Developing Global Scientists and Engineers (International Research Experiences for Students (IRES) and Doctoral Dissertation Enhancement Projects (DDEP))

PROGRAM SOLICITATION
04-036

REPLACES DOCUMENT(S):
 NSF 03-559

National Science Foundation

Office of International Science and Engineering

Full Proposal Target Date(s):

September 15, 2004

September 15, Annually Thereafter

> International Research Experiences for Students (IRES) proposals for activities beginning at least six months after the target date.

February 15, 2005

February 15, Annually Thereafter

> International Research Experiences for Students (IRES) proposals for activities beginning at least six months after the target date.

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

Proposals Accepted Anytime

> No deadlines apply for Doctoral Dissertation Enhancement Projects (DDEP). Such proposals may be submitted at any time

REVISION NOTES

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), NSF 09-1, was issued on October 1, 2008 and is effective for proposals submitted on or after January 5, 2009. Please be advised that the guidelines contained in NSF 09-1 apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 5[th,] 2009, must also follow the guidelines contained in NSF 09-1.

One of the most significant changes to the PAPPG is implementation of the mentoring provisions of the America COMPETES Act. Each proposal that requests funding to support postdoctoral researchers must include, as a separate section within the 15-page project description, a description of the mentoring activities that will be provided for such individuals. Proposals that do not include a separate section on mentoring activities within the Project Description will be returned without review (seethe PAPP Guide Part I: *Grant Proposal Guide* Chapter II.C.2.d for further information).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

> Developing Global Scientists and Engineers (International Research Experiences for Students (IRES) and Doctoral Dissertation Enhancement Projects (DDEP))

Synopsis of Program:

> The United States needs to educate a globally-engaged science and engineering workforce capable of performing in an international research environment in order to remain at the forefront of world science and technology. To

support this aim, the Developing Global Scientists and Engineers program provides highest quality international research experiences for U.S. students. Whereas the International Research Experiences for Students (IRES) component of the program supports groups of U.S. undergraduate or graduate students conducting research abroad in collaboration with foreign investigators, the Doctoral Dissertation Enhancement Projects (DDEP) component supports the dissertation research abroad of one doctoral student in collaboration with a foreign investigator.

In addition to the activities described in this solicitation, the Office of International Science and Engineering (OISE) supports other targeted international research and education experiences for early-career scientists and engineers via the Research Experience for Undergraduates program, the East Asia and Pacific Summer Institutes for U.S. Graduate Students, the Pan-American Advanced Studies Institutes (for advanced graduate students and post-doctoral fellows), and the International Research Fellowship Program (for post-doctoral fellows or new faculty). More information is provided below in Section IX. Other Programs of Interest.

Cognizant Program Officer(s):

- , Fastlane Helpdesk, email: fastlane@nsf.gov, or OISE Fastlane contact, email: oisefl@nsf.gov,

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

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

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 24 annually

Anticipated Funding Amount: $2,100,000 annually, pending availability of funds

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- Proposals must be submitted by a U.S. institution, organization, or professional society.

PI Limit:

Proposals must be submitted by a U.S. institution, organization, or professional society on behalf of the Principal Investigator(s).

Doctoral Dissertation Enhancement Project (DDEP) proposals must be submitted by the faculty advisor of the graduate student whose dissertation project is the subject of the proposal.

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI: 1

Principal Investigator (PI) should submit only one International Research Experiences for Students (IRES) proposal for any given submission target date.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable

- **Preliminary Proposal Submission:** Not Applicable

- **Full Proposals:**
  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. 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.
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/pubs/policydocs/grantsgovguide607.pdf)

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required under this solicitation.

- **Indirect Cost (F&A) Limitations:**

  No indirect costs are allowable on Doctoral Dissertation Enhancement Projects (DDEP) proposals.

  On International Research Experiences for Students (IRES) proposals, indirect costs are allowable, consistent with NSF's general policy. Student stipends, travel, and subsistence costs for this training experience are typically listed as participant support costs and as such are not subject to indirect costs. Off-campus indirect rates are applicable to activities at foreign sites.

- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Target Date(s):**

  September 15, 2004

  September 15, Annually Thereafter

  > International Research Experiences for Students (IRES) proposals for activities beginning at least six months after the target date.

  February 15, 2005

  February 15, Annually Thereafter

  > International Research Experiences for Students (IRES) proposals for activities beginning at least six months after the target date.

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

  Proposals Accepted Anytime

  > No deadlines apply for Doctoral Dissertation Enhancement Projects (DDEP). Such proposals may be submitted at any time

Proposal Review Information Criteria

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

X. Appendix

I. INTRODUCTION

The United States needs to educate a globally-engaged science and engineering workforce capable of performing in an international research environment in order to remain at the forefront of world science and technology. To support this aim, the Developing Global Scientists and Engineers program provides highest quality international research experiences for U.S. students. Whereas the International Research Experiences for Students component of the program supports groups of U.S. undergraduate or graduate students conducting research abroad in collaboration with foreign investigators, the Doctoral Dissertation Enhancement Projects component supports the dissertation research abroad of one doctoral student in collaboration with a foreign investigator.

NSF does not normally provide support for technical assistance, pilot plant efforts, research requiring security classification, development of products for commercial marketing or market research for a particular project or invention. Similarly, research with disease-related goals, including work on the etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals, is normally not supported.

For a summary of all OISE supported activities, including other programs that contribute to development of a cadre of global scientists and engineers, check the OISE homepage.

II. PROGRAM DESCRIPTION

OISE supports international research and education experience for U.S. scientists early in their careers. This solicitation describes opportunities for two such activities:

A. International Research Experiences for Students (IRES)

IRES aims to provide high quality educational experiences for small groups of U.S. undergraduate and/or graduate students through active research participation in collaboration with foreign researchers at an international site. IRES will help prepare a globally-engaged science and technology workforce by providing students with international collaborative research training and a personal network on which to build future collaborations. IRES proposals must have a unifying research theme that enables a cohort experience for participating students.

IRES proposals should give as many students as feasible, given budgetary and project constraints, the opportunity for a meaningful research experience abroad. Projects which include fewer than four U.S. students per year, or whose annual duration of research conducted abroad is less than four weeks, should be justified by exceptional conditions or circumstances.

Proposals are accepted from academic research institutions, professional societies, or consortia on behalf of a small group of students, and proposals involving more than one institution are encouraged.

Proposals should describe the research focus of the proposed activity; the intellectual collaboration with the foreign team; the plan for enhancement of students' professional network and details on mentoring, professional development, and training that students will receive; the recruitment and broadening participation plan, selection process, and pre-departure preparation that will take place; the plans for leveraging U.S. or foreign resources to strengthen the program; the plan to assess the impact of the IRES program, to encourage participants stay engaged in science and engineering, and to disseminate the research results; and the arrangements for housing, health insurance, and other logistics.

Organizers are encouraged to consult with the cognizant OISE program officer http://www.nsf.gov/od/oise/country-list.jsp before submitting their proposal.

Typically, the IRES program does not support summer schools or coursework and does not pay for foreign students to travel to the U.S.

A good source of general information for PI's planning to take students abroad, which proposers may find valuable, is an OISE workshop report entitled "Looking Beyond the Borders: A Project Director's Handbook of Best Practices for International Research Experiences for Undergraduates", available at http://www.nsf.gov/pubs/2006/nsf06204/index.html.

B. Doctoral Dissertation Enhancement Projects (DDEP)

OISE supports dissertation research conducted by graduate students at a foreign site. Students are expected to work in close cooperation with a host country institution and investigator. The applicant is responsible for making all necessary arrangements with the host country institution and scientist. The doctoral faculty advisor, on behalf of the student, submits the dissertation enhancement proposal. Eligible students should be U.S. citizens or permanent residents enrolled in Ph.D. programs at U.S. institutions who have advanced to candidacy before the submission date. Students from developing countries who are enrolled in Ph.D. programs at U.S. institutions may also apply, but preference is given to qualified U.S. applicants. Before applying, applicants should investigate the dissertation enhancement programs that NSF supports in several disciplines; many of these programs allow for greater budget flexibility when there is an international dimension to the project. Proposals cannot be submitted for simultaneous review to both a research directorate and OISE for the same dissertation project.

C. Additional Considerations

1. Regional considerations: For a summary of OISE program activities supported in geographic regions of the world, consult the OISE regional web page. Select the appropriate region for details on cooperative activities with a specific country or

international organization. The OISE geographic regions are:

- Africa, Near East, and South Asia (ANESA)
- The Americas (AMERICAS)
- Europe and Eurasia (EE)
- East Asia and the Pacific (EAP)

2. Responsibilities of principal investigators: PIs are responsible for obtaining any required visas for foreign travel and, through the U.S. host research institution, for providing documentation in support of U.S. visas for foreign counterpart investigators. When applying for visas to enter countries with which NSF has formal bilateral agreements, participants should indicate specifically that the visit would be under a cooperative program between NSF and that foreign country or international organization. PIs are also responsible for obtaining research permits and import/export documents, where necessary. PIs should consult NSF's web page "Information for U.S. Travelers"; among other things, this page includes information regarding the collection of genetic resources outside the U.S.

3. A National Science Board Report (NSB 00-217) recommended "NSF should take a more active role in facilitating cooperation in international S & E and higher education with developing countries." Because NSF funds primarily cover the U.S. side of international collaborative activities, PIs are encouraged to work with individuals and/or institutions that have garnered substantial long-term support for research activities, and/or to assist their foreign collaborators in garnering such support.

III. AWARD INFORMATION

Anticipated annual funding for FY 2008 and subsequent years is estimated as:

- International Research Experiences for Students (IRES): $2,000,000 to fund up to 14 awards ;
- Doctoral Dissertation Enhancement Projects (DDEP): $100,000 to fund up to 10 awards.

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

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- Proposals must be submitted by a U.S. institution, organization, or professional society.

PI Limit:

Proposals must be submitted by a U.S. institution, organization, or professional society on behalf of the Principal Investigator(s).

Doctoral Dissertation Enhancement Project (DDEP) proposals must be submitted by the faculty advisor of the graduate student whose dissertation project is the subject of the proposal.

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI: 1

Principal Investigator (PI) should submit only one International Research Experiences for Students (IRES) proposal for any given submission target date.

Additional Eligibility Info:

Proposals must be submitted by a U.S. institution, organization, or professional society on behalf of the Principal Investigators(s). Doctoral Dissertation Enhancement Project (DDEP) proposals must be submitted by the faculty advisor of the graduate student whose dissertation project is the subject of the proposal.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program 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. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (http://www.nsf.gov/pubs/policydocs/grantsgovguide607.pdf). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.3 of the Grant Proposal Guide provides additional information on collaborative proposals.

In addition to the GPG or the NSF Grants.gov Application Guide, OISE proposals must be prepared in accordance with the instructions in this Program Solicitation. **Proposals that do not contain the required information as described below will be considered incomplete and may be returned without review.**

1. **Proposal Cover Sheet**. When using Fastlane, from the selection list, choose NSF solicitation number 04-036. For Grants.gov users, the program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page. Enter the proposal title beginning with "International:" followed by the descriptive title of the planned activities. Select the checkbox for "International Cooperative Activity" and name the relevant country or countries. Failure to submit this information may delay processing.

2. **OISE Cover Page Addendum**. See Appendix I. When using Fastlane, this Addendum will be listed as a form for completion after the NSF Cover Sheet has been saved with the OISE Program Solicitation selected. Submit this information as a supplemental document when requesting a supplement to an existing award. If submitting via Grants.gov, complete the information and attach as a PDF file (see Field 6, Additional Single Copy Documents, on the NSF Grant Application Cover Page).

3. **Project Summary**. Include information on the collaborative aspects of the project as well as the scientific research and educational activities. Intellectual merit and broader impacts anticipated from the international activity must be addressed in separate paragraphs.

4. **Project Description and Results from Prior NSF Support**. Project descriptions for IRES and DDEP should address issues of special importance to the proposed activity, as described below. Information on Results of Prior NSF Support, not to exceed 2 pages, should be placed within this 15-page Project Description section.

4a. **Specifically for International Research Experiences for Students (IRES)**:

- Research focus of proposed activity, including specific examples of research projects students will conduct during their time abroad. Novel research which could lead to publication or presentation at a professional meeting should be proposed in the context of current literature.
- Description of the intellectual collaboration with the foreign team. Describe unique expertise, facilities, data, or research sites of which will be available to students. Describe why the particular host(s) is desirable for this project.
- Plan describing how the students' professional network will be enhanced, including the development of student-faculty and student-student interaction. Details on mentoring, professional development, and training students will receive from both the U.S. principal investigator and foreign host.
- Recruitment and broadening participation plan, selection process, and pre-departure preparation should be described in as much detail as possible. Include the names and types of academic institutions where students will be recruited and efforts that will be made to attract members of under-represented groups.
- Description of any plans for leveraging U.S. or foreign resources to strengthen the program, for example taking advantage of campus IT facilities, academic centers, language instruction, international programming, or cultural activities. PI's are encouraged to extend the benefit of this activity to U.S. students who do not travel by incorporating approaches that exploit cyberinfrastructure or other advanced technologies that facilitate research, learning, and collaboration over distances.
- Plan to assess the IRES program in terms of research experience and network development for students, plan to encourage participants to stay engaged in science and engineering, and plan to disseminate research results.
- Arrangements for housing, health insurance and other logistics.

4b. **Specifically for Doctoral Dissertation Enhancement Projects (DDEP)**:

- Research objectives and methodology.
- Description of cooperative arrangement/division of labor/complementary expertise, including identification of host researchers or mentors.
- Details on the scientific significance of the host country/counterpart institution.
- A description of the role of the foreign institution/country in the graduate student's thesis and career objectives and tentative schedule of activities during the stay abroad.
- Expected scientific/engineering and mutual international benefits to be derived from the project.

5. **Biographical sketch of foreign counterpart(s)**. In English; maximum of two pages per person, compliant with standard guidelines. For DDEP proposals, a biographical sketch of the graduate student who will be supported should be included as well.

6. **Current and Pending Support of Principal Investigator(s)**. A list of all current and pending research and travel support from any source.

7. **Special Information/Supplementary Documentation**. Letter of endorsement signed by a senior investigator with the counterpart host institution. For DDEP proposals, a supplementary document limited to the following wording "This student has advanced to candidacy for a Ph.D. degree." This statement must be signed and dated by the department chairperson, graduate dean, or other

responsible administration official.

B. Budgetary Information

Cost Sharing: Cost sharing is not required under this solicitation.

Indirect Cost (F&A) Limitations:

No indirect costs are allowable on Doctoral Dissertation Enhancement Projects (DDEP) proposals.

On International Research Experiences for Students (IRES) proposals, indirect costs are allowable, consistent with NSF's general policy. Student stipends, travel, and subsistence costs for this training experience are typically listed as participant support costs and as such are not subject to indirect costs. Off-campus indirect rates are applicable to activities at foreign sites.

Other Budgetary Limitations:

Maximum award sizes:

1. IRES: $50,000 per year for 3 years;

2. DDEP: $15,000 per award for up to 2 years.

Budget Preparation Instructions:

Before preparing an OISE proposal, proposers should refer to the information below, which describes special considerations and funding provisions for certain geographical regions or countries.

OISE support is primarily for the U.S. students' costs incurred as a result of the international cooperation. Support for PI salaries, major pieces of equipment, and large amounts for materials and supplies are not provided. Proposals requiring such support can be submitted to the appropriate disciplinary or interdisciplinary research program.

Proposers are encouraged to work with their foreign counterpart to develop realistic budget requests for their living expenses. In all cases, the requested amount for living expenses cannot exceed the authorized U.S. Government per diem rates (calculated at the authorized daily rate for the first 30 days of a single project visit, and 50 percent of that rate for all time after that.) The 30 days is not aggregated from multiple visits. Per diem rates can be viewed at: http://www.state.gov/m/a/als/prdm.

By law, U.S. flag carriers must be used whenever possible (see Chapter VI.G.1b of the NSF Award & Administration Guide at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag).

Allowable budgetary costs normally include:

- Participant support costs, including travel, and subsistence for IRES and DDEP. Student stipends should be included as participant support costs and are available only for IRES. Stipends should be sufficient to attract competitive students.
- For IRES proposals, limited support for international travel and associated living and research costs for the U.S. mentor to spend a short amount of time at the foreign site.
- Publication and communication charges and minor equipment and supply costs.
- Costs associated with program assessment.
- Exceptional allowable costs requiring prior consultation with the OISE program director include:
    - Essential costs such as survey costs, translators, field assistance.
    - Some limited costs for eligible foreign participants (from developing countries, countries whose economies are in transition, or from countries whose currency is not convertible.)

C. Due Dates

- **Full Proposal Target Date(s):**

    September 15, 2004

    September 15, Annually Thereafter

    > International Research Experiences for Students (IRES) proposals for activities beginning at least six months after the target date.

    February 15, 2005

    February 15, Annually Thereafter

    > International Research Experiences for Students (IRES) proposals for activities beginning at least six months after the target date.

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

    Proposals Accepted Anytime

    > No deadlines apply for Doctoral Dissertation Enhancement Projects (DDEP). Such proposals may be submitted at any time

No deadlines apply for Doctoral Dissertation Enhancement Projects (DDEP); such proposals can be submitted at any time.

D. FastLane/Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

  Detailed technical instructions regarding the technical aspects of 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 solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

  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. Further instructions regarding this process are available on the FastLane Website at: https://www.fastlane.nsf.gov/fastlane.jsp.

  For Proposals Submitted Via Grants.gov:

  Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. The Grants.gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: http://www.grants.gov/CustomerSupport. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

  Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. 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 the reviewer 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, original, or potentially transformative 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?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf.

NSF staff also will give careful consideration to the following in making funding decisions:

Integration of Research and Education
One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities
Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

Additional Review Criteria:

In addition to the general NSF review criteria described above, the following criteria will be used in evaluating proposals submitted in response to this solicitation:

1. Mutually beneficial international activity with complementary strengths in evidence.

2. Novel and innovative activities.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review 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.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's 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 Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

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 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.B. 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 (GC-1); * or Research Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. 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 and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report.

Failure to provide the required annual or final project reports will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. 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. Such reports provide information on activities and findings, project participants (individual and organizational) 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. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete.

In their annual and final reports, in the section on "Project Participants/ Graduate Students" and "Project Participants/Undergraduate Students", names of the U.S. students who have participated in the NSF- funded IRES project should be listed. In the final report, in the section on "Activities and Findings / Training and Development," IRES grantees are required to include summary information on the gender, under-represented minority status, disability status, and home institution type of the U.S. students who have participated in the NSF- funded IRES project. In addition, grantees should list the number of weeks each student has spent at each research site abroad. All IRES grantees are expected to evaluate students before and after their participation in the IRES project to assess the effectiveness of the project. Grantees must include a summary of these evaluation results in the final report.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- , Fastlane Helpdesk, email: fastlane@nsf.gov, or OISE Fastlane contact, email: oisefl@nsf.gov,

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

- , Fastlane Helpdesk, email: fastlane@nsf.gov, or OISE Fastlane contact, email: oisefl@nsf.gov,

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

Appropriate OISE region/country program manager regarding proposal development, appropriate funding levels, and supplement opportunities and requirements. Contacts for cognizant program manager(s) are available from the OISE Staff by Country page.

IX. OTHER INFORMATION

The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, MyNSF (formerly the Custom News Service) is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. MyNSF also is available on NSF's Website at http://www.nsf.gov/mynsf/.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

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 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

X. APPENDIX

Appendix I

Office of International Science and Engineering Cover Page Addendum
(When using FastLane, this Addendum is listed as a form for completion after the NSF Cover Sheet has been saved with the OISE Program Solicitation selected. When requesting a supplement to an existing award, submit this information as a supplemental document.)

```
Country #1: _____
Country #2: _____
Country #3: _____

Proposal Category:

[   ] Planning Visit or Workshop
[   ] Developing Global Scientists and Engineers
[   ] Partnerships for International Research and Education
[   ] Multilateral organizations

Foreign Counterpart Investigator/Organizer/Host (Repeat as needed for up to three Foreign Counterpart
Investigators/Organizers/Hosts)
Name:        _____
Department:  _____
Institution: _____
Address:     _____
```

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                    _____
                    _____
Phone:              _____
Fax:                _____

Email: _____

For Planning Visit or Workshop Location
    City:     _____
    Country:  _____
 Start Date:  _____
  End Date:   _____

Demographics (people that will be supported by this project):


Number of senior US scientists and engineers (excluding those within 6
years of their Ph.D. and graduate and undergraduate students): _____


Number of U.S. scientists within 6 years of
the Ph.D. (including the PI and/or Co-PI if applicable): _____

Number of U.S. graduate students:                      _____

Number of U.S. undergraduate students:                 _____

Number of foreign scientists and engineers (including post-docs,
graduate students and undergraduate students) associated with the foreign
institution. Include only those that will be supported under
this NSF proposal (if allowable, see Budgetary Limitations section). Do not count foreign participants that
will
be supported by non-NSF funds.          _____
```