

NATIONAL SCIENCE FOUNDATION: CROSS-CUTTING PROGRAMS (MRI, STC, CAREER, ITR)



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Funding

Crosscutting/Interdisciplinary Programs



TOPIC:

Crosscutting/ Interdisciplinary Programs

Joint Agency Programs

- ▶ Arabidopsis: NSF/DOE/USDA
- ▶ Digital Libraries 2
- ▶ NSF/EPA Partnership for Environmental Research
- ▶ Global Change Research Program
- ▶ HPCC: High Performance Computing and Communications
- ▶ IERI: Interagency Education Research Initiative
- ▶ NSF/DOE Partnership in Basic Plasma Science and Engineering
- ▶ NSF Scholar-in-Residence at NIH

Related NSF Offices

- ▶ Office of Integrative Activities
- ▶ Division of Experimental and Integrative Activities (CISE)
- ▶ Office of Multidisciplinary Activities (MPS)
- ▶ Division of International Programs (SBE)
- ▶ Cross-Directorate Activities (SBE)

Crosscutting programs at the NSF include interdisciplinary programs, programs that are supported by multiple Directorates at NSF, and programs jointly supported by NSF and other Federal agencies. Selected major programs are listed here **alphabetically**. For new program announcements, see the list [below](#).

- ▶ **ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers**
- ▶ **CAREER: Faculty Early Career Development Program**
- ▶ **EPSCoR: Experimental Program to Stimulate Competitive Research**
- ▶ **ERE: Environmental Research and Education**
- ▶ **ESH: Earth System History**
- ▶ **GK-12: NSF Graduate Teaching Fellows in K-12 Education**
- ▶ **GOALI: Grant Opportunities for Academic Liaison with Industry**
- ▶ **IGERT: Integrative Graduate Education and Research Traineeship**
- ▶ **IOC: Innovation and Organizational Change**
- ▶ **ITR: Information Technology Research**
- ▶ **ITW: Information Technology Workforce**
- ▶ **Minority Research Planning Grants and Career Advancement Awards**
- ▶ **MRI: Major Research Instrumentation Program**
- ▶ **NANO: Partnership in Nanotechnology**
- ▶ **Partnerships for Innovation (PFI)**
- ▶ **PECASE: Presidential Early Career Awards for Scientists and Engineers**
- ▶ **REU: Research Experiences for Undergraduates**
- ▶ **RUI/ROA: Research in Undergraduate Institutions and Research Opportunity Awards**
- ▶ **SBIR: Small Business Innovation Research**
- ▶ **Science and Technology Centers (STC): Integrative Partnerships**
- ▶ **Science of Learning Centers (SLC)**
- ▶ **TCW: Transitions from Childhood to the Workforce**

New Interdisciplinary Funding Opportunities

[Math and Science Partnership Program - nsf03605](#)
(Posted: Sep 16 2003)

[Biocomplexity in the Environment \(BE\): Integrated Research and Education in Environmental Systems - nsf03597](#)
(Posted: Sep 04 2003)

[Historically Black Colleges and Universities Undergraduate Program - nsf03594](#)
(Posted: Aug 28 2003)

[International Materials Institutes \(IMI\) - nsf03593](#)
(Posted: Aug 25 2003)

[Integrated Carbon Cycle Research Program - nsf03582](#)
(Posted: Jul 23 2003)

Search



[More Search Options](#)



Major Research Instrumentation (MRI)

Major Research Instrumentation (MRI): PURPOSE

- The MRI program is designed to increase access to scientific and engineering equipment for research and research training in U.S. academic institutions.
- The MRI program seeks to improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments.
- The MRI program encourages the development and acquisition of research instrumentation for shared use across academic departments, among research institutions, and in concert with private sector partners.



MRI: GOAL

- Support the acquisition, through purchase, upgrade, or development, of major state-of-the-art instrumentation for research, research training, and integrated research/education activities at U.S. Institutions;
- Improve access to and increase use of modern research and research training instrumentation by scientists, engineers, and graduate and undergraduate students;
- Enable academic departments or cross-departmental units to create well-equipped learning environments that integrate research and education;
- Foster the development of the next generation of instrumentation for research and research training; and
- Promote partnerships between academic researchers and private sector instrument developers.



MRI: Eligible Institutions

- Funding level up to 2 million
- U.S. Institutions of Higher Education
- Independent Non-Profit Research Institutions
- Research Museums
- Legally Incorporated Consortia of Eligible Institutions



MRI: FY 2004 Overview

- Instrumentation Acquisition or Development
- Two proposals for acquisition or development; a third for development. An institution may be part of a consortium
- Award size--\$100,000 to \$2 Million
 - ✓ (exceptions for non-Ph.D. granting institutions and for mathematical and social, behavioral and economic sciences)
- Cost sharing--30% required
 - ✓ (exceptions for development proposals and for non Ph.D. granting institutions)
- Deadline for proposal submission: January 22, 2004

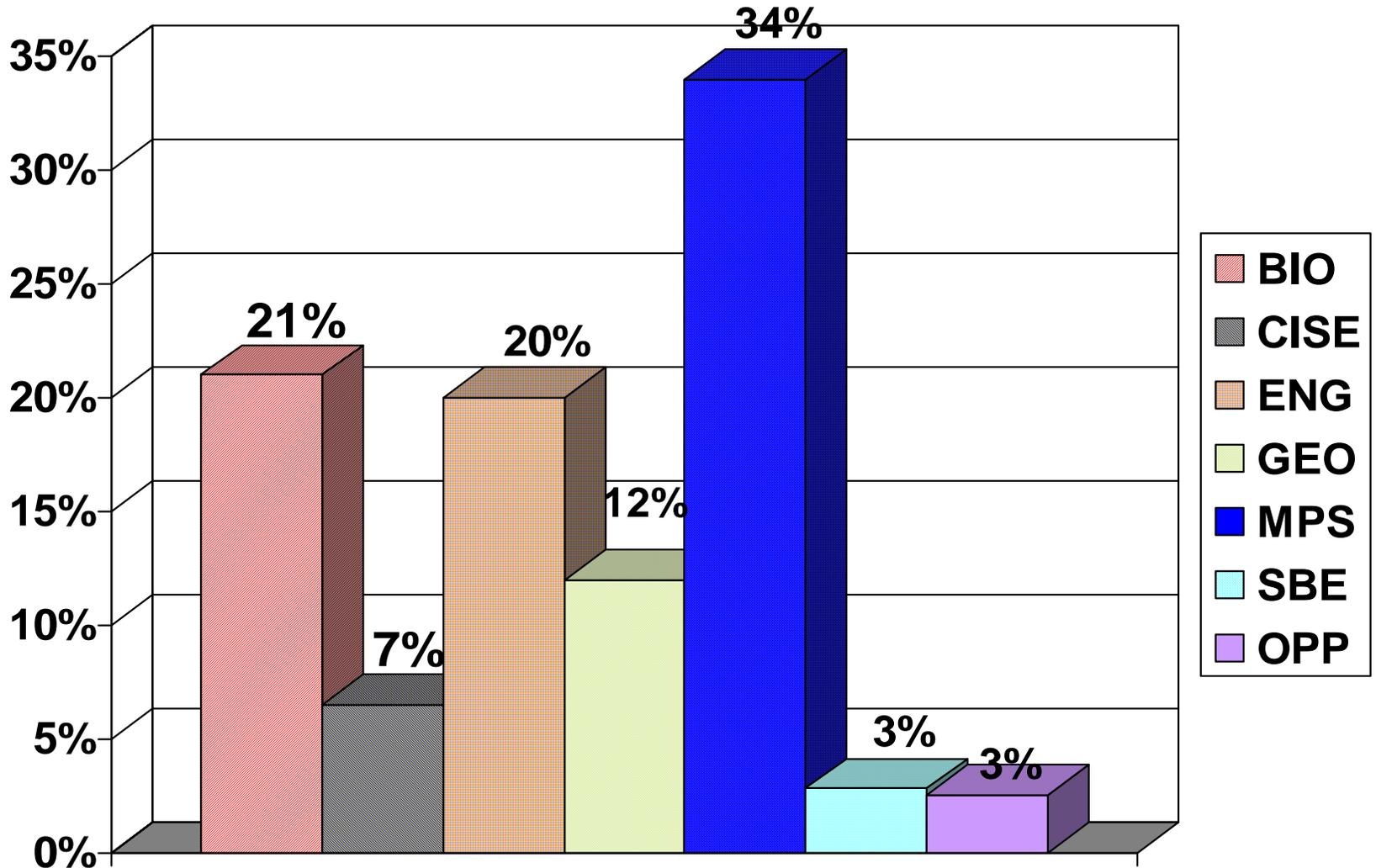


MRI Proposal and Award Information by Fiscal Year (FY 1997-2003)

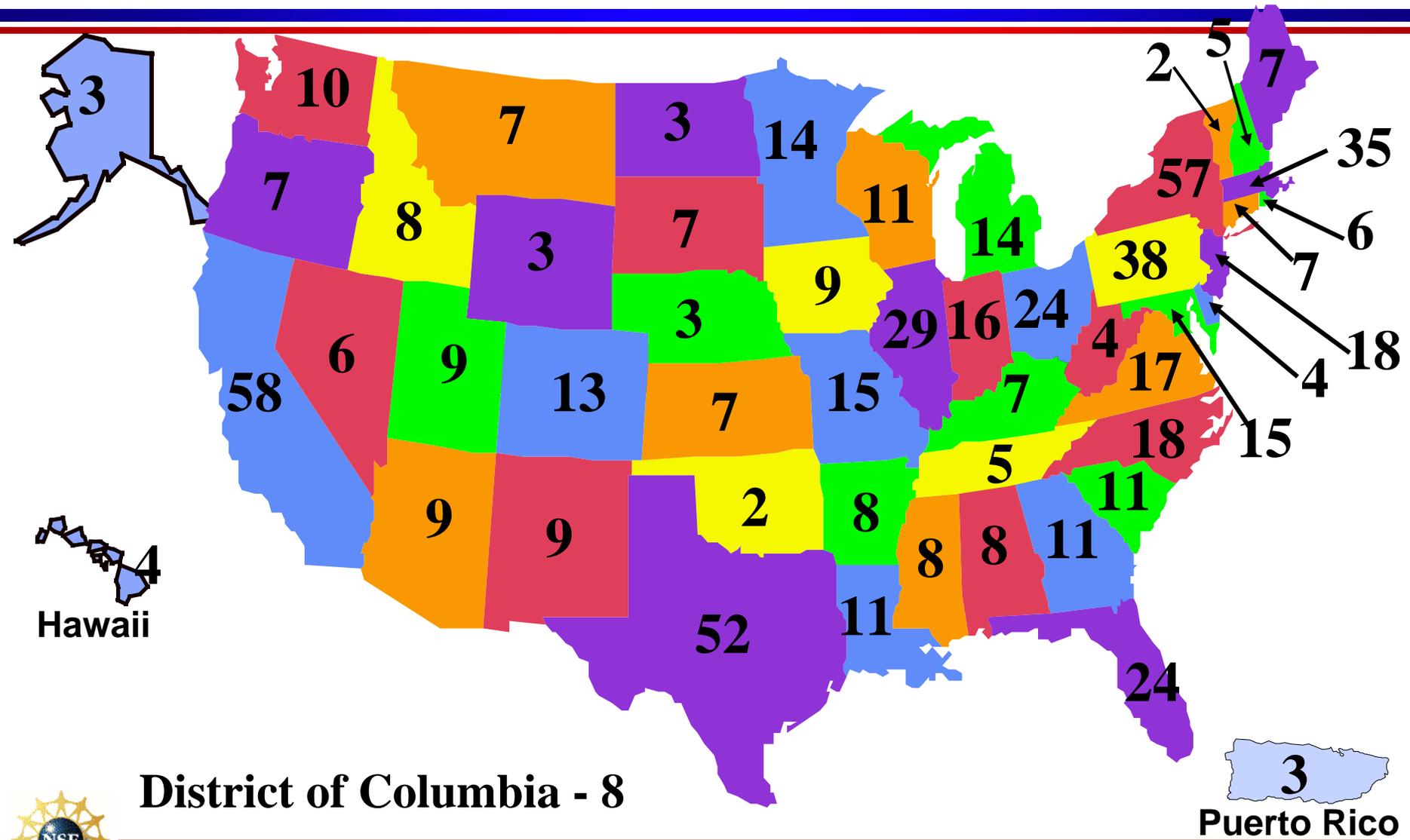
Fiscal Year	# Proposals	\$ Requested	# Awards	Total NSF Funding
1997	503	\$269,837,421	164	\$59,260,773
1998	479	\$248,512,726	165	\$56,363,744
1999	472	\$261,520,174	166	\$56,772,169
2000	476	\$251,903,360	156	\$53,138,543
2001	741	\$304,336,164	308	\$78,569,885
2002	692	\$296,581,578	279	\$81,624,367
2003	758	\$352,342,421	277	\$83,036,486
TOTAL:	4,121	\$1,985,033,844	1515	\$468,765,967



FY 2002 Awards by Directorate



FY 2002 Proposals Submitted by State





Science and Technology Centers: Integrative Partnerships (STC)

STC: Historical Information

- Current competition started in summer of 2003 — 158 proposals, new centers are expected in 2005.
- Competition of 2000 — 6 new centers started in 2002
- Competition of 1998 — 5 new centers started in 2000
- Competitions of 1989 and 1991 — 25 centers



Overview of STC Program

- Goals
- Proposal / Evaluation Criteria
- Funding level 4 million/year for up to 10 years



NSF in a Changing World

➤ 3 overarching goals

- ✓ world class science
- ✓ promote discovery in service to society
- ✓ excellence in science math and engineering education

➤ 4 core strategies

- ✓ strengthening physical infrastructure
- ✓ integrating research and education
- ✓ promote partnerships
- ✓ developing intellectual capital

Equal value for research and education.



The Science and Technology Centers: Integrative Partnerships (STC)

- Research efforts not before possible
- Involvement of researchers in education efforts at a different level
- Not feel good education and outreach
- A cultural Change agent on campuses



Issues Possible to Approach in this Mode of Support

- Connectivity of the community for various items (research, education, communications)
- Partnerships in research, education
 - ✓ (U/I; U/U; U/State; U/Fed; U/INT) too numerous to enumerate all
- International issues
- Education over the web (curriculum reform)
- Models for dissemination
- Innovative and non-traditional uses of technologies/communications



STCs...A VERY RISKY BUSINESS

- Risk in research outcomes
- Risk in educational goals
- Management Risk



Proposal Evaluation Criteria

1. What is the intellectual merit of the proposed activity?
2. What are the broader impacts of the proposed activity?
3. Integration of research and education
4. Integrating diversity into NSF programs, projects, and activities.
5. Value of the center-mode to research, education, and knowledge transfer.
6. Integrative nature of the proposed center.
7. Leadership, management plan, impact of institutional support, and budget.



Awardees vs. Declinees

- Value Added
- Regional or National Impact
- Demonstrated commitment of Institutions
- Leadership





Faculty Early Career Development Program (CAREER)

Faculty Early Career Development Program (CAREER)

- Principal investigators must meet eligibility criteria
 - ✓ Have doctoral degree in field of science or engineering supported by NSF
 - ✓ be employed in a tenure-track position
 - ✓ have not competed more than two times in the NSF CAREER program
- Deadline July 2004 (directorates dependent, July 20-22)
- Minimum award size \$400,000 over 5 years (Higher for BIO directorate)



CAREER

- Proposals are submitted to particular programs
- Success rate is program dependent
- Estimated number of awards about 350
- Each proposal should address research and educational objectives
- URL:
<http://www.nsf.gov/home/crssprgm/career/start.htm>





Information Technology Research (ITR)

Information Technology Research (ITR)

Background

- Priority Area (PA) since FY00; designated as a PA for 5 years
- FY04 is the transition year
- Changing foci over the years:
 - ✓ FY00: fundamental IT research and education
 - ✓ FY01: application of IT to science and engineering challenges
 - ✓ FY02: multidisciplinary IT challenges
 - ✓ FY03: relationship between acquisition and utilization of knowledge and IT tools
- FY04 ITR Budget Request = \$303M



ITR: Status Of 2004 Competition

- URL <http://www.itr.nsf.gov/>
- Have ITR FY04 solicitation (which will include the two foci in “Interdisciplinary IT research and education”) on NSF website early fall with a single deadline of January 15, 2004

