



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

DATE: May 30, 2009

TITLE: The Division of Electrical, Communications and Cyber Systems (ECCS) – Employment Opportunities for 3 Program Director Positions

Dear Colleague:

The Division of Electrical, Communications and Cyber Systems (ECCS), within the Directorate for Engineering at the National Science Foundation, announces a nationwide search for senior-level engineering researchers to fill 3 open Program Director positions. The desired starting timeframe for the positions is in the Fall of 2009.

The ECCS Division addresses fundamental research issues underlying component and device technologies, power and energy, controls, computation, networks, communications and cyber technologies, and supports the integration and networking of complex intelligent systems principles at the nano, micro, and macro scales for a variety of application domains in healthcare, energy, communications, critical infrastructures, environment, homeland security, transportation, and manufacturing.

The Division is organized around three broad programs: Electronics, Photonics and Device Technologies (EPDT); Power, Controls and Adaptive Networks (PCAN); and Integrative, Hybrid and Complex Systems (IHCS). The management of these programs involves a team approach by Program Directors within the Division to reflect the increasing convergence of disciplinary topics and the need for interdisciplinary approaches to new problem areas. ECCS has a continuing goal to integrate education into all of its program activities. For further information, please visit the ECCS web site at <http://www.nsf.gov/div/index.jsp?org=ECCS>.

1. **Program Director for the Micro and Nano Systems Thrust** within the IHCS program requires an individual with broad and demonstrated experience to address emerging research areas in MEMS and micro and nano systems such as for environmental sensing, diagnostic and therapeutic healthcare, scanning probe microscopy, and micro total analysis. Experience in physical, chemical and biological transduction techniques at the micro- and nano-scales; fabrication, assembly and packaging challenges at these scales; and interface circuitry, multi-sensor architectures and protocols is also desired.
2. **Program Director for the Power and Energy Thrust** within the PCAN program requires an individual with broad and demonstrated experience in electric power systems encompassing generation, transmission, distribution, storage, management, and power electronics. Emerging research areas include integration of alternative and distributed energy resources such as ocean wave harvesting, wind generation, solar energy, and microgrids, and the application of nanotechnology to power and energy systems. A systems integration vision for electric power and other civil or cyber infrastructures including cyber-enabled wide area monitoring and control, smart grids, emergency response, as well as electric power markets and policies is also desired.
3. **Program Director for the Cyber Systems Thrust** within the IHCS program requires an individual with broad and demonstrated experience in hardware, algorithms, signal processing, and system architectures to enable the next generation of computing and communication systems and networks. An important emerging research area is cyber-physical systems (CPS), requiring integrative approaches to computation, communication, and control with natural and human-made engineered systems. Understanding of the use of cyber infrastructure for innovative research in areas of interest to the ECCS Division is also desired.

NSF Program Directors have the primary responsibility for carrying out the Agency's overall mission to support innovative and merit-evaluated activities in fundamental research and education that contribute to the nation's technological strength, security, and welfare. This requires expertise in appropriate disciplines to implement the proposal review and evaluation process for the program, as well as strong skills in written and oral communication, a commitment to high standards, considerable breadth of interest and receptivity to new ideas, strong sense of fairness, good judgment, and a high degree of personal integrity. The position provides a challenging experience and an excellent opportunity to encourage and support engineering research and education. The individual will work with other Program Directors in formulating research strategies, developing collaboration and cooperation across the Foundation and among government, academe and industry, fostering outreach to underrepresented groups, and providing leadership within NSF and the research community.

Qualification requirements for the position are a Ph.D. or equivalent professional experience in the relevant discipline in engineering or science, plus six or more years of successful research, research administration and/or managerial experience in academe, industry, or government. The candidate must demonstrate vision and leadership to identify and support long-term research and education that contributes to the mission of the Division and NSF.

The Program Director positions recruited under this announcement may be filled under the following rotational appointment options for a period of one year and may be extended for an additional one or two years by mutual agreement:

Intergovernmental Personnel Assignment (IPA) Act: Individuals eligible for an IPA assignment with a Federal agency include employees of State and local government agencies or institutions of higher education, Indian tribal governments, and other eligible organizations in instances where such assignments would be of mutual benefit to the organizations involved. The individual remains an employee of the home institution and NSF provides funding toward the assignee's salary and benefits. Further information regarding IPA positions is available at http://www.nsf.gov/about/career_opps/rotators/ipa.jsp.

Visiting Scientist Appointment: Appointment to this position will be made under the Excepted Authority of the NSF Act. Visiting Scientists are on a non-paid leave status from their home institution and appointed to NSF's payroll as a Federal employee. NSF withholds Social Security benefits (i.e., health benefits and life insurance), either directly to the home institution or to the carrier. Further information is available at http://www.nsf.gov/about/career_opps/rotators/ipa.jsp.

Temporary Excepted Service Appointment: Appointment to this position will be made under the Excepted Authority of the NSF Act. Candidates who do not have civil service 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, and life insurance) are applicable for appointments of more than one year.

For additional information on NSF's rotational programs, please see "Programs for Science, Engineering and Science Education Positions" on the NSF website at: http://www.nsf.gov/about/career_opps/.

Should you or your colleagues be interested in this position, or wish to nominate suitable candidates, please contact the search committee coordinator, Dr. Kishan Baheti (rbaheti@nsf.gov), and forward a curriculum vita to him by July 15, 2009. Formal consideration of applications will begin after the closing date and the position will remain open until filled. Inquiries, applications, and nominations for this Program Director position should be directed to:

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