



National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

ECCS 13-001

## **Dear Colleague Letter: The Division of Electrical, Communications and Cyber Systems (ECCS) - Employment Opportunities for a Program Director Position**

Date: May 27, 2013

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 researcher to fill an open Program Director position in the Energy, Power, and Adaptive Systems (EPAS) area.

Formal consideration of interested applications will begin **June 17, 2013** and will continue until a selection is made. The division is looking to fill this position during the summer timeframe.

The ECCS Division addresses fundamental research issues underlying component and device technologies, energy and power research, including smart grid, 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 Energy, Power, and Adaptive Systems (**EPAS**) program invests in the design and analysis of intelligent and adaptive engineering networks, including sensing, imaging, controls, and computational technologies for a variety of application domains. EPAS places emphasis on electric power networks and grids, including generation, transmission and integration of renewable, sustainable and distributed energy systems; high power electronics and drives; and understanding of associated regulatory and economic structures. Topics of interest include alternate energy sources, the Smart Grid, and interdependencies of critical infrastructure in power and communications. The program also places emphasis on energy scavenging and alternative energy technologies, including solar cells, ocean waves, wind, and low-head hydro. In addition, the program supports innovative test beds, and laboratory and curriculum development to integrate research and education. EPAS invests in adaptive dynamic programming, brain-like networked architectures performing real-time learning, neuromorphic engineering, telerobotics, and systems theory. The program supports distributed control of multi-agent systems with embedded computation for sensor and adaptive networks. EPAS provides additional emphasis on emerging areas, such as quantum systems engineering, quantum and molecular modeling and simulation of devices and systems.

The successful candidate will possess **broad and demonstrated experience to address emerging research in areas such as** Energy Collection and Harvesting Devices and Systems, Energy Storage, Advanced Power Electronics, Electric Grid Interfaces, Electric and Hybrid Vehicles, Energy/Power Sensing, and Local Distributed Power Systems.

The Division is organized around three broad programs: Electronics, Photonics and Magnetic Device Technologies (EPMD); Energy, Power, and Adaptive Systems (EPAS); and Communications, Circuits,

and Sensing Systems (CCSS). 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 a <http://www.nsf.gov/div/index.jsp?org=ECCS>.

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. 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.

The Program Director position recruited under this announcement may be filled under the **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. Initial assignments under IPA provisions may be made for a period up to two years, with a possible extension for up to an additional two-year period. The individual remains an employee of the home institution and NSF provides the negotiated 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 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/](http://www.nsf.gov/about/career_opps/).

Applicants should indicate in their cover letter that they are applying to the EPAS Position. Please submit your application to:

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