Opportunities for Geographers at the National Science Foundation

Substantial new opportunities for geographers to secure research funding came to light at a recent strategic planning meeting for the Geography and Regional Science (GRS) Program at the National Science Foundation (NSF). Many geographers are aware of the funding opportunities within the vibrant GRS Program, which has an annual budget of approximately $4.8 million (see nsf.gov/sbe/bcs/geograph/start.htm). However, there are also a set of cross-cutting interdisciplinary programs at NSF that are funded at much higher levels than GRS itself and that provide excellent opportunities for geographers to obtain support from NSF (for the full range of programs see nsf.gov/home/crssprgm/).

Successful proposals to these foundation-wide programs generally must be team-based, interdisciplinary projects that will address large questions of substantial societal impact. Geographers can take advantage of these opportunities by building team-based projects now in anticipation of submission deadlines as early as the first months of 2004. Great care should be taken to review the guidelines in announcements of these special programs, as many require investigators to submit proposals to the specific competition rather than to the GRS Program. I highlight here several opportunities that are of particular relevance to geographers.

The most important news relates to a major new priority area in the current budget request for 2004 as part of the doubling of the NSF budget. In FY 2004, NSF plans to invest $24.25 million in interdisciplinary research on Human and Social Dynamics (HSD). This priority area is expected to function for five years and to promote a broad range of new inquiries into the behavior of individuals, formal and informal organizations, and societies as they evolve and change over time. An informal document prepared in September 2003 outlines the general framework of the HSD priority area as one in which “…new methods, data and technologies have invigorated the social and behavioral sciences, as have findings in other disciplines. One result is that today the scientific understanding of the dynamics of individual behavior and social activity increasingly requires partnerships that span the scientific communities. For example the convergence of research in biology, engineering, nanotechnology, information technology, and cognitive science is crucial for understanding the dynamics of mind, brain and behavior and also offers new possibilities for studying group and organizational behavior. Geographic information systems (GIS) and other technologies, together with mathematically rooted advances in multilevel modeling and network analysis, have opened new frontiers for understanding such diverse subjects as crime, environmental management, epidemics and patterns of linguistic behavior.” The HSD program is expected to be formally announced in late November 2003, with a proposal submission deadline three months later. A typical award is expected to range from $250,000 to $500,000 in the first years of the program.

The HSD priority area has six emphasis areas, many of which are highly relevant to geographers. These include 1) agents of change; 2) dynamics of human behavior; 3) decision-making and risk; 4) modeling and human and social dynamics; 5) spatial social science; and 6) instrumentation and data resource development. For more information about the HSD competition in FY 2004, go to the NSF Directorate for Social, Behavioral,
and Economic Sciences web site at www.nsf.gov/home/sbe/ and click on the appropriate link.

In addition to HSD, I encourage you to investigate the Biocomplexity in the Environment priority area, which “...promotes comprehensive, integrated investigations of environmental systems using advanced scientific and engineering methods. By placing biocomplexity studies in an environmental context, this competition emphasizes research with the following characteristics: (a) a high degree of interdisciplinarity; (b) a focus on complex environmental systems that includes non-human biota or humans; and (c) a focus on systems with high potential for exhibiting non-linear behavior” (see www.nsf.gov/geo/eren/ereweb/fundbiocomplex.cfm for details regarding FY 2004 and 2005 competitions).

Within this larger priority area is the Dynamics of Coupled Natural and Human Systems (CNH) competition. CNH is a “…topical area focusing on the complex interactions among human and natural systems at diverse spatial, temporal, and organizational scales. To be competitive for support, teams of investigators drawn from natural and human sciences must examine the dynamics of appropriate natural and human systems as well as the interactions that link those human and natural systems” (www.nsf.gov/pubs/2003/nsf03597/nsf03597.htm#cnh). Geographers have already been competitive in this competition, with geographers serving in lead roles for several funded projects.

Geographers have also been involved with the Integrative Graduate Education and Research Traineeship (IGERT) Program. This is another initiative that provides opportunities to fund geographers through graduate education. “The IGERT program has been developed to meet the challenges of educating U.S. Ph.D. scientists, engineers, and educators with the interdisciplinary backgrounds, deep knowledge in chosen disciplines, and technical, professional, and personal skills to become in their own careers the leaders and creative agents for change. The program is intended to catalyze a cultural change in graduate education, for students, faculty, and institutions, by establishing innovative new models for graduate education and training in a fertile environment for collaborative research that transcends traditional disciplinary boundaries” (see www.nsf.gov/home/crssprgm/igert/)

The CAREER Program is yet another program that has funded geographers. These are highly prestigious awards for which recent Ph.D.s in geography can compete. “The CAREER program recognizes and supports early career-development activities for those teacher-scholars who are most likely to become the academic leaders of the 21st century. CAREER awardees will be selected on the basis of creative, career-development plans that effectively integrate research and education within the context of the mission of their institution” (see www.nsf.gov/home/crssprgm/career/start.htm).

All of these opportunities emphasize the importance of communities of scholars working together to bring forward larger projects and to think strategically about opportunities at the NSF. Check the NSF website and begin planning. For more information, contact individuals associated with the special competitions or contact GRS Program Directors Tom Baerwald (tbaerwal@nsf.gov) and Greg Chu (gchu@nsf.gov) at NSF.

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