

INTERDISCIPLINARY GRANTS IN THE MATHEMATICAL SCIENCES

Proposal Solicitation 1998

DIVISION OF MATHEMATICAL SCIENCES

DEADLINE: *November 25, 1998*



NATIONAL SCIENCE FOUNDATION

Purpose and Scope

The objective of the Interdisciplinary Grants in the Mathematical Sciences (IGMS) is to enable mathematical scientists to undertake research and study in another discipline so as to

- expand their skills and knowledge in areas other than the mathematical sciences;
- subsequently apply this knowledge in their research, and
- enrich the educational experiences and broaden the career options of their students.

Recipients of an IGMS award are expected to spend eleven months full time in a twelve month period either in a non-mathematical academic science department or in an industrial, commercial or financial institution. The expected outcome is sufficient familiarity with another discipline so as to open opportunities for effective collaboration by the mathematical scientist with researchers in another discipline.

These awards are in addition to those available in the Grant Opportunities for Academic Liaison with Industry (GOALI) activity. For further details on GOALI, see NSF 98-142.

Proposal Content

The proposal must include:

- a well-defined description of the proposed activity and a corresponding implementation plan;
- a statement delineating the PI's expectation of the impact of this experience on the PI's subsequent research and education activities;
- an approximate time schedule for accomplishing the proposed activities;
- a plan for applying the newly acquired expertise to broaden the research and educational experiences and career options for students;
- an evaluation phase including plans and metrics to be used to assess the success of the project; and
- a dissemination plan, to share the outcome(s) with the community.

It is expected that the recipients will immerse themselves in a discipline apart from the mathematical sciences that

makes use of the mathematical sciences in a significant way. Hence, the recipient should reside in a department or laboratory other than the mathematical sciences for the duration of the award.

Required Commitments

- The PI must commit to remain in academia for a minimum of one year following the end of the grant, should an award be made.
- To help ensure institutional support of these interdisciplinary activities, there should be a co-PI at the level of dean (or higher level university official). A brief description from the latter of the expected impact of these activities on the institution's research and education efforts, as well as a statement of expected duties while on assignment to the host department, must be included in the proposal.
- The awardee's institution shall contribute a minimum of 50% of awardee's academic year salary plus health benefits for the twelve months.
- The proposal must also include a statement of commitment from the host institution or department which contains as a minimum: (a) commitment for an office as well as laboratory space, if appropriate, in the host department, for the award duration; (b) assurance that the investigator will be treated as a regular faculty member within the host unit, and be granted authority to conduct the activities in accordance with their best judgment, consistent with the organization's policies; (c) identification of at least one senior person in the host organization who will serve as host to the award; and (d) approval by a department head or above of the host organization.

These items may be included as Supplementary Documentation in Section I of the proposal or in the Project Description, but not as an Appendix.

Eligibility Criteria

To be eligible for these awards, the PI must hold a tenured or tenure-track position at the academic institution submitting the proposal and have a strong background in one of the disciplines within the purview of the Division of Mathematical Sciences (see the DMS Web page at <http://www.nsf.gov/mps/dms>).

Evaluation Criteria

Proposals will be reviewed in accordance with established Foundation procedures and the two general criteria described in the Grant Proposal Guide (NSF 98-2), in Chapter III, "NSF Proposal Processing and Review." Additional equally-weighted criteria will be:

(1) Competence: The quality of independent research and accomplishment of the PI in his or her own area.

(2) Movement: The degree of movement by the PI beyond his or her own areas of expertise. Bolder moves will be favored over minor, incremental changes or additions.

(3) Consequence: The degree of expected impact of the grant activity on the PI's own research, as well as on the development of students in both disciplines involved.

Award and Budget Information

The duration of the award will be for a twelve month period. The awardee institution shall contribute a minimum of 50% of academic year faculty support and health benefits for twelve months.

It is expected that up to 10 awards will be made depending on the quality of the proposals submitted and the availability of funding. The grant amounts will not exceed \$100,000 per award. Faculty salaries are limited to 50% of academic year salary plus two months summer salary within the 12 month period. Fringe benefits, other than health benefits, and indirect costs are allowable, subject to the \$100,000 limit. Requests of additional amounts for equipment may be considered. The need for such equipment must be well documented in the proposal. Other allowable costs can be found in Chapter VI of the NSF Grant Proposal Manual (NSF 95-26).

DMS is very interested in fostering significant new projects that could arise from IGMS grants. Therefore it welcomes proposals that build on IGMS projects. Grantees are invited to explore this possibility with the Division of Mathematical Sciences following their IGMS grants.

PROPOSAL PREPARATION AND SUBMISSION

Proposals must be prepared in accordance with the NSF Grant Proposal Guide (GPG) (NSF 98-2).

Submission of the entire proposal via FastLane is strongly encouraged and will be mandatory for proposals submitted in FY 2000, which begins on October 1, 1999. The web location for FastLane is www.fastlane.nsf.gov. Instruction

for FastLane proposal submission can be found on the FastLane Web page at <http://www.fastlane.nsf.gov/a1/newstan.htm>.

You may submit your Interdisciplinary Grants in the Mathematical Sciences (IGMS) proposal either by paper copies or electronically using FastLane. **If you are submitting your proposal using paper copies rather than electronically, you are required to submit the proposal cover sheet to NSF using FastLane.** On the cover sheet in the block "Program Announcement/Solicitation No./Closing Date," enter "NSF 98-145." Choose only one of these methods (either FastLane cover-sheet submission or full FastLane proposal submission).

If only the cover sheet has been submitted electronically, then ten (10) copies of the entire proposal must also be sent to NSF. Proposals submitted in response to this solicitation must be received by NSF no later than November 25, 1998.

For full proposals submitted via FastLane, the cover sheet {with NSF proposal number} and signed certification must arrive at the below address with five (5) working days of the deadline:

Announcement No. NSF 98-145
NATIONAL SCIENCE FOUNDATION PPU
4201 Wilson Blvd, Room P60
Arlington VA 22230

Only one (1) copy of NSF Form 1225, Information about Principal Investigator/Project Director, should be sent, attached to the original signed proposal.

PROPOSAL EVALUATION AND REVIEW

It is anticipated that panel reviews will be used to evaluate the proposals, although *ad hoc* mail reviews may also be solicited.

NOTIFICATION OF AWARDS

It is expected that awards will be made no later than May 1999.

ADDITIONAL INFORMATION

General inquiries should be made to the:

Mathematical Sciences Infrastructure Program
Division of Mathematical Sciences
Room 1025
National Science Foundation
4201 Wilson Boulevard
Arlington, VA 22230
Telephone: (703) 306-1870
ldouglas@nsf.gov or thaler@nsf.gov

GRANT ADMINISTRATION

Grants awarded as a result of this announcement are administered in accordance with the terms and conditions of NSF GC-1, "Grant General Conditions," or FDP-III, "Federal Demonstration Partnership General Terms and Conditions," depending on the grantee organization. Copies of these documents are available at no cost from the NSF Forms and Publications Unit, telephone (301) 947-2722, or via e-mail pubs@nsf.gov (Internet). More comprehensive information is contained in the NSF Grant Policy Manual (NSF95-26, August 1995), for sale through the Superintendent of Documents, Government Printing Office, Washington, DC 20404. The telephone number at GPO is (202) 783-3238 for subscription information.

REPORTING REQUIREMENTS

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. 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 subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

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-supported projects. See the program announcement or contact the program coordinator at (703) 306-1636.

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 regarding NSF programs, employment, or general information. TDD may be accessed at (703) 306-0090 or through FIRS on 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 review process; to applicant 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 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: Reports Clearance Officer; Information Dissemination Branch, DAS; National Science Foundation; Arlington, VA 22230.

YEAR 2000 REMINDER

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: Year 2000 Computer Problem, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include: computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF funded activity. Information concerning Year 2000 activities can be found on the NSF web site at <http://www.nsf.gov/oirm/y2k/start.htm>.

This program is described in the Catalog of Federal Domestic Assistance category 47.049 (Mathematical and Physical Sciences).

NATIONAL SCIENCE FOUNDATION
ARLINGTON, VA 22230

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P.T.: 22, 34
K.W.: 1010000

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