



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

Dear Colleague Letter: Graduate Research Supplements (GRS) to Current ENG Awards to Broaden Participation

March 25, 2009

Dear Colleague:

This letter is to call your attention to an opportunity to broaden participation particularly of underrepresented students in Ph.D. programs in engineering through supplements to current research grants funded by the divisions in the Directorate for Engineering (ENG) at the National Science Foundation.

Introduction: The establishment of Graduate Research Supplements (GRS) reflects the continuing effort by ENG to promote increased participation of new Ph.D. students in all fields of engineering research with particular emphasis on individuals from underrepresented groups. The long-term goal of GRS is to increase the number of persons from underrepresented groups in advanced academic and professional careers. According to the NSF 2003 Survey of Doctorate Recipients (SDR), among teaching faculty in engineering, there are 10.3 percent women, 3.9 percent African American, 3.3 percent Hispanic, 0.4 percent American Indian/Alaskan Native and 7.1 percent persons with disabilities. The most recent NSF SDR in 2006 indicated the number of Doctorates degrees awarded by engineering disciplines (selected years from 1996 to 2005) increased from 6,309 in year 1996 to 6,404 in year 2005. With such a low level of increasing faculty from underrepresented groups, ENG recognizes that these underrepresented groups represent a significant untapped technical resource for the nation.

In FY 2005, the Divisions of Electrical, Communications and Cyber Systems (ECCS), and Chemical, Bioengineering, Environmental and Transport (CBET) Systems initiated a two-year pilot program through GRS to encourage active participation in on-going research programs by new Ph.D. students including women, underrepresented minorities, and persons with disabilities. Recognizing the importance and impact of the program, the Directorate for Engineering at this time is announcing GRS for its Divisions of Electrical, Communications and Cyber Systems; Chemical, Bioengineering, Environmental and Transport Systems; Civil, Mechanical and Manufacturing Innovation; Engineering Education and Centers; and Industrial Innovation and Partnerships. It is anticipated that GRS will help in the development of intellectual synergy between faculty and students, will provide faculty with the opportunity to involve additional graduate students in on-going research programs, will foster a learning and career advancement environment that supports students, and will lead to greater retention of students in the underrepresented populations.

Anticipated Type of Award: Supplements to ENG on-going awards.

Eligibility: A request for funding of a GRS should be made by the Principal Investigator of an existing ENG award. Only one new Ph.D. student for GRS may be supported under each research grant. GRS candidates must be United States citizens or nationals, or permanent resident aliens of the United States. The graduate students must be newly enrolled in, or planning to pursue the Ph.D. degree in engineering disciplines. Renewal for a second or third

year supplement requires a report on the progress of the student toward the Ph.D. degree and availability of funds in the program.

Proposal Preparation: Requests for supplements should be submitted through FastLane as described in <http://www.fastlane.nsf.gov/fastlane.htm>, following the instructions given in the Grant Proposal Guide (GPG) at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg, for supplemental funding requests. The procedure is the same as that described in the Research Experiences for Undergraduates (REU) solicitation under the sections for REU supplements for investigators holding an existing NSF research award. The Principal Investigator must enter a description of the proposed GRS activity (limited to three pages) in support of broadening participation, including a supporting budget and a justification of the funds requested. The proposal should articulate the form and nature of the involvement of the identified graduate student majoring in an engineering discipline in the Principal Investigator's on-going research program. The Directorate for Engineering expects that the GRS student will contribute to activities that comprise the intellectual core of the funded research effort. Since it is anticipated that GRS will promote increased participation of underrepresented graduate students in engineering, the proposal for a GRS should indicate the follow-up mechanism that will be used to encourage career advancement of the GRS student beyond participation in the Ph.D. research program. In addition, a brief biographical sketch of the candidate student must be included, which should incorporate the student's long-range career goals and commitment to diversity as a resource for enriching education in engineering disciplines. For further guidance concerning the GRS, the Principal Investigator should consult with the program director of the ENG award under which the GRS is to be supported. Inquiries regarding possible conflict-of-interest situations and other questions should be addressed to the GRS coordinators.

Proposal Review: An award decision will be based on internal review by the managing program director of the grant, and availability of funds in a particular program.

Award Size and Duration: The Principal Investigator may request a GRS for twelve months, renewable annually, for the duration of the research grant for a maximum period of three years for an individual student. The supplements are nontransferable and may only include graduate student stipend and tuition support consistent with academic institutional practices. Indirect costs are not permitted; however, an administration allowance limited to 25 percent of the student stipend may be included.

Award Information: Anticipated funding for GRS in FY 2009 is \$1,950,000, pending the availability of funds. The estimated number of supplements to be awarded will be 45-50.

Submission Deadline: The deadline for submission of this supplement request is May 26, 2009.

The Directorate for Engineering encourages its grantees to disseminate information on GRS to students planning to pursue the Ph.D. degree in engineering disciplines who share a commitment to diversity as a resource for enriching education. ENG anticipates that GRS will open and facilitate new avenues for increasing the participation of underrepresented students in engineering disciplines, and in turn, enhance the development of the U.S. engineering workforce in accordance with the America COMPETES Act and the Engineer of 2020 report of the National Academy of Engineering.

Inquiries regarding the supplement should be directed to one of the following GRS Coordinators:

Dr. Omnia El-Hakim
Program Director, Diversity and Outreach
Office of the Assistant Director
uelhakim@nsf.gov

703-292-2149

Dr. Usha Varshney
Program Director
Division of Electrical, Communications and Cyber Systems
uvarshne@nsf.gov
703-292-8339

Ms. Sharon Middledorf
Senior Specialist
Division of Engineering Education and Centers
smiddled@nsf.gov
703-292-5351

Ted A. Conway, Ph.D. - Program Director
Research to Aid Persons with Disabilities
Division of Chemical, Bioengineering, Environmental and Transport Systems Engineering
e-mail: tconway@nsf.gov
Tel: (703) 292-7091

Dr. Richard Fragaszy
Program Director
Division of Civil, Mechanical and Manufacturing Innovation
rfragasz@nsf.gov
703-292-7011

Dr. Juan Figueroa
Program Director
Division of Industrial Innovation and Partnerships
jfiguero@nsf.gov
703-292-7054