Collaboratives to Integrate Research and Education (CIRE) (NSF 98-47)

Development and Institutionalization of Long-Term Research and Education Relationships Between Minority-Serving Institutions and NSF-Supported Facilities and Centers

OFFICE OF SCIENCE AND TECHNOLOGY INFRASTRUCTURE

DEADLINES: Letters of Intent - February 6, 1998
Proposals - April 13, 1998

National Science Foundation

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Introduction

The National Science Foundation's mandate to ensure the vitality of the Nation's scientific and engineering enterprise includes concern for the quality, composition, distribution and effectiveness of the human resource base in science, engineering and mathematics. The Foundation has a strong commitment to improving the quality of, and access to science, engineering and mathematics education for all Americans. Within this context, it is recognized that minority-serving institutions and NSF-supported facilities and centers represent rich resources for improving minority access to careers in the natural, social, behavioral and economic sciences, computer sciences, engineering and mathematics (SEM).

The Collaboratives to Integrate Research and Education (CIRE) activity described in this solicitation is one part of a comprehensive plan to improve and strengthen education infrastructure in SEM and increase recruitment, retention and degree attainment by members of groups underrepresented in SEM.

Traditionally, minority institutions are leading sources of SEM degrees awarded to underrepresented minorities. The CIRE activity is intended to enhance the quantity and quality of SEM opportunities for students and faculty members at participating minority-serving institutions. The activity will produce models for developing long-term SEM education and research relationships between minority-serving institutions and NSF-supported facilities and centers.

Activity Objectives

The objective of CIRE is to enhance diversity in the SEM research and education enterprise by stimulating the development of formal, long-term, collaborative research and education relationships between minority-serving institutions and NSF-supported facilities and centers.

CIRE will:

- Provide an opportunity to involve minority-serving institutions in SEM education and research at NSF-supported facilities and centers;
- Target NSF-supported facilities and centers that are poised to make a substantial contribution to the SEM education and research enterprise at minority-serving institutions;
- Enable facilities and centers to serve as models for successful collaboration with minority-serving institutions; and
- Allow the Foundation to exercise its statutory authority more effectively "...to undertake or support a comprehensive science and engineering program to increase the participation of minorities in science and engineering..."

Purpose, Award Size and Duration

Awards are intended to facilitate the establishment of long-term research and education relationships between minority-serving institutions and NSF-supported facilities and centers. The long-term objective is to formalize and institutionalize these developing relationships by negotiating formal institution-to-institution agreements for continuation and support of the relationships.

CIRE proposals may request support for a maximum period of 3 years, to be funded at a maximum of $500,000 per year. Approximately four (4) awards will be made. Institutions are expected to provide reasonable assurances that the efforts and activities generated through CIRE will continue at a comparable level following the conclusion of NSF funding of this activity. Cost effectiveness will be a factor in the review process. This means building into the early stages of the award the means of sustaining the collaboration, including cost effective approaches to support student and faculty activities that may involve commitment of additional resources on behalf of the partners.

Successful CIRE proposals will be funded as an award to the minority-serving institution that may include a subcontract to the NSF-supported facility or center.

Eligible Activities

In general, support will be provided for activities that facilitate development of formal long-term research and education relationships between NSF-supported facilities and centers, and minority-serving institutions by funding collaborative activities. Funded activities might include (among other possibilities) development of collaborative and mutually beneficial research and education projects, and exchanges of faculty and students. The former can include infrastructure enhancements at the minority-serving institution, if needed to support the proposed collaborative activity.

Proposals must clearly identify and address any administrative, education and research infrastructure changes needed to achieve CIRE objectives.

Pre-college and bridging programs are not eligible for CIRE support. Undergraduate students, graduate students, and well-prepared high school students may be part of the proposed activity.

Eligible Institutions

CIRE proposals may be submitted by Minority-Serving Institutions (MSIs), including Historically Black Colleges and Universities (HBCUs), Hispanic-serving institutions (HSIs), and Tribally-Controlled Colleges (TCCs). Each CIRE proposal must be submitted in collaboration with (and may include a subcontract to) one or more NSF-supported facilities/centers or similar NSF-supported efforts.

Colleges and universities eligible to participate in this activity must offer baccalaureate degrees in engineering, mathematics or science disciplines and meet at least one of the following criteria:

- Be an accredited college or university with enrollment of a single underrepresented minority group or the combination of underrepresented minority groups that exceeds 50 percent of the total student enrollment as defined in the Higher Education Act as amended [see 20 USC 1135d-5 and 34 CFR 637.4(b)].
- Be designated by the Department of Education in FY 1994 as a Hispanic-Serving Institution (HSI) under Title III of the Higher Education Act of 1965, as amended [See 20 USC 1059 ©; Public Law 102-325, Section 316, July 22, 1992].
- Be designated by the Department of Education as a Historically Black College or University under Title III of the Higher Education Act of 1965, as amended (see 34 CFR 608.2).
- Be cited as Tribal colleges and universities in Section 532 of the Equity in Educational Land-Grant Status October of 1994; Tribally Controlled Community College Assistance Act of 1978; or the Navajo Community College Assistance Act of 1978, Public Law 95-471.

The MSI may partner with any NSF-supported facility/center or similar effort. The major NSF-supported facilities and centers are listed at the websites given below. The review process will take into consideration prospects for long-term institutional commitment for the participating facility/center or similar effort:

- Science and Technology Centers (STCs):
  http://www.nsf.gov/od/osti/centers/stcaward.htm
- Engineering Research Centers (ERCs):
  http://www.eng.nsf.gov/eec/erc.htm
- Industry/University Cooperative Research Centers (IUCRCs):
  http://www.eng.nsf.gov/eec/i-ucrc.htm
- State/Industry/University Cooperative Research Centers (S/I/UCRCs):
  http://www.eng.nsf.gov/eec/0-intro.htm
- Materials Research Science and Engineering Centers (MRSECs):
  http://www.nsf.gov/mps/dmr/mrsec.htm
- National Center for Atmospheric Research (NCAR):
  http://www.geo.nsf.gov/atm/ncar.htm
- National Observatories:
  http://www.nsf.gov/mps/ast/natl_obs.htm
- Physics Research Facilities and Centers
  http://www.nsf.gov/mps/phy/facil.htm
- Upper Atmospheric Facilities:
  http://www.geo.nsf.gov/atm/uaf.htm
- National Facilities and Instrumentation (NAFI):
  http://www.nsf.gov/mps/dmr/natfacil.htm
- Supercomputer Centers:
  http://www.cise.nsf.gov/general/compsci/net/superc.html

- Field Stations/Marine Labs and Museums:
  http://www.nsf.gov/cgi-bin/getpub?nsf9611
  http://www.nsf.gov/pubs/stis1993/nsf93116/nsf93116.txt
- Long-Term Ecological Research Centers:
  http://lternet.edu/about/sites/names.htm
- National Opinion Research Center:
  http://www.norc.uchicago.edu/homepage.htm
- Inter-University Consortium for Social and Political Research:
  http://www.icpsr.umich.edu/
- Institute for Social Research:
  http://www.isr.umich.edu/
- National Consortium for Research on Violence:
  http://www.ncovr.heinz.cmu.edu/ncovr/index.asp
- National Center for Geographic Information and Analysis:
  http://www.ncgia.ucsb.edu/
- Center for the Study of Institutions, Population and Environmental Change:
  http://www.indiana.edu/~cipec/
- Center for the Integrated Study of the Human Dimensions of Global Change:
  http://hdgc.epp.cmu.edu/
- Joint Program in Survey Methodology:
  http://www.bsos.umd.edu/jpsm/
- Centers of Research Excellence in Science and Technology:
  http://www.nsf.gov/pubs/1998/nsf9819/nsf9819.txt
- Centers for Collaborative Research in Learning Technologies:
  http://www.ehr.nsf.gov/lis/alist.htm/

Proposers may subcontract (if appropriate) with an NSF-supported facility/center or similar effort whose institutional leadership has demonstrated a commitment to this center-type enterprise at least for the duration of their CIRE grant. Clarification of eligible minority-serving institutions, and additional information about CIRE and NSF-supported facilities and centers may be obtained by contacting the Office of Science and Technology Infrastructure at 703/306-1040 or by e-mail at cire@nsf.gov.

Project Staff

In accordance with standard NSF practice, the grantee institution has full responsibility for the conduct of the project and for adherence to the award conditions**.**

The CIRE collaboration will involve the principal investigator (PI) at the minority-serving institution and a co-PI at the NSF-supported facility or center. While the PI is responsible for the scientific/technical direction of the CIRE collaborative activities, both
the PI and co-PI will assume responsibility for accomplishing the project goals at their respective institutions.

Advisory Committee(s)

Each project must develop an appropriate mechanism for obtaining external advice. Examples might include the establishment of a free-standing external advisory committee or taking advantage of the existing advisory committees at the partner centers and facilities. The advisory committee(s) will guide and assist the co-PIs in defining the goals and relevant strategies for the project.

Proposal Deadline

In order to plan the composition of the merit review panel, it is requested that the PI submit an optional letter of intent by February 6, 1998. Letters of intent should be e-mailed (no attachments) to cire@nsf.gov.

Proposals for CIRE must be submitted electronically to NSF, via FastLane, no later than 5:00 p.m. (EST), on April 13, 1998. A paper copy of the cover sheet signed by the PI and an institutional representative, the CIRE Impact Data table, the signed subcontract budget (where applicable), and documentation of institutional commitments and commitments from other sources must be mailed to the address below to arrive by April 20, 1998.

CIRE, Rm. 1270
Office of Science and Technology Infrastructure
National Science Foundation
4201 Wilson Blvd.
Arlington, VA 22230

Proposal Preparation and Submission

CIRE proposals must be prepared and submitted to CIRE via the NSF FastLane system in accordance with the guidelines, including page limitation and formatting requirements, provided in the NSF brochure, Grant Proposal Guide (GPG), NSF 98-2, except where modified in this solicitation. (The NSF FastLane system and instructions for registration and its use, are available at http://www.fastlane.nsf.gov.) Proposals are to include:

1. A Project Summary of no more than one page which provides a succinct description of the vision, goals, program, management and special features of the proposed project.

2. The Project Description (up to 15 pages) should include:

   A. A clear statement of strategic goals, activities proposed involving students and faculty to affect opportunities for change, and anticipated results, including future plans for the collaborative after conclusion of NSF support;

B. A clear and concise description of the organizational structure of the collaborative and a management plan which includes identification of the roles of key personnel at all participating institutions and the advisory committee(s);

C. Results from current and prior NSF and other Federal funding in the area of SEM education and research, and results from prior collaborative efforts of the participating institutions; and

D. A concise description of the NSF-supported facility or center's use of current Federal (including NSF), industry, State, and other funding in the SEM fields, in both education and research.

CIRE proposals are expected to be in compliance with all applicable equal opportunity laws and existing institutional policies. There are no specific student selection criteria. Participating institutions are expected to use student selection criteria that are consistent with attainment of the baccalaureate or graduate degrees in SEM at their institutions. CIRE awards are expected to achieve significant increases in the number and quality of interactions between participants from the NSF-supported facility or center, and faculty and students at the minority-serving institution, and should result in increasing graduate SEM degrees for underrepresented minorities, and networking and the dissemination of new knowledge.

3. The Proposed Budget (NSF Form 1030), with justification page, can request a maximum of $500,000/year for a maximum period of 3 years. As noted above, a paper copy of a separate signed subcontract budget (if appropriate) must be included.

   Awards will be multi-year grants. However, approval to expend funds annually will be contingent on approval of the annual report.

   The minority-serving institution must provide documentation of its procedures/ability to manage the subcontract (if appropriate) to the NSF-supported facility/center. This documentation should be part of the budget materials.

   Specific provisions regarding allowable costs are stated in the NSF brochure Grant Proposal Guide (GPG), NSF 98-2, and Chapter VI of the Grant Policy Manual (GPM), NSF 95-26.

   CIRE requires a commitment to achieving strategic goals shared by the host and collaborating institution(s). A statement documenting the submitting institution's degree and type of commitment must be an integral part of the proposal. Documentation of institutional commitments to the proposed collaborative will be considered in the review process.

   To the extent that the institution's commitment to achieve CIRE goals is financial in nature, that commitment should be built into the budget justification. An NSF-supported

center/facility may wish to forgo a subcontract as demonstration of it's (financial) commitment.

The budget statement will also be used to determine the cost effectiveness of the proposal. Factors for determining cost effectiveness include: institutional commitment, external commitments, number of students or faculty served, number of baccalaureate degrees, etc. Any financial commitment specified in the proposal will be referenced and included as a condition of an award resulting from this solicitation.

4. The Special Information and Supplementary Documentation section (which must be submitted in hardcopy) contains:

   A. Table (in the format indicated below) that summarizes the anticipated number of minority-serving institution students and faculty members participating in activities related to, or at, the NSF-supported facility or center, and the anticipated total number of SEM Baccalaureates Awarded.

CIRE Impact Data

(Supported = receiving a <u>minimum</u> of $500 in a year from CIRE-related sources)

At the Minority-Serving Institution (MSI)

	AY96/97	1st Year	2nd Year	3rd Year	Long-Term
MSI Students Supported (months)	__	__	__	__	__
MSI Students Supported (number)	__	__	__	__	__
Baccalaureates Awarded	__	__	__	__	__
MSI Faculty Supported (months)	__	__	__	__	__
MSI Faculty Supported (number)	__	__	__	__	__
Visiting Faculty Supported (months)	__	__	__	__	__
Visiting Faculty Supported (number)	__	__	__	__	__

At the NSF-Supported Facility/Center

MSI Student Visits (months)	__	__	__	__	__
MSI Student Visits (number)	__	__	__	__	__
MSI Faculty Visits (months)	__	__	__	__	__
MSI Faculty Visits (number)	__	__	__	__	__
Faculty/Scientists Supported (months)	__	__	__	__	__
Faculty/Scientists Supported (number)	__	__	__	__	__

AY96/97 = Academic Year 1996-1997.

   B. Letters of commitment from all participating institutions and other sources, for continuation of the project beyond the period of NSF support.

Proposal Review

Proposals will be reviewed in accordance with established Foundation procedures and consistent with the two general criteria described in GPG. The two general criteria are:

1. 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 of the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

2. 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?

Proposals also are expected to address and will be evaluated on:

- Capability of the proposed project team to successfully carry out the proposed goals of the collaborative.
- Potential to increase the number of SEM students and faculty members from participating minority-serving institutions with substantial involvement in the activities of the facility/center.
- Potential as a model for developing long-term collaborative relationships between NSF-supported facilities and centers and minority-serving institutions.
- Institutional commitment to achieving and realizing the potential.
- Management plan for the collaborative.
- Cost effectiveness of the collaborative.
- Plan for making the project self-sustaining at the end of NSF funding.
- Evidence of the ability to work collaboratively with other institutions.

Proposals will be reviewed by an external merit review panel consisting of individuals from academia, industry and government.

Award Administration

Grant awards made as a result of this solicitation will be administered in accordance with the terms and conditions of NSF GC-1, "Grant General Conditions 10/95" or FDP III, “Federal

Demonstration Partnership Term and Conditions." More comprehensive information is contained in the NSF "Grant Policy Manual" (NSF 95-26, July 1995). These documents are available on the NSF home page (http://www.nsf.gov).

Inquiries

Questions not addressed in this publication may be directed to the CIRE staff by e-mail at cire@nsf.gov, phone (703) 306-1040, or by writing to:

CIRE, Room 1270
National Science Foundation
4201 Wilson Blvd.
Arlington, VA 22230

Privacy Act and Public Burden Statements

The Foundation provides awards for research and education in the sciences and engineering. The awardee is wholly responsible for the conduct of such research and preparation of the results for publication. The Foundation, therefore, does not assume responsibility for the research findings or their interpretation.

The Foundation welcomes proposals from all qualified scientists and engineers and strongly encourages women, minorities, and persons with disabilities to compete fully in any of the research and education related programs described here. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving financial assistance from the National Science Foundation.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF projects. See the program announcement or contact the program coordinator at (703) 306-1636.

Privacy Act. The information requested on proposal forms is solicited under the authority of the National Science Foundation Act of 1950, as amended. It will be used in connection with the selection of qualified proposals and may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees; to provide or obtain data regarding the application review process, award decisions, or the administration of awards; to government contractors, experts, volunteers, and researchers as necessary to complete assigned work; and to other government agencies in order to coordinate programs. See Systems of Records, NSF 50, Principal Investigators/Proposal File and Associated Records, and NSF-51, 60 Federal Register 4449 (January 23, 1995), Reviewer/Proposal File and Associated Records, 59 Federal Register 8031 (February 17, 1994).

Public Burden. Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of your receiving an award.

The public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Gail A. McHenry, Reports Clearance Officer, Information Dissemination Branch, National Science Foundation, 4201 Wilson Boulevard, Suite 245, Arlington, VA 22230.

The National Science Foundation has TDD (Telephonic Device for the Deaf) capability, which enables individuals with hearing impairment to communicate with the Foundation about NSF programs, employment, or general information. To access NSF TDD, dial (703) 306-0090; for FIRS, 1-800-877-8339.

Catalog of Federal Domestic Assistance Numbers:

- 47.041 Engineering Grants
- 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 Polar Programs

OMB# 3145-0058

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