



National Science Foundation

4201 Wilson Boulevard
Arlington, Virginia 22230

Title: Division of Electrical and Communications Systems (ECS)
Directorate for Engineering (ENG)
Employment Opportunities - Program Director
Dear Colleague Letter

Date: May 12, 2006

Dear Colleague,

The Division of Electrical and Communications Systems (ECS) announce a nationwide search for a senior-level engineering researcher to serve as Program Director for the Cybersystems program at the National Science Foundation (NSF). The desired starting date for the position is August 1, 2006.

The Division of Electrical and Communications Systems (ECS) addresses fundamental research issues underlying component and device technologies, power, controls, networking, communications and cyber technologies, and supports the integration and networking of intelligent systems principles at the nano, micro and macro scales for a variety of application domains in healthcare, homeland security, disaster mitigation, energy, telecommunications, environment, transportation, manufacturing, and other systems-related areas. ECS envisions a research community that will address major technological challenges for the next generation of devices and systems due to convergence of technologies and increased emphasis on interdisciplinary research. ECS has a continuing goal to integrate education into its programs to support the education of a diverse workforce in the 21st century that will continue innovative advances for the rapid development of emerging technologies as drivers of the global economy.

The ECS Division is organized around three programs:

- Electronics, Photonics and Device Technologies ([EPDT](#))
- Power, Controls and Adaptive Networks ([PCAN](#))
- Integrative, Hybrid and Complex Systems ([IHCS](#))

The management of these programs involves a team approach by Program Directors of the ECS Division, to reflect the increasing convergence of traditional disciplinary topics and the need for interdisciplinary approaches to new problem areas. In addition to these program areas, ECS sponsors workshops on areas of frontier and innovative technologies, which often lead to special program initiatives. Please visit our web site at <http://www.nsf.gov/div/index.jsp?div=ECS>

This job opening is in the area of cybersystems in the IHCS program. The candidate for this position should have broad expertise and specific demonstrated experience in innovative hardware/software architectures for emerging areas of cyberengineering and cybersystems.

Research in cyberengineering systems supports activities that integrate physical devices with distributed sensing and actuation, communications, storage, computation and control of complex systems; focuses on design, integration and implementation of multi-scale and multi-level complex systems; and enables visualizing, analyzing and reconfiguring of complex systems due to emergent behavior to develop reliable and agile infrastructures for domain-specific applications. Some examples include, but are not limited to: multi-scale dynamic system integration for real-time monitoring and control of engineered complex and hybrid systems; integrated hybrid optical and electronic systems for high-speed computation and communications; self-organizing blackout-free electric power grid; ambient intelligent systems' networks for homes of the future; computer-integrated telemedicine and robotic surgical systems; and a globally interactive environment for engineering education.

Program Director positions at the National Science Foundation provide a challenging experience and an excellent opportunity to encourage and support engineering research and education. The individuals will work with other Program Directors in formulating research strategies, developing cooperation among government, academia and industry, fostering outreach to underrepresented groups, and will provide leadership within NSF and the research community. The positions require a Ph.D. with a minimum of six years of academic, government or industrial experience.

The Program Director position recruited under this announcement may be filled under the following appointment options:

Intergovernmental Personnel Act (IPA) Assignment. 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. Initial IPA assignments are made for a one-year period and may be extended by mutual agreement for up to two additional years.

Visiting Scientist Engineering Educator. Appointment to this position will be made under the Excepted Authority of the NSF Act. A Visiting Scientist is on non-paid leave status from their home institution and appointed to NSF's payroll as a Federal employee. NSF withholds Social Security taxes and pays the home institution's contributions to maintain retirement and fringe benefits (i.e. health benefits and life insurance), either directly to the home institution or to the carrier. Appointments are usually made for up to one year and may be extended for an additional year by mutual agreement.

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 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. Temporary appointment may not exceed three years.

For additional information on NSF's rotational programs, please see "Programs for Scientists, Engineers, and Educators" 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. Rajinder P. Khosla (rkhosla@nsf.gov), and forward a curriculum vitae to him by June 15, 2006. Applications will be reviewed immediately after this date, though the position will remain open until filled. For questions or further information, please feel free to contact:

Dr. Rajinder P. Khosla, Search Committee Coordinator
Division of Electrical and Communications Systems
National Science Foundation
4201 Wilson Blvd., Arlington, VA 22230
Phone: (703)-292 8339
FAX: (703)-292 9147
Email: rkhosla@nsf.gov

Dr. Usha Varshney, Director
Division of Electrical and Communications Systems
National Science Foundation
4201 Wilson Blvd, Arlington, VA 22230
Phone: (703)-292 8339
FAX: (703)-292 9147
Email: uvarshne@nsf.gov

**NSF IS AN EQUAL OPPORTUNITY EMPLOYER COMMITTED TO EMPLOYING A
HIGHLY QUALIFIED STAFF THAT REFLECTS THE DIVERSITY OF OUR NATION**