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ADVANCE

Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers

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Program Solicitation

NSF 01-69

LETTER OF INTENT DUE DATE(S) (*optional*):

April 2, 2001	**Institutional Transformation Proposals, Leadership Proposals**
May 16, 2001	**Fellows Proposals**

FULL PROPOSAL DEADLINE(S) :

May 8, 2001	**Institutional Transformation Proposals** **Leadership Proposals**
August 21-24, 2001	**Fellows Proposals - Deadlines by Directorate**

August 21, 2001
Biological Sciences

August 22, 2001
Computer and Information Science and Engineering
Education and Human Resources
Engineering

August 23, 2001
Geosciences
Office of Polar Programs

August 24, 2001
Mathematical and Physical Sciences
Social, Behavioral and Economic Sciences

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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: ADVANCE

Synopsis of Program:

The pursuit of new scientific and engineering knowledge and its use in service to society requires the talent, perspectives and insight that can only be assured by increasing diversity in the science, engineering and technological workforce. Despite advances made in the proportion of women choosing to pursue science and engineering careers, women continue to be significantly underrepresented in almost all science and engineering fields, constituting only ~22% of the science and engineering workforce at large, and less than 20% of science and engineering faculty in 4-year colleges and universities.

The goal of the ADVANCE program is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce. Creative strategies to realize this goal are sought from men and women. Members of underrepresented minority groups and individuals with disabilities are encouraged to apply.

In FY 2001 this pilot program will offer three types of awards:

> *Fellows Awards* will enable promising individuals to establish or reestablish full-time independent academic research and education careers in institutions of higher learning.
>
> *Institutional Transformation Awards* will support academic institutional transformation to promote the increased participation and advancement of women scientists and engineers in academe.
>
> *Leadership Awards* will recognize the outstanding contributions made to date by organizations and/or individuals who have enabled the increased participation and advancement of women in academic science and engineering careers, and will enable awardees to sustain, intensify and initiate new activities designed to make further progress.

Cognizant Program Officer(s):

- Alice Hogan, ADVANCE Program Director, e-mail: ahogan@nsf.gov.
- ADVANCE Directorate Contacts, http://www.nsf.gov/home/crssprgm/advance/.

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

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

ELIGIBILITY INFORMATION

- **Organization Limit:**

  Fellows Awards
  Principal Investigators (PI's) must be affiliated with an institution of higher learning in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico at the time of award.

  Institutional Transformation Awards
  Proposals may be submitted by academic institutions of higher learning in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico, that award degrees in a field supported by NSF. Partnerships involving industry, government, professional societies and other not-for-profit organizations are encouraged but not required; however, in the case of partnerships, the lead partner organization must be an academic institution of higher learning and must accept overall management responsibility for the activity.

  Leadership Awards
  Proposals may be submitted by: academic institutions of higher learning that award degrees in a field supported by NSF; professional societies; or other not-for-profit organizations. Submitting institutions and organizations must be based in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico. Government organizations (other than academic institutions of higher learning) are not eligible to apply.

- **PI Eligibility Limit:** PI eligibility varies by type of proposal. See the full solicitation for further details.

- **Limit on Number of Proposals:** A Principal Investigator may submit only one Fellows proposal to the ADVANCE Program this year.

AWARD INFORMATION

- **Anticipated Type of Award:** Fellows and Leadership Awards: Standard Grant. Institutional Transformation Awards: Cooperative Agreement with a commitment of up to 5 years.
- **Estimated Number of Awards:** Fellows Awards: 20 to 40 awards. Institutional Transformation Awards: 5 to 10 awards. Leadership Awards: 8 to 12 awards.
- **Anticipated Funding Amount:** Approximately $19 million, subject to the availability of funds

PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is optional. Please see the full program announcement/solicitation for further information.
- **Full Proposals:** Supplemental Preparation Guidelines
    - The program announcement/solicitation contains supplements to the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full program announcement/solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is Specialized. Please see the full program solicitation for further information.
- **Indirect Cost (F&A) Limitations:** Not Applicable.
- **Other Budgetary Limitations:** Not Applicable.

C. Deadline/Target Dates

- **Preliminary Proposals (*optional*): None**

LETTER OF INTENT DUE DATE(S) (*optional*):

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FULL PROPOSAL DEADLINE(S) :

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Office of Polar Programs

August 24, 2001
Mathematical and Physical Sciences
Social, Behavioral and Economic Sciences

D. FastLane Requirements

- **FastLane Submission:** Full Proposal Required

Cover Sheets. The proposal cover sheet (NSF Form 1207, Pages 1 and 2) will be submitted electronically to NSF at the time of the electronic submission of the proposal. **No PI Cover Sheet signatures will be required for submission and no paper copy of the Cover Sheet should be sent to NSF.**

- **FastLane Contact(s):**
    - FastLane Help Desk, telephone: 703-292-8142, 800-673-6188, e-mail: fastlane@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.

TABLE OF CONTENTS

SUMMARY OF PROGRAM REQUIREMENTS

I. INTRODUCTION

II. PROGRAM DESCRIPTION

III. ELIGIBILITY INFORMATION

IV. AWARD INFORMATION

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

- A. Proposal Preparation Instructions
- B. Budgetary Information
- C. Deadline/Target Dates
- D. FastLane Requirements

VI. PROPOSAL REVIEW INFORMATION

- A. NSF Proposal Review Process
- B. Review Protocol and Associated Customer Service Standard

VII. AWARD ADMINISTRATION INFORMATION

- A. Notification of the Award
- B. Award Conditions
- C. Reporting Requirements

VIII. CONTACTS FOR ADDITIONAL INFORMATION

IX. OTHER PROGRAMS OF INTEREST

I. INTRODUCTION

The pursuit of new scientific and engineering knowledge and its use in service to society requires the talent, perspectives and insight that can only be assured by increasing diversity in the science, engineering and technological workforce. Despite advances made in the proportion of women choosing to pursue science and engineering careers, women continue to be significantly underrepresented in almost all science and engineering fields and constitute only ~22% of the science and engineering workforce at large.

In preparing the science and engineering workforce of the 21st century, academic institutions of higher learning play a pivotal role. Faculty members and these institutions serve as intellectual, professional, personal and organizational role models that shape the expectations of many prospective scientists and engineers. The underrepresentation of senior women faculty members is likely to affect women students' critical relationships with mentors, full participation as members of research and education teams, and self-identification as potential researchers. Currently women make up less than 20% of science and engineering faculty in 4-year colleges and universities, and hold an even smaller percentage of high-ranked positions. This situation creates a minimizing effect on the number of women choosing to pursue science and engineering careers.

A number of factors have been hypothesized to account for the lower proportion of women in the senior ranks of science and engineering faculties, e.g. differential effects of conflicts between work and family demands, unequal access to resources such as space and supporting facilities, underrepresentation of women in important departmental decision-making processes, to name but a few. The cumulative effect of such diverse factors has been to create formidable barriers to the advancement of women in academic science and engineering.

To address these and other challenges, the ADVANCE program provides new award opportunities for both individuals and organizations: Fellows Awards, Institutional Transformation Awards, and Leadership Awards.

II. PROGRAM DESCRIPTION

The goal of the ADVANCE program is to increase the participation of women in the scientific and engineering workforce through the increased representation and advancement of women in academic science and engineering careers. With each of the three types of ADVANCE awards, NSF seeks to support new approaches to improving the climate for women in U.S. academic institutions and to facilitate women's advancement to the highest ranks of academic leadership. Creative approaches to realize the goal of this pilot program are sought from men and women. Members of underrepresented minority groups and individuals with disabilities are encouraged to apply.

A. Fellows Awards

The career development and advancement of scientists and engineers may be limited by various factors. Women particularly may experience career advancement limitations because of child-

rearing or elder-care responsibilities, the relocation of a spouse, or that occur with extended postdoctoral status.

Fellows Awards are intended to serve individuals who experience such career limitations and who demonstrate high potential to develop or resume active, full-time, independent academic careers at institutions of higher learning in a science or engineering field supported by NSF. Fellows Awards are not intended to support graduate or postdoctoral training and are not intended to support transitions from non-research to research careers for individuals without prior research training. Fellows proposals may be submitted directly to NSF by individuals (hereafter referred to as independent PI's), or by institutions on behalf of individuals (hereafter referred to as affiliated PI's). Individuals submitting Fellows proposals as independent PI's must first register as a FastLane organization via NSF's FastLane system @https://www.fastlane.nsf.gov/a0/about/registration.htm.

The Principal Investigator (PI) should consider the Fellows Award an opportunity to establish a strong, sustainable independent research and education career in academe. PI's are expected to provide coherent career-development plans that describe career-enhancing research and education activities. Affiliated PI's must describe the institutional resources available to realize the proposed career-development plans. Independent PI's must identify the institutional resources necessary for the proposed activities and describe plans for affiliating with a host institution. Awards to independent PI's will commence only when the PI affiliates with an academic host institution in the United States, its territories or possessions, or the Commonwealth of Puerto Rico that agrees to provide resources necessary to support the proposed career-development plan.

Fellows Awards will include 12-month salary support of up to $60,000 plus applicable fringe benefits and a career-development allotment of up to $25,000 per year. The career-development allotment provides support for activities directly related to the proposed research and education activities in the Fellow's career-development plan, such as computing, travel to professional workshops, materials and supplies, publication charges, technical support, student support and other such needs. In addition, indirect costs will be included in the Fellows Awards at the host or home institution's standard rate. For Fellows Awards, host and home institutions must provide employee health insurance benefits for Fellows and families and other fringe benefits as appropriate.

B. Institutional Transformation Awards

Despite some progress toward realizing gender-neutral attitudes, policies, and practices in academe, women scientists and engineers continue to be significantly underrepresented in some science and engineering fields and proportionately under-advanced in science and engineering in general in the Nation's colleges and universities. There is increasing recognition that the lack of women's full participation at the senior level of academe is often a systemic consequence of academic culture. To catalyze change that will transform academic environments in ways that enhance the participation and advancement of women in science and engineering, NSF seeks proposals for institutional transformation.

Institutional Transformation Awards provide flexibility to proposing institutions to define and implement effective approaches to increase the participation and advancement of women faculty

members into the senior and leadership ranks of science and engineering, and to implement the necessary changes to institutionalize those approaches. By supporting the groundwork necessary to transform institutional practices systemically, the Institutional Transformation Awards seek to create positive, sustainable, and permanent change in academic climates.

These awards are designed to support several stages of institutional transformation, including data collection, analysis, and self-study necessary to identify the problems and define solutions; and implementation of initiatives that bring about sustainable organizational change contributing to the advancement of women in science and engineering. Proposals must include a plan for credible assessment and evaluation and a plan for sharing best practices during and at the end of the award period. The Principal Investigator (PI) will be the director of the ADVANCE project and will have overall responsibility for managing the award, directing the project, and interacting with NSF. The PI and the lead institution are expected to develop an administrative structure for the ADVANCE project that enables faculty members and others involved to interact effectively in furthering the project's goals.

Proposals for Institutional Transformation Awards should show an integrated approach to addressing the complex institutional factors affecting the full participation and advancement of women in academic science and engineering careers. The project may be directed at review and transformation of one or more departments or schools of science or engineering, or of an entire institution or system.

Supportable activities include, but are not limited to:

- Development of mechanisms to assist successful transition from tenure-track to tenured status that support the goal of ADVANCE
- Released time for faculty members to gather and analyze data, develop strategies, and convene workshops on gender-related issues, or to lead institutional self-study programs addressing, for example, space allocation, resource distribution, salaries, teaching assignments, and time in rank of men and women faculty members
- Establishment of chaired professorships that support the goal of ADVANCE
- Strategic planning, identification and dissemination of "best practices," and/or initiation of programs to realize gender equity in institutions, schools, or departments
- Training programs for department chairs that focus on improving diversity and academic environment for all faculty members
- Initiatives that implement sustainable organizational change contributing to the advancement of women in science and engineering, such as mentoring programs, workshops, research support; programs to address family/work issues, split/shared positions; establishment of and experimentation with impartiality procedures such as blind screening for advancement
- Establishment of a re-entry fellowship program in fields of science and engineering in which the institution has significant capabilities and which support the goal of ADVANCE

- Workshops for faculty development and mentoring, to disseminate information on existing "best practices" strategies that support the goal of ADVANCE

- Initiatives designed to provide guidance on career paths, including promotion and tenure requirements and expectations

C. Leadership Awards

Leadership Awards recognize and encourage outstanding contributions made toward increasing the participation and advancement of women in academic science and engineering careers. Awards will enable awardees to sustain, intensify, and initiate new activities designed to increase the participation and advancement of women scientists and engineers in academe.

Supportable activities include, but are not limited to:

- Development and implementation of new strategies and programs that help women to establish successful academic careers and advance into academic leadership positions

- Establishment of term chaired professorships that support the goal of ADVANCE

- Programs to encourage the adoption of best practices for advancing women in science or engineering

- Programs for mentoring women scientists through to senior professorships and senior academic administrative positions

- Maintenance of an active research program and/or laboratory while allowing an individual to devote more time to activities that target increased participation and advancement of women faculty members

- Research and education activities that allow an individual to transition back to a full-time research and education position following an administrative assignment that had a demonstrable impact on increased participation and advancement of women faculty

Proposals must include letters of support (a maximum of 3) attesting to the proposer's demonstrated and sustained achievements toward the increased participation and advancement of women in academic science and engineering careers. (See Special Information and Supplementary Documentation, below.)

III. ELIGIBILITY INFORMATION

Fellows Awards

PI's must hold a Ph.D. in a field of science or engineering supported by NSF, be a U.S. citizen, U.S. national or permanent resident of the United States, and at the time of award be establishing a full-time independent academic research and education career at an institution of higher learning in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico. In addition, eligible PI's must:

either
1) have received their first Ph.D. in science and engineering between January 1997 and December 1999 and on the proposal due date:

a) be in a postdoctoral or equivalent status and
b) have never held a tenure-track or tenured position at a U.S. institution of higher learning and
c) have not served as a PI on any NSF award with the exception of doctoral dissertation, postdoctoral fellowship or research-planning grants

or

2) on the proposal due date, be out of the full-time science and engineering workforce and have been out of this workforce for 2 to 8 years to attend to family responsibilities

or

3) either

a) have resigned from a full-time academic science or engineering appointment because of relocation of a spouse in the 24 months preceding the proposal due date and on the proposal due date, not hold a tenure-track or tenured position at an institution of higher learning

or

b) be planning to leave a full-time academic science or engineering appointment because of relocation of a spouse to occur in the 12 months following the proposal due date.

Fellows proposals may be submitted directly to NSF by individuals (hereafter referred to as independent PI's), or by institutions on behalf of individuals (hereafter referred to as affiliated PI's).

Institutional Transformation Awards

Proposals may be submitted by academic institutions of higher learning in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico, that award degrees in a field supported by NSF. Partnerships involving industry, government, professional societies and other not-for-profit organizations are encouraged but not required; however, in the case of partnerships, the lead partner organization must be an academic institution of higher learning and must accept overall management responsibility for the activity.

Leadership Awards

Proposals may be submitted by: academic institutions of higher learning that award degrees in a field supported by NSF; professional societies; or other not-for-profit organizations. Submitting institutions and organizations must be based in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico. Government organizations (other than academic institutions of higher learning) are not eligible to apply.

Limit on Number of Proposals: There is no limit on the number of proposals that an organization may submit. However, a Principal Investigator may submit only one Fellows proposal to the ADVANCE Program this year.

IV. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

A. Duration

Fellows Awards: up to 3 years
Institutional Transformation Awards: up to 5 years
Leadership Awards: up to 3 years

B. Amount

Fellows Awards: up to $60,000 in 12 month salary support plus applicable fringe benefits, plus an annual career-development allotment of up to $25,000, plus indirect costs
Institutional Transformation Awards: up to $750,000 per year
Leadership Awards: up to $200,000 total

For Institutional Transformation Awards and for Leadership Awards, all amounts are total costs, including indirect costs and applicable allowances.

C. Notification

Fellows Awards: Fellows PI's will be notified by January 31, 2002 if their proposal has been selected for award. At that time, independent PI's must seek to affiliate with institutional hosts in order to receive the award. Independent PI's must advise NSF of the institutional host affiliation by June 30, 2002.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent:

Fellows Awards: PI's intending to submit proposals for Fellows Awards should send a letter of intent via e-mail ONLY to advance@nsf.gov by May 16, 2001. The letter of intent should describe in 300 words or less the science or engineering field in which the PI will work and a brief summary of the proposed career-development plan. The letter of intent is not mandatory and is non-binding; letters of intent allow NSF to prepare for the review process.

Institutional Transformation Awards and Leadership Awards: PI's intending to submit proposals for Institutional Transformation or for Leadership Awards should send a letter of intent via e-mail ONLY to advance@nsf.gov by April 2, 2001. The letter of intent should describe, in 300 words or less, the proposed activity and the participating organizations and senior personnel. The letter of intent is not mandatory and is non-binding; letters of intent allow NSF to prepare for the review process.

Full Proposal:

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 Web Site at: http://www.nsf.gov/cgi-bin/getpub?nsf012. 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.

Step-by-step preparation and submission instructions for ADVANCE proposals are available on the ADVANCE Web page at http://www.nsf.gov/home/crssprgm/advance/. For ADVANCE Fellows proposals, the Principal Investigator may be the only investigator on the project. Individuals submitting Fellows proposals are encouraged to adhere to the timetable on the ADVANCE Web page. In addition, individuals submitting Fellows proposals as independent PI's must first register as an organization via NSF's FastLane system. Detailed instructions are available on the ADVANCE Web page and on the FastLane Web site.

Deviations and or additions to GPG guidelines:

1. Proposal Content

a. Cover Sheet, NSF Form 1207:

(1) Program Announcement/Solicitation Number:

Select NSF 01-69 - ADVANCE

(2) NSF Unit of Consideration:

(a) ADVANCE Institutional Transformation Award and ADVANCE Leadership Award (May 8, 2001):

Division: No PI selection required. Default will be automatically assigned.
Program: Select either ADVANCE - Institutional Transformation or ADVANCE - Leadership.

(b) ADVANCE Fellows Award (August 21-24, 2001):

Division: select the disciplinary division most closely related to the PI's research and education interests.
Program: Select the disciplinary program most closely related to the PI's research and education interests.

(3) Proposal Title:

The project title should be either ""ADVANCE Institutional Transformation Award," "ADVANCE Leadership Award," or ADVANCE Fellows Award."

(4) Eligibility Information:

Fellows PI's must certify that they meet the eligibility criteria described in the Eligibility Information section of this announcement by checking the appropriate eligibility box.

(5) FastLane Requirements:

The proposal cover sheet (NSF Form 1207, Pages 1 and 2) will be submitted electronically to NSF at the time of the electronic submission of the proposal. **No PI Cover Sheet signatures will be required for submission and no paper copy of the Cover Sheet should be sent to NSF.**

b. **Project Description Including Results from Prior NSF Support, (not to exceed 15 pages)**

Provide the following materials, as appropriate:

(1) Fellows Awards

(a) Background information

- Provide a brief narrative of the PI's career history and accomplishments to date

- Describe the likely impact of a Fellows award on the PI's career

(*b) Career-Development Plan*

Provide a well-argued and specific proposal for activities that will, over a 3-year period, enable the development of a strong, sustainable, independent academic career. The plan should include:

- the relation of the plan to the goal of ADVANCE;

- the objectives and significance of the proposed career-development strategy;

- the specific research and education activities to be undertaken;

- the relation of the plan to the PI's career goals and to the goals of the host institution, if one has been identified;

- for independent PI's, a description of the institutional resources necessary for the proposed activities and the PI's plans for affiliating with a host institution; or

- for affiliated PI's, a description of the institutional resources available to enable the proposed career-development plan. Documentation of the institution's commitment should be provided in the form of a statement from the PI's department head or equivalent confirming the institution's commitment to enabling the

PI's proposed career-development plan (See Special Information and Supplementary Documentation, below.)

(2) Institutional Transformation Awards:

- Provide a clear and concise plan to enable effective and sustainable institutional transformation designed to increase the participation and advancement of women in academic science and engineering careers. In the plan:

- Discuss the current status of women at the participating institution(s)/department(s) with supporting documents and data.

- Describe the specific barriers to women's advancement that the project is intended to address; supply relevant data. Discuss the vision, goals, and anticipated impact of the proposed project. Be specific about what is new and innovative.

- Describe a performance plan and methodology that relates the project goals to indicators and specific measurements for assessing progress toward goal achievement. This assessment should involve evaluators who are external to the project, who can render an objective evaluation, and whose expertise is relevant to the issues affecting the participation and advancement of women in science and engineering.

- Describe an administrative structure for the project that enables project partners, faculty members and others involved to interact effectively in furthering the project's goals.

(3) Leadership Awards

- Provide a brief discussion of the submitting organization, its mission and its relevance to the ADVANCE goal

- Describe the achievements of the PI and submitting organization in increasing the participation and advancement of women in academic science and engineering careers

- Describe in detail, activities upon which the Leadership Award funds will be spent

- Submit a plan of action, including a description of methodology that relates the project goals to indicators and specific measurements for assessing progress toward goal achievement

c. Budget and Budget Justification:

For Fellows proposals, the budget must include:

- A 12-month salary of up to $60,000 plus applicable fringe benefits in

accordance with host or home institution policy. Independent PI's should use 20% of the base salary as a placeholder for fringe benefits. This budget line item will be revised at the time of award to reflect the fringe benefits rate of the host institution. It is expected that fringe benefits at a minimum will include health coverage for the Fellow and eligible dependents.

- An allotment of up to $25,000 per year for use by the Fellow for expenses supporting the proposed research and education activities in the Fellow's career-development plan, such as computing, travel to professional workshops, materials and supplies, student support, publication charges and other such needs. A budget justification page should provide details of how these funds will be allocated.

- Independent PI's must include an indirect cost "placeholder" of $40,000 per year. This budget line item will be revised at the time of award to reflect the negotiated indirect cost rate of the host institution. Affiliated PI's should enter indirect costs corresponding to the home institution's negotiated rate.

d. Special Information and Supplementary Documentation: Original documents of the following kinds, if applicable.

Fellows Awards: Where appropriate, letters of commitment to proposed collaborations should be entered into the supplementary documents section as described in the step-by-step instructions on the ADVANCE Web page (http://www.nsf.gov/home/crssprgm/advance/). For affiliated PI's, a statement describing the institution's commitment to the PI's proposed career-development plan should be entered by the PI's department head or equivalent into the supplementary documents section as described in the step-by-step application and submission instructions on the ADVANCE web page.

Institutional Transformation and Leadership Awards: Where appropriate, letters of commitment to proposed collaborations, letters of support and letters to document institutional commitment to the project should be scanned into the supplementary documents module.

Proposers are reminded to identify the program solicitation number (NSF 01-69) 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 is not required for a Fellows Award or for a Leadership Award.

Cost sharing of 20% of the requested total amount of NSF funds is required for Institutional Transformation Award proposals submitted in response to this program solicitation.

The proposed cost sharing must be shown on Line M on the proposal budget. 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 as 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 award. All cost-sharing amounts are subject to audit. Failure to provide the level of cost-sharing reflected in the approved award budget may result in termination of the NSF award, disallowance of award costs and/or refund of award funds to NSF.

C. Deadline/Target Dates

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

LETTER OF INTENT DUE DATE(S) (*optional*):

April 2, 2001 **Institutional Transformation Proposals, Leadership Proposals**
May 16, 2001 **Fellows Proposals**

FULL PROPOSALS *by 5:00 PM local time*:

May 8, 2001 **Institutional Transformation Proposals**
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Social, Behavioral and Economic Sciences

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: http://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call 1-800-673-6188.

Cover Sheets. The proposal cover sheet (NSF Form 1207, Pages 1 and 2) will be submitted electronically to NSF at the time of the electronic submission of the proposal. **No PI Cover Sheet signatures will be required for submission and no paper copy of the Cover Sheet should be sent to NSF.**

Your proposal status, including the date NSF received the proposal, the NSF program name, and the assigned Program Officer, is available through the PI/co-PI functions in FastLane at http://www.fastlane.nsf.gov. All communications about your proposal, including the program assignment, should be directed to the assigned program director, with reference to the proposal number.

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.

Additional Review Criteria

In addition to the standard NSF merit-review criteria, reviewers of all ADVANCE proposals will consider the following question:

> **Will the proposed activity contribute to realization of the goal of the ADVANCE Program?**

Reviewers will also consider the following additional review criteria as appropriate for the proposal in hand:

Fellows Awards:

- How likely are the PI's specific plans to lead to academic career advancement of one or more women in science and engineering?
- For affiliated PI's, what is the quality of the commitment of the host institution to the success of the proposed career-development plan?
- For independent PI's, has the PI identified the institutional resources necessary to enable the proposed career-development plan, and is the plan for identifying a host institution sound?

Institutional Transformation Awards:

- Does the proposed activity offer an innovative and sustainable approach to achieving the goals of the ADVANCE program?
- Are the PI and other personnel involved in the project likely to be effective in achieving the goals of the proposed project?
- How likely is the proposed project to make significant improvements in the institutional climate for women?
- What specific institutional resources are committed to the effort?
- How appropriate is the plan for assessing progress toward the objectives of the proposal?
- For proposals that include establishing a fellowship program: What are the institution's capabilities in the fields of science or engineering in which the program is proposed?

Leadership Awards:

- Does the proposed activity offer an innovative and sustainable approach to achieving the goals of the ADVANCE program?
- How likely is the proposed project to improve the advancement of women?
- How strong is the proposer's commitment to and organizational support for the proposed project, and to sustaining the effort after the NSF award ends?
- How appropriate is the plan for assessing progress toward the objectives of the proposal?

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 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.

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 Mail 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.

In most cases, proposers will be contacted by the Program Officer after his or her recommendation to award or decline funding has been approved by the Division Director. This informal notification is not a guarantee of an eventual award.

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 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, 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.

Special Award Conditions

Fellows PI's will be notified by January 31, 2002 if their proposal has been selected for award. At that time, independent PI's must seek to affiliate with a host institution in order to receive the award. Independent PI's must advise NSF of the institutional host affiliation by June 30, 2002. A Fellows award will not be finalized until a host institution provides to NSF a revised cover sheet and budget for the proposed activity signed by an authorized organizational representative, and a statement from the Fellow's new Department Head or equivalent endorsing the Fellow's proposed career-development plan, and committing the necessary institutional resources to it. Fellows awards must be finalized by September 30, 2002.

A Fellow who secures a tenure-track appointment that will begin during the period of the Fellows award must immediately notify the cognizant NSF Program Officer. NSF will request a revised budget for the grant that provides salary support consistent with the policies stated in the GPG, with the remaining funds allocated to support the Fellow's research and education activities.

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.

For **Fellows Awards**, annual reports must be endorsed by the PI's department head or equivalent, reaffirming the institution's continued commitment to enabling the PI's career-development plan.

For **Institutional Transformation Awards**, awardees will be required to submit annual reports on progress and plans that will be used as a basis for performance review to determine the level of continued funding. To support this review, and management of the institutional transformation activities undertaken, awardees will be required to develop a set of management goals and performance indicators for submission annually to NSF. These reporting requirements will be included in the cooperative agreement that is binding between the awardee institution and the NSF.
For **Leadership Awards,** standard NSF reporting requirements apply.

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 regarding ADVANCE should be made to:

- Alice Hogan, ADVANCE Program Director, e-mail: ahogan@nsf.gov.
- ADVANCE Directorate Contacts, http://www.nsf.gov/home/crssprgm/advance/.

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 703-292-8142, 800-673-6188, e-mail: fastlane@nsf.gov.

Specific questions about Fellows proposal development should be directed to the directorate ADVANCE representatives listed under Contacts on the ADVANCE Web page. Questions about Institutional Transformation and Leadership proposal development should be directed to the ADVANCE Program Director.

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 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 (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/solicitation for further information.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090, FIRS at 1-800-877-8339.

The National Science Foundation is committed to making all of the information we publish easy to understand. If you have a suggestion about how to improve the clarity of this document or other NSF-published materials, please contact us at plainlanguage@nsf.gov.

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.

Pursuant to 5 CFR 1320.5(b), 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, Information Dissemination Branch, Division of Administrative Services, National Science Foundation, Arlington, VA 22230, or to Office of Information and Regulatory Affairs of OMB, Attention: Desk Officer for National Science Foundation (3145-0058), 725 17th Street, N.W. Room 10235, Washington, D.C. 20503.

OMB control number: 3145-0058.