

## Law & Science (LS)

---

### PROGRAM SOLICITATION

NSF 19-612

---

### REPLACES DOCUMENT(S):

NSF 19-519

---



National Science Foundation

Directorate for Social, Behavioral and Economic Sciences  
Division of Social and Economic Sciences

#### Full Proposal Target Date(s):

January 15, 2020

January 15, Annually Thereafter

Standard and Collaborative Research, Conference and DDRIG Proposals

August 03, 2020

August 1, Annually Thereafter

Standard and Collaborative Research and Conference Proposals

### IMPORTANT INFORMATION AND REVISION NOTES

---

This revision updates general information on the Law & Science (LS) Program, formerly known as Law & Social Sciences (LSS), and incorporates guidance for individuals submitting proposals for Doctoral Dissertation Research Improvement Grants (DDRIGs). Interdisciplinary Postdoctoral Fellowships, which existed under prior solicitations, have been removed as a distinct type of proposal. Postdoctoral scholars may still be funded as part of a Standard Research award, which must include a Postdoctoral Mentoring Plan. Postdoctoral scholars may also be funded through the SBE Postdoctoral Research Fellowship Program: [https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504810](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504810).

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 19-1), which is effective for proposals submitted, or due, on or after February 25, 2019.

### SUMMARY OF PROGRAM REQUIREMENTS

---

#### General Information

---

##### Program Title:

Law & Science (LS)

##### Synopsis of Program:

The Law & Science Program considers proposals that address social scientific studies of law and law-like systems of rules, as well as studies of how science and technology are applied in legal contexts. The Program is inherently interdisciplinary and multi-methodological. Successful proposals describe research that advances scientific theory and understanding of the connections between human behavior and law, legal institutions, or legal processes; or the interactions of law and basic sciences, including biology, computer and information sciences, STEM education, engineering, geosciences, and math and physical sciences. Scientific studies of law often approach law as dynamic, interacting with multiple arenas, and with the participation of multiple actors. Fields of study include many disciplines, and often address problems including, though not limited, to:

- Crime, Violence, and Policing
- Cyberspace
- Economic Issues
- Environmental Science
- Evidentiary Issues
- Forensic Science

- Governance and Courts
- Human Rights and Comparative Law
- Information Technology
- Legal and Ethical Issues related to Science
- Legal Decision Making
- Legal Mobilization and Conceptions of Justice
- Litigation and the Legal Profession
- Punishment and Corrections
- Regulation and Facilitation of Biotechnology (e.g., Gene Editing, Gene Testing, Synthetic Biology) and Other Emerging Sciences and Technologies
- Use of Science in the Legal Processes

LS supports the following types of proposals:

- Standard Research Grants and Grants for Collaborative Research
- Doctoral Dissertation Research Improvement Grants
- Conference Awards

LS also participates in a number of specialized funding opportunities through NSF's cross-cutting and cross-directorate activities, including, for example:

- Faculty Early Career Development (CAREER) Program
- Research Experiences for Undergraduates (REU)
- Research at Undergraduate Institutions (RUI)
- Grants for Rapid Response Research (RAPID)
- Early-concept Grants for Exploratory Research (EAGER)

For information about these and other programs, please visit the [Cross-cutting and NSF-wide Active Funding Opportunities](#) homepage.

#### **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.*

- Reginald S. Sheehan-Program Director, telephone: (703) 292-5389, email: [rsheehan@nsf.gov](mailto:rsheehan@nsf.gov)
- Mark S. Hurwitz-Program Director, telephone: (703) 292-5366, email: [mhurwitz@nsf.gov](mailto:mhurwitz@nsf.gov)
- Mauricia Barnett-Social Scientist, telephone: (703) 292-7309, email: [mbarnett@nsf.gov](mailto:mbarnett@nsf.gov)
- Linh Nguyen-Program Assistant, telephone: (703) 292-7270, email: [linguyen@nsf.gov](mailto:linguyen@nsf.gov)

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

- 47.075 --- Social Behavioral and Economic Sciences

## **Award Information**

---

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

**Estimated Number of Awards:** 60

About 60 awards per year is anticipated.

**Anticipated Funding Amount:** \$5,500,000

\$5,500,000 pending availability of funds.

## **Eligibility Information**

---

#### **Who May Submit Proposals:**

Proposals may only be submitted by the following:

- Organization limit varies by the type of proposal:
  - **Doctoral Dissertation Research Improvement Grants:** US Institutions of Higher Education (IHEs).
  - **For all other types of awards:** see the categories of proposers eligible to submit proposals to the National Science Foundation identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E.

See Section II. Program Description for detailed information about each type of proposal.

#### **Who May Serve as PI:**

PI eligibility limit varies by the type of proposal. See Section II. Program Description for detailed information about each type of proposal.

#### **Limit on Number of Proposals per Organization:**

There are no restrictions or limits.

#### **Limit on Number of Proposals per PI or Co-PI:**

There are no restrictions or limits.

## Proposal Preparation and Submission Instructions

---

### A. Proposal Preparation Instructions

- **Letters of Intent:** Not required
- **Preliminary Proposal Submission:** Not required
- **Full Proposals:**
  - Full Proposals submitted via FastLane: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: [https://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=pappg](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg).
  - 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](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](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)).

### B. Budgetary Information

- **Cost Sharing Requirements:**

Inclusion of voluntary committed cost sharing is prohibited.
- **Indirect Cost (F&A) Limitations:**

Not Applicable
- **Other Budgetary Limitations:**

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

### C. Due Dates

- **Full Proposal Target Date(s):**
  - January 15, 2020FF
  - January 15, Annually Thereafter
    - Standard and Collaborative Research, Conference and DDRIG Proposals
  - August 03, 2020
  - August 1, Annually Thereafter
    - Standard and Collaborative Research and Conference Proposals

## Proposal Review Information Criteria

---

### Merit Review Criteria:

National Science Board approved criteria apply.

## Award Administration Information

---

### Award Conditions:

Standard NSF award conditions apply.

### Reporting Requirements:

Standard NSF reporting requirements apply.

## TABLE OF CONTENTS

---

[Summary of Program Requirements](#)

- I. **Introduction**
- II. **Program Description**
- III. **Award Information**
- IV. **Eligibility Information**
- V. **Proposal Preparation and Submission Instructions**
  - A. Proposal Preparation Instructions
  - B. Budgetary Information
  - C. Due Dates
  - D. FastLane/Research.gov/Grants.gov Requirements
- VI. **NSF Proposal Processing and Review Procedures**
  - A. Merit Review Principles and Criteria
  - B. Review and Selection Process
- VII. **Award Administration Information**
  - A. Notification of the Award
  - B. Award Conditions
  - C. Reporting Requirements
- VIII. **Agency Contacts**
- IX. **Other Information**

## I. INTRODUCTION

---

The Law & Science (LS) Program is a standing, interdisciplinary program in the Division of Social and Economic Sciences (SES), and in the Directorate for Social, Behavioral, and Economic Sciences (SBE). LS considers and funds proposals from many disciplinary and interdisciplinary perspectives in support of innovative research on law and law-like systems of rules. LS collaborates with other programs in SES and SBE, and at the Foundation more broadly. In addition, LS partners with other federal agencies, including the National Institute of Justice, to support the study of social, behavioral, and forensic sciences.

## II. PROGRAM DESCRIPTION

---

### An Overview of Program Components

The Law & Science Program at the National Science Foundation supports social scientific studies of law and law-like systems of rules. Successful proposals describe research that advances scientific theory and understanding of the connections between human behavior and law, legal institutions, or legal processes, as well as studies of how science and technology are applied in legal contexts. The Law & Science Program funds the best proposals submitted within the field broadly defined, regardless of specific subfield, and strives to support a multi- and interdisciplinary community of scholars studying relevant topics. The Law & Science Program supports Standard Research Grants and Grants for Collaborative Research, Conference proposals, and Doctoral Dissertation Research Improvement proposals.

Scientific studies of law often approach law as dynamic, made in multiple arenas, with the participation of multiple actors. Scholars study mobilization, the creation and implementation of law, the meanings of rules or laws to both individuals and institutions, and the impact of law on societies. The Program considers proposals that examine historical, social, cultural and policy-related questions that arise concerning law. The Program invites proposals relying upon qualitative and/or quantitative methods. The Program also considers and funds proposals from many different disciplines, including anthropology, communications, criminology/criminal justice, economics, legal scholarship, political science, psychology, public policy, sociology and other STEM disciplines. The Program also invites proposals addressing the interactions of law and basic sciences, including biology, computer and information sciences, STEM education, engineering, geosciences, and math and physical sciences. The sites for the study of law are multiple and may include appellate and trial courts; domestic and international regulatory offices; federal, state, and local law enforcement; and the variety of settings in which organizations deploy law. Proposals are welcome that address legal processes that extend beyond any single nation, as well as about how local and national legal institutions, systems, and cultures engage transnational or international phenomena.

The Law & Science Program has funded research on a wide variety of topics relevant to science and legal scholars. The themes identified below are representative of previous awards from the Law & Science Program, but do not constitute an exclusive listing of relevant topics. Scholars conducting research in science related to law (broadly defined) that are outside or beyond these major themes are also encouraged to apply for funding.

**Crime, Violence, and Policing:** Research develops theories of crime and methods of crime control (e.g., policing) based upon social and forensic science theories. It examines the etiology of violence in the context of domestic criminal behavior, terrorism, and cross-national conflict, as well as the use of new technologies in crime detection and prevention.

**Economic Issues:** Research explores the significance of property rules or contracts in legal disputes, claims in social welfare states, and the role of law in labor and migration policies.

**Forensic Science:** Research examines the development, implementation, and the reliability of various forensic technologies such as DNA, fingerprinting, and weapons analysis, especially with respect to the technologies' human dimension (e.g., assessment and interpretation of accuracy).

**Governance and Courts:** Research examines the deployment of law, including conceptions of what counts as law both cross-nationally and over time. Inquiry in this area addresses how rules have been understood, and the varying format that governing takes in local, regional, national and transnational settings, including trial and appellate courts at various levels.

**Human Rights and Comparative Law:** Research examines the claims processes for rights violations and mechanisms for providing restitution. Research also explores legal systems in other nations from anthropological, historical, jurisprudential, and sociological perspectives.

**Legal Decision Making:** Research examines how people and institutions make decisions in the context of particular rules or statutes, and the values revealed in those decisions concerning pressing public issues, civil and criminal justice processes. Research also examines how law is interpreted and reinterpreted by individuals, and how expectations concerning the law influence how people claim rights and responsibilities.

**Legal and Ethical Issues Related to Biotechnology, Environmental Science, Cyberspace and Information Technology:** Research explores the intersection between law, technology and science with a focus on how scientific innovation influences the legal system and how the law regulates scientific discovery.

**Legal Mobilization and Conceptions of Justice:** Research assesses how and when people understand their challenges as legal problems, how individuals choose among systems to pursue justice (e.g., family, communities, non-profit organizations, or state actors), how individuals or groups access justice systems, as well as various equity issues that arise in mobilizing justice; and how well individuals and groups understand justice.

**Litigation and Legal Professions:** Research addresses the mutual constitution of the legal professions and the world in which they work and assesses the influence of these professions on public policies and practices. Research also investigates the various forms of litigation and legal services available to people, professionals' understanding of their ethics and responsibility, and issues regarding equity in participation in the profession.

These topics are meant to be illustrative. The Law & Science Program welcomes all scholarship that advances social scientific understandings of law.

## TYPES OF PROPOSALS

### 1. STANDARD RESEARCH GRANTS AND GRANTS FOR COLLABORATIVE RESEARCH

Standard and Collaborative awards provide support for basic research activities, infrastructure development, and other research-related expenses. These grants can support projects that require several investigators, advisors, or collaboration among Principal Investigators, including investigators at different organizations. They may involve postdoctoral researchers, or graduate or undergraduate student assistants.

#### Guidelines for Standard and Collaborative Research Grant Proposals

Standard and collaborative research grant proposals should be prepared following the guidelines in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG). Support for Principal Investigators and co-Principal Investigators will generally not exceed two months per year of the project. Generally speaking, regular and collaborative awards will not exceed \$300,000 in direct costs over two to three years' duration. Indirect costs are in addition to this direct cost limitation and are subject to the awardee's current Federally negotiated indirect cost rate. Proposals requesting a longer duration or larger amount of support may be considered if extraordinarily well justified and merited.

### 2. DOCTORAL DISSERTATION RESEARCH IMPROVEMENT GRANTS (DDRIG)

These awards provide funds for dissertation research expenses not normally available through the doctoral student's university. The Project Description should describe the scientific significance of the work, including its relationship to other current research, and the design of the project in sufficient detail to permit evaluation. The proposal should present and interpret progress to date if the research is already underway. The Project Description must contain, as separate sections within the narrative, a section labeled "Intellectual Merit" and a section labeled "Broader Impacts".

Awards are not intended to cover the full costs of a student's doctoral dissertation research. Project budgets should be developed at scales appropriate for the work to be conducted and may only include costs directly associated with the conduct of dissertation research. These include, for example, costs associated with conducting field research in settings away from campus that would not otherwise be possible, data collection and sample survey costs, payments to subjects or informants, specialized research equipment, data transcription, analysis and services not otherwise available, supplies, travel to archives, special collections or seminars, and facilities or field research locations, and partial living expenses for conducting necessary research away from the student's university. DDRIG funds may not be used as a student stipend, for tuition, textbooks, or journals, or for the typing, reproduction, or publication costs of the student's dissertation. Funds may be requested for research assistants only in very special circumstances, which should be carefully justified.

#### Guidelines for Doctoral Dissertation Research Improvement Grant Proposals

- Dissertation awards must not exceed \$20,000 in direct costs. Indirect costs are in addition to this direct cost limitation and are subject to the awardee's current Federally negotiated indirect cost rate.
- **Project Duration** is for a maximum of 12 months. The dissertation need not be completed during this time period, but costs associated with research activities to be reimbursed with DDRIG funds must be incurred when the award is active.
- **Proposal Title** must include this prefix: "Doctoral Dissertation Research."
- **Project Description** must not exceed 10 single-spaced pages.
- **Results from Prior NSF Support** section is not required.
- Proposals involving **human subjects** must specify the date on which the university's Institutional Review Board (IRB) approved the research or must provide the exemption number(s) corresponding to one or more of the exemption categories. If the IRB approval is pending, this should be indicated in the space provided for the approval date on the Cover Sheet. Doctoral students should not wait for notice of funding to start the IRB certification process.
- Neither the PI (the advisor) nor any of the co-PIs (including the doctoral student) should be listed on the Senior Personnel Listing on the Budget page, since DDRIG proposals do not provide funds for salaries or stipends for the doctoral student or for faculty advisor(s). After the PI and the co-PI(s) are entered on the Cover Sheet, their names should be manually removed from the Senior Personnel Listing on the budget pages to avoid construal as voluntary committed cost sharing, which is not permitted.

Except as indicated above, DDRIG proposals should be prepared in accordance with the guidelines in the [PAPPG](#).

#### Eligibility Requirements for Doctoral Dissertation Research Improvement Grants

- DDRIGs are made to U.S. IHEs, and proposals must be submitted by a U.S. IHE on behalf of the dissertation advisor and doctoral student.
- The doctoral student must be enrolled at a U.S. IHE but does not need to be a U.S. citizen. The dissertation advisor is the Principal Investigator; the doctoral student should be listed as co-Principal Investigator.
- Doctoral students must have passed the qualifying exams, completed all course work required for the degree, and had the dissertation topic approved prior to receiving the award.

### 3. CONFERENCE AWARDS

The Law & Science Program will support national and international conferences and symposia that enable social scientists and legal scholars to develop, evaluate, and share new research findings. The Program encourages conferences and symposia that promote interactions between researchers across multiple disciplines within the Law & Science domain.

Conference proposals should be prepared in accordance with the NSF PAPPG and the additional information provided herein. Proposals should describe the need for the gathering, the proposed date and location, topics and persons who will be involved, prior related meetings, publicity, and expected outcomes. Every effort must be made to include younger scholars and members of underrepresented groups, and these efforts should be described in the proposal. Conferences may, where justified, be carried out as special sessions in regular meetings of professional societies. NSF-funded conferences are generally open to scholars from across the research community. For general guidance about conferences, including a list of required elements and budget exclusions, follow the PAPPG guidance for preparing Conference Proposals (PAPPG Chapter II.E.7). Please follow those instructions while keeping in mind the LS program's specific interests and limitations. **Conference proposals must be submitted via FastLane or Grants.gov.**

#### **Guidelines for Conference Proposals**

- Prospective Principal Investigators are encouraged to consult with a Law & Sciences Program Officer prior to submission of a Conference proposal.
- Conference proposals do not generally exceed \$50,000 in total (direct and indirect) costs.

#### **4. OTHER GRANT OPPORTUNITIES**

The Law & Science program may provide supplemental funding to existing awards to help cover unforeseen expenses or in order to create research experiences for undergraduates (REU; see the [REU Solicitation](#) in the listings of NSF funding opportunities). The Law & Science Program also participates in many other Foundation-wide initiatives, such as CAREER, RUI, RAPID, EAGER, ADVANCE, Major Research Instrumentation (MRI), and Research Coordination Networks (RCN). Information about these opportunities can be found at the [NSF Home Page](#), by linking to the funding opportunities alphabetical listing or to the cross-cutting programs section of the page. Investigators can also use the search feature to find relevant documents, and may wish to visit the [SBE Office of Multidisciplinary Activities website](#).

### **III. AWARD INFORMATION**

---

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

**Estimated Number of Awards:** 60 awards per year is anticipated.

**Anticipated Funding Amount:** \$5,500,000, pending availability of funds

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

### **IV. ELIGIBILITY INFORMATION**

---

#### **Who May Submit Proposals:**

Proposals may only be submitted by the following:

- Organization limit varies by the type of proposal:
  - **Doctoral Dissertation Research Improvement Grants:** US Institutions of Higher Education (IHEs).
  - **For all other types of awards:** see the categories of proposers eligible to submit proposals to the National Science Foundation identified in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), Chapter I.E.

See Section II. Program Description for detailed information about each type of proposal.

#### **Who May Serve as PI:**

PI eligibility limit varies by the type of proposal. See Section II. Program Description for detailed information about each type of proposal.

#### **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 FastLane, Research.gov, or Grants.gov.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: [https://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=pappg](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](mailto:nsfpubs@nsf.gov). Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full Proposals submitted via 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](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](mailto: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](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](mailto: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 the NSF FastLane system. 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.

Please refer to Section II, Program Description, for special proposal preparation information and instructions.

## B. Budgetary Information

---

### Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

### Other Budgetary Limitations:

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

## C. Due Dates

---

### • Full Proposal Target Date(s):

January 15, 2020

January 15, Annually Thereafter

Standard and Collaborative Research, Conference and DDRIG Proposals

August 03, 2020

August 1, Annually Thereafter

Standard and Collaborative Research and Conference Proposals

## D. FastLane/Research.gov/Grants.gov Requirements

---

### For Proposals Submitted Via FastLane or Research.gov:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. 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](https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html). For FastLane or Research.gov user support, call the FastLane and Research.gov Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov) or



[rgov@nsf.gov](mailto:rgov@nsf.gov). The FastLane and Research.gov Help Desk answers general technical questions related to the use of the FastLane and Research.gov systems. 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](mailto:support@grants.gov). The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

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

Proposers that submitted via FastLane or 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/](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 underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

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

## B. Review and Selection Process

---

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

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

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

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

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

## VII. AWARD ADMINISTRATION INFORMATION

---

### A. Notification of the Award

---

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

### B. Award Conditions

---

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

\*These documents may be accessed electronically on NSF's Website at [https://www.nsf.gov/awards/managing/award\\_conditions.jsp?org=NSF](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](mailto:nsfpubs@nsf.gov).

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *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](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg).

### C. Reporting Requirements

---

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

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

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

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

## 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:

- Reginald S. Sheehan-Program Director, telephone: (703) 292-5389, email: [rsheehan@nsf.gov](mailto:rsheehan@nsf.gov)
- Mark S. Hurwitz-Program Director, telephone: (703) 292-5366, email: [mhurwitz@nsf.gov](mailto:mhurwitz@nsf.gov)
- Mauricia Barnett-Social Scientist, telephone: (703) 292-7309, email: [mbarnett@nsf.gov](mailto:mbarnett@nsf.gov)
- Linh Nguyen-Program Assistant, telephone: (703) 292-7270, email: [linguyen@nsf.gov](mailto:linguyen@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](mailto:fastlane@nsf.gov).  
Research.gov Help Desk e-mail: [rgov@nsf.gov](mailto: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](mailto: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>.

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.

NSF also is committed to public access to publications and data, unless there are countervailing interests that prohibit or limit public access to data, including matters of personally identifiable information of research participants, privacy, other issues of vulnerability such as economic, social or other security interests, etc.). See generally [Public Access to Results of NSF-Funded Research](#).

## 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* (FASSED) 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** (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
  - Send an e-mail to: [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov)
  - or telephone: (703) 292-7827

- To Locate NSF Employees: (703) 292-5111

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

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  
Office of the General Counsel  
National Science Foundation  
Alexandria, VA 22314

[Policies and Important Links](#)

[Privacy](#)

[FOIA](#)

[Help](#)

[Contact NSF](#)

[Contact Web Master](#)

[SiteMap](#)



National Science Foundation, 2415 Eisenhower Avenue, Alexandria, Virginia 22314, USA  
Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (703) 292-5090 or (800) 281-8749

[Text Only](#)