, postdoctoral scholars should plan on their professional development activities taking no less than 10% and no more than 25% of their time. The balance of the time will be dedicated to their research project. Proposers are encouraged to discuss the proposed professional development activities with their proposed host prior to proposal submission so that the professional development activities can be incorporated into the mentor's letter.

The Research and Training Plan must include a timetable with yearly goals with benchmarks for major anticipated outcomes and a description of future research and career directions. The proposer must identify and present goals for both the research and training components of the award. The proposer must also address the broader impacts of the

award beyond their own training in this section; it is not adequate to address broader impacts only in the project summary. The research portion should not contain jargon and acronyms that are not understandable to a wide range of scientists. The project summary should not be cut and pasted into the project description.

B. Host Institutions:

The postdoctoral scholar must affiliate with a primary host institution that has an active CREST Center, which will receive and administer the award. Please refer to the CREST web page to find active CREST Centers.

The proposer is responsible for making prior arrangements with the host CREST Center institution and scientific mentor(s). The postdoctoral scholar must affiliate with a CREST Center institution at all times during the entire tenure of the CREST-PRP and select a scientific mentor(s) at the CREST Center who will provide mentoring and guidance for both the research and professional development planned by the proposer. Once a proposal is submitted, any changes in location (to another active CREST Center) or scientific mentor for the CREST-PRP must be approved in advance by NSF.

Documentation required from the host institution is described in Section V below. It is important that the host institution's letter(s) specifically acknowledge that the institution will accept responsibility for administering the award and that the postdoctoral scholar will be named as the PI on the award and receive a salary and benefits as an institutional employee.

C. Scientific Mentor(s) (Primary Mentor):

In addition to affiliation with a host institution, the candidate must identify a scientific mentor(s) (primary mentor) at an active CREST Center who will be providing guidance on the research and professional development goals. The scientific mentor(s) must provide the Scientific Mentor(s) Statement, as described in Section V below. The support of the scientific mentor(s) and their plan for mentoring the postdoctoral scholar will be considered during the evaluation of the proposal (See Additional Solicitation Specific Review Criteria). The roles of the other scientific mentor(s) must be clearly stated in the project description.

Fulfillment of the CREST Center's research needs by the postdoctoral scholar should be clearly articulated in the scientific mentor's statement. If an award is offered, the proposer must provide documentation from the CREST Center institution that the terms and conditions of the CREST-PRP are acceptable and that the postdoctoral scholar will be provided adequate mentoring, space, basic services, needed resources, and supplies.

The proposer can have secondary mentors. Regardless of the number of CREST Center scientific mentor(s), the proposal requires a single CREST Center scientific mentor statement. When more than one scientific mentor is proposed, one must be named primary scientific mentor and information from all scientific mentors must be integrated into a single statement.

The candidate is responsible for securing both the host institution's and the scientific mentors' (a) support for the proposal and (b) agreement to abide by the terms of the program as described in this solicitation with the host institution and scientific mentor(s).

III. Award Information

A. Duration and Tenure

Awardees must begin their postdoctoral training within 12 months following the submission date.

Awards are made for up to two years. Interruptions in tenure or extensions without additional cost to NSF are permitted only for extenuating circumstances beyond the control of the postdoctoral scholar and require prior NSF approval.

Within a CREST-PRP award period, one month per year may be used for paid leave, including parental or family leave. The paid leave cannot be used to increase the level of NSF support beyond the duration of the award. NSF enables career-life balance through a variety of mechanisms. For more information, please see https://www.nsf.gov/career-life-balance/.

Candidates selected to receive the award will be contacted by NSF and asked to provide additional information such as forms required for the pre-award transfer to the initial (primary) host institution.

Successful candidates who have not completed the doctorate at the time of proposal submission must provide certification of the completion of all doctoral degree requirements before receiving the award. Normally, awards will be held at institutions specified in the proposal, but under certain circumstances and with suitable justification postdoctoral scholars may transfer during the tenure of the award to a new CREST Center upon prior approval by NSF. If a postdoctoral scholar chooses to accept employment during an award year, the fellowship award will be terminated upon the start of the new position. In such cases, the primary host institution is responsible for initiating procedures for a termination by mutual agreement in accordance with Chapter XII of the NSF PAPPG.

No additional appointment or fellowship may be held during the period of the award. No other remuneration from any source may be accepted during the period of the award without prior permission of the cognizant NSF Program Officer.

Awards are not renewable and are subject to availability of funds.

B. Salary and Allowances

The maximum annual award amount is $85,000 and consists of two type of direct costs:

- The annual fellow salary paid from the award must not exceed $70,000/year. Salary paid from the award must not exceed $140,000 per recipient over a two-year period.
- The annual allowance paid from the award must not exceed $15,000/year and is intended to cover expenses directly related to the conduct of the proposed research and professional development goals, including but not limited to, materials and supplies, equipment, computing resources, access to databases, domestic and international travel, publication charges, and subscription fees. The allowance paid from the award must not exceed $30,000 per recipient over a two-year period.

There are no allowances for dependents or for travel separate from these two allowances.

NSF would like to encourage a close partnership between the scholar and the primary host institution, allow the scholar access to institutional benefits such as healthcare, and decrease the burden of grant management that is placed on the scholar when an award is made directly to an individual. Therefore, NSF will review proposals as submitted by individuals, but all awards will be made to the primary host institution using the Pre-award Transfer Process after the review process is complete. Budgets and award documents will be adjusted to include institutional fringe benefits and overhead costs as part of the Pre-award Transfer Process described below. The postdoctoral fellow must be listed as the project PI.

Awards may be supplemented by host scientists and CREST Center institutions with non-Federal funds, but only if the additional funds do not carry additional responsibilities beyond the research and training supported by the award. Compensation may not be paid from a research grant that supports the same research that is part of the scholars' planned training experience. Under no circumstances may the support interfere with, detract from, or prolong the scholars' training program. Supplementation can be provided for travel, supplies, and equipment. An institution can determine what amount of salary supplementation, if any, will be provided according to its own formally established policies governing salary support. These policies must be consistently applied to all individuals in a similar training status regardless of the source of funds.

Additional funding for research at a non-CREST Center institution (can be requested after the award as a supplement)

Because the objectives of the CREST-PRP include broadening the perspectives and experiences of the postdoctoral scholars and facilitating interdisciplinary interactions, postdoctoral scholars may request additional funding (up to $50,000) for travel and expenses related to conducting research at a non-CREST Center institution during the two years. This additional funding does not count toward the $170,000 award limit for salary and allowance.

Proposers seeking this support:

- are **required** to contact the CREST Program Officer prior to application to discuss the appropriateness of the research and training at a non-CREST Center institution. The mentor at the non-CREST Center institution should be working in a field funded by NSF.
- are **strongly encouraged** to discuss the research plans at the non-CREST Center institution and the importance of the non-CREST Center scientific mentor with the CREST Center scientific mentor (primary).

Approval of plans to conduct research at a non-CREST Center institution will require a letter by the scientific mentor and a letter of support from the non-CREST Center scientific mentor.

Pre-Award Transfer Process

The CREST-PRP will review proposals as submitted by individuals but all awards will be made to the primary host institution after the merit review is complete, using the Pre-Award Transfer Process. Budgets and award documents will be adjusted to include institutional fringe benefits and overhead costs as part of the Pre-Award Transfer Process described below. The postdoctoral fellow who submitted the proposal must be listed as the project PI.

To process the Pre-award Proposal Transfer, the postdoctoral scholar, acting as the original proposing institution's Authorized Organizational Representative (AOR), must submit to the cognizant Program Officer (PO) an e-mail concurring with the transfer of the proposal to the host institution. This documentation will be added to the files by the PO as correspondence associated with the proposal. The cognizant PO will request that the host institution submit to NSF a revised:

- Cover Sheet (with postdoctoral scholar named as PI) and Certification pages signed by the AOR.
- Budget and Budget Justification. The postdoctoral scholar must receive a monthly or bi-weekly salary equal to $70,000 in each year plus institutional employee benefits. The primary host institution's budget is expected to include fringe benefit costs for the postdoctoral scholar. In the final budget, the $15,000 per year allowance may be distributed in the budget to cover other direct research costs including but not limited to, materials and supplies, equipment, computing resources, access to databases, domestic travel, publication charges, and subscription fees.
- The applicable U.S. Federally negotiated indirect cost rate(s) must be used in computing indirect costs (F&A). Institutions that do not have a current negotiated rate agreement with a cognizant Federal agency may request indirect cost recovery up to the de minimis rate of 10% of modified total direct costs.

The PO will update the proposal system with the new institutional and budget data so that processing of the proposal award to the host institution can proceed. The original Cover Sheet and Certification pages will not be modified and will be retained for the historical record of how the proposal was submitted to NSF.

IV. Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- CREST Postdoctoral Research Program proposals are submitted directly by the fellowship candidate to NSF. Each fellowship candidate must identify in the proposal one or more scientific mentor(s) and must affiliate with a primary host institution that houses a CREST Center with whom the scientific mentor(s) is affiliated. See the CREST program website for a list of active centers.

Who May Serve as PI:

To be eligible to submit a proposal to the CREST-PRP, an individual must, as of the full proposal deadline date:

- Be a U.S. citizen, national, or permanent resident;

- Have earned the doctoral degree, or expect to have earned the doctoral degree, from an MSI (based on the most recent IPEDS data) prior to the required start date of the award;
- Submit a project plan that falls within the purview of the NSF CREST Center host institution's research priorities;
- Not have worked for more than a total of 24 full-time-equivalent months in positions that require the doctoral degree; and
- Not have previously been a principal investigator or co-principal investigator of an NSF award (other than an NSF Graduate Research Fellowship)

For the CREST-PRP, eligible institutions are MSIs that have undergraduate enrollments of 50% or more students (based on total student enrollment) who are members of minority groups underrepresented among those holding advanced degrees in science and engineering fields.

Eligibility may be determined by reference to the Integrated Postsecondary Education Data System (IPEDS) of the US Department of Education National Center for Education Statistics (http://nces.ed.gov/ipeds/).

Proposals that fail to meet eligibility requirements will be returned without review.

By signing and submitting the proposal, the proposer is certifying that they meet the eligibility criteria specified in this program solicitation. Willful provision of false information in this request and its supporting documents or in reports required under an ensuing award is a criminal offense (U.S. Code, Title 18, Section 1001).

Limit on Number of Proposals per Organization:

Only individuals may submit proposals. There is no limit on the number of individual postdoctoral fellowship proposers per institution.

Limit on Number of Proposals per PI or co-PI: 1

Eligible individuals may submit one CREST-PRP proposal per deadline date.

Additional Eligibility Info:

Proposer must propose to undertake postdoctoral training at an active CREST Center. See CREST program website for a list of active centers.

Proposals must be submitted to NSF directly by the postdoctoral research candidate.

Each proposer must identify a primary scientific mentor(s) at an active CREST Center.

If an award is recommended, the award will be transferred to the proposed primary host institution where the postdoctoral scholar will be named as the project's PI. The award will be issued to and administered by the primary host institution. See Section III for additional information about the Pre-Award Transfer Process.

No additional appointment or fellowship may be held during the period of the award. No other remuneration from any source may be accepted during the period of the award without permission of the Program Officer.

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.

See PAPPG Chapter II.D.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.

Prospective fellows intending to submit a proposal are encouraged to participate in webinars that will be webcast after the release of this solicitation. See CREST webpage for dates.

Proposals must be submitted electronically through either Research.gov or Grants.gov. A full proposal consists of many parts and requires input from the fellowship candidate, the proposed scientific mentor(s) and the proposed host institution(s). Proposers are advised to begin the proposal well in advance of the submission deadline and to submit as early as possible. Partially completed proposals may be saved for future completion and submission. The submission of incomplete or late proposals is not permitted.

Proposal preparation and submission through Research.gov is strongly encouraged because this solicitation contains unique requirements. If the proposer elects to submit through Grants.gov, confirmation that **all** required documents have been successfully uploaded into NSF systems by the deadline date is recommended. Otherwise, the proposal will be considered incomplete or late and will be returned without review.

Before starting proposal preparation, the proposer must be registered as an individual in Research.gov or Grants.gov. To register as a new individual in Research.gov, access the Research.gov New Account Management System. To register as a new individual in Grants.gov, access Grants.gov Applicant Registration. Please note that if submitting via Grants.gov, you must also obtain an NSF ID in Research.gov.

Proposals must be submitted by the candidate, not by the candidate's current or proposed organizational Sponsored Projects Office (SPO). The candidate serves as his/her own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in Research.gov or Grants.gov.

Proposals must include all of the required sections of a full research proposal submitted to NSF as specified in Chapter II.D.2 of the PAPPG. *In cases where requirements given in this document supplement or deviate from the instructions provided in the PAPPG or the NSF Grants.gov Application Guide, this solicitation takes precedence.* All page limitations include pictures, figures, tables, graphics, etc. Proposers are urged to take special care to strictly adhere to page limitations. Proposals that do not conform to the requirements will not be accepted or will be returned without review.

Proposal Set-Up: Select "Prepare New Full Proposal" in Research.gov. The Postdoctoral Scholar/PI must select the "I am a Postdoctoral Scholar (Postdoctoral Fellowship Proposals)" option to initiate a postdoctoral proposal.

Search for and select this solicitation title in Step 1 of the Full Proposal wizard. The information in Steps 2 and 3 is pre-populated by the system. In Step 4, add a descriptive title of the research following the prepended text "CREST-PRP: ". The

title must be informative and descriptive of the project, concise (20 words or less), and uses Title Case. The title must not include the institution name, any acronyms ("STEM" excepted), or quotation marks.

Personnel Documents: The Postdoctoral Scholar is automatically designated as the PI in Research.gov. When preparing the Current and Pending Support section, please include current support for research and training. Under pending support, include this proposal, as well as pending and planned applications to other fellowship or research programs. The project submitted to this solicitation should not be concurrently under review by another program.

The scientific mentor must be identified on the proposal. If using Research.gov, this is done by going to the **Personnel Documents** section, clicking on the "Add Mentor/Advisor" tab and entering the individual's NSF ID or Email or Personnel name and Organization. For each mentor, please submit a Biographical Sketch and COA Information. Current & Pending Support documents are not required for the mentor(s). Research.gov contains sections to upload the Biographical Sketch and COA for the scientific mentor(s). For Grants.gov, the mentor(s) Biographical Sketch can be uploaded to "Other Supplementary Documents" and COA(s) to "Collaborators & Other Affiliations (COA)" as Single Copy Documents.

The following instructions supplement or deviate from the guidance in the NSF PAPPG or the *NSF Grants.gov Application Guide*:

Cover Sheet

- A requested start date must be entered. The proposed duration for a postdoctoral fellowship proposal is pre-populated, read-only (i.e., not editable), and aligns with the program solicitation selected when initiating the proposal in Research.gov.
- No co-PIs are permitted on the Cover Sheet.
- In the Primary Place of Performance section enter host institution information. Complete any other sections as appropriate/applicable.

Grants.gov Users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Proposer Cover Sheet.
The title must start with "CREST-PRP: " The title must be informative and descriptive of the project, concise (20 words or less), and uses Title Case. The title must not includes the institution name, any acronyms ("STEM" excepted), or quotation marks.

Project Summary (limited to one page)

Includes an overview of the project and separate statements that clearly address the intellectual merit and broader impacts of the proposed activity. In addition, the Project Summary must also identify (in the overview section):

- Proposed scientific mentor(s) and/or career mentor
- Proposed host institution(s).

Project Description (Research and Training Plan)

Please note this section **must** include a separate section header labeled Broader Impacts and the heading must be on its own line with no other text on that line. The Project Description must not to exceed 10 single-spaced pages (including any figures, pictures and tables), which must include the following:

- Research plan;
- Justification for the choice of the host institution(s) and scientific mentor(s) and career mentor that relates the proposed fellowship work to available expertise, facilities and resources;
- Statement about the array of expected broader impacts, including a specific statement of commitment to broadening participation in science;
- Description of the candidate's long-term career goals and the role of this postdoctoral experience in achieving them; and

- Description of Eligibility for Fellowship - including the month and year when the doctoral degree was (or is expected to be) received. If more than 24 months have elapsed between the date that the doctoral degree was conferred and the proposal target date, include the following statement: "**I affirm that I have not worked for more than 24 full-time-equivalent months in positions for which the doctoral degree was a requirement.**" Do not include personal information such as birth date or place of birth.

Special certifications and permits may be required when projects involve human subjects, vertebrate animals, endangered species, hazardous materials, collecting in foreign countries, or other elements. The research plan should provide general information on these matters and address feasibility. If selected, candidates must submit required documentation to the NSF Program Officer before an award can be made.

Budget and Budget Justification

CREST-PRP awards will not exceed $85,000 annually and consists of an annual salary ($70,000), an annual allowance (up to $15,000).

In Research.gov, the budget section includes the pre-populated salary and fellowship allowance based on the requirements of this solicitation. The budget section does not display on the proposal main page after the proposal has been created but can be viewed by clicking Print Proposal. When the Postdoctoral Scholar/PI submits the proposal, the budget will display as read-only and will be accessible from the proposal main page. The budget section is editable during a proposal file update/budget revision.

Grants.gov users: The salary and fellowship allowance should be entered in Participant Support Costs (enter the $70,000 for Year 1 and $70,000 for Year 2 salary on line E.2 and the $15,000/year fellowship allowance on line E.5). Enter (1) as the total number of participants. No other budget lines should be used for fellowship proposals. An annual budget must be submitted for each of the two years of the fellowship support.

A budget justification of no more than two pages must list and justify estimated expenditures under the annual fellowship allowance.

Pre-Award Transfer: Should a proposal be recommended for award, the primary host institution will be required to submit a revised budget and budget justification that allocates the proposed direct costs to the appropriate NSF budget line item(s). Institutional fringe benefits and indirect costs will also be added to the budget prior to award in accordance with the guidance provided in Section III above.

Data Management Plan: not to exceed two pages, that describes plans for data management and sharing of the products of research or asserts the absence of the need for such plans.

Facilities, Equipment and Other Resources, as applicable. Insert text or upload a document that states: "See Letter(s) of Collaboration from the prospective host institution(s)."

Other Required Sections

PhD Abstract: Abstract of the applicant's doctoral dissertation (completed as a requirement for earning the PhD, EdD, etc.), limited to one page.

Host Institution Letter(s) from the prospective host institution(s), signed by the department chair (or equivalent) and the Sponsored Research Office, certifying that adequate facilities and support will be provided for the Fellow to accommodate the proposed activities and certifying plans to appoint the Fellow as project PI if an award is recommended. Should the Principal Investigator propose to hold the fellowship concurrently or sequentially at more than one institution during the two-year tenure, letters of collaboration must be provided from all institutions. The primary host institution's letter must specifically acknowledge that 1) the institution is aware that award recommendations will require a pre-award transfer of the proposal to the primary host organization, 2) the organization will submit all documents required for a pre-award transfer, including a new cover page that lists the Fellow as the PI and a budget that adds funding for institutional fringe and overhead costs to support the Fellow's benefits, and 3) the institution will administer the award to provide the postdoctoral fellow's salary, benefits, and proposed research activities. If a host

institution is not the primary host institution and if the institution is eligible to receive NSF funding, the letter must acknowledge that the institution is willing to administer the award if the Fellow transfers to the organization. Awards cannot be transferred to foreign organizations or government agencies. If the host organization has not received prior NSF funding, the institution will need to submit "New Awardee" documentation, which will be subject to NSF's evaluation before an award can be made or transferred.

Other Supplementary Documents:

- A signed letter(s), not to exceed two pages each and uploaded to the Other Supplementary Documents section, from the proposed scientific mentor(s) and career mentor certifying that the fellowship proposal has been read and approved, and including discussion of:
  - The role the proposed scientific mentor(s) and career mentor will play in the professional development of the fellow; and
  - The opportunities for research and professional development at the host institution that will be of particular benefit to the fellow.
- For individuals who have not completed the doctorate at the time of proposal submission, a signed letter from the graduate advisor or Dean confirming the expectation that the candidate will receive the degree before the requested start date of the fellowship.

Letters of recommendation will not be considered. Letters from the proposed host institution(s), scientific mentors(s) and career mentors, as needed, the candidate's current graduate advisor, should not reflect a letter of recommendation and should make *no subjective statements* regarding either the candidate or their proposed activities.

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):

  April 26, 2023

  October 06, 2023

  First Friday in October, Annually Thereafter

  February 23, 2024

  Last Friday in February, Annually Thereafter

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

Before starting proposal preparation, the proposer must be registered as an individual. To register as a new individual in Research.gov, access the Research.gov New Account Management System. 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/ProposalPreparationandSubm
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.

Submitting the Proposal: Fellowship proposals must be submitted by the Fellowship candidate, not by the Fellowship candidate's current or proposed organizational Sponsored Projects Office (SPO). The Fellowship candidate serves as his/her own SPO and Authorized Organizational Representative (AOR) for the purposes of any research administration functions in Research.gov. As such, the Fellowship candidate, serving as the SPO/AOR must electronically sign and submit the proposal using the Sign and Submit button in Research.gov. The Fellowship candidate is signing on his/her own behalf and by signing the proposal NSF is in no way inferring that the proposer has assumed organizational status. Further instructions regarding this process are available on the Research.gov website: https://www.research.gov/research-web/.

For Proposals Submitted Via Grants.gov:

Before starting proposal preparation, the proposer must register as a new individual in Research.gov and Grants.gov. To register as a new individual in Research.gov go to:https://www.research.gov/accountmgmt/assets/welcomeunaffiliated.html and to register in Grants.gov go to: https://www.grants.gov/web/grants/applicants/registration.html. Once registered, the proposer can then apply for grant opportunities which indicate "Individual" eligibility 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 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: Fellowship proposals must be submitted by the Fellowship applicant, not by the applicant's current or proposed organizational Sponsored Projects Office (SPO). Once all documents have been completed, the applicant must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The applicant must then sign and submit the application to Grants.gov. The completed application will be transferred to Research.gov or 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 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 *Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research - NSF Strategic Plan for Fiscal Years (FY) 2022 - 2026* . 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.D.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.D.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

Reviewers will be asked to consider the following:

- Qualifications of the proposer and the individual's potential for continued professional growth and leadership in the field
- Impact on the career development of the proposer

- Interactions between the postdoctoral scholar and scientific mentor(s) are clearly defined and designed to promote the professional development of the postdoctoral scholar

B. Review and Selection Process

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

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

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

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements 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:

Awardees are expected to participate in convocations of the Division of Equity for Excellence in STEM (EES) activities and
principal investigator meetings.

Awards cannot be extended without prior NSF approval. Pre-award costs are not permitted.

Normally, awards will be held at an active CREST Center institution specified in the proposal; however, under certain
circumstances and with suitable justification, awards may be transferred to a new active CREST Center upon approval by
NSF.

No additional appointment or fellowship may be held during the period of the award. No other remuneration from any
source may be accepted during the period of the award without permission of the Program Officer.

Candidates are encouraged to discuss institutional policies on intellectual property rights with the scientific mentor(s)
before submitting the proposal. Candidates should also discuss the policies of the scientific mentor(s) regarding which
materials will remain with the host institution(s) and which can be released to the postdoctoral scholar at the conclusion
of the award.

PI Meeting/Workshop for Postdoctoral Scholars and Mentors

All current postdoctoral scholars and mentors (scientific mentor) are expected to attend NSF CREST PI meetings. The
meeting will include scientific presentations by postdoctoral scholars and mentors in the program. Participation in the
workshop is considered an important part of the program and new postdoctoral scholars are expected to attend absent
exigent circumstances. Postdoctoral scholars must budget for the PI meeting.

Transfer of an award issued under this solicitation to a substitute PI is not permissible, and the awardee cannot terminate
the award without NSF's concurrence.

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.

Reports

In addition to the annual and final reports, postdoctoral scholars must file:

- An interim report 90 days after the start of the award. This report must include a letter signed by the postdoctoral scholar and the host mentor on the expectations for the postdoctoral training and the deliverables that must be produced at the end of the training.

ORCID

The CREST-PRP encourages the use of ORCID to reduce administrative burden in helping to pre-populate biographical sketches and current and pending support documents in SciENcv. The CREST-PRP encourages the creation of an ORCID profile and the inclusion of the ORCID iD in the annual project report. Please include the ORCID iD in the first line of text in your report "ORCID iD:_____"

ORCID® (http://orchid.org ⧉) is an open, non-profit, community-driven effort to create and maintain a registry of unique researcher identifiers and a transparent method of linking research activities and outputs to these identifiers. An ORCID identifier provides a unique and persistent digital identifier to distinguish individual researchers. While NSF encourages the use of an ORCID ID, submission of the ORCID ID is optional at the time of writing of this solicitation.

Program Evaluation

EES conducts evaluations to provide evidence of the impacts of EES programs (e.g., CREST-PRP) on individuals' educational decisions, career preparations, aspirations, and progress, as well as professional productivity; and provide an understanding of the program policies in achieving the program goals. Additionally, it is highly desirable to have a structured means of tracking awardees beyond postdoctoral training to gauge the extent to which they choose a career path consistent with the intent of the program and to assess the impact the CREST-PRP has had on their postdoctoral training experience. Accordingly, CREST-PRP recipients may be contacted for updates on various aspects of their employment history, professional activities and accomplishments, participation in international research collaborations, and other information helpful in evaluating the impact of the program. CREST-PRP recipients and their institutions agree to cooperate in program-level evaluations conducted by the NSF and/or contracted evaluators.

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:

- Luis A. Cubano, telephone: (703) 292-7941, email: lcubano@nsf.gov

- Regina Sievert, Program Director, telephone: (703) 292-2808, email: rsievert@nsf.gov

- Nicole E. Gass, Program Specialist, telephone: (703) 292-8378, email: ngass@nsf.gov

For questions related to the use of NSF systems contact, contact:

- NSF Help Desk: 1-800-673-6188

- 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.

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.F.7 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

National Science Foundation, 2415 Eisenhower Ave Alexandria, VA 22314
Tel: (703) 292-5111,