# **PROGRAM SOLICITATION**

NSF 08-603

REPLACES DOCUMENT(S): NSF 07-584



National Science Foundation

Office of International Science and Engineering

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

December 09, 2008

Second Tuesday in December, Annually Thereafter

2nd Tuesday in December

### **REVISION NOTES**

- Application deadline has been updated.
- Statements have been introduced to indicate that the summer institute in Japan is 10 weeks.
- Contact information has been updated to reflect the establishment of the EAPSI Helpdesk toll free 866-501-2922 or www.nsfsi.org/
- Proposal preparation instructions have been updated to indicate that: 1) applicants may apply to up to three locations; 2) correspondence with a potential host researcher and other supplementary documents are required; and 3) one-page project synopsis and timeline is required as a supplementary document.
- "How to Apply" instructions have been updated (at www.nsf.gov/eapsi) to correlate to changes made to the proposal
  preparation instructions

As announced on May 21st, proposers must prepare and submit proposals to the National Science Foundation (NSF) using the NSF FastLane system at http://www.fastlane.nsf.gov/. This approach is being taken to support efficient Grants.gov operations during this busy workload period and in response to OMB direction guidance issued March 9, 2009. NSF will continue to post information about available funding opportunities to Grants.gov FIND and will continue to collaborate with institutions who have invested in system-to-system submission functionality as their preferred proposal submission method. NSF remains committed to the long-standing goal of streamlined grants processing and plans to provide a web services interface for those institutions that want to use their existing grants management systems to directly submit proposals to NSF.

### SUMMARY OF PROGRAM REQUIREMENTS

### **General Information**

### **Program Title:**

East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI)

#### Synopsis of Program:

The East Asia and Pacific Summer Institutes (EAPSI) provide U.S. graduate students in science and engineering: 1) first-hand research experiences in Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan; 2) an

introduction to the science, science policy, and scientific infrastructure of the respective location; and 3) an orientation to the society, culture and language. The primary goals of EAPSI are to introduce students to East Asia and Pacific science and engineering in the context of a research setting, and to help students initiate scientific relationships that will better enable future collaboration with foreign counterparts. All institutes, except Japan, last approximately eight weeks from June to August. Japan lasts approximately ten weeks from June to August (specific dates are available and updated at www.nsf.gov/eapsi).

### Cognizant Program Officer(s):

• EAPSI Helpdesk, telephone: 1-866-501-2922, email: eapsi@asee.org

### 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
- · 47.081 --- Office of Experimental Program to Stimulate Competitive Research

### Award Information

Anticipated Type of Award: Fellowship

Estimated Number of Awards: 195 annually, depending on the quality of applications and availability of funds.

Anticipated Funding Amount: \$1,950,000 -- Awardees will receive a \$5,000 stipend, a roundtrip international airline ticket, and will be supported to attend a pre-departure orientation in the Washington, D.C. area. Foreign co-sponsoring organizations will provide additional support to cover EAPSI students' living expenses abroad during the period of the summer institutes, and will provide an in-country orientation to the science environment and culture(s) of each location.

### **Eligibility Information**

#### **Organization Limit:**

Proposals may only be submitted by the following:

 Applications are submitted directly by the individual graduate student, unlike standard NSF proposals that are submitted through the principal investigator's U.S. Authorized Organizational Representative (AOR). In the EAPSI FastLane application process (Section V.D.), the applicant acts as the AOR.

#### PI Limit:

As of the deadline date of the application year, applicants must meet all of the following criteria:

- U.S. citizen or permanent resident;
- Enrolled in a research-oriented Master's or Ph.D. degree program (including joint degree programs);
- Students enrolled in joint Bachelor/Master's programs must have graduated from the undergraduate degree; and
- · Enrolled at a U.S. institution in the United States; and
- Pursuing studies in fields of science and engineering research and education supported by the National Science Foundation (see Section X below).

Applications submitted by persons who do not meet ALL the above criteria will be returned without review.

Previous awardees may apply, but only to a new host location (Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan.)

Students selected for the program who are matriculated at the time of application and subsequently graduate may still receive an award and participate in the EAPSI program.

#### Limit on Number of Proposals per Organization:

Not applicable

#### Limit on Number of Proposals per PI: 1

One application per student per year.

### **Proposal Preparation and Submission Instructions**

#### **A. Proposal Preparation Instructions**

- · Letters of Intent: Not Applicable
- Preliminary Proposal Submission: Not Applicable
- 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 under this solicitation.
- Indirect Cost (F&A) Limitations: There are no indirect costs allowed.
- Other Budgetary Limitations: Other budgetary limitations apply. Please see the full text of this solicitation for further information.

#### C. Due Dates

- Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):
  - December 09, 2008

Second Tuesday in December, Annually Thereafter

2nd Tuesday in December

### **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: Additional award conditions apply. Please see the full text of this solicitation for further information.

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

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The East Asia and Pacific Summer Institutes (EAPSI) provide U.S. graduate students in science and engineering: 1) first-hand research experiences in Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan; 2) an introduction to the science, science policy, and scientific infrastructure of the respective location; and 3) an orientation to the society, culture and language. The primary goals of EAPSI are to introduce students to East Asia and Pacific science and engineering in the context of a research setting, and to help students initiate scientific relationships that will better enable future collaboration with foreign counterparts. All institutes, except Japan, last approximately eight weeks from June to August. Japan lasts approximately ten weeks from June to August (specific dates are available and updated at www.nsf.gov/eapsi).

# **II. PROGRAM DESCRIPTION**

Support of international activities is an integral part of the NSF mission to sustain and strengthen the nation's science, mathematics, and engineering capabilities, and to promote the use of those capabilities in service to society. In particular, NSF recognizes the importance of enabling U.S. researchers and educators to advance their work through international collaborations, and of helping ensure that future generations of U.S. scientists and engineers gain professional experience beyond this nation's borders early in their careers.

The East Asia and Pacific Summer Institutes are administered in the United States by the National Science Foundation. In East Asia and the Pacific, the Summer Institutes are co-sponsored by:

- · Australian Academy of Science;
- Chinese Ministry of Science and Technology, Chinese Academy of Sciences, and National Natural Science Foundation of China;
- Japan Society for the Promotion of Science;
- Korea Science and Engineering Foundation;
- Royal Society of New Zealand;
- National Research Foundation of Singapore; and
- National Science Council of Taiwan.

The first summer institute began in Japan in 1990, followed by Korea in 1995, Taiwan in 2000, Australia and China in 2004, New Zealand in 2007 and Singapore in 2008. The Summer Institute in Taiwan operates in accordance with the U.S.-Taiwan Relations Act (PL 96-8).

#### A. Key Elements

The EAPSI program is designed for U.S. graduate students wishing to conduct research in a foreign setting and to experience the culture(s) of the participating locations.

Foreign language capability is not required for acceptance into the EAPSI program.

Selected students attend a 2-3 day pre-departure orientation session in the Washington, D.C. area in late March or early April.

The Summer Institutes occur between June and August each year. The Summer Institutes are designed to provide an introduction to the society, culture, language, and research facilities of the host location.

Approximately seven weeks (9 weeks for Japan) are spent on research activities at the host institution. Students work collaboratively with host researchers on projects of mutual interest.

Participants are encouraged to visit other research sites in their host location (Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan) in order to learn about research being conducted in their field and to cultivate additional contacts for future collaboration. Such visits should be scheduled in consultation with host researchers and foreign co-sponsoring organizations, and be planned to occur following the conclusion of the Summer Institutes.

#### **B. Program Conditions and Requirements:**

As a set of structured programs jointly funded and managed by NSF and foreign co-sponsoring organizations in the East Asia and Pacific region, EAPSI participants **MUST AGREE** to the following terms and conditions:

- 1. Program dates/duration: Participants' attendance during the EAPSI program is **MANDATORY**, including any opening and closing activities. For all locations, except Japan, EAPSI lasts approximately eight weeks, from June to August. Japan lasts approximately ten weeks from June to August. (For specific dates, please review the latest information at www.nsf.gov/eapsi.)
- 2. Acceptance by the foreign co-sponsoring organization and a host researcher is required. NSF and the counterpart agency must both approve the application before a student is awarded an EAPSI fellowship.

Applicants may apply to up to three locations (Australia, China, Japan, Korea, New Zealand, Singapore, or Taiwan) listed in order of preference. Applicants should identify one potential host researcher per location.

Applicants must obtain an invitation or acceptance from their top choice host researcher to conduct summer research prior to submitting an application.

Applicants are advised to carefully review specific information about their desired location and potential host researchers prior to submission. See "Potential Host Institutions for East Asia and Pacific Summer Institutes" on the Summer Institutes Website (http://www.nsf.gov/eapsi) for details about applying to the respective locations.

NSF and the relevant foreign co-sponsoring organizations work together to finalize host arrangements for selected students. Placement with the student's first-choice host researcher will be attempted, but cannot be guaranteed. Students are expected to consider accepting placement with alternative host researchers as suggested by NSF and/or the foreign cosponsoring organization.

- Spouses and/or dependents are not permitted to accompany participants during the program, as the host organizations cannot accommodate them.
- 4. Each applicant is responsible for determining his or her ability to fully participate in the EAPSI program in its entirety, and adhering to the Program Conditions and Requirements, if selected. Selected students are responsible for making their own arrangements for receiving necessary medications, immunizations, and insurance coverage. (Health insurance coverage varies by location).
- 5. EAPSI students are responsible for preparing for their own travel, including, but not limited to: obtaining passports, visas and any other requirements for travel. Before applying for the Summer Institutes, U.S. permanent residents should verify their ability to travel without difficulty outside of the United States and to Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan.
- 6. Selected participants are acting as representatives of NSF and the United States. Failure to adhere to any of the above terms and conditions, or other behavior that reflects negatively upon either NSF or the United States may result in immediate expulsion from the program and the requirement that award funds be returned to NSF and/or the foreign co-sponsoring organization.

Applicants are strongly encouraged to review information for each location in the respective handbooks at (http://www.nsf.gov/eapsi). Information in the handbooks is updated each year for the following year's programs, or as details become available.

# Questions about these requirements should be addressed before submitting an application by contacting the EAPSI Help Desk (eapsi@asee.org or toll-free 866-501-2922).

### C. Approximate Timetable:

Application Deadline: Second Tuesday in December

December - January: NSF compliance check of proposals

January: NSF merit review of proposals

February: Notification to selected students of tentative acceptance or alternate status

March/April: Pre-departure orientation in Washington, D.C. area (2-3 days) for all tentative awardees

April: Final acceptance notices issued to confirmed students by NSF's foreign co-sponsoring organizations in Australia, China, Japan, Korea, New Zealand, Singapore and Taiwan

April - June: Official NSF awards or declinations issued; students prepare to travel

June - August: Summer Institutes

December: Final reports due

### **III. AWARD INFORMATION**

- Each awardee will receive an NSF stipend of \$5,000 that is intended as compensation, in part, for loss of summer employment. (Awardees are permitted to receive only one stipend from a federal source during the period of the EAPSI.)
- Each tentative awardee will be reimbursed for the costs of attending a pre-departure orientation in the Washington, D.C. area.
- Each awardee will receive an international round-trip air ticket. (Certain travel restrictions will apply.)
- Each awardee's living expenses during the duration of the Summer Institutes will be supported by the relevant foreign cosponsoring organization in the East Asia and Pacific region.

### IV. ELIGIBILITY INFORMATION

### Organization Limit:

Proposals may only be submitted by the following:

 Applications are submitted directly by the individual graduate student, unlike standard NSF proposals that are submitted through the principal investigator's U.S. Authorized Organizational Representative (AOR). In the EAPSI FastLane application process (Section V.D.), the applicant acts as the AOR.

### PI Limit:

As of the deadline date of the application year, applicants must meet all of the following criteria:

- U.S. citizen or permanent resident;
- Enrolled in a research-oriented Master's or Ph.D. degree program (including joint degree programs);
- Students enrolled in joint Bachelor/Master's programs must have graduated from the undergraduate degree; and
- · Enrolled at a U.S. institution in the United States; and
- Pursuing studies in fields of science and engineering research and education supported by the National Science Foundation (see Section X below).

Applications submitted by persons who do not meet ALL the above criteria will be returned without review.

Previous awardees may apply, but only to a new host location (Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan.)

Students selected for the program who are matriculated at the time of application and subsequently graduate may still receive an award and participate in the EAPSI program.

#### Limit on Number of Proposals per Organization:

Not applicable

Limit on Number of Proposals per PI: 1

One application per student per year.

Additional Eligibility Info:

### V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

### A. Proposal Preparation Instructions

**Full Proposal Instructions:** Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the guidelines specified 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-PUBS (7827) or by e-mail from nsfpubs@nsf.gov.

In cases where requirements given in this program solicitation differ from those given in the Grant Proposal Guide, this program solicitation takes precedence.

All page limits indicated within this program solicitation include images, figures, graphics, tables, etc. Applicants must adhere to page limitations, font size (no smaller than 10 point), and margins (minimum of 2.5 cm). Proposals that do not conform to the requirements will be returned without review.

- 1. **IMPORTANT SUBMISSION NOTES**: Unlike standard proposals to NSF, EAPSI proposals are submitted directly to NSF without going through your university. EAPSI proposals must be submitted electronically on the NSF FastLane website.
  - Follow specific instructions from 'How to Apply' by selecting 'Postdoctoral Fellowships and Other Programs', 'I am an Applicant', and then 'East Asia and Pacific Summer Institutes' on the NSF FastLane website (https://www.fastlane.nsf.gov/fastlane.jsp).
  - b. In the FastLane application process for EAPSI, the applicant will be called a Principal Investigator (PI) or Proposer and must register as an 'individual researcher' acting as the Authorized Organizational Representative (AOR).
  - c. The applicant must list names of Letter of Recommendation writers within the "Add/Delete Letter of Reference Writers" section in FastLane Proposal Preparation. This must be done **BEFORE** the applicant's references can upload their letters into the FastLane system.
  - d. All proposal materials must be submitted via FastLane by the deadline. Materials sent via other means to NSF will not be reviewed, considered, or accepted.
  - e. EAPSI applications will be shared with foreign partner science agencies, and subsequently, with potential host researchers. Therefore, do not include any information in your application to which you would not want your host researcher or the foreign co-sponsoring organization to have access.
  - f. Before selecting their hosts, applicants are advised to review specific criteria and procedures for Australia, China, Japan, Korea, New Zealand, Singapore and Taiwan listed under "Potential Host Institutions for East Asia and Pacific Summer Institutes" on the EAPSI website (http://www.nsf.gov/eapsi). Applicants to Japan should seek formal acceptance from a senior-level representative at the host institution (e.g., Professor, Director), even if the applicant's mentor may be a junior-level (e.g., Assistant Professor) researcher at that institution. Applicants are encouraged to contact the EAPSI Help Desk for questions about conditions in each host location (Australia, China, Japan, Korea, New Zealand, Singapore and Taiwan).
  - g. Applicants are not restricted to the hosts listed on the "Potential Host Institutions for East Asia and Pacific Summer Institutes" website. Rather, students are strongly encouraged to seek information about potential foreign host researchers and institutions from their academic advisors, appropriate U.S. or foreign faculty members, or by contacting primary points of contact at foreign co-sponsoring organizations listed in the respective Handbooks. Students may also seek out host researchers by conducting literature searches and/or from host universities directly via the Internet.
  - h. While preparing your proposal, keep in mind that the key to a successful EAPSI application and experience is developing clear, mutually agreed upon expectations about your proposed research, between you, your U.S. advisor and your foreign host.

# Questions should be discussed with the EAPSI Helpdesk (toll-free 866-501-2922, email: eapsi@asee.org) before submitting your application.

### 2. PROPOSAL COMPONENTS: ALL materials listed below MUST BE SUBMITTED BY THE APPLICATION DEADLINE.

- a. **Cover Sheet:** You must first complete all fields in the cover sheet. Check that your name and address are correct. Select the EAPSI program solicitation from the list shown. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- b. Application Form:
  - You are required to submit the Application Form. Please enter all information COMPLETELY and CORRECTLY.
  - List up to three locations (Australia, China, Japan, Korea, New Zealand, Singapore, or Taiwan) and up to three potential host researchers (one per location) in order of preference.
  - Include up to three (3) keywords describing your proposed research area and/or field of study.

At least one of the keywords should be selected from Appendix X, NSF supported fields (below).

- Provide a succinct and clear title that indicates to NSF reviewers the specific focus of your proposed research.
- In order of preference, identify the foreign host researcher(s) and institution(s) by name, and provide contact information (including email addresses).
- Applicants must obtain an invitation or acceptance (an email is sufficient) from their top choice host researcher prior to submitting applications. Student-Host correspondence must be placed in the "Supplementary Docs" section, and submitted via FastLane as part of your proposal by the deadline.
- c. **Project Summary:** A standard project summary is automatically generated for all EAPSI applications. Do not change this section.
- d. Project Description: (not to exceed five (5) single spaced pages with 2.5 cm margins)
  - Include the title of your research.
    - Describe the Intellectual Merit of your proposed research (See Section VI. A. for a complete description of Intellectual Merit).
    - Provide a clear description of hypothesis-driven research question(s) to be addressed, research objectives and methodologies. The description should be detailed and specific enough to be evaluated by disciplinary experts, yet able to be understood by a scientifically literate layperson outside your field.
    - The proposed research should be achievable within a 6-7 week time frame (8-9 weeks for Japan).
    - Describe the Broader Impacts of the proposed research and of your participation in the Summer Institute (See Section VI.A., for a complete description of Broader Impacts).
    - List the specific expertise of your proposed host researcher and capability of the host institution (e.g., facilities, data, equipment access). Describe what benefits derive from working with your host on the proposed research topic/project.
    - Describe the expected value of gaining cultural and scientific experience in Australia, China, Japan, Korea, New Zealand, Singapore or Taiwan to your future career.
    - Describe your unique qualifications to conduct research in an international setting
    - Project Descriptions that exceed the limit of five (5) single space pages will be returned without review.
    - References must be listed separately and uploaded into the References section.
- e. Biographical Sketch (not to exceed two single-spaced pages):
  - Provide a 2-page biographical sketch that includes your academic background, past research experience, previous international experience, a list of publications (if any), and/or other pertinent information (e.g., awards, skills and abilities) you consider relevant to determining your overall suitability for receiving an EAPSI fellowship.
  - Near the top of the 1st page, indicate your citizenship status (U.S. citizen or permanent resident).
  - Near the top of the 1st page, include name and location of the last high school attended.

Do not send reprints or abstracts of publications.

- f. **Two Letters of Recommendation:** You **must** have **two** letters of recommendation from faculty members or other senior individuals qualified to comment on your abilities and potential as an EAPSI Fellow.
  - One reference must be from your current research advisor, academic advisor or Department Chair.
  - Do not ask for or include references from proposed foreign host researchers.
  - Your recommendation-letter writers must submit their letters using FastLane (See "Add/Delete Letter of Recommendation Writers" section in your FastLane application).
  - You must list their names in Fastlane before your references can submit their letters.
  - You are responsible for assuring that your references use FastLane to submit their letters by the
    application deadline.
  - If both letters are not received in FastLane by the deadline, the proposal will be returned without review.
- g. **Supplementary Documents: ONLY** the following supplementary documents are to be submitted electronically via FastLane as part of the application:
  - Undergraduate and Graduate Transcripts: Unofficial copies are acceptable.
  - A statement from your advisor, the registrar's office, Dean, or Department Chair attesting to your current enrollment in the graduate program. Email statements with their original headings including senders' email addresses and dates are acceptable.
  - Correspondence (emails) including letters of invitation or acceptance from potential host researcher(s).
  - One-page project synopsis and timeline.

### 3. SPECIFIC NOTES REGARDING THE EAPSI SELECTION PROCESS:

- a. You will be notified if your application is **tentatively** selected by NSF Merit Review. NSF will then forward tentatively-selected applications to the respective foreign co-sponsoring organization for matching/confirming with host researcher(s) listed in your application. Final award decisions are contingent on 1. recommendation by NSF, 2. acceptance by NSF's foreign co-sponsoring organization, and 3. confirmed placement at the foreign host institution. It is possible that an applicant who has been tentatively selected based on NSF merit review may ultimately be declined.
- b. NSF may suggest alternative placement at other locations in rare cases where applicants are not able to be matched with a host or are declined by the foreign co-sponsoring organization.

Proposers are reminded to identify the program solicitation number (NSF 08-603) 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.

### **B. Budgetary Information**

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

Indirect Cost (F&A) Limitations: There are no indirect costs allowed.

Other Budgetary Limitations: Other budgetary limitations apply. See the full text of this solicitation for further details.

**Budget Preparation Instructions:** The proposal budget form is filled in automatically to reflect the amount of the stipend and allowances. Do not alter this form in any way.

### **C. Due Dates**

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

December 09, 2008

Second Tuesday in December, Annually Thereafter

2nd Tuesday in December

### **D. FastLane Requirements**

Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF FastLane system. Detailed instructions regarding the technical aspects of proposal preparation and submission via FastLane are available at: <a href="http://www.fastlane.nsf.gov/a1/newstan.htm">http://www.fastlane.nsf.gov/a1/newstan.htm</a>. 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.

### 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. Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

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:

The review criteria above are for standard NSF proposals. For the EAPSI program, the reviewers are asked to consider the following additional criteria:

- Qualifications of applicant, including potential for continued growth and the probable effect of participation in the Summer Institute on the applicant's career;
- Resources and capabilities of the proposed host institution(s) and researcher(s), and/or the current stature of
  research in the student's field of interest in the chosen location (Australia, China, Japan, Korea, New Zealand,
  Singapore or Taiwan); and
- Merit, complementarities, and expected mutual benefits of the proposed international collaboration.

Because EAPSI is funded and managed in partnership with organizations in the East Asia and Pacific region, final selection of participants is dependent on mutual agreement between NSF and the counterpart foreign agencies. Thus, it is possible that an applicant who has been tentatively selected based on merit review may ultimately be declined.

# **B. Review and Selection Process**

Proposals submitted in response to this program solicitation will be reviewed 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.

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 nsfpubs@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 <a href="http://www.nsf.gov/publications/publicati

**Special Award Conditions:** The National Science Foundation claims no rights to any inventions or writings that might result from its fellowship or traineeship grants. However, fellows and trainees should be aware that the NSF, another Federal agency, or some private party may acquire such rights through other support for particular research. Also, fellows and trainees should note their obligation to include an Acknowledgment and Disclaimer in any publication.

### **C. Reporting Requirements**

For all EAPSI awards, participants are required to submit a final project report to the EAPSI Program Office by December 1 of the year in which they participated in the EAPSI program. This reporting requirement is in addition to any established by the participant's foreign co-sponsoring organization.

Failure to provide the required report to NSF will impact any future requests for funding 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 the NSF report. The report will 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.

The co-sponsoring organizations in Australia, China, Japan, Korea, New Zealand, Singapore and Taiwan have independent reporting requirements and deadlines. EAPSI participants are expected to comply with the guidelines of foreign co-sponsoring organizations, in addition to those of NSF.

EAPSI program staff may request at a future date that EAPSI participants provide evaluations of their experience.

### **VIII. AGENCY CONTACTS**

General inquiries regarding this program should be made to:

EAPSI Helpdesk, telephone: 1-866-501-2922, email: eapsi@asee.org

For questions related to the use of FastLane, contact:

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

The EAPSI Helpdesk, operated for NSF by the American Society for Engineering Education, is responsible for processing applications and responding to requests for information. Inquiries should be directed to eapsi@asee.org or phone tollfree 1-866-501-2922. View the EAPSI web site at nsfsi.org for additional information.

### **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, National Science Foundation Update is a free e-mail subscription service 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 when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the NSF web site.

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 <a href="http://www.grants.gov">http://www.grants.gov</a>.

NSF's Office of International Science and Engineering supports several other types of activities of potential interest:

- 1. Doctoral Dissertation Enhancement Projects (DDEP) within the Developing Global Scientists and Engineers program at
- http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=12831;
- 2. International Research Fellowship Program (IRFP) for post-docs at
- http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=5179; and
   International Planning Visits and Workshops for catalyzing innovative international research collaborations at
  - http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=12815.

The program solicitations for these activities can be found at the OISE homepage: http://www.nsf.gov/od/oise.

### 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.

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

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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; and 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 proposer 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 or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; 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," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). 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 Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0023. Public reporting burden for this collection of information is estimated to average 12 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton Reports Clearance Officer Division of Administrative Services National Science Foundation

### X. APPENDIX

#### NATIONAL SCIENCE FOUNDATION SUPPORTED FIELDS OF STUDY

#### [Select at least one keyword from the list below, to describe your EAPSI research topic]

#### CHEMISTRY

5230 Analytical, 5250 Bio-inorganic, 5240 Bio-organic, 5260 Biophysical, 9994 Environmental, 5290 Inorganic, 5330 Organic, 5350 Physical, 5331 Polymer, 5370 Theoretical, 0001 Chemistry other (specify)

### COMPUTER AND INFORMATION SCIENCE AND ENGINEERING (CISE)

0006 Artificial Intelligence (including Robotics, Computer Vision, and Human Language Processing), 7210 Computer Science - Languages and Systems, 0007 Computer Science - Theoretical Foundations, 7270 Computer Systems Design (including Signal Processing), 0008 Databases, Information Retrieval, and Web Search, 0009 Graphics and Visualization, 7260 Human Computer Interaction, 7250 Information Technology and Organizations, 7290 Networks and Communications, 0010 Scientific Computing and Informatics, 7220 Software Engineering, 0012 Computer Architecture and Grids, 0020 Information Security and Assurance, 0001 CISE other (specify), 0011 Operating Systems and Middleware

#### ENGINEERING

6210 Aeronautical and Aerospace, 6240 Agricultural, 6250 Bioengineering and Biomedical, 6330 Chemical Engineering, 6350 Civil Engineering, 6388 Computer Engineering, 6390 Electrical and Electronic, 6741 Energy, 6470 Engineering Mechanics, 6532 Engineering Science, 9996 Environmental, 6580 Industrial Engineering, 6476 Materials, 6620 Mechanical, 6660 Metallurgical, 6740 Nuclear, 6245 Ocean, 6716 Petroleum, 6480 Polymer, 6585 Systems Engineering, 0001 Engineering other [Specify] (e.g., Engineering Education Research)

#### GEOSCIENCES

5710 Aeronomy, 5720 Atmospheric Chemistry, 5750 Chemical Oceanography, 5770 Climate Dynamics, 5740 Geochemistry, 5780 Geology, 5800 Geophysics, 5810 Hydrologic Sciences, 5820 Large-scale Dynamics Meteorology, 5830 Magnetospheric Physics, 5840 Marine Geology and Geophysics, 5850 Mesoscale Dynamic Meteorology, 5870 Paleoclimate, 5860 Paleontology, 5880 Physical Meteorology, 7799 Physical Oceanography, 5890 Solar - Terrestrial, 0001 Geosciences other (specify)

### LIFE SCIENCES

0399 Agriculture, 0140 Agronomy, 4510 Anatomy, 4530 Animal Behavior, 4531 Animal Science, 0999 Biochemistry, 1870 Biological Oceanography, 1299 Biophysics, 1599 Botany (including Plant Physiology), 1820 Cell Biology, 1860 Computational Biology, 1840 Developmental Biology, 1830 Ecology, 4570 Entomology, 9992 Environmental Sciences, 1850 Evolutionary Biology, 4590 Fish and Wildlife, 0250 Forestry, 2499 Genetics, 0300 Horticulture, 3293 Immunology, 1874 Marine Biology, 3299 Microbiology, 1880 Molecular Biology, 1829 Neurosciences, 1890 Nutrition, 2970 Pharmacology, 3899 Physiology, 1545 Plant Pathology, 4540 Soil Science, 1822 Structural Biology, 3290 Virology, 4699 Zoology, 0001 Life Sciences other (specify)

#### MATHEMATICAL SCIENCES

7010 Algebra or Number Theory, 7030 Analysis, 7050 Applications of Mathematics (including Biometrics and Biostatistics), 7110 Geometry, 7130 Logic or Foundations of Mathematics, 7140 Operations Research, 7150 Probability and Statistics, 7170 Topology, 0001 Mathematics other (specify)

#### PHYSICS AND ASTRONOMY

4999 Astronomy, 4930 Astrophysics, 8040 Atomic and Molecula,r 8050 Condensed Matter Physics, 8160 Nuclear, 8180 Optics, 8110 Particle Physics, 8200 Physics of Fluids, 8210 Plasma, 8220 Solid State, 8260 Theoretical Physics, 0001 Physics other (specify)

#### PSYCHOLOGY

4125 Cognitive, 4120 Cognitive Neuroscience, 0006 Computational Psychology, 4130 Developmental, 4150 Experimental or Comparative, 4189 Industrial/Organizational, 4155 Neuropsychology, 4165 Perception and Psychophysics, 4170 Personality and Individual Differences, 0007 Psycholinguistics, 4158 Physiological, 4162 Quantitative, 4190 Social, 0001 Psychology other (specify)

#### SOCIAL SCIENCES

0695 Cultural Anthropology, 0694 Linguistic Anthropology, 0696 Medical Anthropology, 0697 Physical Anthropology, 0610 Archaeology, 0011 Cleometric History, 0010 Communications, 0006 Decision Making, 9818 Demography, 0009 Econometrics, 0013 Economics (except Business Administration), 8799 Geography, 9099 History of Science, 9499 International Relations, 0008 Law and Social Science, 9299 Linguistics, 9098 Philosophy of Science, 9399 Political Science, 9799 Public Policy, 0007 Risk Analysis, 0012 Science Policy, 0014 Sociology (except Social Work), 9699 Urban and Regional Planning, 0001 Social Sciences other (specify), 0002 Anthropology other (specify)

Note: Individuals pursuing Science, Technology, Engineering and Mathematics (STEM) education research should select the most appropriate keyword from the list above.

Note: Individuals pursuing research in a policy science are eligible for funding only if they are pursuing research-oriented Master's or Ph.D. degrees.

Note: Research with disease-related goals is not eligible for support by NSF. Applicants in this field will be judged ineligible if their Proposed Plan of Research has disease-related goals and/or is insufficiently focused on basic research questions.

**Note:** Clinical and counseling psychology are generally not supported in this program; applicants in this field will be judged ineligible if their Proposed Plan of Research focuses on mental disease, abnormality or malfunction.

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