NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VA 22230

Title: Division of Electrical and Communication Systems (ECS), Control, Networks, and Computational Intelligence, (CNCI) Program Director
Employment Opportunities--Dear Colleague Letter

Date: March 30, 2004

Dear Colleague:

The Division of Electrical and Communication Systems (ECS) announce a nationwide search for a Program Director for the Control, Networks, and Computational Intelligence Program at the National Science Foundation (NSF).

The ECS division addresses fundamental research and education issues underlying both component technologies and systems integration principles that involve signal processing, control and communications at the macro, micro and nanoscales. Some of the special interagency and NSF research programs that ECS manages for FY2004 funding are: Sensors and Sensor Networks and Organic Electronics and Photonics. In addition ECS is engaged actively in the NSF Nanoscale Science & Engineering program that is a major component of the National Nanotechnology Initiative. The division also manages the National Nanotechnology Infrastructure Network (NNIN). Please visit our web site at http://www.eng.nsf.gov/ecs/.

The ECS division supports research on microelectronics, spin, molecular, organic, opto and quantum electronics, MEMS, NEMS, sensors, RF MEMS, integrated systems for sensing and control, systems on a chip, cyber engineering, complex adaptive systems, neural networks and pattern recognition for data mining, power and energy systems, efficiency and security of the electric power grid, and enablers for high speed, ultra high capacity optical and wireless networks, high frequency integrated electronics, microwave and millimeter wave devices, electromagnetic modeling and simulations. The division is committed to the education of engineers at the undergraduate and graduate levels, increasing the participation of members of underrepresented groups and participating in outreach programs at the K-12 level. The division actively participates in NSF-wide initiatives such as REU, RET, IGERT, MSP, and CRCD to address 21st century workforce development concerns (details may be found at www.nsf.gov). The division's FY2004 budget is $75.4M managed by the division director, a senior engineering advisor and eight program directors.

The ***Control, Networks, and Computational Intelligence Program*** supports creative research underlying the analysis and design of intelligent engineering systems for control, communications, and computation. The program invites proposals for research that can lead to improved methods for analysis, design, and evaluation of complex systems that incorporate characteristics of non-linearity, uncertainty, scaleability, and non-stationarity.

NSF Program Directors bear the primary responsibility for carrying out the Agency's overall mission: to support innovative and merit-reviewed activities in basic research and education that contribute to the nation's technical strength, security, and welfare. To discharge this responsibility requires not only 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, good judgment, and a high degree of personal integrity. Program Directors should have a breadth of technical knowledge and vision, good communications skills, and an ability to work well with others. Ability to assess risk, potential outcomes at the frontiers of research topics of interest to the division, and good contacts with the research community is needed. Active participation in NSF's commitment to the broad impacts of discovery and innovation in promoting teaching, training and learning; integration of research and education; representation of underrepresented groups; enhancement of the research/education infrastructure, such as facilities, instrumentation, networks and partnerships; and the broad dissemination of research and educational advances for the benefit of society is required of all NSF Program Directors.

Qualification requirements include a Ph.D. or equivalent professional experience in engineering, plus six or more years of successful research, research administration and/or substantial managerial experience in academe, industry, or government. Also desirable is a broad experience in Power and Energy Systems; Distributed and Intelligent Systems; Control and Optimization techniques for Distributed Networks; and cross-disciplinary goals that link Power Engineering to Economics policy and Social Sciences; Reliability, Security, and Efficiency of the Electric Power Grid; Environmental issues; Non-Fossil, Alternative Energy systems; convergence of Cyber and Critical Infrastructure; new Pedagogy and Curricula to prepare the work force of the future.

The appointee is expected to function effectively both within specific programs, as well as in a team mode, contributing to and coordinating with organizations in the Directorate, across the Foundation, and with other Federal and State government agencies and private-sector organizations. Periodic assignments to leadership of interdivisional, inter-directorate and interagency programs may be made. We are particularly interested in attracting women and underrepresented minority candidates to these positions.

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

- **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. 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 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.

Should you or your colleagues be interested in this position, please contact the search committee coordinator, Dr. Fil Bartoli (fbartoli@nsf.gov) and forward a curriculum vita to him by April 15, 2004. Applications will be reviewed immediately after this date, and the position will remain open until filled.

For additional information on NSF's rotational programs, please see "Programs for Scientists, Engineers and Educators" on the NSF website at www.nsf.gov/jobs.

Applications and questions concerning Program Director positions should be directed to:

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