

INTEGRATIVE GRADUATE EDUCATION AND RESEARCH TRAINING PROGRAM

Program Announcement

1998 Competition

PREPROPOSAL DEADLINE: *July 1, 1998*

FULL PROPOSAL DEADLINE: *November 23, 1998*

1999 Competition

PREPROPOSAL DEADLINE: *April 15, 1999*

FULL PROPOSAL DEADLINE: *September 7, 1999*



NATIONAL SCIENCE FOUNDATION

The challenges of educating scientists, mathematicians, and engineers for the 21st century mandate a new paradigm for training graduate students. To meet the need for a cadre of broadly prepared Ph.D.s with multidisciplinary backgrounds and the technical, professional, and personal skills essential to addressing the varied career demands of the future, the National Science Foundation (NSF) announces an agency-wide, multidisciplinary, graduate training program. The goal of the Integrative Graduate Education and Research Training (IGERT) Program is to enable the development of innovative, research-based, graduate education and training activities that will produce a diverse group of new scientists and engineers well-prepared for a broad spectrum of career opportunities in industry, government and academe. Supported projects must be based upon a multidisciplinary research theme and organized around a diverse group of investigators from U.S. Ph.D.-granting institutions with appropriate research and teaching interests and expertise.

NSF organizations participating in the IGERT program include the Directorates for Biological Sciences (BIO), Computer and Information Science and Engineering (CISE), Education and Human Resources (EHR), Engineering (ENG), Geosciences (GEO), Mathematical and Physical Sciences (MPS), Social, Behavioral, and Economic Sciences (SBE), and the Office of Polar Programs (OPP).

Program Description

An effective multidisciplinary training environment is one that combines the strengths of various disciplines necessary to meet the challenges of a particular multidisciplinary research theme. The use of a multidisciplinary research theme provides a framework for the integration of research and educational activities, and for collaborative efforts in training that span disciplinary areas. Such training programs should, for example: emphasize critical and emerging areas of science and engineering; provide students with hands-on experience in state-of-the-art research instrumentation and methodologies; develop trainee communication and teamwork skills; offer training experiences relevant to both academic and non-academic careers by linking graduate research with research in industry, national laboratories, or other non-academic settings; provide training in the responsible conduct of research; facilitate the development of a diverse workforce; and foster international perspectives on research.

The research theme may draw upon investigators from two or more departments within one institution or from more than one institution. The primary emphasis of the IGERT program is on new and innovative training of doctoral students. However, the program may, in exceptional cases, support efforts that include undergraduate, masters and/or postdoctoral training if such participation clearly strengthens the proposed training program.

All IGERT projects are expected to incorporate the following features:

- Comprehensive multidisciplinary research theme, appropriate for doctoral-level research, to serve as the foundation for training activities;

- Training activities based on the integration of the multidisciplinary research theme with innovative educational opportunities, including training in the responsible conduct of research, and strong interactions among participating students and faculty;
- Training environment that exposes students to state-of-the-art research instrumentation and/or methodologies;
- Formal administrative plan and organizational structure that ensure the effective management of the requested resources to achieve the goals of the project;
- Institutional strategy and operational plan for student recruitment, with special consideration of efforts aimed at members of groups underrepresented in science and engineering, i.e., women, racial and ethnic minorities, and persons with disabilities, to ensure preparation of a diverse science and engineering workforce; and
- Well-defined strategy for assessment of project performance.

Two-Stage IGERT Competition

Applicants compete for support from the IGERT program in a two-stage process. In the first stage, applicants submit a preliminary proposal (preproposal) that outlines the planned IGERT activity; in the second, invited applicants submit a full proposal. Invitations to submit full proposals will be extended on the basis of merit review of the preproposals; only invited full proposals will be accepted.

Eligibility

Academic institutions in the United States and its territories that grant the Ph.D. degree and have research and training programs in the sciences and engineering are invited to submit preproposals. Projects involving more than one U.S. institution are eligible, but a single institution must accept overall management responsibility. Collaborating institutions need not be academic. Details of complex, multi-institutional arrangements should be discussed with one of the directorate representatives listed at the end of this announcement before preproposal submission. To encourage the development of innovative projects, there is no limit to the number of preproposals that may be submitted by an institution in response to this announcement. However, NSF does not anticipate making more than one IGERT award to a single institution as a result of any single competition. Therefore, an institution may submit no more than two single-institution full proposals and, as lead institution, one multi-institution full proposal per round of competition. Projects involving research in any of the areas appropriate for funding by NSF are eligible.

Principal Investigator

The Principal Investigator should be the director of the IGERT project. The director will have overall responsibility for administration of the award, management of the project, and for

interactions with the NSF. The director and the home institution are expected to develop an administrative structure that enables faculty, students and others involved in the group effort to interact productively during the award period. The director is expected to be an integral participant in the education and research training activities of the IGERT project.

Award Size and Duration

Awards will be made in amounts up to \$500,000 per year (including direct and indirect costs) for a duration not to exceed five years; up to an additional \$200,000 will be available for appropriate state-of-the-art research instrumentation and special purpose research materials during the first year of the award. The number and size of awards will depend on the advice of reviewers and on the availability of funds; however, it is anticipated that about 20 awards will be made as a result of each annual competition.

Proposal Format and Electronic Submission

Both preproposals and full proposals must be prepared following requirements described in Chapter I, Section F of the NSF Grant Proposal Guide (GPG), NSF 98-2. The GPG, as well many other NSF publications, can be obtained from the NSF World Wide Web home page at the following Universal Resource Locator (URL): <http://www.nsf.gov>. Paper copies of the GPG can be requested at no cost from:

NSF Publication Clearinghouse
P.O. Box 218
Jessup, MD 20794-0218
Phone: 301-947-2722.
Email: pubs@nsf.gov

Preproposals and full proposals must be submitted electronically using the NSF FastLane system for electronic proposal submission and review, available through the World Wide Web at the FastLane home page (<http://www.fastlane.nsf.gov/>). The special forms kits for preparation of IGERT preproposals and full proposals should be used. Detailed instructions on "Preparing and Submitting an IGERT Preproposal" and on "Preparing and Submitting an IGERT Full Proposal" are available on the NSF home page at the following URL: <http://www.nsf.gov/home/crssprgm/igert/start.htm/>.

In order to use NSF FastLane to prepare and submit a proposal, you must have the following software: Netscape Navigator 3.0 or above, or Microsoft Internet Explorer 4.0 or above; Adobe Acrobat Reader 3.0 or above; and a PDF File Converter. To access the FastLane Proposal Preparation application, your institution needs to be a registered FastLane institution. A list of registered institutions and the FastLane registration form are located on the FastLane home page.

Preproposals and full proposals must be submitted via FastLane no later than 5:00 PM (submitter's local time) on the deadline dates listed at the beginning of this announcement, and

the signed (paper) cover sheet must be mailed in time to arrive at NSF within seven calendar days of the deadline for electronic submission. For questions concerning FastLane, please send an e-mail message to fastlane@nsf.gov.

Preproposal Content

The preproposal must include the items listed below in the order shown. *No appendices or letters of endorsement are permitted.* Preproposals containing appendices or such letters, or that exceed the page limits indicated below, will be returned without review.

1. Cover Sheet for Preproposals (NSF Form 1207): Preproposals submitted in response to this program announcement must specify "IGERT" and the announcement number NSF 98-96 in the box entitled "Program Announcement". They must also specify "IGERT-Preproposal" in the box entitled "For consideration by NSF Organizational Unit". This box is accessed with the "org unit" button while completing the form. Both boxes are automatically completed if the special forms kit for IGERT preproposals is used. A short, informative title should be provided on the appropriate line. In accordance with FastLane instructions, a printed (paper) copy of the form must be endorsed by the Principal Investigator(s) and authorized institutional representative and mailed to the NSF at the following address for receipt within 7 calendar days of the deadline for electronic submission:

IGERT Program – NSF 98-96
National Science Foundation PPU
4201 Wilson Blvd., Room P60
Arlington, VA 22230

2. Project Summary Form: Provide a brief (200 words or less) description of the training program, including the research theme, education features and objectives.

3. Project Description Form: Sections requested in items A and F (below) are each limited to a length of one page. The main project description, which includes information requested in items B through E, cannot exceed five pages of text in total length, including any citations, lists, charts, figures, or tables. This narrative must include the following:

- A. **List of Faculty Participants:** Include departmental and, if appropriate, institutional affiliation of all faculty participants expected to mentor students or to otherwise play an important role in the project. This section is limited to one page.
- B. **Goals and Objectives:** Discuss the goals, objectives, and anticipated impact of the proposed project. Include a discussion of what is currently missing from graduate training or what could be done more effectively, and how the proposed project will address these issues. Be specific about what is new.
- C. **Multidisciplinary Research Theme and Major Research Efforts:** Describe the multidisciplinary research theme and the major research efforts that form the foundation for the proposed project.

- D. **Training Program:** Describe the proposed integrative research and education activities for graduate student training. Indicate how the training activities ensure full diversity as an integral component, and how training in responsible conduct of research will be provided. New or novel aspects of the training program should be emphasized to help reviewers judge the potential impact of the proposed activities.
- E. **Administration and Evaluation:** Briefly describe the strategies for award administration and for evaluation of the project.
- F. **Expected Resource Commitments:** Briefly describe *anticipated* resource commitments to the IGERT project by the institution(s) and other sources. Any such commitments need not be firmly established at the time of preproposal submission; therefore, no letters of commitment or endorsement from the submitting institution or other entities are allowed. This section is limited to one page.

4. **Biographical Sketches:** For each individual included on the list of faculty participants (item 3A), provide a one-page, *abbreviated* biographical sketch or *curriculum vitae* that includes a brief description of current research support. The sketch should include the individual's academic and professional history, and may include a list of at most 10 publications. Other activities or accomplishments may be listed. In choosing what to include, emphasize information that will be of help in understanding the strengths and qualifications the individual will bring to the proposed IGERT project. Provide comparable information about non-faculty mentors, if appropriate. Although the instructions for content of normal biographical sketches (**GPG**: Chapter II, Section 6.D) may be consulted, *there is no specific required content other than the description of current support*. This section must not exceed one page per person.

5. **Estimated Five-Year Total Budget Summary (NSF Form 1030):** Prepare a one page, five-year summary of total estimated expenses. Specific items of equipment or special research materials need not be listed. Budgets should emphasize graduate student support.

Preproposal Submission and Review

Preproposals must be submitted no later than 5:00 PM (submitter's local time) on the deadline date listed at the beginning of this document. Preproposals will be evaluated by multidisciplinary advisory panels using the criteria for review of full proposals described below. *The aim of this review is to identify groups most likely to submit competitive full proposals*. Up to 60 such groups will be invited to submit full proposals.

Full Proposal Content

Full proposals must contain the following elements *in the order indicated*. Proposals that do not strictly adhere to the specified page limitations (given below) will be ineligible for consideration and will be returned without review.

1. **Cover Sheet for Full Proposals (NSF Form 1207):** Invited full proposals should specify "IGERT" and list the announcement number NSF 98-96 in the appropriate box. They must

also specify “IGERT-Full Proposal” in the box entitled “For consideration by NSF Organizational Unit”. This box is accessed with the “org unit” button while completing the form. Both boxes are automatically completed if the special forms kit for IGERT full proposals is used. A short, informative title should be provided on the appropriate line. In accordance with FastLane instructions, a printed copy of the form must be endorsed by the Principal Investigator(s) and authorized institutional representative and mailed to the NSF (at the address given above for preproposal submission) for receipt within seven days of the deadline for electronic submission.

2. Project Summary Form: Provide a brief (200 words or less) description of the training program, including the research theme, education features and objectives.

3. Project Description Form: Particular attention must be paid to the following in preparing the description:

- A. Table of Contents:** Provide a Table of Contents with a page number for each section and for major subdivisions of the project description (see below).
- B. List of Faculty Participants:** Include departmental and, if appropriate, institutional affiliation of all faculty participants expected to mentor students or to otherwise play an important role in the project. This list is limited to one page.
- C. Thematic Basis for the Group Effort:** The research training theme provides a conceptual focus that identifies the common interests of participating faculty. The goals and objectives of the training effort as well as the general nature and unifying aspects of the research training to be offered must be described in this section. Benefits to be realized from opportunities for cross-disciplinary cooperation in education and research training should be emphasized. This section must not exceed 2 pages.
- D. Major Research Efforts:** Provide examples of ongoing or planned research that is expected to provide research training and thus serve as the foundation of the multidisciplinary graduate training program. No more than six research programs or thrust areas may be described. *This restriction is intended to limit the size of the proposal, not the number of participating faculty or the scope of the project.* These programs may represent efforts of individuals or collaborative efforts. In either case, the description of each program should highlight those aspects that link to the other research programs and that provide opportunities for multidisciplinary efforts relevant to the thematic focus. The faculty member(s) or other participants responsible for each program must be identified, and the programs described in sufficient detail for reviewers to assess their scientific merit and relevance to the theme. Needs for special materials, shared instruments, travel to research sites, or special courses must be justified in the context of the program(s) for which they are required. The overall length of this section must not exceed 24 pages, inclusive of citations, tables, figures or other graphical data.
- E. Other Research:** The research of other participating faculty members and of any non-academic mentors who will participate in the IGERT activity should be identified with a title and brief description of how it will contribute to the training program. This section must not exceed 2 pages (total).

- F. Education and Training:** This section should describe the training to be provided, with emphasis on any new and/or innovative education and training opportunities central to the proposed IGERT project. Identify faculty members or others with primary responsibility for these efforts. If planned training includes international, industrial or other non-academic internships, the potential mentors should be identified if known. This section must also indicate how the various proposed research efforts and educational experiences will be interwoven to integrate research and education into an effective and innovative graduate training program. Provisions for training in ethics and responsible conduct of research, the role of diversity as an integral part of the program, and time-to-degree expectations must be elaborated. The role of undergraduate and/or postdoctoral components, if proposed, must also be described with sufficient detail to clarify the benefit to the trainees themselves and to justify support through this type of award. This section must not exceed 10 pages.
- G. Recruitment and Retention:** Plans for recruitment and retention of trainees should be described, including specific provisions for successful recruitment and retention of members of groups underrepresented in science and engineering. Identify the Ph.D. program(s) in which the IGERT graduate students may enroll. This section must not exceed 3 pages.
- H. Organization and Management:** Plans and procedures for the development and management of the proposed activity should be described. The plan should include use of a formal mechanism that assures the fair and effective allocation of group resources. Procedures for selection of students and others who will receive stipends or otherwise share in group funds must be described, as should methods for allocation of use of shared equipment to be acquired with IGERT funds. Relationships to other faculty and equipment at the institution, and elsewhere if relevant, should be described as should the relationship to any existing grants that provide funds for related training and educational activities. This section must not exceed 3 pages.
- I. Performance Assessment:** Describe a performance evaluation plan that ties goals and objectives to indicators and specific measurements for assessing the progress toward achievement of goals. Examples of some indicators which may be useful are assessment of trainees' performance, time-to-degree (from beginning of graduate studies), numbers and types of trainee placements, percentages of members of underrepresented groups among trainees and faculty, effectiveness of the multidisciplinary enterprise, and impact of the project on graduate education within the institution(s). Although each project should propose its own indicators, some later standardization is anticipated so that the NSF can meet the requirements of the Government Performance and Results Act of 1993. This section may not exceed 2 pages.
- J. Recruitment and Retention Experience:** Provide the following information about recruitment and retention of students in the participating Ph.D. programs(s) in each of the last three years: (1) total number of applicants, (2) total number of applicants accepted, (3) total number of accepted applicants who enrolled, (4) average GRE scores of those who enrolled, (5) total number of students currently enrolled in the program, indicating full- or part-time status, (6) total number of Ph.D.s awarded, (7) average time-to-degree, and (8) other relevant measures of student success. In addition to these total numbers, provide separate numbers for women and for underrepresented

minorities in each of these categories. A tabular format should be used, with separate tables for each participating Ph.D. program. This section is limited to 1 page per participating Ph.D. program.

- K. Recent Training Experience:** Provide information about the recent training activities of each participating faculty member included on the list of participating faculty (item 3B). This should include the numbers of undergraduates, graduate students, and postdoctoral fellows (list numbers for each category separately) who carried out research under the faculty member's direction in each of the last three years and the titles of courses taught by the faculty member during that time period. Other relevant activities such as organization of workshops or special courses may be included; do not include lectures or publications here. This section is limited to 1 page per person.
- L. Students and Collaborators:** Provide a list of current and past collaborators for each of the personnel included on the list of participating faculty. The list should be arranged alphabetically (by personnel name) and include the names of their graduate and postdoctoral mentors, the names of all graduate students and postdoctoral fellows who have trained with the key personnel, and the names of those with whom the key personnel have co-authored papers within the last four years.
- M. Existing Facilities and Equipment:** Include a brief description of available facilities, including major instruments required for the research. Where requested equipment or materials duplicate existing items, explain the need for duplication. This section is limited to 2 pages.

4. Budget and Allowable Costs (NSF Form 1030): A budget for each year of support requested as well as a cumulative budget for all five years must be provided. *The major portion of awarded funds must be used for training and educational activities, and for related expenditures (including, for example, travel, publication costs and student recruitment).* No funds for faculty research or faculty salaries may be requested. Stipends for students and fellows, support for short-term visitors, and funding of a limited amount of administrative support may be requested. The current graduate stipend is \$15,000 per year per student, with a cost-of-education allowance of \$10,500 per year per student. Undergraduate stipends should be consistent with those of the NSF Research Experiences for Undergraduates program, and postdoctoral stipends may be determined by the institution. Each award will carry an 8% overhead allowance based on the total direct cost minus equipment and cost-of-education allowances. *Stipend recipients must be citizens, nationals or permanent residents of the U.S.* Funds for the purchase, but not the maintenance, of shared, special purpose research instruments which cost more than \$5,000 may be requested. Personnel and shop costs may be requested for the development and construction of special instruments, as may funds for the purchase of computer software or other special purpose materials. The total funds requested for equipment, software and special purpose materials may not exceed \$200,000; if awarded, these funds will be provided in the first year of the grant. Requests for equipment or special materials that exceed this limit, or for equipment or materials whose primary use is in instruction, should be addressed to an appropriate NSF program (see the NSF Guide to Programs; NSF 97-150). Limited funds intended to partially defray the costs of research by students and fellows may also be requested. Funds for facility renovation or for instrument installation or maintenance may not be requested.

5. Biographical Sketches and Individual Support: For each of the personnel included on the list of participating faculty (item 3B), provide a curriculum vitae or short biographical sketch (1-2 paragraphs), a list of up to 10 publications (to include the individual's 5 most important and up to 5 other, relevant publications) and a complete list of current support. The information may not exceed 2 pages for each individual. *Do not include a list of collaborators as part of the biographical sketch.*

6. Budget Justification: A brief justification for funds in each budget category should be provided. For shared equipment and special materials, a particular model or source and the current or expected price should be specified whenever possible. A brief explanation of the need for each requested item and of the choice of specified models should be provided. Arrangements for maintenance and operating expenses of requested equipment should be described. If internships are planned, the willingness to participate of the host organization and of the individual mentors (if known) should be documented. This section should also include details of institutional cost sharing, if any, and of other sources of support for the IGERT project, such as government, industry, or private foundations. Although cost sharing is not required, any such commitment specified in the proposal will be referenced and included as a condition of an award resulting from this announcement.

As part of this section, provide a list of all relevant documentation, including that for institutional commitments, commitments by any other sources of funding and commitments by any organizations expected to host interns or otherwise participate. The portion of the section devoted to the budget justification and list of commitments is limited to 4 pages. Letters or other documentation included on the list of commitments should be scanned and placed at the end of this section. There is no limit to the number of such letters that may be included on the list, but no more than six letters of commitment may be provided as part of the proposal. Do not include additional letters of commitment, and *do not list or include letters whose sole purpose is to endorse the project.*

Submission of Full Proposals

The full proposals must be submitted electronically no later than 5:00 PM (submitter's local time) on the deadline date listed at the beginning of this document. All required information must be submitted together. The Principal Investigator is responsible for the completeness and accuracy of the proposal as submitted. Unless requested by the NSF, additional information may not be sent following proposal submission.

Evaluation of Full Proposals

Multidisciplinary panels with relevant expertise will be convened to review proposals using the NSF merit review criteria as described in GPG, Chapter III, Section A. Panel review of full proposals may be supplemented by *ad hoc* reviews and site visits as appropriate. The basis for

award decisions will be the merit of the education and research training activities proposed. The merit review criteria are

1. What is the intellectual merit and quality of the proposed activity?

2. What are the broader impacts of the proposed activity?

In light of the IGERT program's objectives, reviewers will be asked to consider these Merit Review criteria with emphasis placed on:

- Importance and coherence of the comprehensive multidisciplinary research theme, including its effectiveness as an intellectual focus for all participating scientists and engineers;
- Excellence of the research environment as reflected in the major research efforts;
- Quality and innovation in the planned graduate education and training activities, including provisions for training in the responsible conduct of research;
- Effectiveness of the integration of research and education;
- Appropriateness of the formal administrative plan and organizational structure in assuring fair and effective allocation of group resources;
- Effectiveness of the strategy for preparing a diverse science and engineering workforce, including operational plans for student recruitment and retention;
- Appropriateness of the plans for assessment of project performance; and
- Appropriateness of the budget.

Award Administration

Awards made as a result of this document are administered in accordance with the terms and conditions of NSF GC-I, "Grant General Conditions," (12/97), FDP-III, "Federal Demonstration Partnership General Terms and Conditions" (7/97), depending on the grantee organization, or "Cooperative Agreement General Terms and Conditions." This information can be obtained from the NSF OnLine Document System at the NSF homepage (<http://www.nsf.gov>). Printed copies of these documents are available at no cost from the NSF Clearinghouse, P.O. Box 218, Jessup, MD 20794-0218, phone (301) 947-2722, or via e-mail at pubs@nsf.gov. More comprehensive information is contained in the NSF Grant Policy Manual (NSF 95-26), for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, D.C. 20402. The telephone number at GPO is (202) 783-3238 for subscription information. The NSF Grant Policy Manual can also be accessed online at the NSF homepage.

Other Information

As warranted, NSF will assemble a listing of Frequently Asked Questions (FAQ) relating to this announcement. Any FAQ prepared can be found by following the instructions for accessing IGERT on the NSF home page as described above in the section on Proposal Format and Electronic Submission.

Inquiries regarding the IGERT program should be directed to one of the following:

BIO: Judith E. Plesset (703) 306-1417 (jplesset@nsf.gov)

CISE: William W. Agresti (703) 306-1911 (wagresti@nsf.gov)

EHR: Paul W. Jennings (703) 306-1696 (pjennin@nsf.gov)

ENG: Lawrence S. Goldberg (Chairman), (703) 306-1339 (lgolber@nsf.gov)

ENG: Susan Kemnitzer (703) 306-1382 (skemnitz@nsf.gov)

GEO: Jarvis Moyers (703) 306-1523 (jmoyers@nsf.gov)

MPS: Robert J. Reynik (703) 306-1814 (rreynik@nsf.gov)

OPP: Jane Dionne (703) 306-1033 (jdionne@nsf.gov)

SBE: Paul Chapin (703) 306-1731 (pchapin@nsf.gov)

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The Foundation provides awards for research and education in the sciences and engineering. The awardee is wholly responsible for the conduct of such research and preparation of the results for publication. The Foundation, therefore, does not assume responsibility for the research findings or their interpretation.

The Foundation welcomes proposals from all qualified scientists and engineers and strongly encourages women, minorities, and persons with disabilities to compete fully in any of the research and education related programs described here. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving financial assistance from the National Science Foundation.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF projects. See the program announcement or contact the program coordinator at (703) 306-1636.

The National Science Foundation has TDD (Telephonic Device for the Deaf) capability, which enables individuals with hearing impairment to communicate with the Foundation about NSF programs, employment, or general information. To access NSF TDD, dial (703) 306-0090; for FIRS, 1-800-877-8339.

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; 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 application review process; to applicant institutions/grantees to provide or obtain data regarding the application review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; 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," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

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 this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Gail A. McHenry
Reports Clearance Officer
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

The program described in this announcement is in categories 47.074 (BIO), 47.070 (CISE), 47.076 (EHR), 47.041 (ENG), 47.050 (GEO), 47.049 (MPS), 47.075 (SBE), and 47.078 (OPP) of the Catalog of Federal Domestic Assistance.

OMB# 3145-0058
P.T. 44
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NSF 98-96