



National Science Foundation

Excepted Position Vacancy

ANNOUNCEMENT NO: E20050131

OPEN: 08/29/05

CLOSE: 10/31/05

THIS IS A PERMANENT POSITION.

POSITION VACANT: Program Director (Civil Engineer) AD-810-4. Annual salary ranges from \$88,369 to \$137,713.

LOCATION: Directorate for Engineering, Division of Civil & Mechanical Systems, Infrastructure Materials & Structural Mechanics, Arlington, VA

BARGAINING UNIT STATUS: This position is included in the bargaining unit and will be filled in accordance with the Merit Promotion Plan described in NSF Manual 14 (PER II-100).

AREA OF CONSIDERATION: All Sources.

RELOCATION: Expenses will be paid.

THIS POSITION IS OUTSIDE THE COMPETITIVE CIVIL SERVICE

Appointment to this position will be made under the Excepted Authority of the NSF Act. Candidates who do not have civil service status or reinstatement eligibility will not obtain civil service status if selected. Candidates currently in the competitive service will be required to waive competitive civil service rights if selected. Usual civil service benefits (retirement, health benefits, life insurance) are applicable for appointments of more than one year.

The National Science Foundation is seeking a qualified candidate for the position of Program Director for the Infrastructure Materials & Structural Mechanics Program (IMSM) in the Division of Civil and Mechanical Systems, Directorate for Engineering, Arlington, VA. The desired starting date for this appointment is January 2006.

The Civil and Mechanical Systems (CMS) Division funds research that contributes to the knowledge base and intellectual growth in the areas of infrastructure construction and management, geotechnology, structures, dynamics, control and mechatronics, engineering mechanics and materials, and sensors and smart structures technology, as well as the reduction of risks induced by earthquakes and other natural and technological hazards. The Division encourages cross-disciplinary partnerships at the intersections of traditional disciplines, to promote discoveries using technologies such as sensors, actuators and adaptive systems, nanotechnology, information technology, and simulation to enable revolutionary advances in our nation's civil and mechanical systems. The CMS Division is organized into three program clusters: Engineered Materials and Mechanics Cluster, Intelligent Civil and Mechanical Systems Cluster, and Infrastructure Systems and Hazard Mitigation Cluster. Further information about CMS is available at <http://www.eng.nsf.gov/cms>

The IMSM program is part of a group of four programs, which constitute the Engineered Materials and Mechanics cluster within CMS. The IMSM program supports basic research on properties and applications of advanced structural materials; repair, retrofit and application of structural components; durability of structural materials and components, including effects derived from interaction with the natural and constructed environment; development and constitutive characterization of new construction materials; and the behavior of infrastructure materials and structural components. The research portfolio of the IMSM program element includes projects on experimental, analytical, computational and modeling aspects of properties of infrastructure materials: strength, fracture, durability, and performance of concrete, composites, asphalt, steel, structural polymers, reinforcing materials, wood and biodegradable structural materials; scale effects from nanoscale to macroscale; microstructural effects;

non-destructive testing, in-situ property evaluation and sensing. Also included are materials for repair and rehabilitation, bond performance and reliability. Support is provided for research that will increase the fundamental knowledge for predicting the performance of infrastructure materials and for selecting, designing and developing new materials and their applications. Support is also provided for research, which incorporates advances from other fields, such as nanotechnology, materials science and engineering, chemistry and surface science into the broader studies of infrastructure materials.

DUTIES AND RESPONSIBILITIES:

The incumbent in this position serves as Program Director in the Infrastructure Materials & Structural Mechanics (IMSM) program in the Division of Civil and Mechanical Systems.

The incumbent will provide expertise in the program's specialized scientific or engineering research areas, as well as providing a broad understanding of current research and educational activities. The work requires expert knowledge of research dealing with Engineered Materials & Mechanics (EMM). The person selected familiarizes themselves with proposals submitted to the program, and is open to discussion of proposals that involve cross-disciplinary research in CMS, ENG and throughout NSF where the disciplinary matter of EMM is involved. The incumbent also manages the proposal review process, including selecting reviewers, negotiating budgets, conducting analyses of proposals, and recommending final actions. The incumbent participates as assigned in NSF working group activities, and developed liaison interactions with counterparts at other federal agencies. The incumbent is recognized as an agency authority for the program and coordinates the effort of others in research grant activities. The selectee needs to be an expert in the following:

- Conducting programmatic reviews, discussions, negotiations, and liaison. Also in determining funds available, and evaluating similarly or related projects including internal and external liaison.
- Reviewing technical progress reports and monitoring projects to determine satisfactory technical progress is being made.
- Performing site visits to determine the ability of proposers to perform proposed work, to review progress on awards and to assure proper expenditure of funds.
- Keeping abreast of trends and developments within the appropriate engineering field by reading the relevant literature, attending professional meetings and by personal discussions with leaders in the field.
- Recommending and develop new or revised policies and plans in technical, fiscal, and administrative matters to improve the activities and management of programs.
- Conducting final review of proposals, and evaluating, and recommending acceptance or declination.
- Providing senior managerial and technical guidance to related sub disciplinary programs.
- Representing the Foundation at professional meetings and seminars.

QUALIFICATIONS REQUIRED: Applicants must possess a Ph.D. or equivalent experience in civil engineering, construction engineering, materials engineering, solid mechanics, or allied disciplines. In addition, six or more years of active research in the field, research administration and/or substantial managerial experience in academe, industry, or government is required. In addition the applicant must have at least one year of experience running a proposal-driven competitive grant program at the Federal Government level. Also required are knowledge of the relevant research community, ability to deal with both experiment and theory, a broad knowledge of advances in other relevant fields, and effective communication skills (written & oral).

QUALITY RANKING FACTORS:

1. Knowledge and understanding of research directions and literature in the broad area of information infrastructure materials and structural mechanics with particular emphasis on relationships between microstructure and mechanical properties, durability and performance on development of experimental and computational tools to study infrastructure materials and their properties and for solving novel problems in structural mechanics.
2. Research, analytical and writing skills demonstrating the ability to make sound scholarly judgments and funding decisions, and to explain such decisions in writing.
3. Ability to organize, implement and manage a federal proposal-driven engineering grant program, allocating resources effectively to meet a broad spectrum of program goals.

4. Ability to cooperate and work effectively with peers in other engineering and scientific disciplines on joint ventures and to present and advocate program plans and policies to individuals within the Foundation, other government agencies, academic institutions, private organizations and the research community at large.

BASIS FOR RATING: Final ranking is based on an evaluation of your experience, education and training as they relate to the knowledge, skills and abilities specified in the Quality Ranking Factors. Current performance appraisal, letter(s) of recommendation, and awards may also be used in the evaluation process.

CONDITIONS OF EMPLOYMENT: Appointment to the position is contingent upon successful completion of the appropriate background investigation. Satisfactory completion of a one-year trial period may also be required.

HOW TO APPLY: You may apply for this position with the *Optional Application for Federal Employment* (OF-612), the older *Application for Federal Employment* (SF-171), a resume, or other application format of your choice - so long as it contains the necessary information (summarized below). You must also submit a current Performance Appraisal or letter(s) of recommendation from professionals who can comment on your capabilities. In order to ensure full consideration, it is recommended that you submit a supplemental statement which specifically addresses how your background and experience relate to each Quality Ranking Factor listed on this announcement.

You must specify the job announcement number, and title and grade(s) of the job for which you are applying. You should also provide the following information: ♦ Your country of citizenship. ♦ Your social security number. ♦ Information about your education, including (1) high school graduation date and (2) college/university information - your major, and type and year of degree(s). If no degree, show total credits earned and indicate whether they are semester or quarter hours. ♦ Information about all your work experience related to this job, including job titles, duties and accomplishments, employer's name and phone number, number of hours worked per week, starting and ending dates (month and year), and annual salary. If you held various positions with the same employer, describe each separately. ♦ If you have Federal civilian experience, indicate the highest grade held, the job series, and dates held. ♦ The brochure *Applying for a Federal Job* provides information on the Federal job application process; it is available by calling the number listed below. **If your application does not provide all the information requested in the vacancy announcement, you may lose consideration for this job.**

The National Science Foundation provides reasonable accommodations to applicants with disabilities on a case-by-case basis. If you need a reasonable accommodation for any part of the application and hiring process, please notify the point of contact listed on this vacancy announcement.

Submit all application material to National Science Foundation, Division of Human Resource Management, 4201 Wilson Boulevard, Room 315, Arlington, VA 22230. Attn: Announcement Number E20050131. In addition to the required application materials, you are asked to complete and submit the attached Applicant Survey form. Submission of this form is voluntary and will not affect your application for employment. The information is used for statistical purposes only. **ALL FORMS MUST BE RECEIVED BY THE CLOSING DATE OF THIS ANNOUNCEMENT.** For additional information call Myra Loyd, on (703) 292-4363 Technical questions may be referred to Dr. Jorn Larsen-Basse,, Program Director at 703-292-7016; Dr. Ken Chong at 703-292-7008. Hearing impaired individuals may call TDD (703) 292-8044.

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HIGHLY QUALIFIED STAFF THAT REFLECTS THE DIVERSITY OF OUR NATION**

NATIONAL SCIENCE FOUNDATION
APPLICANT SURVEY

OMB No. 3145-0096
Expiration: 7/31/2005

Vacancy Ann. #: _____ Position Status (temporary/permanent): _____

Position Title/Series/Grade: _____

INSTRUCTIONS

Your completion of this form will be appreciated. Submission of this Information is voluntary and it will have no effect on the processing of your application. The data collected will be used only for statistical purposes to ensure that agency personnel practices meet the requirements of Federal law. Pursuant to 5 CFR 1320.5(b), an agency may not conduct or sponsor, and a person is not required to respond to an information collection unless it displays a valid OMB control number. The OMB control number for this collection is 3145-0096. NSF estimates that each respondent should take about 3 minutes to complete this survey, including time to read the instructions. You may have comments regarding this burden estimate or any other aspect of this survey, including suggestions for reducing this burden. If so, please send them to NSF Reports Clearance Officer, Division of Administrative Services, NSF, 4201 Wilson Blvd., Arlington, VA. 22230.

PRIVACY ACT INFORMATION

GENERAL - This information is provided pursuant to Public Law 93-579 (Privacy Act of 1974), December 31, 1974, for individuals completing Federal records and forms that solicit personal information.

AUTHORITY - Section 7201 of title 5 of the U.S. Code and Section 2000e-16 of title 42 of the U.S. Code.

PURPOSE AND ROUTINE USES

The information is used for research and for a Federal Equal Opportunity Recruitment Program (FEORP) to help insure that agency personnel practices meet the requirements of Federal law. Address questions concerning this form and its uses to the Privacy Act Officer, National Science Foundation, Arlington, VA 22230.

1. Today's Date: _____ 2. Year of Birth: _____

3. How did you learn about the particular position for which you are applying? (Circle appropriate number.)

- 01 - Newspaper (specify) _____
- 02 - Contact with NSF Personnel Office (Agency Bulletin Board or other Announcement)
- 03 - NSF-initiated personal contact
- 04 - Science Magazine, or other professional journal or magazine (specify) _____
- 05 - Affirmative Action Register
- 06 - Attendance at conference, meeting or job fair (specify) _____
- 07 - NSF recruitment at school or college
- 08 - Colleague referral
- 09 - NSF Bulletin
- 10 - Federal, State or local job information center
- 11 - State vocational rehabilitation agency or Veterans Administration
- 12 - State employment office
- 13 - School or college counselor or other official
- 14 - Private job Information service
- 15 - Private employment service
- 16 - Friend or relative working at NSF
- 17 - Friend or relative not working at NSF
- 18 - NSF website
- 19 - Internet or other website
- 20 - Other (specify) _____

4. Select the ethnic category with which you most closely identify:

- A. **Hispanic or Latino.** A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
- B. **Not Hispanic or Latino.**

5. Select one or more racial category with which you most closely identify:

- A. **American Indian or Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.
- B. **Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- C. **Black or African American.** A person having origins in any of the black racial groups of Africa.
- D. **Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- E. **White.** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

6. Sex (Circle the appropriate letter.) F - Female M - Male

7. Please provide information on your disability status by circling the appropriate category below:

- 1. I do not have a disability; 2. Hearing impairment; 3. Vision impairment; 4. Missing extremities; 5. Partial paralysis;
- 6. Complete paralysis; 7. Convulsive disorder; 8. Mental retardation; 9. Mental or emotional illness; 10. Severe distortion of limbs and/or spine; 11. I have a disability but it is not listed.

FOR AGENCY USE

Agency Code: _____

AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER