



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 10-024

Dear Colleagues:

The Engineering Directorate (ENG) and the Office of International Science and Engineering (OISE) at the National Science Foundation (NSF) is accepting proposals to conduct research on the effects of the devastating magnitude 7.0 earthquake that struck the island nation of Haiti on January 12, 2010. Proposals must conform to the guidelines for preparation of Rapid Response Research (RAPID) proposals as specified in the Proposal and Award Policies and Procedures (PAPP) Guide available at:

http://www.nsf.gov/pubs/policydocs/pappguide/nsf10_1/gpg_2.jsp#IID1

As noted in the PAPP Guide, the RAPID funding mechanism is used for proposals having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events. Given the international dimension, submitted proposals should address access to expertise, facilities, and resources at the Haitian site. Whenever feasible, the proposal should involve true intellectual collaboration with counterparts in Haiti.

The number of awards made by NSF will depend on the quality of the proposals received and the availability of funds. For full consideration, proposals should be submitted electronically via the NSF FastLane system by 5:00 pm, submitter's local time, Friday, March 5, 2010. It is anticipated that the majority of awards will not exceed \$40,000.

Principal Investigator(s) must contact the NSF program officer whose research is most germane to the proposal topic prior to submitting the proposal. The cognizant program officers for this opportunity are as follows:

Dr. Paul Bishop, Environmental Engineering, pbishop@nsf.gov

Dr. John Daniels, Geotechnical Engineering, jdaniels@nsf.gov

Dr. Bruce Hamilton, Environmental Sustainability, bhamilto@nsf.gov

Dr. Cerry Klein, Service Enterprise Systems, cklein@nsf.gov

Dr. Joy Pauschke, George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES), jpauschk@nsf.gov

Dr. Jessica Robin, Office of International Science and Engineering, jrobin@nsf.gov

Mr. Kevin Simmons, Industrial Innovation and Partnerships, kesimmon@nsf.gov

Dr. M. P. Singh, Hazard Mitigation and Structural Engineering, mpsingh@nsf.gov

Dr. Dennis Wenger, Infrastructure Management and Extreme Events, dwenger@nsf.gov

Dr. Rosemarie Wesson, Chemical and Biological Separations, rwesson@nsf.gov

The Program Officer may request the PI(s) to submit a draft proposal project summary via email to determine relevance and interest prior to formal submission of the RAPID proposal via FastLane.

Topics appropriate for RAPID proposals may include, but are not limited to, the following:

- Geotechnical systems performance, with appropriate site characterization and documentation of liquefaction, lateral spreading, differential settlement, subsidence, landslides, soil/structure interaction, and port and coastal regions.
- Structural and nonstructural systems performance, including buildings, bridges, dams, communication towers, water towers, industrial units, and other components of civil infrastructure systems; sensor-based tracking and monitoring of structural performance.
- Critical infrastructure systems performance (e.g., water and food supply, housing, wastewater, power, communications, transportation, health care delivery, and banking and finance).
- Collection of perishable field data for geotechnical, structural, nonstructural, and critical infrastructure systems performance studies using NEES mobile field equipment (<http://www.nees.org>). Proposers planning to use NEES mobile equipment will need to include in their proposal submission the equipment schedule and budget for equipment and

personnel deployment, and will be responsible for obtaining any required permissions and/or permits for field testing.

- Emergency response and relief: Use of imagery and sensor-based technologies for rapid post-event damage assessment; coordination of and technologies such as robots and processes for search and rescue; techniques for rapid, large-scale condition assessment of buildings and infrastructure; provision for mass casualty aid; provision of temporary shelters and housing; supply chain and delivery of international aid; post-event risk communication.

Given the scale and widespread physical damage associated with the event, proposers should include a detailed research plan that incorporates specific plans for country entry and logistics for data collection. The awardee organization is responsible for obtaining required visas for foreign travel and research permits and clearances. Proposers should be aware of the latest information from the U.S. Government regarding travel and stay in Haiti:

- U.S. Department of State, Travel Warning, Haiti
http://travel.state.gov/travel/cis_pa_tw/tw/tw_4632.html
- U.S. Geological Survey (USGS), USGS Statement on Earthquake Hazard and Safety in Haiti and the Caribbean Region, and any subsequent statements that may follow
http://www.usgs.gov/newsroom/article.asp?ID=2385&from=rss_home
- Centers for Disease Control and Prevention, Health Information for Travelers to Haiti
<http://wwwnc.cdc.gov/travel/destinations/Haiti.aspx>

Proposers should include, in the RAPID budget, travel costs for one trip to the Arlington, VA, area to present the results of their RAPID research at a workshop open to the public. The workshop is anticipated to be held in summer or fall of 2010.

ENG & OISE look forward to continuing work with the research community on the response to this disaster.

Thomas W. Peterson
Assistant Director for Engineering (ENG)

Larry H. Weber
Director, Office of International Science and Engineering (OISE)