Cyberinfrastructure TEAM (CI-TEAM): Demonstration Projects

Program Solicitation
NSF 05-560

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

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

May 27, 2005

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Cyberinfrastructure TEAM (CI-TEAM): Demonstration Projects

Synopsis of Program:

Information technology (IT)-enabled systems, tools, and services have had a profound impact on the practice of science and engineering research and education. Integrated together to create a national cyberinfrastructure, these systems, tools and services are enabling individuals, groups and organizations to advance science and engineering in ways that revolutionize *what they can do*, *how they do it*, and *who can participate*. To harness the full power of cyberinfrastructure and the promise it portends for discovery, learning and innovation across and within all areas of science and engineering requires focused investments in the preparation of a science and engineering workforce with the knowledge and requisite skills needed to create, advance and exploit cyberinfrastructure over the long-term.

The creation of the CI-TEAM program signals NSF's commitment to join with the national science and engineering community in the support of projects designed to prepare current and future generations of scientists and engineers to create, advance and exploit cyberinfrastructure. Since cyberinfrastructure promises to make state-of-the-art science and engineering research more accessible to all, it is expected that activities undertaken will broaden the participation of groups currently underrepresented in the science and engineering enterprise.

This first CI-TEAM solicitation seeks promising *demonstration project* proposals from partnerships of organizations committed to the preparation of a diverse cyberinfrastructure-savvy science and engineering workforce. Following merit review of the proposals received, NSF will select 10-20 projects for support that together address a rich mix of cyberinfrastructure-related workforce dimensions, and that promise to serve as pathfinders to effective larger-scale implementation activities in the future.

Cognizant Program Officer(s):

- Miriam Heller, Program Director, Directorate for Computer & Information Science & Engineering, Division of Shared Cyberinfrastructure, 1145 S, telephone: (703) 292-7025, fax: (703) 292-9060, email: mheller@nsf.gov

- Jose Munoz, Deputy Division Director, Directorate for Computer & Information Science & Engineering, Division of Shared Cyberinfrastructure, 1145 S, telephone: (703) 292-8962, fax: (703) 292-9060, email: jmunoz@nsf.gov
- Michael R. Willig, Division Director, Directorate for Biological Sciences, Division of Environmental Biology, telephone: (703) 292-8480, fax: (703) 292-9064, email: mwillig@nsf.gov
- Lee L. Zia, Program Director, Directorate for Education and Human Resources, Division of Undergraduate Education, telephone: (703) 292-5140, fax: (703) 292-9015, email: lzia@nsf.gov
- Robert L. Norwood, Program Director, Directorate for Engineering, Division of Engineering Education & Centers, 585 N, telephone: (703) 292-7079, email: rnorwood@nsf.gov
- Stephen Meacham, Program Director, Directorate for Geosciences, Division of Atmospheric Sciences, 775 S, telephone: (703) 292-8527, fax: (703) 292-9022, email: smeacham@nsf.gov
- Marvin Goldberg, Program Director, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7374, email: mgoldber@nsf.gov
- Julia I Lane, Program Director, Directorate for Social, Behavioral & Economic Sciences, Division of Social and Economic Sciences, 995 N, telephone: (703) 292-7266, fax: (703) 292-9068, email: jlane@nsf.gov
- William Y.B. Chang, Senior Program Manager, Office of the Director, Office of International Science and Engineering, 935 N, telephone: (703) 292-8704, fax: (703) 292-9175, email: wychang@nsf.gov
- Bernhard Lettau, Ocean & Climate System Program Manager, Office of the Director, Office of Polar Programs, 755 S, telephone: (703) 292-8033, fax: (703) 292-9079, email: blettau@nsf.gov

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

- 47.075 --- Social, Behavioral and Economic Sciences
- 47.078 --- Office of Polar Programs
- 47.049 --- Mathematical and Physical Sciences
- 47.050 --- Geosciences
- 47.041 --- Engineering
- 47.076 --- Education and Human Resources
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences
- 47.074 ---

Eligibility Information

- **Organization Limit:** None Specified.
- **PI Eligibility Limit:** None Specified.
- **Limit on Number of Proposals:** An organization may submit only one CI-TEAM proposal as the lead organization in response to this solicitation.

Award Information

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** 10 to 20
- **Anticipated Funding Amount:** $2,500,000 pending availability of funds.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Full Proposal Preparation Instructions:** This solicitation contains information that supplements the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required.
- **Indirect Cost (F&A) Limitations:** Not Applicable.
- **Other Budgetary Limitations:** Not Applicable.

C. Due Dates

- **Full Proposal Deadline Date(s)** (due by 5 p.m. proposer's local time):
  May 27, 2005

Proposal Review Information

- **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

The practice of science and engineering at the research frontier has changed markedly in recent years, owing in large measure to the impact of increasingly powerful and pervasive information technology (IT). Today, simulation and modeling are as important to discovery and innovation as are theory and experimentation. Advances in sensor technology and the availability of affordable mass data storage devices have enabled the collection, creation, and federation of large, complex

datasets which in turn are revealing exciting new research and education opportunities. At the same time, pervasive networking technology is enriching collaborations and providing broad and persistent access to a multitude of scientific resources. These advances in IT are also revealing transformational opportunities to promote and advance learning, to expand and exploit understanding of human cognition, and to enable distributed learning through enhanced access and peer-to-peer technologies.

Integrated together to create a national cyberinfrastructure, these IT systems, tools and services are enabling individuals, groups and organizations to advance science and engineering in ways that revolutionize *what they can do*, *how they do it*, and *who can participate*. In fact, ambitious cyberinfrastructure-related projects are already emerging in many science and engineering communities and are helping create an infrastructure that links people, organizations, information, instrumentation and services on a global scale. While this cyberinfrastructure is providing the productivity enhancements we have come to expect with each new generation of IT, it is also empowering research communities to undertake bold new lines of inquiry; these may be founded on traditional cyberinfrastructure components such as supercomputers, clusters, and workstations, as well as emerging cyberinfrastructure elements such as observing and sensing systems, intelligent and remotely operable instrumentation, collaboratories, federated data archives and digital libraries.

To harness the full power of cyberinfrastructure and the promise it portends for discovery, learning and innovation across and within all areas of science and engineering requires sustained investments in the preparation of a science and engineering workforce with the knowledge and requisite skills needed to create, advance and exploit cyberinfrastructure over the long-term. The CI-TEAM program has been developed to meet this need.

II. PROGRAM DESCRIPTION

This solicitation represents a comprehensive effort on the part of NSF to support promising demonstration projects aimed at positioning the national science and engineering community to more effectively engage in national and global research and education activities that promote and leverage cyberinfrastructure. Collectively, it is anticipated that CI-TEAM awards will:

- Prepare current and future generations of scientists, engineers, and educators to use, support, deploy, develop, and design cyberinfrastructure; and
- Foster inclusion of diverse groups of people and organizations in science and engineering that participate in cyberinfrastructure activities.

The preparation of a diverse science and engineering workforce with the appropriate IT knowledge and skills is essential to inform the design, development, deployment, support, and widespread use of state-of-the-art cyberinfrastructure; this includes not only those individuals interested in or pursuing IT careers, but also includes a broad spectrum of current and future scientists and engineers who will be key to the effective use of emerging cyberinfrastructure and its impact in advancing science and engineering.

Each proposal submitted in response to this solicitation should define a CI-TEAM demonstration project that is:

- Clearly focused on one or more cyberinfrastructure-related science and engineering workforce dimensions.
- Designed as a generalizable, scalable model. Successful demonstration projects will have the potential to be replicated widely and should be scalable to a national level;
- Built on strong science and engineering-focused partnerships among diverse organizations, including: K-20 academic institutions, industry, and not-for profit organizations including professional societies and museums; industry; federal, state, and local government agencies or organizations; and international partners, as appropriate.

Proposing partnerships are strongly encouraged to be creative in defining their project foci. However, note that the intent of this program is to fund cyberinfrastructure workforce preparation activities; proposals focusing only on new types of cyberinfrastructure development or deployment are more appropriately directed toward other cyberinfrastructure funding opportunities. The following examples are *illustrative* of the types of activities that may be undertaken in a CI-TEAM demonstration project. A demonstration project might focus on:

- Mobilization of a community of interest or practice around existing or future cyberinfrastructure resources or services;
- Preparing faculty in junior colleges to use cyberinfrastructure effectively to promote and advance learning and discovery;
- Developing new science & engineering curriculum based on cyberinfrastructure capabilities such as simulation, modeling, and data driven science;
- Preparing individuals in organizations traditionally underrepresented in science and engineering research activities to participate more fully in the national enterprise;
- Preparing cyberinfrastructure professionals to develop and support cyberinfrastructure services;

- Engaging new communities, organizations, groups and/or individuals in science and engineering through the improved effectiveness of collaboratories
- Exploring the complementary roles that for-profit and not for-profit organizations play in supporting and sustaining cyberinfrastructure and the cyberinfrastructure workforce.

Successful demonstration project proposals will clearly define project goals and metrics for assessing success. They will clearly articulate an implementation plan developed to achieve the project goals, and collaboration plans will describe the complementary roles of each of the participating partner organizations. Successful proposals will also describe dissemination plans that ensure that lessons learned, both those leading to success and otherwise, are shared with the national community.

Over the next 3 years, it is anticipated that CI-TEAM will develop into a program that supports a portfolio of Large Scale Implementation projects that will assure an increase in the number and diversity of researchers, educators and students trained to utilize, integrate, and support cyberinfrastructure systems and tools in their research and education activities. In the long-term, NSF's CI -TEAM portfolio will be diverse and pervasive in its impact on science and engineering domains. It will result in a broadening of participation of groups, organizations and regions in science and engineering research and education activities, and will accelerate the preparation of a well-trained science, engineering, and instructional workforce equipped to use cyberinfrastructure to advance discovery, learning, and innovation.

Cyberinfrastructure-related resource materials that may be useful to partnerships preparing CI-TEAM proposals are available at the CI-TEAM website (www.nsf.gov/ci-team). Additional information on cyberinfrastructure can be found in the report of the *National Science Foundation Advisory Panel on Cyberinfrastructure* (www.cise.nsf.gov/sci/reports/atkins.pdf).

III. ELIGIBILITY INFORMATION

The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program announcement/solicitation.

Limit on Number of Proposals: An organization may submit only one CI-TEAM proposal as lead organization in response to this solicitation.

IV. AWARD INFORMATION

It is anticipated that 10 - 20 Demonstration Project awards will be made as either standard or continuing grants. Under this solicitation, individual projects, including all subawards and/or collaborative proposals, may request funding for up to $250,000 total over a maximum project duration of 24 months. Demonstration Project awards will be made subject to the availability of funds and the quality of proposals received. Funding for this program is estimated to be 2.5 million dollars in FY05, subject to the availability of funds. Additional details on award information are described in Section VII. "Award Administration Information".

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal 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). 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.

The following information supplements the standard Grant Proposal Guide (GPG) proposal preparation guidelines.

Project Description

The Project Description section ***must be no more than 15 pages in length.*** The Project Description should address:

- the project vision and goals, together with the potential of the model proposed to be replicable and scalable to a more systemic level of effort;
- a project plan as well as qualitative and quantitative metrics for success;
- collaboration plan that describes the roles of each of the partnership organizations and of each of the project PIs as well as overall project management; and
- plans for disseminating promising practices and for sharing lessons learned, including what works and what does not.

NSF will arrange a grantees meeting but there is no need to budget for it for this solicitation.

Proposers are reminded to identify the program announcement/solicitation number (05-560) in the program announcement/ solicitation block on the proposal Cover Sheet. 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:

Cost sharing is not required in proposals submitted under this Program Solicitation.

C. Due Dates

Proposals must be submitted by the following date(s):

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

May 27, 2005

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this announcement/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. 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 announcement/solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this announcement/solicitation.

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. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane Website at: http://www.fastlane.nsf.gov

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.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued Important Notice 127, Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the Grant Proposal Guide Chapter III.A for further information). 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 he/she is qualified to make judgments.

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?

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:

In addition to the general criteria described above, peer reviewers and NSF staff will evaluate each proposed Demonstration Project in terms of its *potential* to address the goals of

- Preparing a diverse science and engineering workforce able to exploit, enhance, and promote *cyberinfrastructure* to advance science and engineering research and education; and
- Broadening the participation of underrepresented groups and organizations in *cyberinfrastructure* activities.

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/solicitation will be reviewed by Ad Hoc

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.

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 Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

NSF is striving to be able to tell proposers whether their proposals have been declined or recommended for funding within six months. The time interval begins on the closing date of an announcement/solicitation, or the date of proposal receipt, whichever is later. 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 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 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 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 Website at http://www.nsf.gov/awards/managing/. 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 is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=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 Website at http://www.gpo.gov.

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.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI and all Co-PIs. 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. 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 regarding this program should be made to:

- Miriam Heller, Program Director, Directorate for Computer & Information Science & Engineering, Division of Shared Cyberinfrastructure, 1145 S, telephone: (703) 292-7025, fax: (703) 292-9060, email: mheller@nsf.gov
- Jose Munoz, Deputy Division Director, Directorate for Computer & Information Science & Engineering, Division of Shared Cyberinfrastructure, 1145 S, telephone: (703) 292-8962, fax: (703) 292-9060, email: jmunoz@nsf.gov
- Michael R. Willig, Division Director, Directorate for Biological Sciences, Division of Environmental Biology, telephone: (703) 292-8480, fax: (703) 292-9064, email: mwillig@nsf.gov
- Lee L. Zia, Program Director, Directorate for Education and Human Resources, Division of Undergraduate Education, telephone: (703) 292-5140, fax: (703) 292-9015, email: lzia@nsf.gov
- Robert L. Norwood, Program Director, Directorate for Engineering, Division of Engineering Education & Centers, 585 N, telephone: (703) 292-7079, email: rnorwood@nsf.gov
- Stephen Meacham, Program Director, Directorate for Geosciences, Division of Atmospheric Sciences, 775 S, telephone: (703) 292-8527, fax: (703) 292-9022, email: smeacham@nsf.gov
- Marvin Goldberg, Program Director, Directorate for Mathematical & Physical Sciences, Division of Physics, 1015 N, telephone: (703) 292-7374, email: mgoldber@nsf.gov
- Julia I Lane, Program Director, Directorate for Social, Behavioral & Economic Sciences, Division of Social and Economic Sciences, 995 N, telephone: (703) 292-7266, fax: (703) 292-9068, email: jlane@nsf.gov
- William Y.B. Chang, Senior Program Manager, Office of the Director, Office of International Science and Engineering, 935 N, telephone: (703) 292-8704, fax: (703) 292-9175, email: wychang@nsf.gov
- Bernhard Lettau, Ocean & Climate System Program Manager, Office of the Director, Office of Polar Programs, 755 S, telephone: (703) 292-8033, fax: (703) 292-9079, email: blettau@nsf.gov

For questions related to the use of FastLane, contact:

- Crystal R. Champion-Payne, Program Specialist, Directorate for Computer & Information Science & Engineering, Division of Shared Cyberinfrastructure, 1115 N, telephone: (703) 292-8910, fax: (703) 292-9059, email: cchampio@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. 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 Website at http://www.nsf.gov/home/ebulletin, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's MyNSF News Service (http://www.nsf.gov/mynsf/) 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, although some programs may have special requirements that limit eligibility.

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 GPG Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

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; 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 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.

An agency may not conduct or sponsor, and a person is not required to respond to an information collection unless it displays a valid 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 this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne Plimpton, Reports Clearance Officer, Division of Administrative Services, National Science Foundation, Arlington, VA 22230.

OMB control number: 3145-0058.