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

Program Solicitation
NSF 05-584
***Replaces Document* NSF 02-121**

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

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

July 15, 2005

Leadership Awards

July 22, 2005

Institutional Transformation Awards

January 27, 2006

Partnerships for Adaptation, Implementation, and Dissemination

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

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

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 approximately 25% of the science and engineering workforce at large, and less than 21% of science and engineering faculty in 4-year colleges and universities. Women from minority groups underrepresented in science and engineering constitute only about 2% 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 especially encouraged to

apply. Proposals that address the participation and advancement of women from underrepresented minority groups are encouraged.

In 2005-2006, this program will support the following types of ADVANCE Projects:

Institutional Transformation Awards

Institutional Transformation Awards support academic institutional transformation to promote the increased participation and advancement of women scientists and engineers in academe. These awards support innovative and comprehensive programs for institution-wide change.

Deadline July 22, 2005

Leadership Awards

Leadership Awards support the efforts of individuals, small groups, or organizations in developing national and/or discipline-specific leadership in enabling the full participation and advancement of women in academic science and engineering careers.

Deadline July 15, 2005

Partnerships for Adaptation, Implementation, and Dissemination Awards

Partnerships for Adaptation, Implementation, and Dissemination Awards support the analysis, adaptation, dissemination and use of existing innovative materials and practices that have been demonstrated to be effective in increasing representation and participation of women in academic science and engineering careers.

Deadline January 27, 2006

Cognizant Program Officer(s):

- Alice C. Hogan, Program Director for Advance, Directorate for Social, Behavioral & Economic Sciences, 905 N, telephone: (703) 292-7238, fax: (703) 292-9083, email: ahogan@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

Eligibility Information

- **Organization Limit:**

Institutional Transformation Awards

Institutional Transformation 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. Government organizations (other than academic institutions of higher learning) are not eligible to apply, but may participate in partnerships when the lead partner organization is an academic institution of higher learning with overall management responsibility for the activity. Partner organizations and institutions must be based in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico.

Organizations currently holding NSF ADVANCE Institutional Transformation awards are not eligible to apply for an institutional transformation award.

Leadership Awards, and Partnerships for Adaptation, Implementation and Dissemination Awards

Leadership, and Partnerships for Adaptation, Implementation and Dissemination 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, but may participate in partnerships when the lead partner organization is an academic institution of higher learning with overall management responsibility for the activity. Partner institutions and organizations must be based in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico.

- **PI Eligibility Limit:** None Specified.
- **Limit on Number of Proposals:** Institutional Transformation proposals: Organizations may submit only one Institutional Transformation proposal. Leadership, or Partnerships for Adaptation, Implementation and Dissemination proposals: There is no limit on the number of Leadership or Partnerships for Adaptation, Implementation and Dissemination proposals that an organization may submit.

Award Information

- **Anticipated Type of Award:** Standard or Continuing Grant or Cooperative Agreement
- **Estimated Number of Awards:** 15 to 20
- **Anticipated Funding Amount:** $10,000,000 - NSF anticipates having $6M in FY2005 and $4M in FY2006 for new awards under this solicitation, pending the availability of funds. Please see the full text of this solicitation for further information.

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 by NSF.
- **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):
  July 15, 2005
  Leadership Awards
  July 22, 2005
  Institutional Transformation Awards
  January 27, 2006
  Partnerships for Adaptation, Implementation, and Dissemination

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:** Additional reporting requirements apply. Please see the full text of this solicitation for further information.

TABLE OF CONTENTS

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 broadening participation 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 approximately 25% of the science and engineering workforce at large. Women from minority groups underrepresented in science and engineering constitute only about 2% of the science and engineering workforce, and only 2% of science and engineering faculty in 4-year colleges and universities. Academic institutions of higher learning play a pivotal role in preparing the science and engineering workforce. Faculty members and academic and administrative leadership at these institutions serve as intellectual, professional, personal and organizational role models that shape the expectations of many prospective scientists and engineers.

Currently women make up less than 21% of science and engineering faculty in 4-year colleges and universities, and hold an even smaller percentage of high-ranked positions. Persistent under-representation 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. 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 Institutional Transformation Awards, Leadership Awards, and Partnerships for Adaptation, Implementation and Dissemination 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. Through these 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 program are sought from men and women. Proposals may include international activities that directly support the goals of ADVANCE.

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 underrepresented in senior positions 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 changes necessary to institutionalize those approaches through changes to institutional policies and practices. 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.

Projects may be directed at review and transformation of multiple departments or schools of science or engineering, or of an entire institution or group of institutions. Activities that enhance the participation of women students in science and engineering should not be the primary or major focus of proposals.

Institutional Transformation proposals must clearly state the conceptual framework for the proposed project, identify relevant research findings, and build on existing research and practice. NSF anticipates that publicly available findings from earlier ADVANCE Program awards will be incorporated as appropriate into proposals for institutional transformation, and that research perspectives relevant to the issues ADVANCE seeks to address will be reflected in the design of proposed projects. Proposals should demonstrate the connection between the conceptual framework, the issues identified through analysis of institutional data, and the proposed plan.

It is expected that each project will complement its efforts with formative evaluation. This evaluation should be the basis for strengthening implementation over the course of the project and for annual reporting to NSF. Proposals should provide suggestions of objectives, benchmarks, and indicators of progress that will inform reviewers of the proposers' understanding of essential factors for judging accountability, both quantitative (indicators of women's representation at various academic ranks, in recruitment and promotion pools, for example) and qualitative (the process of change in organizational culture, experiences of academic climate).

Within institutional transformation proposals, attention to the issues associated with transitions between career stages is encouraged. Movement from post-doctoral positions to tenure track faculty positions, transitions associated with re-entry to full time faculty positions following leave for dependent care, or challenges of moving from one academic institution to another as part of a dual-career couple, all pose risks for women scientists and engineers to fall behind or to decide to leave science because flexible institutional options are not available that meet their needs during these transitional periods.

Activities that focus on increasing the participation and advancement of women from underrepresented groups are encouraged. As indicated by the extremely low number of women of color in academic science and engineering careers, different strategies may be required to address their low representation in science and engineering.

Institutional Transformation proposals must include a management plan that details how project activities will be organized. This should describe leadership, participants and partners. A site's capacity to organize its efforts coherently and strategically, and to document progress, will be a key to its success. Its director and senior management must be able to develop and lead a team to fulfill a clearly articulated shared vision. The director is responsible for the management, staffing, and resource allocation of the program; for administering the award in accordance with NSF policies and the terms of the grant or cooperative agreement; for serving as the liaison between the site and a national network of ADVANCE sites; and for arranging for external evaluation of the project’s activities. Successful proposals will provide clear evidence of institutional readiness to provide necessary administrative functions in support of the project, for example, appropriate office space and clear access to institutional leadership. Institutions are encouraged to provide evidence that the challenges of administering a project that spans various administrative units have been considered. Attention should be paid to the sustainability of the efforts past the term of the award.

The institutional transformation leadership team must include appropriate social science expertise. This expertise will contribute to analysis and innovation of institutional policies and practices that are informed by current scholarly knowledge of gender issues and of organizational effectiveness.

The program encourages dissemination of knowledge gained about institutional transformation to organizations and institutions that can implement reforms based on what has been learned. Since the goal of the program is to contribute to a national knowledge base, it is important to show that the investigator is aware of appropriate channels -- specific peer-reviewed journals, publications, web sites, professional association conferences -- and is committed (including allocating resources) to make sure that the investment in the project leads to this contribution and that peers in the community will benefit. The ADVANCE Program welcomes creative uses of cyberinfrastructure for enabling and enhancing Institutional Transformation projects.

Awards are for up to five years. Additional reporting requirements apply for Institutional Transformation awards.

Leadership Awards

Leadership awards provide support for national and/or discipline-specific leadership in meeting the challenges of increasing the participation and advancement of women in academic science and engineering careers. These awards are available to support efforts of individuals, small groups, and organizations such as professional societies to advance the diversity of the academic science and engineering workforce. 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.

In general, Leadership awards will support work that has systemic impact. Leadership in meeting the challenges of increasing the number of women in science and engineering takes many forms, including for example, development and implementation of new strategies and programs that enable women with advanced degrees or equivalent training to establish or re-establish successful academic careers and advance into positions of academic leadership; programs to encourage the adoption of best practices for advancing faculty development among women in science or engineering, or programs for career advising to clarify pathways for reaching senior professorships and senior academic administrative and leadership positions. Innovative approaches that address particular career stages are also welcomed, for example advancing from post-doctoral appointments to tenure track positions, from associate to full professor, or from senior faculty to academic leadership positions.

Activities that enhance the participation of women students in science and engineering may be included in proposals, but should not be the primary focus of proposals. The primary focus of activities under this category should be on faculty and leadership development.

Proposals must include letters of support (at least 1 but no more than 3) attesting to the proposer's leadership in contributing to increasing participation and advancement of women in academic science and engineering careers.

The ADVANCE Program welcomes creative uses of cyberinfrastructure for enabling and enhancing Leadership projects.

Partnerships for Adaptation, Implementation and Dissemination (PAID)

Awards for adaptation, implementation and dissemination provide support to broaden the impact of institutional transformation efforts, and to expand the network of institutions and individuals that are equipped with knowledge about the institutional factors underlying the underrepresentation of women in academic science and engineering. These awards seek innovative approaches to adapting and implementing exemplary programs, policies, and practices for increasing the participation and advancement of women in academic science and engineering careers, particularly at the senior faculty and leadership levels. PAID proposals are expected to provide evidence that the exemplary materials and practices have been effective on other campuses, to explain why they are expected to be effective in this new situation, and to provide a plan to evaluate them, including any necessary adaptations, in this new environment.

For institutions not currently supported through ADVANCE Institutional Transformation awards, PAID awards could provide support for ‘mini’ transformation efforts, for example at a departmental level, or a college level. In addition, PAID awards may support workshop and planning activities that emphasize, for example, approaches to data collection; designing, executing and analyzing climate surveys; or programs that encourage development of a cohort of faculty to be leaders of institutional change efforts at other institutions. Through the subsequent synthesis of evaluation results, NSF seeks to continue building knowledge about effective institutional practices and policies (what works under what circumstances), thereby strengthening the cycle of innovation. Institutions under served in the current ADVANCE portfolio, including undergraduate institutions, minority-serving institutions, and women’s colleges are encouraged to apply in order that a wide variety of experience and practice can be included in clarifying the persistent institutional factors that affect the career advancement of women in academic science and engineering careers.

PAID proposals should address the relevance of the expected outcomes and impacts of the activities to the future goals of the organization and to the goals of the ADVANCE program. Activities of various scales are welcome; budgets are expected to be appropriately scaled to the size and complexity of the institution and/or proposal

For current ADVANCE Institutional Transformation awardees, PAID awards provide an opportunity to streamline and focus

continued efforts on programs that work and areas that are in serious need of continued effort, based on evidence generated in the first grant period, while pursuing creative means of disseminating learning, methods, and practices to a wider community beyond the awardee institution.

Proposals that are designed as partnerships between more than one institution are encouraged. Such partnerships may be between an existing ADVANCE awardee and a new partner, or between two or more institutions that have not previously received an ADVANCE award. Partnership proposals may be submitted as either two collaborative proposals or as a subaward to a partnering institution. Partnership proposals should offer a clear rationale for the partnership as well as the value-added to each partnering institution.

All projects supported by PAID seek to speed the diffusion of innovative approaches to transformation of institutional climate, practices, and policies that increase the participation and advancement of women science and engineering faculty. The ADVANCE Program welcomes creative uses of cyberinfrastructure for enabling and enhancing PAID projects.

References:

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"A National Analysis of Diversity in Science and Engineering Faculties at Research Universities," Dr. Donna J. Nelson, Norman, OK. January, 2005. http://cheminfo.chem.ou.edu/~djn/diversity/briefings/Diversity%20Report%20Final.pdf

III. ELIGIBILITY INFORMATION

Institutional Transformation Awards

Institutional Transformation 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. Government organizations (other than academic institutions of higher learning) are not eligible to apply, but may participate in partnerships when the lead partner organization is an academic institution of higher learning with overall management responsibility for the activity. Partner organizations and institutions must be based in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico.

Limit on number of proposals: Organizations may submit only one Institutional Transformation proposal.

Organizations currently holding NSF ADVANCE Institutional Transformation awards are not eligible to apply for an institutional transformation award.

Leadership Awards, and Partnerships for Adaptation, Implementation and Dissemination Awards

Leadership, and Partnerships for Adaptation, Implementation and Dissemination 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, but may participate in partnerships when the lead partner organization is an academic institution of higher learning with overall management responsibility for the activity. Partner institutions and organizations must be based in the U. S., its territories or possessions, or the Commonwealth of Puerto Rico.

Limit on Number of Proposals: There is no limit on the number of Leadership or Partnerships for Adaptation, Implementation and Dissemination proposals that an organization may submit.

IV. AWARD INFORMATION

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

Anticipated Funding Amount: $10,000,000 - NSF anticipates having $6M in FY2005 and $4M in FY2006 for new awards under this solicitation, pending the availability of funds.

Institutional Transformation Awards: Annual budgets may not exceed $750,000, with duration of up to five years. Awards will be made as cooperative agreements with start dates between October 2005 and January 2006.

Leadership Awards: Total budgets may not exceed $300,000, with duration of up to three years. Awards must start between October 2005 and January 2006.

Partnerships for Adaptation, Implementation and Dissemination Awards: Total budgets may not exceed $500,000, with duration of up to three years. Awards must start between September 2006 and January 2007.

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.

Cover Sheet: The title of the proposal should include the appropriate ADVANCE project name: “ADVANCE Institutional Transformation Award;” “ADVANCE Leadership Award;” or ADVANCE Partnerships for Adaptation, Implementation, and

Dissemination Award."

Project Summary: Provide an abstract of up to 250 words describing the proposed project.

Project Description: Provide the following materials as appropriate, (not to exceed 15 pages including Results from Prior NSF Support):

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 documentation and data, including data on minority women from groups underrepresented in science and engineering.

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 synergy among project components.

Describe the conceptual framework for the proposed project, drawing on relevant research findings. Include reference as appropriate to publicly available findings from earlier ADVANCE Program awards. Clarify the connection between the conceptual framework, the issues identified through analysis of institutional data, and the proposed plan.

Describe specific strategies for expanding the participation of women from minority groups underrepresented in science and engineering.

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 both formative evaluation as well as 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 formative evaluation strategies. Include objectives, benchmarks, and indicators of progress that will be used for assessing project effectiveness. Describe how feedback from formative evaluation will be used to strengthen the project over the course of the award.

Define a management plan that details how project activities will be organized. The plan should describe leadership, participants and partners. Provide evidence of institutional readiness to provide necessary administrative functions in support of the project, for example, appropriate office space and clear access to institutional leadership, as well as evidence that the challenges of administering a project that spans various administrative units have been considered. Describe plans for sustainability of the efforts past the term of the award. Include discussion of provision for data collection to support documentation and reporting of project progress and indicators. Identify project participants, their expertise, roles and level of effort on the project. Indicate how current scholarly knowledge of gender issues and of organizational effectiveness is incorporated through the project participants.

Describe factors that support the sustainability of project results, including leadership involvement and commitment, participation of senior faculty and academic administrators, and institutional readiness to participate in development of appropriate policies and practices and long-term evaluation and intervention.

Detail plans for sharing best practices during and at the end of the award period.

Leadership Awards

If not an academic institution, provide a brief discussion of the submitting organization, its mission and its relevance to the ADVANCE goal.

Discuss the vision, goals, and anticipated impact of the proposed project. Be specific about what is new and innovative. Describe the specific barriers to women's full participation in science and engineering that the proposed project addresses; reference relevant literature and existing effective practice.

Describe in detail activities upon which the Leadership Award funds will be spent. Describe extent and type of impact anticipated from proposed activities. Budget explanation notes should clarify how the funds will be allocated and the time commitment of the PI with respect to the proposed activities.

Describe the qualifications and/or achievements of the PI and submitting organization in increasing the participation and advancement of women in academic science and engineering careers.

Describe strategies for expanding the participation of women from minority groups underrepresented in science and engineering.

Submit a plan of action, including an assessment and evaluation component that incorporates indicators and other specific measurements for ascertaining progress in achieving the goals of the proposed activities.

Describe how results will be disseminated to other potential cohorts or partners, and in the peer-reviewed literature.

Partnerships for Adaptation, Implementation and Dissemination Awards

Describe why the new approaches are needed for the proposer's institution or organization, including relevant data on the status of women faculty in science and engineering at the proposer's institution.

Describe the materials to be adapted and implemented in the new setting. Include all necessary references and citations, especially those demonstrating the efficacy of the proposed approach in the past and their applicability to the new institution (s).

Describe benchmarks and methods for evaluating the success of these approaches following the adaptation and implementation in the new setting.

Describe timelines for the evaluation process and how activities may be changed as a result of findings from these exercises

Provide evidence of institutional support for the proposed adaptation and implementation effort.

Provide a performance plan that outlines the management structure for the project and provides a timeline for project implementation..

Describe how results will be disseminated to other potential cohorts or partners, and in the peer-reviewed literature.

Describe details of any proposed partnerships

For current ADVANCE awardees that propose to streamline and focus continued efforts on programs that work and on areas that are in serious need of continued effort,

Present evidence generated in the first grant period of effectiveness of programs and of need for continued effort.

Describe indicators of institutional support for sustainability of project results.

Describe means of disseminating new knowledge, methods, and practices to a wider community beyond the awardee institution.

Proposers are reminded to identify the program announcement/solicitation number (05-584) 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 by NSF 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):

July 15, 2005
Leadership Awards

July 22, 2005
Institutional Transformation Awards

January 27, 2006
Partnerships for Adaptation, Implementation, and Dissemination

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

How well 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:

Institutional Transformation Awards:

- Is there evidence of institutional readiness to support necessary data collection and faculty participation in the proposed effort? What other evidence is there of institutional support?
- Is it clear how success will be determined?

Leadership Awards:

- Is there an adequate plan for dissemination of best practices?

Partnerships for Adaptation, Implementation and Dissemination Awards:

- Is there appropriate expertise represented in the proposal to support ongoing learning and analyses about the effectiveness of the policies and practices at different institutional types and sizes?

If previously funded through ADVANCE only:

- Is there clear evidence of progress toward sustainability of project results?

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 Review followed by 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.

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 all other ADVANCE 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. 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:

- Alice C. Hogan, Program Director for Advance, Directorate for Social, Behavioral & Economic Sciences, 905 N, telephone: (703) 292-7238, fax: (703) 292-9083, email: ahogan@nsf.gov

For questions related to the use of FastLane, contact:

- Gail D. Williams, Staff Associate, Directorate for Social, Behavioral & Economic Sciences, 905 N, telephone: (703) 292-7469, fax: (703) 292-9083, email: gwilliam@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.