NSF Regional Grants Conference
Proposal Preparation
October 5-6, 2009

Hosted by: Jackson State University, Jackson, MS

Panelists

Dragana Brzakovic  
Senior Staff Associate, Office of the Director, Office of Integrative Activities

Jolene Jesse  
Program Director, Directorate for Education & Human Resources,  
Division of Human Resource Development

Bruce Kramer  
Division Director (Acting), Directorate for Engineering, Division of Civil, Mechanical &  
Manufacturing Innovation

Anne-Marie Schmoltner  
Section Head, Lower Atmospheric Research, Directorate for Geosciences, Division of  
Atmospheric Sciences
Topics Covered

• Find Funding Opportunities
• Proposal and Award Policies and Procedures Guide
• Sections of an NSF Proposal
• Proposal Development Strategies
• Budgetary Guidelines
• Support for Proposal Writing
• Grants for Rapid Response (RAPID) & EArly-concept Grants for Exploratory Research (EAGER)
• Conclusion

Find Funding Opportunities

NSF provides numerous ways to locate funding from its website.

www.nsf.gov
Navigate from NSF's home page to find funding opportunities.
Find Funding: Keyword Search

Use the Keyword Search function to find specific opportunities of interest.
Find Funding: Keyword Search Results

Scroll through search results to find the ones that best suit your needs.
Other Ways to Find Funding

Consult the alphabetical listing of funding opportunities.

Find Funding
A-Z Index of Funding Opportunities
Recent Funding Opportunities
Upcoming Due Dates
Advanced Funding Search
How to Prepare Your Proposal
About Funding

OTHER WAYS TO FIND FUNDING

A-Z Index
Index of words appearing in the titles of all funding opportunities.

Special Programs
- For Undergraduate Students
- For Graduate Students
- For Postdoctoral Fellows
- For K-12 Educators
- Small Business Programs

Program Areas
- Computational & Cyber-Infrastructure
- Education and Human Resources
- Environmental Research & Education
- Geosciences
- Interdisciplinary Activities
- International Science & Engineering
- Mathematical & Physical Sciences
- Social, Behavioral & Economic Sciences

Recently Announced Funding Opportunities
All funding opportunities ordered by the date they were published on the NSF web site.

Upcoming Due Dates
All funding opportunities ordered by their next due date.

Solicitations that Limit the Number of Proposals an Organization Can Submit
Solicitations that have limits on the number of proposals that may be submitted by one organization.
Other Ways to Find Funding

Also find funding opportunities on FastLane.
Other Ways to Find Funding: NSF Update

- NSF’s free e-mail subscription service
- Offers subscription options for many content categories, such as images, videos, and events
- Includes information concerning upcoming due dates for funding opportunities
To sign up, go to the NSF Home Page
Other Ways to Find Funding

Use Grants.gov’s search feature
What is the Proposal & Award Policies & Procedures Guide?

The Proposal and Award Policies and Procedures Guide (PAPPG) contains documents relating to NSF's proposal and award process. It has been designed for use by both our customer community and NSF staff and consists of two parts:

- Part I is NSF's proposal preparation and submission guidelines -- the NSF Grant Proposal Guide (GPG) and the NSF Grants.gov Application.
- Part II contains the documents used to guide, manage, and monitor the award and administration of grants and cooperative agreements made by NSF.
Grant Proposal Guide

• Provides guidance for preparation and submission of proposals to NSF

• Describes process – and criteria – by which proposals will be reviewed

• Outlines reasons why a proposal may be returned without review

• Describes process for withdrawals, returns & declinations
To Find the PAPPG and Related Documents

Find a link to the PAPPG on NSF’s website.

Proposal and Award Policies and Procedures Guide, April 2009

Available Formats: HTML | PDF
Document Type: Policies and Procedures
Document Number: nsf0929

Public Comment: Effective for proposals submitted on or after April 6, 2009. In the interim, the guidelines contained in NSF 08-014 continue to apply. Proposers responding to a funding opportunity with a due date on or after April 6th must comply with the guidelines in NSF 09-029.

## Types of Funding Opportunities

<table>
<thead>
<tr>
<th>Program Descriptions</th>
<th>Proposals for a <strong>Program Description</strong> must follow the instructions in the GPG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Announcements</td>
<td>Proposals for a <strong>Program Announcement</strong> must follow the instructions in the GPG.</td>
</tr>
<tr>
<td>Program Solicitations</td>
<td>Proposals must follow the instructions in the <strong>Program Solicitation</strong>; the instructions in the GPG apply unless otherwise stated in the solicitation.</td>
</tr>
<tr>
<td>Dear Colleague Letters</td>
<td><strong>Dear Colleague Letters</strong> are notifications of opportunities or special competitions for supplements to existing NSF awards.</td>
</tr>
</tbody>
</table>

## What to Look For in a Program Announcement or Solicitation

- Goal of Program
- Eligibility
- Special proposal preparation and/or award requirements
Sample Cover Page of a Solicitation

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

Program Solicitation
NSF 08-557

Replaces Document(s):
NSF 05-579

National Science Foundation
Directorate for Biological Sciences
Directorate for Computer & Information Science & Engineering
Directorate for Education & Human Resources
Directorate for Engineering
Directorate for Geosciences
Directorate for Mathematical & Physical Sciences
Directorate for Social, Behavioral & Economic Sciences
Office of Polar Programs

Program Solicitation Number

Disciplines providing funding for this opportunity
Sample Cover Page of a Solicitation

<table>
<thead>
<tr>
<th>Award Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Type of Award: Standard Grant or Continuing Grant</td>
</tr>
<tr>
<td>Estimated Number of Awards: 425 per year</td>
</tr>
<tr>
<td>Anticipated Funding Amount: $80,000,000 per year for new awards. This amount is approximate and subject to availability of funds. Funding for CAREER awards is contained within program allocations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eligibility Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Limit:</td>
</tr>
<tr>
<td>Proposals may only be submitted by the following:</td>
</tr>
<tr>
<td>- Academic institutions in the U.S., its territories or possessions, and the Commonwealth of Puerto Rico that award degrees in fields supported by NSF.</td>
</tr>
<tr>
<td>- Non-profit, non-degree-granting organizations such as museums, observatories or research labs may also be eligible to submit proposals, if the eligibility requirements of the PIs position are satisfied.</td>
</tr>
<tr>
<td>PI Limit:</td>
</tr>
<tr>
<td>Special eligibility criteria apply.</td>
</tr>
<tr>
<td>Limit on Number of Proposals per Organization:</td>
</tr>
<tr>
<td>There is no limit on the number of proposals that an organization may submit.</td>
</tr>
<tr>
<td>Limit on Number of Proposals per PI:</td>
</tr>
<tr>
<td>Each Principal Investigator may only submit one CAREER proposal per annual competition. In addition, a Principal Investigator may not participate in more than three CAREER competitions. Proposals that are not reviewed (i.e., are withdrawn or are returned without review) do not count toward the three-competition limit.</td>
</tr>
</tbody>
</table>

Number of awards funded by the program per year

Eligibility information for institutions/PIs submitting proposals

Amount of money this program funds per year
Types of Proposal Submissions

No Deadlines – Proposals may be submitted at any time

Proposers should allow adequate time for NSF review and processing of proposals (see NSF 1.11 for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. **Target dates**: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.

2. **Deadline dates**: dates after which proposals will not be accepted for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with NSF Chapter 11.5.
Types of Proposal Submissions

Target Dates –
Talk to the Program Office if you think you might miss the date

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F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals [see OPS 1.11 for further information]. Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. **Target dates**: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.
2. **Deadline dates**: dates after which proposals will not be accepted for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with OPS Chapter 1.11.

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Types of Proposal Submissions

Deadline Dates – Proposals will not be accepted after this date and time (5 pm submitter’s local time)

Proposers should allow adequate time for NSF review and processing of proposals (see NSF 1.1.3 for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. **Target dates**: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.

2. **Deadline dates**: dates after which proposals will not be accepted for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with NSF Chapter 1.1.4.
Types of Proposal Submissions

Submission Windows – Closing date converts to a deadline date

3. Submission windows: designated periods of time during which proposals will be accepted for review by NSF. It is NSF’s policy that the end date of a submission window converts to, and is subject to, the same policies as a deadline date.
Types of Proposal Submissions

Letters of Intent – Enables better management of reviewers and panelists

Some NSF program solicitations require or request submission of a letter of intent (LOI) in advance of submission of a full proposal. A LOI is not binding. The predominant reason for its use is to help NSF program staff to gauge the size and range of the competition, enabling earlier selection and better management of reviewers and panelists. In addition, the information contained in a LOI is used to help avoid potential conflicts of interest in the review process.

A LOI normally contains the PI’s and co-PI’s names, a proposed title, a list of possible participating organizations (if applicable), and a synopsis that describes the work in sufficient detail to permit an appropriate selection of reviewers. A LOI is not externally evaluated or used to decide on funding. The requirement to submit a LOI will be identified in the program solicitation, and such letters are submitted electronically via the NSF FastLane System.
Types of Proposal Submissions

Preliminary Proposals – Sometimes required, sometimes optional

2. Preliminary Proposal

Some NSF program solicitations require or request submission of a preliminary proposal in advance of submission of a full proposal. The two predominant reasons for requiring submission of a preliminary proposal are to:

- reduce the proposers’ unnecessary effort in proposal preparation when the chance of success is very small. This is particularly true of exploratory initiatives where the community senses that a major new direction is being identified, or competitions that will result in a small number of actual awards; and
- increase the overall quality of the full submission.
Sections of an NSF Proposal

Cover Sheet
Many of the boxes on the cover sheet are electronically prefilled as part of the FastLane login process.

Example from FastLane
Sections of an NSF Proposal

Project Summary
The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length.

Proposals that do not separately address both merit review criteria will be returned without review.

Text from the GPG

- **Human Subjects** (See GPG II.C.7)
- **High-Resolution Graphics/Other Graphics** (Where Exact Color Representation Is Required for Proper Interpretation) (See GPG II.G.1)
- **International Cooperative Activities Country Names** (See GPG III.C.2)

### Project Summary

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded. The summary should be written in the third person and include a statement of objectives and methods to be employed. It must clearly address separate statements (within the one-page summary):

- the intellectual merit of the proposed activity and
- the broader impacts resulting from the proposed activity.

It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically literate non-expert reader. Proposals that do not separately address both merit review criteria within the one-page Project Summary will be returned without review.

### Table of Contents

A Table of Contents is automatically generated for the proposal by the FastLane system. The proposer cannot edit this form.

### Project Description (Including Results from Prior NSF Support)

All proposals to NSF will be reviewed utilizing the two merit review criteria described in greater length in GPG Chapter II.

The Project Description should provide a clear statement of the work to be undertaken and must include:

- objectives for the period of the proposed work and expected significance, relation to longer-term goals of the field, and relation to the present state of knowledge in the field;
- to work in progress by the PI under other support and to work in progress elsewhere.

The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures and plans for preservation, documentation, and sharing of data, samples, physical collections, curricular materials and other related research and education products. It must describe as an integral part of the narrative, the broader impacts resulting from the proposed activities, addressing one or more of the following as appropriate for the project: how the project will integrate research and education by advancing discovery and understanding while at the same time promoting teaching, training, and learning, ways in which the proposed activity will broaden the participation of underserved groups (e.g., gender, ethnicity, disability, geographic, etc.); how the project will enhance the infrastructure for research and/or education, such as facilities, instrumentation, networks, and partnerships; how the results of the project will be disseminated broadly to enhance scientific and technological understanding; and potential benefits of the proposed activity to society at large. Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website.

Each proposal that requests funding to support postdoctoral researchers must include, as a separate section within the 10-page Project Description, a description of the mentoring activities that will be provided for such individuals. Examples of mentoring activities include, but are not limited to: career counseling; training in...
Sections of an NSF Proposal

Table of Contents
FastLane automatically generates a Table of Contents.

*Example from FastLane*

<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Cover Sheet for Proposal to the National Science Foundation</td>
</tr>
<tr>
<td>Project Summary (not to exceed 1 page)</td>
</tr>
<tr>
<td>Table of Contents</td>
</tr>
<tr>
<td>Project Description (including results from prior NSF support, if any)</td>
</tr>
<tr>
<td>NSF Support or to exceed 10 pages allowed only. Followed by a specific program announcement/notification or if approved by the appropriate NSF Division or director.</td>
</tr>
<tr>
<td>References: Cited</td>
</tr>
<tr>
<td>Biographical Sketches (not to exceed 2 pages each)</td>
</tr>
<tr>
<td>Budget</td>
</tr>
<tr>
<td>(Not to exceed 3 pages additional publications)</td>
</tr>
<tr>
<td>Current and Pending Support</td>
</tr>
<tr>
<td>Facilities, Equipment and Other Resources</td>
</tr>
<tr>
<td>Special Information/Supplementary Documentation</td>
</tr>
<tr>
<td>Appendix: (See section 4)</td>
</tr>
<tr>
<td>(Mandatory if included by a specific program announcement/ notification; not approved in advance by the appropriate NSF Division/ director)</td>
</tr>
<tr>
<td>Appendix Items</td>
</tr>
</tbody>
</table>

*Proposals may enter any numbering mechanism for the proposal. The entire proposal, however, must be paginated.
Complex text figures and if the proposal is benchmarked consecutively...*
Sections of an NSF Proposal

Project Description
The two merit review criteria should be addressed with the project description, which may not exceed 15 pages.

Text from the GPG

- Human Subjects (See GPG 1.1.7)
- High Resolution Graphical/Other Graphics Where Exact Color Representation is Required for Proper Interpretation (See GPG 1.1.10.2)
- International Cooperative Activities Country Names (See GPG 1.1.22.12)

b. Project Summary

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded. The summary should be written in the third person and indicate a statement of objectives and methods to be employed. It must clearly address in separate statements within the one-page Project Summary will be returned without review.

- the intellectual merit of the proposed activity;
- the broader impacts resulting from the proposed activity.

It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically or technically literate reader. Proposals that do not separately address both merit review criteria within the one-page Project Summary will be returned without review.

c. Table of Contents

A Table of Contents is automatically generated for the proposal by the FastLane system. The proposer cannot use this feature.

1. Project Description (including Results From Prior NSF Support)

b. Context

All proposals to NSF will be reviewed utilizing the two merit review criteria described in greater length in GPG Chapter 11.

The Project Description should provide a clear statement of the work to be undertaken and must include, as appropriate,

- a general description of the work to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures and plans for presentation, documentation, and sharing of data, samples, physical collections, curricular materials, and other related research and education products.
- the intellectual merit of the proposed activity as identified in the Project Description and in the Project Summary;
- the potential impact of the proposed activity, as identified in the Project Description and in the Project Summary;
- the potential for the proposed activity to achieve its stated goals;
- the potential for the proposed activity to achieve its stated goals;
- the potential for the proposed activity to achieve its stated goals;
- the potential for the proposed activity to achieve its stated goals;
Sections of an NSF Proposal

References Cited
Reference information is required, and proposers must follow accepted scholarly practices in providing citations for source materials.

Text from the GPG
Biographical Sketches

Biographical sketches are required for all senior project personnel and must not exceed two pages in length, per individual.

Text from the GPG
Sections of an NSF Proposal

Budget
Each proposal must contain a budget for each year of support requested. The budget justification should be no more than three pages for all years of the project combined.

Example from FastLane
Sections of an NSF Proposal

Current & Pending Support
This section of the proposal calls for information on all current and pending support for ongoing projects and proposals.

Example from FastLane
Sections of an NSF Proposal

Facilities, Equipment, and Other Resources
This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed.

*Example from FastLane*
Sections of an NSF Proposal

Special Information and Supplementary Documentation

This segment should alert NSF officials to unusual circumstances that require special handling; more information can be found in the GPG Chapter II.C.2.j.

Text from the GPG

Excerpt from the 2023 NSF Proposal Guide:

Special Information and Supplementary Documentation

C) Entertainment
- Costs of entertainment, amusement, diversion, and social activities and any costs directly associated with such activities such as tickets to shows or sporting events, meals, lodging, travel, compensation and gratuities are unallowable. Gifts, meals, and travel expenses of grantee employees who are not on travel status are unallowable. Costs of entertainment on travel status are limited to those allowed under the governing cost principles for travel expenses.

D) Meals and Coffee Breaks
- No NSF funds may be spent on meals or coffee breaks for informal meetings of an organization or any of its components, including local or distant, laboratories, departments and centers.

E) Alcoholic Beverages
- No NSF funds may be spent on alcoholic beverages.

Additional information on charging certain types of costs generally associated with meetings and conferences to NSF awards is available in AID Chapter V.C.9.

Current and Pending Support

This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing grants. All current project support from whatever source (i.e., other federal agencies, state or local government agencies, private and non-profit organizations, or unrestricted funds) is to be reported as a line item. A unique project title should be assigned to each line item of current and pending support. Activities reported as part of the current and pending support must be described in sufficient detail to support the proposal. The title awarded amount for the entire award period covered (including renewal periods) must be shown as well as the number of principal investigators to be supported by the project. Supported organizations in other public sectors (e.g., institutional units, divisions, or units of large organizations) will not be reviewed by NSF. Note the Biological Sciences Directorate exception to this policy; however, described in GPG Chapter II.E.2.

If the project now being submitted has been funded previously by a source other than NSF, the information requested in the paragraph above must be forwarded for the two-year period of funding.

I. Facilities, Equipment and Other Resources

This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed. Resources must describe only those resources that are directly attributable.

II. Special Information and Supplementary Documentation

(Except as specified below, special information and supplementary documentation must be included as part of the Project Description on the cover sheets of the proposal. If it is relevant to the quality of the proposal, the appropriate project office may seek detailed information in the form of a special information or supplementary documentation. This Special Information and Supplementary Documentation section shall be considered as appendices. Separate guidance regarding the need for additional documentation may be obtained from the organization's sponsoring project office or from the references cited below:

- Reference for performance at all or part of the project off-campus or away from organizational headquarters. (See AID Chapter V.D.3.1)
- Documentation of collaborative arrangements of significance to the proposal through letters of commitment. (See EPS Chapter X.D.1.4.H)

Grant Proposal Guide 9-11 NSF 18-28
Proposal Development Strategies

• Key Questions for Prospective Investigators
  - What do you intend to do?
  - Why is the work important?
  - What has already been done?
  - How are you going to do the work?

Proposal Development Strategies for Individual Investigators

• Determine your long-term research and education goals

• Develop your bright idea
  - Survey the literature
  - Contact other investigators currently working on the same subject
  - Prepare a brief concept paper
  - Discuss with your colleagues and mentors

• Read solicitation instructions carefully
Proposal Development Strategies for Individual Investigators

• Prepare to carry out your project
  - Determine available resources
  - Realistically assess your needs
  - Develop preliminary data
  - Present to your colleagues, mentors, and students

• Determine possible funding sources

• Understand the ground rules

Proposal Development Strategies: Mentoring for Postdoctoral Researchers

• Proposals that include funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals.

• Proposed mentoring activities will be evaluated as part of the merit review process, under NSF’s broader impacts merit review criterion.
Proposal Development Strategies: Mentoring for Postdoctoral Researchers

- Mentoring activities may include:
  - Providing career counseling, training in the preparation of grant proposals, or training in responsible professional practices
  - Developing publications and presentations
  - Offering guidance on techniques to improve teaching and mentoring skills
  - Providing counseling on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas

- Proposals that do not include a maximum one page supplementary document on mentoring activities will be returned without review.

- For collaborative proposals, the lead organization must submit a mentoring plan for all postdoctoral researchers supported under the entire collaborative project.

Budgetary Guidelines

Information regarding budgetary guidelines can be found in both the GPG and in the Award & Administration Guide (AAG), as well as NSF program solicitations.

Amounts should be:
- Realistic and reasonable
- Well-justified and should establish need
- Consistent with program guidelines

Eligible costs consist of:
- Personnel
- Equipment
- Travel
- Participant support
- Other direct costs (e.g., subawards, consultant services, computer services, and publications costs)
Find Support for Proposal Writing

- NSF Publications
  - Program announcements and solicitations
  - The GPG
  - Web pages
  - Funded project abstracts
  - Reports and special publications
- Targeted workshops
- Program Officers
- Mentors on Campus
- Former panelists
- Sponsored Research Office
- Successful proposals

Finally, serving as a reviewer is helpful as well!

Grants for Rapid Response Research (RAPID)

The RAPID funding mechanism is for projects having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events.
Grants for Rapid Response Research (RAPID)

- Requests may be for up to $200K and for one year of duration
- The project description is expected to be brief; no more than five pages
- Only internal merit review is required for RAPID proposals. Under rare circumstances, Program Officers may elect to obtain external reviews. If external merit review is to be used, then the PI will be informed

EArly-concept Grants for Exploratory Research (EAGER)

- The EAGER funding mechanism may be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches.

- This work is considered especially "high risk-high payoff" because it involves radically different approaches, applies new expertise, or engages novel disciplinary or interdisciplinary perspectives.
EArly-concept Grants for Exploratory Research (EAGER)

- Requests may be for up to $300K and for two years of duration
- Only internal merit review is required. Under rare circumstances, Program Officers may elect to obtain external reviews. If external merit review is to be used, then the PI will be informed
- No-cost extensions, and requests for supplemental funding may be requested but are subject to full external merit review

For More Information

Ask Early, Ask Often!

http://www.nsf.gov/staff
http://www.nsf.gov/staff/orglist.jsp