

Instrumentation for Materials Research (IMR)

PROGRAM SOLICITATION

NSF 07-600

REPLACES DOCUMENT(S):

NSF 05-522



National Science Foundation

Directorate for Mathematical & Physical Sciences
Division of Materials Research

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

January 10, 2008

Second Thursday in January, Annually Thereafter

REVISION NOTES

A revised version of the *NSF Proposal & Award Policies & Procedures Guide (PAPPG)*, [NSF 09-1](#), was issued on October 1, 2008 and is effective for proposals submitted on or after January 5, 2009. Please be advised that the guidelines contained in [NSF 09-1](#) apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 5th, 2009, must also follow the guidelines contained in [NSF 09-1](#).

One of the most significant changes to the PAPPG is implementation of the mentoring provisions of the America COMPETES Act. Each proposal that requests funding to support postdoctoral researchers must include, as a separate section within the 15-page project description, a description of the mentoring activities that will be provided for such individuals. Proposals that do not include a separate section on mentoring activities within the Project Description will be returned without review (see the PAPP Guide Part I: *Grant Proposal Guide* Chapter II.C.2.d for further information).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Instrumentation for Materials Research (IMR)
Division of Materials Research

Synopsis of Program:

The IMR Program supports the acquisition and/or development of research instruments that will provide new capability and/or advance current capability to: (1) discover fundamental phenomena in materials; (2) synthesize, process, and/or characterize the composition, structure, properties, and performance of materials; and (3) improve the quality, expand the scope, and foster and enable the integration of research and education in research-intensive environments.

Cognizant Program Officer(s):

- Charles Bouldin, Program Director (IMR), 1065 N, telephone: (703) 292-4920, email: cbouldin@nsf.gov

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

- 47.049 --- Mathematical and Physical Sciences

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 20 to 25 Approximately 20 to 25 new awards are made each year, depending on the quality of the competing proposals and available funds

Anticipated Funding Amount: \$4,000,000 in FY 2008. Subject to change annually depending on the availability of funds.

Eligibility Information (see Section IV for additional eligibility information)

Organization Limit:

Proposals may only be submitted by the following:

- The IMR program accepts proposals from US academic institutions of higher education, independent non-profit research organizations, research museums, and legally incorporated consortia thereof.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

Only one proposal may be submitted by a principal investigator, and he/she may collaborate in only one other proposal as a co-investigator.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable
- **Full Proposals:**
 - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
 - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: <http://www.nsf.gov/pubs/policydocs/grantsgovguide607.pdf>)

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required under this solicitation.
- **Indirect Cost (F&A) Limitations:** Not Applicable
- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):
 - January 10, 2008
 - Second Thursday in January, Annually Thereafter

Proposal Review Information Criteria

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

Award Administration Information

Award Conditions: Standard NSF award conditions apply

Reporting Requirements: Standard NSF reporting requirements apply

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I. INTRODUCTION

Observation and discovery of new phenomena are at the heart of our scientific enterprise. The Instrumentation for Materials Research (IMR) program in the Division of Materials Research (DMR) is designed to provide advanced capability for discovery, observation, characterization, fabrication and testing to the nation's scientists and engineers who are endeavoring to conduct research and educational activities in all areas normally supported by DMR. The Division supports a wide range of programs addressing fundamental phenomena in materials, materials synthesis and processing, structure and composition, properties and performance, and materials education. DMR plays a significant role in various NSF-wide interdisciplinary initiatives and programs.

II. PROGRAM DESCRIPTION

The goals of the IMR Program are to support the acquisition or development of research instruments that will provide new capability and/or advance current capability to: (1) discover fundamental phenomena in materials; (2) synthesize, process, and/or characterize the composition, structure, properties, and performance of materials; and (3) improve the quality, expand the scope, and foster and enable the integration of research and education in research-intensive environments.

III. AWARD INFORMATION

Approximately 20 to 25 new awards are made each year, depending on the quality of the competing proposals and available funds. The anticipated funding amount is \$4,000,000 in FY 2008.

Funding for the IMR program is subject to change annually depending on the availability of funds. The minimum award size in the IMR program is \$100,000 for PhD-granting institutions and \$50,000 for non-PhD granting institutions. The typical award duration is one to three years.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- The IMR program accepts proposals from US academic institutions of higher education, independent non-profit research organizations, research museums, and legally incorporated consortia thereof.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

Only one proposal may be submitted by a principal investigator, and he/she may collaborate in only one other proposal as a co-investigator.

Additional Eligibility Info:

The IMR program accepts proposals from US academic institutions of higher education, independent nonprofit research organizations, research museums, and legally incorporated consortia thereof. Proposals may be submitted in support of individual investigators or small groups who are endeavoring to conduct research and educational activities in all areas within the purview of DMR. Synergistic collaboration among researchers and collaboration or partnerships with industry or government laboratories is encouraged when appropriate.

Only one proposal can be submitted by a Principal Investigator. In addition, he/she may collaborate in only one other proposal as a co-investigator. Group and collaborative proposals involving more than one organization must be submitted as a single administrative package from one of the organizations involved. Due to the limited availability of funds, prospective proposers are strongly urged to contact the program officer listed at the end of this solicitation for guidance. The IMR program normally considers proposals for single instruments or a single system. If more than one instrument is requested, the proposal must indicate their relative priority, and give explanations and scientific justification for each item requested. A proposal listing assorted instruments without a focused research or research training program will not be accepted. Proposers requesting instruments for multidisciplinary use involving other Divisions within NSF are encouraged to discuss their plans with the appropriate Program Officers prior to submission. Multidisciplinary instrumentation proposals must be submitted to only one NSF Division. These should include a paragraph in the first page describing the multidisciplinary nature of the proposal. Proposals that are multidisciplinary in nature will be co-reviewed by the appropriate Division(s) within NSF.

Investigators interested in seeking NSF support for the acquisition or upgrade of research equipment might also wish to investigate the Major Research Instrumentation (MRI) Program. MRI maintains a January submission deadline each year and the goals and design of the MRI Program complement those of the IMR Program. Investigators are encouraged to examine the latest MRI solicitation available at: <http://www.nsf.gov/od/oaia/programs/mri/>.

Proposals submitted to IMR that are under active review elsewhere in the Foundation are considered inappropriate and will be returned without review.

The IMR program accepts proposals from PhD granting institutions to purchase and/or develop instruments that cost more than \$100,000. The program accepts proposals from non-PhD granting institutions to purchase and/or develop instruments that cost more than \$50,000. Because of the high cost and complexity of major instruments, proposals for multi-user instruments are strongly encouraged. Proposals requesting funds to purchase and/or develop instruments costing less than \$100,000 (less than \$50,000 for non-PhD granting institutions) will be returned without review. Such proposals should be submitted to the appropriate disciplinary program(s) for review.

Eligible Project Costs:

Eligible project costs are those total project costs that are properly and reasonably allocable to the research instrumentation based on the percentage of time that it is to be used for research and research training. For instrument acquisition proposals, eligible project costs include: costs of instrument purchase, installation, commissioning and calibration. The direct and indirect cost of operation, maintenance, and other appropriate technical support during the award period are also eligible. For instrument development proposals, eligible project costs include all of the items listed above, as well as the direct and indirect costs associated with support for personnel engaged in instrument development. Direct and indirect costs associated with research projects to be conducted using the requested instrumentation (including researchers' salary and students' stipends) are not eligible costs under the IMR program.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (<http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf>). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

The following instructions supplement the GPG or NSF Grants.gov Application Guide guidelines. IMR proposals must follow the format of research proposals. An instrumentation proposal should include a brief description of the proposed instrument and the new scientific and educational capability it will provide, a statement of the potential impact it will have on the research and education/training of students, and the potential impact it is expected to have on one or more fields of scientific research, education, or infrastructure.

Each potential major user should describe the project(s) for which the equipment will be used. These descriptions should be succinct, not necessarily as detailed as in an individual research proposal, and should emphasize the intrinsic merit of the activity and the importance of the equipment to it. A brief summary will suffice for auxiliary users. For the review process, you may suggest the names, affiliations, and e-mail addresses of six to eight individuals outside the participating institutions, including women and members of underrepresented groups, who have expertise in the proposed activities and are not collaborators, and who could provide an unbiased evaluation, if requested, of your proposal. Names of individuals who should not be used as reviewers may also be included. Also provide, the names and affiliations of all collaborators over the past four years, and indicate the nature of the collaboration. This information must be sent via the FastLane System or Grants.gov using the "List of Suggested Reviewers" module within the Proposal Preparation function. Special attention should be given to the following required information which is essential for the review and decision making process.

Sections of the Proposal

1. **Title.** The IMR proposal title should be brief and should not include abbreviations. It should begin with "Acquisition of ---." or "Development of ---." and include Education and/or Student Training in the title. For example: "Acquisition of a Rheometer for Polymer Materials Research and Education." Another example: "Development of an Ultrahigh Resolution Photoemission System for Studies of Quantum Structures and Student Training." The title should not refer to any specific supplier or model numbers, and must not exceed 15 words.
2. **Project Summary.** The project summary should include a brief description of the proposed instrument and the new scientific and educational capabilities they will provide, a statement of the potential impact it will have on the research and education/training of students, and the potential impact it is expected to have on one or more fields of scientific research, education, or infrastructure. Some examples of broader impact activities are given in the NSF web site at <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>. **Proposals that do not separately address both merit criteria within the one page Project Summary will be returned without review.**
3. **Table of Contents.** This section is automatically prepared by the system.
4. **Project Description (including Results from Prior NSF Support).** The Project Description must clearly justify the instrument requested in terms of the scientific research and educational activities that are being proposed. The new measurement capability that the new instrument will provide should be clearly described. The following items are required as part of the Project Description (limited to 15 pages):
 - a. *Instrument Development/Construction Projects:* If development/construction of a new instrument is proposed, the design must provide sufficient detail for reviewers to assess its feasibility. Reviewers will be asked to comment on the potential impact that the proposed instrument will have on research and the education/training of students. A brief statement of the anticipated impact of the proposed project is required. The following must be provided:
 - An analysis of the need and broad applicability of the proposed instrument, including potential uses and users in the field of materials research and education;
 - A description of specific initial research plans for the instrument, and plans for long-range future usage;
 - Plans for the construction of the instrument;
 - A description of preliminary work completed;
 - An analysis of potential problems/issues, and proposed solutions;
 - An estimated timeline for completion within the requested duration of support;
 - A plan to evaluate the performance of the instrument; and
 - A description of industrial or national laboratory collaborations or links during the development stages and subsequent to development/construction completion, if appropriate;
 - b. *Instrument Acquisition Projects:* If purchase of a new instrument is proposed, the following information must be provided:
 - A technical description of the proposed instrument, including the specific model(s) chosen, in sufficient detail for reviewers to evaluate the essential need and appropriateness of the instrument for the research and educational activities proposed; and a paragraph indicating whether the instrument will be used for new research project(s) or existing research project(s);
 - A discussion of the research project(s) and educational activities for which the instrument will be used in sufficient detail for reviewers to evaluate its scientific merit. For multi-user instruments, no more than four or five major research projects (projects utilizing 20% or more of the instrument time) may be described in succinct form, emphasizing the intrinsic scientific and educational merit of the activities and the importance of the equipment to them;
 - A brief summary of all additional projects, i.e., those involving less than 20% of the instrument time, is sufficient;
 - In the event the instrumentation proposal is linked to a research proposal under review in any of the disciplinary NSF programs, a clear statement of this link must be made. A summary of the research and educational goals contained in the proposal must be given, as well as the complementarity of the proposals. However, it is not necessary to duplicate the scientific sections of the research proposal in the instrumentation proposal;
 - If the instrument is to be used for existing research projects, a discussion of the new capability the proposed instrument will provide, and how the new instrument will significantly impact the project(s) must be given. If comparable equipment to that requested is already at the proposing institutions, or if replacement of existing equipment is requested, rationale must be provided. This includes comparable government-owned equipment that is on-site; and
 - Plans for implementing the proposed research and educational activities.

Instrumentation proposals must discuss arrangements for **Acquisition, Maintenance, Operation, Use Plans, and Shared Use** of the instrument including:

- Overall acquisition plan;
- Biographical sketch of the person(s) who will have overall responsibility for maintenance and operation and a brief statement of qualifications;
- Description of the physical facility, including floor plans or other appropriate information, where

- the equipment will be located;
- Statement of why the equipment is severable or non-severable from the physical facility;
- Plans for the allocation of time on the instrument and the criteria used for allocation;
- An estimate of the fraction of time the instrument will be used by the various local and other potential users;
- A detailed plan of how use charges will be assessed (if applicable);
- Annual budget for operation and maintenance of the proposed equipment, indicating source of funds; and
- Brief description of other support services available for this instrument, and the annual budget for their operation, maintenance and administration.

In addition to the above requirements, the Project Description within its 15-page limitation should also provide, if applicable, results from Prior NSF Support in the past five years.

5. **References Cited.** References are required with the names of all authors, the article title, journal title, book title, volume number, page number(s) and the year of publication.
6. **Biographical Sketch(es).** A biographical sketch (limited to two pages) is required for each individual identified as senior project personnel. The biographical sketch should provide professional preparation, appointments, publications, synergistic activities, collaborators and other affiliations including names of PhD and postdoctoral advisors.
7. **Budget.** Each proposal must contain a budget for each year of support requested. A budget justification of up to three pages is authorized to provide necessary justification and documentation for the total cost of the proposed project or instrumentation, including the itemized cost of each instrument/component. Only equipment funds requested from NSF should be given in the line D of the proposal budget.

B. Budgetary Information

Cost Sharing: Cost sharing is not required under this solicitation.

Other Budgetary Limitations:

Minimum equipment cost of \$50,000 for proposals from non-PhD granting institutions; minimum equipment cost of \$100,000 for proposals from PhD granting institutions.

Eligible project costs are those total project costs that are properly and reasonably allocable to the research instrumentation based on the percentage of time that it is to be used for research and research training. For instrument acquisition proposals, eligible project costs include: costs of instrument purchase, installation, commissioning and calibration. The direct and indirect cost of operation, maintenance, and other appropriate technical support during the award period are also eligible. For instrument development proposals, eligible project costs include all of the items listed above, as well as the direct and indirect costs associated with support for personnel engaged in instrument development. Direct and indirect costs associated with research projects to be conducted using the requested instrumentation (including researchers' salary and students' stipends) are not eligible costs under the IMR program.

C. Due Dates

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

January 10, 2008

Second Thursday in January, Annually Thereafter

D. FastLane/Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

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

- **For Proposals Submitted Via Grants.gov:**

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. The Grants.gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: <http://www.grants.gov/CustomerSupport>. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

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

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program and, if they meet NSF proposal preparation 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 who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the 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 with the proposer.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>.

NSF staff will give careful consideration to the following in making funding decisions:

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- 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.

Additional Review Criteria:

1. **Essential need for the instrument.** The utility, impact or potential impact that the instrument will have on the proposed research and/or training/educational activities, or on a field of research.
2. **Impact on Infrastructure.** How the instrument will contribute to broader long-range goals of the institution, fields of science, and education.
3. **The ability of the applicants to operate and maintain the instrument.** Evaluation of the qualifications of the person(s) responsible for the instrument, allocation of time on the instrument, and provisions for operation and long-term maintenance of the instrument over its expected lifetime.
4. **Appropriateness of development plans.** For instrument development/construction, an assessment of feasibility, costs and schedule for completion, and plans for integration and use of the instrument in the research and educational activities described subsequent to the completion of the development/construction phase.
5. **Relevance to research and education.** The proposed instrumentation acquisition/development should be relevant to the research and educational activities. Potential toward achieving national goals of strategic importance and impact on all sectors of materials research community should be detailed in the proposal. The expected impact on all sectors of the materials research community and potential for enhancing linkages between sectors should be significant.

B. Review and Selection Process

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

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the date of receipt. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

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

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

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

B. Award Conditions

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

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/general_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the *NSF Award & Administration Guide (AAG)* Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report.

Failure to provide the required annual or final project reports will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. 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 FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Charles Bouldin, Program Director (IMR), 1065 N, telephone: (703) 292-4920, email: cbouldin@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

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, MyNSF (formerly the Custom News Service) 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 Regional 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. MyNSF also is available on NSF's Website at <http://www.nsf.gov/mynsf/>.

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

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 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 Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at <http://www.nsf.gov>

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information** (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
 - Send an e-mail to: pubs@nsf.gov
 - or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
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