Title: Program Director Vacancy for Engineering Research Centers Program, Engineering Education and Centers Division (EEC), National Science Foundation

Dear Colleague,

The Directorate for Engineering at the National Science Foundation (NSF) is seeking a qualified candidate for a senior-level electrical engineer or computer scientist with experience in interdisciplinary engineering research management to serve as a Program Director for the Engineering Research Centers (ERC) Program, within the Division of Engineering Education and Centers (EEC).

Positions will be filled on a one or two year Visiting Scientist Appointment, under the terms of the Intergovernmental Personnel Act (IPA), or as a Federal Temporary Appointment. Temporary and Visiting Scientist appointments will be made under the Excepted Authority of the NSF Act with a current salary range of $80,690 - $125,747, depending on qualifications and experience. For Visiting Scientist appointments, individuals are in a non-pay leave status from the home institution and are appointed to NSF's payroll as a Federal employee. NSF withholds FICA and provides reimbursement for fringe benefits. For Federal temporary appointments of more than one year, the usual civil service benefits (retirement, health and life insurance) are applicable. For IPA assignments, the individual remains an employee on the payroll of the institution and the institution continues to administer pay and benefits. NSF reimburses the institution for NSF's negotiated share of the costs. Individuals eligible for an IPA assignment include employees of State and local government agencies, institutions of higher education, Indian tribal governments, federally funded research and development centers and qualified nonprofit organizations. For more information regarding Visiting Scientist appointments or IPA assignments, visit our website at http://www.nsf.gov/jobs.

ERCs play critical roles in research, education, diversity, outreach and industrial collaboration. Each focuses cross-disciplinary teams of faculty and students on the definition, fundamental understanding, development, and validation of technologies needed to realize a well-defined class of engineered systems with the potential to spawn whole new industries or radically transform the product lines, processing technologies, or service delivery methodologies of current industries. ERC faculty, students and industry partners integrate discovery and learning in an interdisciplinary environment that reflects the complexities and realities of real-world technology and product development. NSF views ERCs as change agents for academic engineering programs and the engineering community at large and expects ERC innovations in research and education to add to current knowledge, affect industrial practice, impact curricula at all levels from pre-college to life-long learning, employ and reach out to a population that reflects the diversity of the United States, and be disseminated to and beyond academic and industry partners. Each ERC is funded by NSF for up to 10 years and undergoes annual reviews. Other information about the ERC Program may be found at www.eng.nsf.gov/eec/erc.htm and a detailed description of the activities of the ERCs may be found in fact sheets describing the individual ERCs at www.nsf.gov/pubs/2000/nsf00137/start.htm.

The individual selected will be a member of the team of Program Directors and staff responsible for the selection and post-award oversight and review of Engineering Research

Centers and will work under the guidance of the Leader of the ERC Program, who is responsible for overall management of the ERC Program. The individual will work under the supervision of the Director of the Division for Engineering Education and Centers. The position advertised is for an electrical engineer or computer scientist responsible for the oversight of the subset of ERCs focused on topics in those technical areas. There are currently seven such ERCs and more can be expected as new ERCs come on line in FY 2003 and FY 2005. The technical concentrations of current centers in these fields are on wireless microsystems, electronic packaging, power electronics, subsurface sensing and imaging systems, neuromorphic engineering, multimedia communications, and computer integrated surgical systems. The successful candidate also will be responsible for coordinating these ERCs to assure effective collaboration among them. The Program Director will work with a team of other Program Directors from NSF to carry out post-award oversight responsibilities. The oversight of ERCs is a complex and interesting endeavor that requires and develops background in research management, strategic planning, integration of research into educational materials. The position also involves coordination of the centers' activities with the research programs in these fields funded by the Director for Engineering and the Directorate for Computer Information Science and Engineering, or other divisions of the NSF and other relevant agencies

In summary, this position encompasses the following activities:

- Specific oversight of a subset of ERCs in electrical engineering and computer science related fields, using peer review as a tool to develop the center's capabilities, review their performance, and determine continuation, renewal, or termination; the oversight will encompass research management, industrial collaboration, education, and center management;

- Development of strategies to promote synergy among all of the ERCs working in electrical and computer science fields, and between those centers and electrical engineering and computer science research projects and programs within and outside the NSF, and;

- Management of review panels for electrical engineering/computer science proposals submitted to the ERC program under biennial program solicitations.

- Assist in other programs of the Division as assigned which may include the education programs of the EEC, the Industry/University Cooperative Research Center program, and/or various other duties cognizant of the position of program director in the EEC Division of the Engineering Directorate.

The position requires experience managing cross-disciplinary research in a university/industry environment context, as an academic, industrial, or government manager of industry/university research programs. Experience with the complexities of developing engineered systems, as opposed to devices or components, an understanding of the interface between research and technological innovation, and the ability to work in and manage teams are all highly desirable. An interest in working with the scientific and engineering community to enhance the effectiveness of research and educational programs to produce graduates who are more effective in practice is also important, as is both depth and breadth of

technical expertise. The Program Director should have a doctoral degree in Electrical Engineering or Computer Science or in another field of science complemented by experience working as an electrical engineer/computer scientist.

Program Director positions at the National Science Foundation provide a challenging experience and an excellent opportunity to encourage and support engineering research and education and for working with academe and industry to develop strategic plans to advance technology and produce engineering graduates who are more effective in industrial practice. The successful candidate will work with other Program Directors in formulating and implementing improvements in the ERC Program, developing cooperation among government, academia, and industry, fostering outreach to underrepresented groups, and providing leadership within NSF and the research community.

Applicants for the position must have a Ph.D. or equivalent with a minimum of 6 years of academic, government, or industry experience. Applicants should also have research administration and/or managerial experience demonstrating disciplinary and interdisciplinary expertise and strong collaborative integration skills within the broad context of engineering and/or science. NSF is very interested in attracting qualified women and underrepresented minority candidates to this position.

Should you or your colleagues be interested in this position, please contact the EEC Search Committee Coordinator, Duane Abata (contact information below). Applications will be reviewed on or about March 29, 2003. Applications will be reviewed after this date, as the position will remain open until filled. Letters of interest and vita should be either emailed (preferred) or sent to:

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Questions may also be addressed to the following individuals:

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