

Mathematical Sciences Research Institutes

Program Solicitation

NSF 00-86

DEADLINE(S): *Jan 16 2001*

DIRECTORATE FOR MATHEMATICAL AND PHYSICAL SCIENCES
DIVISION OF MATHEMATICAL SCIENCES



NATIONAL SCIENCE FOUNDATION



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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: Mathematical Sciences Research Institutes

Synopsis of Program:

This activity enables large-scale group efforts that involve a broad segment of the scientific community interested in the proposed area(s). The scientific focus of the project must involve the mathematical sciences in a significant way and have the scope to justify the funding, the duration, and the infrastructure of an institute. The project must advance mathematical sciences research in the United States and provide the scientific foundations that address important national science, engineering, and educational challenges.

Cognizant Program Officer:

- Dr. Deborah F. Lockhart, Program Director, Division of Mathematical Sciences, Room 1025, telephone: (703) 306-1882, e-mail:dlockhar@nsf.gov.
- Dr. Christopher W. Stark, Program Director, Division of Mathematical Sciences, Room 1025, telephone: (703) 306-1881, e-mail:cstark@nsf.gov.
- Dr. Keith N. Crank, Program Director, Division of Mathematical Sciences, Room 1025, telephone: (703) 306-1885, e-mail:kcrank@nsf.gov.

Applicable Catalog of Federal Domestic Assistance (CFDA) Number:

- 47.049 --- Mathematical and Physical Sciences

ELIGIBILITY INFORMATION

- **Organization Limit:** Proposals may be submitted by universities, colleges and other nonprofit institutions in the United States. Multi-institutional consortia are permitted, but a single entity must accept overall management responsibility.
- **PI Eligibility Limit:** None
- **Limit on Number of Proposals:** None

AWARD INFORMATION

- **Anticipated Type of Award:** Cooperative Agreement
- **Estimated Number of Awards:** Up to four awards

- **Anticipated Funding Amount:** Up to approximately \$6.0 million will be initially available for this activity in FY 2002, subject to availability of funds.

PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Guidelines

- **Proposal Preparation Instructions:** Deviations From Standard Preparation Guidelines
 - The program contains deviations from the standard GPG proposal preparation guidelines. Please see the full program announcement/solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is required (Percentage)
- **Cost Sharing Level/Amount:** 15%
- **Indirect (F&A) limitations:** None
- **Other Budgetary Limitations:** Award amounts are expected to range from approximately \$1 million/year to \$2 million/year for proposals submitted in response to this solicitation.

C. Deadline/Target Dates

- **Letter of Intent Deadline:** None
- **Preproposal Deadline:**None
- **Full Proposal Deadline:** Jan 16 2001

D. FastLane Requirements

- **FastLane Submission:** Full Proposal Required
- **Fast Lane Contact:**
 - Florence Rabanal, Room 1005, telephone: (703) 306-1998, e-mail:dmsfl@nsf.gov.

PROPOSAL REVIEW INFORMATION

- **Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full program announcement/solicitation for further information.

AWARD ADMINISTRATION INFORMATION

- **Award Conditions:** Additional award conditions apply. Please see the program announcement/solicitation for further information.
- **Reporting Requirements:** Additional reporting requirements apply. Please see the full program announcement/solicitation for further information.

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I. INTRODUCTION

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) has traditionally used the individual investigator award as the principal mechanism for supporting fundamental research in the mathematical sciences. Group interactions are also crucial in promoting progress both in the mathematical sciences and its applications. These efforts are important to advancing research that is increasingly dependent on knowledge from different areas in the mathematical sciences and other areas of science and engineering. Interactions within the mathematical sciences and between the mathematical sciences and other sciences and engineering may be fostered in a number of ways. Institutes have been an effective means of encouraging and facilitating such interactions. In 1980, the National Science Foundation established two institutes and a recompetition was held in 1997-98 that led to the renewal of these two institutes and the establishment of a third. These institutes are expected to stimulate research in diverse areas among both established and promising young researchers. However, the existing institutes meet only part of the increased challenges due to the growing interface of the mathematical sciences with other disciplines and the increasing fundamental and mathematical and statistical problems whose solution will contribute to both the knowledge base and societal needs. Thus, the establishment of new institutes will aid in helping the mathematical sciences, in partnership with science and engineering, to meet these new challenges.

Mathematical sciences research institutes exemplify larger-scale projects that are effective in important ways. Institutes:

- Are foci of excellence in the mathematical sciences that reach out to other scientific and engineering disciplines and across the mathematical sciences,
- Advance mathematical sciences research, assure research progress is robust and timely, and enable rapid and broad dissemination of new ideas,
- Provide opportunities for postdoctoral fellows, graduate students and undergraduate students to interact with leading researchers in their fields,
- Foster group approaches on significant problems,
- Further the development of collaborations,
- Build intellectual infrastructure within and between disciplines,
- Nurture interdisciplinary research,
- Foster productive collaborations and contacts with industry and government laboratories,
- Foster important international collaboration,
- Encourage knowledge transfer,
- Enrich and invigorate mathematical education,

- Demonstrate leadership in the involvement of groups underrepresented in the mathematical sciences, and
- Provide outreach to the K-12 education community and to the general public.

DMS anticipates supporting up to four additional institutes. It is expected that additional institutes will demonstrate new, imaginative, and different missions and formats from the existing institutes (the Mathematical Sciences Research Institute, the Institute for Mathematics and Its Applications, and the Institute for Pure and Applied Mathematics).

II. PROGRAM DESCRIPTION

The Division of Mathematical Sciences seeks proposals for institutes that will advance research in the mathematical sciences and/or the interface of the mathematical sciences and other disciplines, address diverse challenges and opportunities facing the nation to which the mathematical sciences can contribute, and promote the integration of research and education.

There are many models and variations that may be considered. Some possible institute models include:

- A broad-based institute focusing on the advancement of fundamental research essential to the vitality of the mathematical sciences.
- An institute focusing on an emerging field of science in which fundamental mathematical research is essential. Such an institute promotes the development and application of the mathematical sciences to the physical, biological, and/or social sciences, geosciences, engineering, and technology.
- A consortium of biological, medical, geophysical, and or engineering laboratories together with mathematical sciences departments. Mathematical sciences can play a strong partnership role in helping to make fundamental advances in biology, medicine, geophysics, and engineering. An appropriate distributed institute may advance the collaborations of these fields with the mathematical sciences without having to construct major new laboratories.
- An institute, possibly with regional branches, designed to promote and facilitate the use of experimentation and visualization in the mathematical sciences and other sciences. Advances in computer technology and software have made the use of computation, modeling, and visualization a possibility for advances that has yet to be fully exploited.
- An institute effectively linking the statistical sciences with other branches of the mathematical sciences in order to develop new statistical theory and methods, and advance the application of the mathematical sciences. Since much interdisciplinary research involves statistics in an essential way, such an institute should have a fundamental impact on the statistical, mathematical and other sciences.

These few examples are listed only to stimulate thinking. They should not be considered as defining this solicitation. Enormous opportunities for advancing knowledge in the mathematical sciences and related areas exist in the coming years. These opportunities must drive the vision

for the creation of additional institutes. Proposers must describe the scientific vision of the institute, the challenge behind this vision, and the rationale for an institute in addressing this challenge.

The institutes are intended to be foci of excellence in the mathematical sciences that enhance the U.S. research and educational environment and address those scientific and educational challenges facing the nation that involve the mathematical sciences. The atmosphere should be conducive to a general exchange of ideas, with concentrated activities in areas of great current interest. Activities may possibly change over the course of the award.

An institute is to be broad in its intellectual scope and coverage consistent with its mission, and to involve the fullest spectrum of the mathematical sciences appropriate to the mission. Since many of the opportunities and challenges in the mathematical sciences arise from the interaction between the mathematical sciences and other disciplines, we strongly encourage the exploration and demonstration of linkages and partnerships with research groups in other disciplines, other kinds of research institutions (e.g., national laboratories), and industry.

The proposal should define the vision, mission and goals of the institute and the anticipated impact on the mathematical sciences. It should describe how the desired goals will be achieved together with appropriate measures and milestones that assure progress toward these goals. The proposal should indicate the organization and structure of the proposed institute including the proposed management structure, mechanisms for focusing institute activities, methods for selecting and integrating research emphases, criteria for selection of participants, and allocation of funds. The process of selection of activities should be described, including the generation and evaluation of suggestions for activities and the interaction and consultation between the institute leadership and the appropriate scientific groups or committees.

The leadership of an institute should be provided by a small group, including a director and possibly one or two associate directors, as well as an external governing committee. The director and at least one of the associate directors of the institute should be experienced in the mathematical sciences and all should have demonstrated organizational, management, and leadership ability, as well as recognized scientific stature and research success. In the case of an interdisciplinary research institute, a co-director might be a scientist of similar stature in his/her field of expertise. An institute's scientific guidance must include representation from those served by the institute (e.g. academic institutions, industry, national laboratories) and display diversity in its membership.

All proposals must address the ways in which education and training are integrated within the research program.

The dissemination of information generated at the institute as well as outreach activities are also important aspects of any institute. Plans for these activities must be discussed in the proposal.

III. ELIGIBILITY INFORMATION

Proposals submitted in response to this solicitation will be accepted from colleges, universities, and other nonprofit institutions in the United States. Multi-institutional consortia are permitted, but a single entity must accept overall management responsibility in dealing with the NSF. Cost

sharing at a level of 15% of the requested total amount of NSF funds is required for all proposals submitted in response to this announcement. Prospective applicants are urged to contact one of the program officers listed at the end of this document for guidance.

IV. AWARD INFORMATION

Proposals should be written with a five-year plan. It is expected that any awards to support the institute activities will be NSF cooperative agreements. Award amounts are expected to range from approximately \$1 million/year to \$2 million/year for five years. Up to four awards will be made depending on the quality of the submissions and the availability of funds. It is expected that the institutes will be funded for an initial period of five years, with annual reviews of their activities. In the third year, NSF will conduct an in-depth evaluation of the institute's efforts by an external committee of experts in order to determine whether a renewal proposal for an additional five years will be considered or whether a phase-down plan for the last two years will be put into effect. Any newly funded institute should be able to manage a full complement of activities no later than the beginning of its second year of support. It is expected that approximately \$6.0 million will be initially available for this activity in FY2002, depending on the availability of funds. Anticipated date of awards: Spring 2002.

A renewal proposal for up to an additional five years may be funded depending on the quality of progress and availability of funds. Institutes created as a result of this solicitation will not be funded for more than ten years without going through a recompetition.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF *Grant Proposal Guide* (GPG) (NSF 00-2). The complete text of the GPG (including electronic forms) is available electronically on the NSF Web Site at: <http://www.nsf.gov/pubs/2000/nsf002/start.htm>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone 301.947.2722 or by e-mail from pubs@nsf.gov.

The proposal must consist of the following parts:

- (a) Cover page with institutional certifications - NSF Standard FastLane Form 1207. Proposers are reminded to identify the program announcement number in the program announcement/solicitation block on the NSF Form 1207, "Cover Sheet for Proposal to the National Science Foundation." The cover sheet should also identify the DIVISION OF MATHEMATICAL SCIENCES as the organizational unit to receive the proposal. This can be done by clicking the "Add Organizational Unit" button, which can be found on the Cover Sheet Screen within the FastLane Proposal Preparation Module, and selecting the item from the pull-down menu. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- (b) Information about Principal Investigators/Project Directors - NSF Standard FastLane Form 1225. This form will be generated automatically by FastLane.

(c) Project Summary, up to 250 words - NSF Standard FastLane Form

(d) Table of Contents - NSF Standard FastLane Form 1359. This form will be generated automatically by FastLane.

(e) The Project Description is subject to strict page limitations, as described below. **These page limits will be strictly enforced. Proposals not adhering to these page limitations will be returned without further review.** The Project Description consists of each of the following items:

1. Detailed description of the intellectual focus of the institute activities, the rationale for the institute, its overall goals, and expected impact. A description of plans for future institute growth and resource development. This section is not to exceed 20 pages total.

2. A description of the planned scientific activities. A five year plan (with "ramp-up" activities for new institutes) should be described, as well as plans to respond quickly to particularly timely or fast-breaking scientific opportunities. It is expected that the institutes will be able to manage a full complement of activities no later than the beginning of the second year of support. This section is not to exceed 5 pages total.

3. A description of the plans for human resource development, including the selection and involvement of researchers at various stages of their career development with particular care to be given to those in the early stages of their careers (this may include advanced graduate students) and members of under-represented groups. This section is not to exceed 3 pages total.

4. A description of the planned dissemination and outreach activities. This section is not to exceed 2 pages total.

5. A statement of goals and outcomes expected, and a description of how the impact of the institute activities will be demonstrated and evaluated. This section is not to exceed 3 pages total.

6. A description of the organizational structure of the institute and a detailed management plan. Clearly outline the proposed management structure, mechanisms for focusing institute activities, methods for selecting and integrating research emphases, criteria for selection of participants, allocating funds and equipment, and managing the involvement of other groups. Include a list of those individuals who have agreed to serve as members of advisory boards and similar groups. This section is not to exceed 5 pages total.

(f) Bibliography. Use NSF Standard FastLane Form for References Cited.

(g) A full description of the total level of current and pending support from all sources for the key personnel using NSF Standard FastLane Form 1239.

(h) Biographical sketches. For all key personnel, please provide a brief biographical sketch, using the standard FastLane form. Do not exceed two pages per person for the sketch. For each individual, include up to one additional page describing how that individual will contribute to the mission and goals of the proposed institute. Use NSF Standard FastLane Form 1362.

(i) Budget. Include a proposed five year budget using NSF Standard FastLane Form 1030, separate annual budgets for each year, a total budget for all years, and a detailed budget

justification/explanation (up to 3 pages). Cost sharing must be included on line M of NSF Form 1030. Note that there is a separate section within FastLane for the budget justification.

(j) A description of the facilities (including laboratories and computational facilities) that will be made available to the institute. Use NSF Standard FastLane Form 1363.

The following items (k, l, and m) are considered to be *Supplementary Documentation* and are the **only** items permitted as supplementary documentation or appendices. Supplementary documentation should be saved and uploaded as a single Portable Document Format (PDF) file. Use the NSF Standard FastLane Form for Supplementary Documentation.

(k) A spreadsheet indicating the expenditure of total expected funds including cost sharing (for each year and the total for all years) over the five-year period. This may be saved directly as a PDF file.

(l) Letters of commitment documenting cost sharing and other support for this project from the participating institution(s). These should include commitments for funds, space, faculty and staff positions, equipment, and access to facilities. Indicate specific dollar amounts for each as appropriate. Describe support from other sources, including funds, facilities, and staff. All cost sharing should be documented in this section. These items should be scanned and saved as a PDF file.

(m) Documentation of collaborative arrangements of significance to the proposal through letters of commitment may be included. Only letters of commitment will be permitted; "endorsement" letters are not acceptable. These items should be scanned and saved as a PDF file.

Proposers are reminded to identify the program announcement/solicitation number (NSF 00-86) in the program announcement/solicitation block on the proposal Cover Sheet (NSF Form 1207). Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost sharing at a level of 15% percent of the requested total amount of NSF funds is required for all proposals submitted in response to this announcement. The proposed cost sharing must be shown on line M on the proposal budget (NSF Form 1030). Documentation of the availability of cost sharing must be included in the proposal.

Only items which would be allowable under the applicable cost principles, if charged to the project, may be included in the awardee's contribution to cost sharing. Contributions may be made from any non-Federal source, including non-Federal grants or contracts, and may be cash or in kind (see OMB Circular A-110, Section 23). It should be noted that contributions counted as cost sharing toward projects of another Federal agency may not be counted towards meeting the specific cost sharing requirements of the NSF grant.

All cost sharing amounts are subject to audit. Failure to provide the level of cost sharing reflected in the approved grant budget may result in termination of the NSF grant, disallowance of grant costs and/or refund of grant funds to NSF.

Indirect (F&A) limitations: None

Other Budgetary Limitations: Award amounts are expected to range from approximately \$1 million/year to \$2 million/year for proposals submitted in response to this solicitation.

C. Deadline/Target Dates

Proposals submitted in response to this announcement must be submitted by 5:00 PM, local time on the following date(s):

Jan 16 2001

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this Program Solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>

Submission of Signed Cover Sheets. The signed copy of the proposal Cover Sheet (NSF Form 1207) must be postmarked (or contain a legible proof of mailing date assigned by the carrier) within five working days following proposal submission and be forwarded to the following address:

National Science Foundation
DIS – FastLane Cover Sheet
4201 Wilson Blvd.
Arlington, VA 22230

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

Proposals will be reviewed against the following general review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she 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 and original 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?

Principal Investigators should address the following elements in their proposal to provide reviewers with the information necessary to respond fully to both of the above-described NSF merit review criteria. NSF staff will give these elements careful consideration 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.

In ADDITION to the above criteria, the following will be used in the evaluation process:

- The overall impact of the proposed scientific activities on the mathematical sciences;
- The quality of the stated missions and goals of the institute and its likely effectiveness in meeting these missions and goals;
- The breadth of involvement of appropriate subfields of the mathematical sciences;
- The capabilities of the institute leadership, including management and organizational ability of the proposed director(s), and the commitment of the proposed leadership team;
- The design, structure and management of the operation of the institute, including the quality and effectiveness of the management plan (including plans for interaction among the institute staff), the method of selection of activities and the method of selection of participants;

- The quality and appropriateness of the institute's education and training components, especially plans to attract, involve, and mentor researchers early in their career paths;
- The extent, where appropriate, to which communication and interaction with other areas of science and engineering are fostered. This may include linkages and partnerships with other university research groups or industry, national laboratories, non-profit organizations, etc;
- The quality and likely effectiveness of the proposed outreach activities;
- The quality of the evaluation plan;
- The reasonableness and appropriateness of the budget;
- The quality and likely effectiveness of plans for future institute growth and resource development;
- The quality and appropriateness of the infrastructure support for the institute (including, but not limited to space, administrative staff, equipment, and access to facilities) and the suitability of location with regard to office space, laboratory space if needed, computing environment, access to library facilities, and housing.

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

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement will be reviewed by mail review and/or panel review. Those proposals that are considered the most meritorious by this process will receive site visits by an external committee of experts.

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.

NSF will be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 95 percent of proposals. The time interval begins on the proposal deadline or target date or from the date of receipt, if deadlines or target dates are not used by the program. The interval ends when the Division Director accepts the Program Officer's recommendation.

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 its 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 Division 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. A, 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 (NSF-GC-1)* or Federal Demonstration Partnership (FDP) Terms and Conditions * and (5) any NSF brochure, program guide, announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

*These documents may be accessed electronically on NSF's web site at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone 301.947.2722 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, (NSF 95-26) available electronically on the NSF web site at <http://www.nsf.gov/cgi-bin/getpub?gpm>. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is 202.512.1800. The GPM may be ordered through the GPO web site at <http://www.gpo.gov>.

The project will be funded for five years subject to a site visit in the third year of operation to determine if it will be continued at the same level for the duration of the award or if it will be phased out over the next two years with reduced funding.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Specific data that must be provided in the annual reports will be identified in the cooperative agreement.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented an electronic project reporting system, available through FastLane. This system permits electronic submission and updating of project reports, including information on: project participants (individual and organizational); activities and findings; 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.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries should be made to the Mathematical Sciences Research Institutes Program:

- Dr. Deborah F. Lockhart, Program Director, Division of Mathematical Sciences, Room 1025, telephone: (703) 306-1882, e-mail:dlockhar@nsf.gov.
- Dr. Christopher W. Stark, Program Director, Division of Mathematical Sciences, Room 1025, telephone: (703) 306-1881, e-mail:cstark@nsf.gov.
- Dr. Keith N. Crank, Program Director, Division of Mathematical Sciences, Room 1025, telephone: (703) 306-1885, e-mail:kcrank@nsf.gov.

For questions related to the use of FastLane, contact, Florence Rabanal, Room 1005, telephone: (703) 306-1998, e-mail:dmsfl@nsf.gov.

IX. OTHER PROGRAMS OF INTEREST

The NSF Guide to Programs is a compilation of funding for research and education in science, mathematics, and engineering. The NSF Guide to Programs is available electronically at <http://www.nsf.gov/cgi-bin/getpub?gp>. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices listed in Appendix A of the GPG. Any changes in NSF's fiscal year programs occurring after press time for the Guide to Programs will be announced in the NSF E-Bulletin, which is updated daily on the NSF web site at <http://www.nsf.gov/home/ebulletin>, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (<http://www.nsf.gov/home/cns/start.htm>) to be notified of new funding opportunities that become available.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees 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 (FASSED) 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/solicitation 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 about NSF programs, employment or general information. TDD may be accessed at (703) 306-0090, FIRS at 1-800-877-8339.

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