

*Title: Program Director Position in the Division of Civil and Mechanical Systems (CMS)--Vacancy Announcement--
Dear Colleague Letter (Open Until Filled)*
Date: March 22, 2002

Program Director Position Available, George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES), Equipment Project Coordinator in the Division of Civil and Mechanical Systems (CMS), Directorate for Engineering at the National Science Foundation

Dear Colleague:

The Directorate for Engineering (ENG) announces a nationwide search to fill a Program Director (PD) position at the National Science Foundation (NSF) in the Division of Civil and Mechanical Systems (CMS). This Program Director position is for the Equipment Project Coordinator for the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) Program.

The National Science Foundation (NSF) (<http://www.nsf.gov>) is an independent U.S. government agency responsible for promoting science and engineering through programs that invest over \$4 billion per year in research and education projects. The National Science Foundation Act of 1950 established the mission of NSF to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.

The CMS Division staff includes 12 Program Directors (PDs): ten of the PDs manage an annual budget of over \$55 million in research, and two PDs manage construction of the \$81.8 million George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) to be completed between FY 2000 and FY 2004. The organization of the CMS Division is described at <http://www.eng.nsf.gov/cms/>. The CMS Division enables knowledge creation and intellectual growth in construction, geotechnical and geo-environmental engineering, structures, dynamics and control, sensors, mechanics, materials and surface engineering, tribology, information technology and infrastructure systems, and reduction of risks induced by earthquakes and other natural, terrorist, and technological hazards. The Division encourages cross-disciplinary research at the intersections and beyond the boundaries of traditional disciplines to promote discoveries and capitalize on emerging fields of science and engineering including nanotechnology, biotechnology, and information technology.

NSF Program Directors bear the primary responsibility for carrying out the Agency's overall mission: to support innovative and merit-reviewed activities in research and education that are fundamental to the nation's capacity to perform. To discharge this responsibility well requires not only domain knowledge in the appropriate disciplines, but also a commitment to high standards, a considerable breadth of interest and receptivity to new ideas, a strong sense of fairness, and a high degree personal integrity. The NSF environment is very demanding and exciting, and a successful Program Director must be a team player, able to integrate, innovate, and interpret new ideas.

The NEES Program is administered by the Directorate for Engineering through the Division of Civil and Mechanical Systems. The NEES Program is coordinated by the NEES Program Director (Dr. Joy Pauschke) with the NEES Project Advisory Team (PAT). The NEES Equipment Project Coordinator will work directly with the NEES Program Director and will be an important member of the NEES PAT. The NEES PAT also includes Program Directors from other NSF Directorates, Office of General Counsel, Office of Budget, Finance, and Award Management, and the Division of Grants and Agreements.

NEES will revolutionize the environment for earthquake engineering research, bringing focus on collaborative and integrated physical testing, theory, computation, databases, and model-based simulation to improve the seismic design and performance of U.S. civil and mechanical systems. NEES will provide a networked, national resource of geographically distributed, shared-use, next-generation earthquake engineering research equipment installations, with teleobservation and teleoperation capabilities. Earthquake engineering research equipment to be acquired or upgraded under the NEES includes shake tables, geotechnical centrifuges, a tsunami wave basin, large-scale laboratory experimentation facilities, and field experimentation and monitoring installations. NEES equipment will be located at U.S. academic institutions and will be networked into a collaboratory through the development of a high performance network, by the NEES System Integration awardee, that will enable teleobservation and teleoperation and provide a curated repository for experimental data, collaborative capabilities, and access to compute, simulation, and visualization resources.

Through the NEES Program, NSF expects to fund 15 to 20 earthquake engineering equipment sites as cooperative agreements. Total authorized funding for NEES, including experimental equipment, the NEES network, and a NEES Consortium, is \$81.8 million over the period FY 2000-2004. The NEES equipment sites and network are expected to be operational by September 30, 2004 and will be operated by the NEES Consortium as a collaboratory through September 30, 2014. Further information on the NEES Program is available at <http://www.eng.nsf.gov/nees>.

The NEES Equipment Project Coordinator will provide NSF-level project oversight for all NEES equipment awards. This includes the following tasks:

- Select members and coordinate activities of a team of peer experts assembled to review recommended NEES equipment proposals and supplemental requests for merit review, information completeness, and constructability.
- Provide technical input for and prepare NEES equipment award documents.
- Establish appropriate reporting requirements for the NEES equipment awardees, review submitted reports, prepare recommendations for annual funding increments, and make recommendations for awardee requested changes in cooperative agreements to the NEES Project Advisory Team.
- Serve as secretary of the NEES Project Advisory Team.
- Coordinate for NSF the overall NEES equipment award project schedule.
- Regularly interface with the NEES equipment awardees using teleconferencing and videoconferencing technology.
- Monitor the progress by NEES equipment awardees toward individual project milestones, including costs, design, procurement, construction, installation, commissioning and performance testing. Prepare quarterly status reports summarizing the progress of each equipment award.
- Develop and implement NSF-level quality assurance procedures for the equipment awards, including annual and/or periodic site visits to NEES equipment awardees as needed.
- Coordinate equipment specifications and installations between the NEES equipment awardees and the NEES System Integration awardee.

- Develop and maintain the NEES Requirements Document that describes in detail all equipment and network components of the NEES Program.
- Participate in weekly NEES team meetings.
- Routinely inform the CMS Division Director and NEES Program Director of the status of the NEES equipment awards.
- Review and approve equipment subaward purchases over \$100,000.

The following professional/technical qualifications are essential and desirable for the NEES Equipment Project Coordinator:

Essential

- Minimum of a Ph.D. or equivalent experience in engineering or appropriate related field plus six or more years of successful research, research administration, and/or managerial experience pertinent to the position.
- Minimum of ten years of experience as a project manager for engineering, procurement and construction projects, with increasingly complexity over the ten-year period.
- Demonstrated proficiency in hands-on use of commercially available project management software.
- Demonstrated knowledge and experience with quality assurance procedures for project management and construction.
- Demonstrated ability to work in a project team environment that requires interface and coordination across engineering and science disciplines and academic, government, and private sectors.
- Demonstrated oral and written communication skills, including hands-on proficiency of MS Office software.
- Ability to serve through December 31, 2004 at NSF as the NEES Equipment Project Coordinator.
- The NEES Equipment Project Coordinator must complement technical excellence with management and leadership skills, including skills for mentoring, public speaking skills, project management experience, financial management skills, and the ability to make timely decisions.

Desirable

- Demonstrated project management or construction management experience with major scientific and engineering research equipment or facilities at U.S. academic institutions, including installation of new equipment, upgrades of existing equipment, and facilities construction and remodeling.
- Demonstrated familiarity with earthquake engineering research equipment.
- Demonstrated experience with commissioning of major scientific and engineering research equipment.

- Demonstrated knowledge of equipment and installation procedures for local area computing networks and connectivity to high performance computing networks.
- Demonstrated experience with cooperative agreement and grant administration, fiscal management, and budget preparation.
- Professional engineering registration.

The Program Directors recruited under this announcement will be appointed as a reimbursable detail from another Federal agency, or under the Visiting Scientist/Engineer or the Intergovernmental Personnel Act (VSE or IPA rotator" position), or as a Temporary Federal Employee. The specific arrangement will be decided on an individual basis. The preferred starting date for these positions will be in June 1, 2002 or as soon after as possible. NSF is particularly interested in attracting qualified candidates from under-represented groups (women and minorities) to these positions.

Please send nominations, statements of interest, and resumes regarding NEES Equipment Project Coordinator Program Director position to:

Dr. Richard J. Fragaszy
CMS Personnel Search Coordinator
Directorate for Engineering
National Science Foundation
4201 Wilson Boulevard, Room 545
Arlington, Virginia 22230
Tel: (703) 292-8360
Fax: (703) 292-9053
email: rfragasz@nsf.gov

Formal consideration of applications for each position will commence immediately and will continue until a successful candidate has been identified.

Sincerely,

Priscilla P. Nelson
Director, Division of Civil and Mechanical Systems
Tel: (703) 292-8360 general or (703) 292-7018 direct
Fax: (703) 292-9053
email: pnelson@nsf.gov