

National Science Foundation

Office of Integrative Activities

(with special focus on the Major Research Instrumentation program)

Omaha, Nebraska

Regional Grants Conference

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<http://www.nsf.gov/od/oia/>

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OFFICE OF INTEGRATIVE ACTIVITIES

OIA

"The Office of Integrative Activities has a key role in working across organizational boundaries as well as providing policy support to the Director's Office. Developing effective ways to transcend traditional boundaries, and bring very different scientific cultures together for the benefit of science and society, without compromising excellence, is a critically important challenge for the Foundation."

- NSF Director Arden Bement (December, 2007)



OFFICE OF INTEGRATIVE ACTIVITIES

Activities

American Association for the Advancement of Science (AAAS) Fellows

- Providing opportunities for learning, and input on issues relating to NSF's mission to support fundamental science and engineering research and education.



Summer Scholars Internship Program

- Developing undergraduate and graduate student potential through exposure to science and engineering policy, issues and programs.

www.nsf.gov/od/oia/activities/interns/about_ext_only.jsp

Committee on Equal Opportunities in Science and Engineering (CEOSE)

- Encouraging full participation of women, underrepresented minorities, and persons with disabilities in scientific, engineering, and professional fields.

www.nsf.gov/od/oia/activities/ceose/

Committee of Visitors (COV)

- Advising the Foundation to ensure improvement of NSF performance, and openness to the research and education community.

www.nsf.gov/od/oia/activities/cov/



OFFICE OF INTEGRATIVE ACTIVITIES

Activities

National Medal of Science

- For individuals "deserving of special recognition by reason of their outstanding contributions to knowledge in the physical, biological, mathematical, or engineering sciences."

www.nsf.gov/od/nms/medal.jsp



Waterman Award

- Recognizing outstanding young researchers in any field of science or engineering supported by the NSF.

www.nsf.gov/od/waterman/waterman.jsp



Presidential Early Career Awards for Scientists and Engineers (PECASE)

- Providing the highest honor bestowed by the United States Government for early career scientists and engineers

www.nsf.gov/od/oia/activities/pecase/

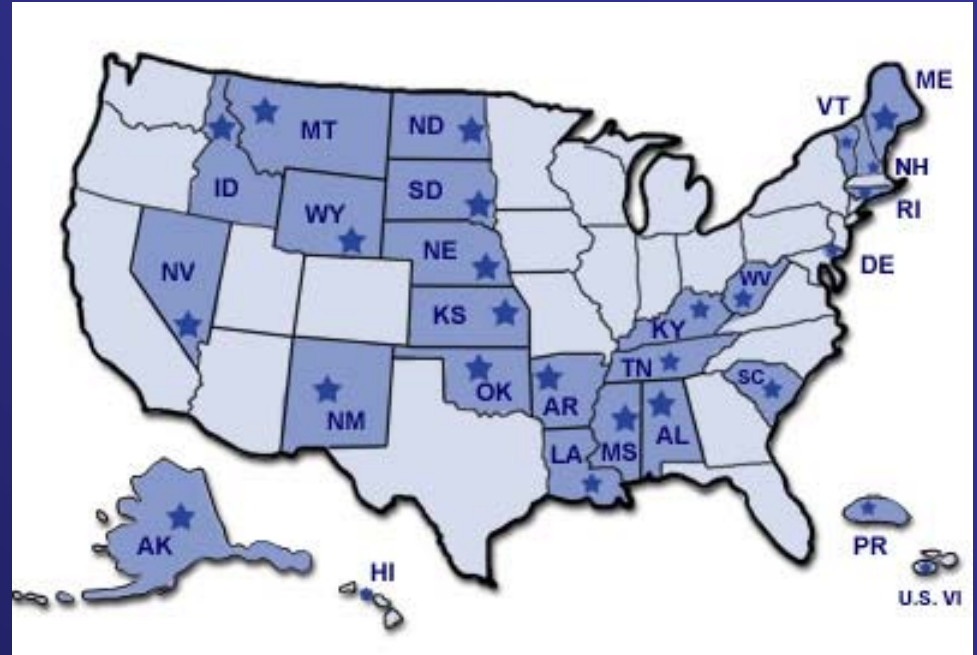


OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Experimental Program to Stimulate Competitive Research (EPSCoR)

- Strengthening research and education in science and engineering throughout the United States and avoiding undue concentration of such research and education;
- Catalyzing key research themes and related activities within and among EPSCoR jurisdictions;
- Facilitating effective jurisdictional and regional collaborations among academic, government and private sector stakeholders;
- Broadening participation in science and engineering by institutions, organizations and people within and among EPSCoR jurisdictions.



<http://www.nsf.gov/od/oia/programs/epscor/about.jsp>

OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Science and Technology Centers (STC)

- Supporting research and education of the highest quality;
- Exploiting opportunities in science, engineering and technology where the complexity of the research requires the advantages of scope, scale, change, duration, equipment and facilities that a Center can provide;
- Supporting innovative frontier investigations at the interfaces of disciplines, and/or fresh approaches within disciplines;
- Engaging the Nation's intellectual talent, robustly drawn from its full human diversity, in the conduct of research and education activities;
- Promoting organizational connections and linkages within and between campuses, schools and/or the world beyond (state, local, federal agencies, national labs, industry, international collaborations);
- Focusing on integrative learning and discovery and the preparation of U.S. students for a broad set of career paths; and
- Fostering science and engineering in service to society especially with respect to new research areas, promising new instrumentation and potential new technologies.

The 2008 Science and Technology Centers: Integrative Partnerships deadline was October 14, 2008.

For more information, contact: [Joan M. Frye \(jfrye@nsf.gov\)](mailto:jfrye@nsf.gov)

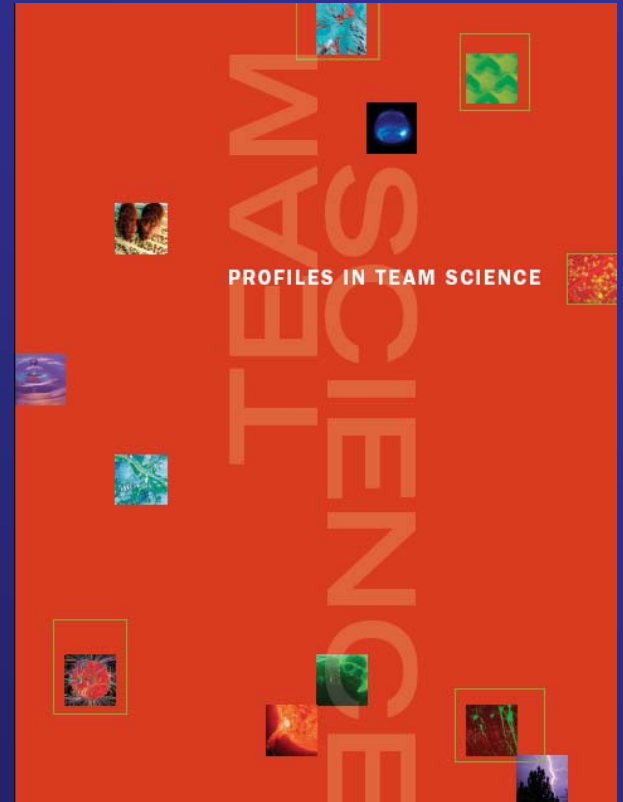
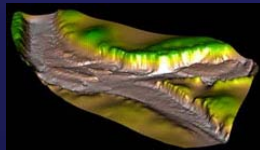
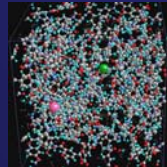
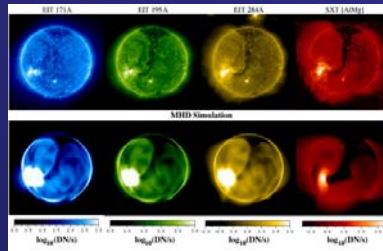
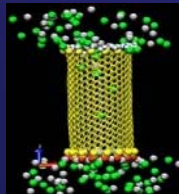
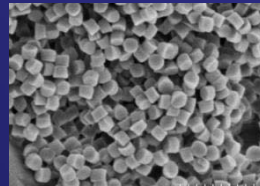


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Programs

Science and Technology Centers (STC)

- Currently there are 17 Science and Technology Centers receiving NSF STC funding
- Profiles in Team Science: <http://depts.washington.edu/teamsci/welcome.html>



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Programs

Major Research Instrumentation (MRI)

Program Overview

- Proposals can be for Instrument Acquisition (3 years) or Instrument Development (5 years)
- Number of Anticipated awards, pending availability of funds:
~235, including up to 8 mid-scale (\$2-4 million) awards¹
- Anticipated award size:
\$100,000 to \$2 million for development proposals
\$100,000 to \$4 million for acquisition proposals²
(no minimum for non-Ph.D. granting institutions and for mathematical and social, behavioral and economic sciences)

1 Information based on the FY 2009 plan

2 Requests over \$2 million must be for the acquisition of a single instrument only. Acquisition proposals requesting \$2 million or less may be for a single instrument, a large system of instruments, or multiple instruments that share a common or specific research focus.



<http://www.nsf.gov/od/oia/programs/mri/>

OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Major Research Instrumentation (MRI)

Goals

- Supporting the acquisition of major state-of-the-art instrumentation, improving access to, and increased use of, modern instrumentation by scientists, engineers, and students;
- Fostering the development of the next generation of instrumentation, resulting in new instruments that are more widely used, and/or open up new areas of research and research training;
- Enabling academic departments, disciplinary and cross-disciplinary units, and multi-organization collaborations to create well-equipped research environments that integrate research with education;
- Supporting the acquisition and development of instrumentation that takes advantage of new opportunities enabled by investments in cyberinfrastructure;
- Promoting substantive and meaningful partnerships for instrument development between the academic and private sectors.



<http://www.nsf.gov/od/oia/programs/mri/>

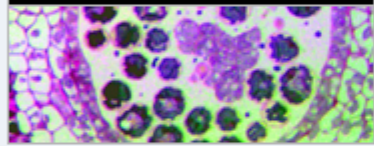
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SEARCH

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Major Research Instrumentation Program

CONTACT INFORMATION

Major Research Instrumentation Questions:

Email: mri@nsf.gov

Phone: 703-292-8040

Specific Program Contacts:

Staff Associate: [Randy Phelps](#)
Tel: 703-292-8040

Office of Integrative Activities

Room 1270

FY 2009 COMPETITION INFORMATION

[FY 2009 Solicitation](#)

Deadline for full proposal submissions: January 22, 2009

COMMITTEE OF VISITORS

- 2000: [Report](#) - [Response](#) - [Summary](#)
- 2005: [Report](#) - [Response](#) - [Member's Website](#)

PROGRAM INFORMATION

Programs

Major Research Instrumentation (MRI)

Caveats

The MRI program will NOT support proposal requests for:

- General purpose equipment, including general purpose computers or assorted instruments that do not share a common or specific research or research training focus;
- Instrumentation used primarily for standard science and engineering courses.
- Renovation or modernization of research facilities, supporting equipment, and general purpose research platforms.
- Instrumentation related to animal models of disease-related conditions or the development or testing of drugs or other procedures for their treatment
- *However*, bioengineering instrumentation that advances engineering research and knowledge, applies engineering principles to problems in biology and medicine, aids persons with disabilities, and may also have clinical uses or diagnosis- or treatment-related goals *is* eligible for support.



<http://www.nsf.gov/od/oia/programs/mri/>

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Programs

Major Research Instrumentation (MRI)

Eligible Organizations

- Ph.D. granting institutions of higher education are academic institutions that have produced more than 20 Ph.D.s or D.Sci.'s in all NSF-supported fields of science, mathematics or engineering during the combined previous two academic years
- Non-Ph.D. granting institutions of higher education (i.e., primarily bachelor and/or master degree granting academic institutions) are two- and four- year colleges and universities that have produced 20 or fewer Ph.D.s or D.Sci.'s in all NSF-supported fields of science, mathematics, and engineering during the combined previous two academic years.
- Non-degree granting organizations are independent nonprofit organizations, museums and science centers, and consortia of organizations working in NSF-supported fields of science, mathematics, and engineering.



<http://www.nsf.gov/od/oia/programs/mri/>

OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Major Research Instrumentation (MRI)

MRI Proposals

MRI solicitation: Revised solicitation to be posted later this month

- Full Proposal Deadline: Fourth Thursday in January

- Submission limit:

- an organization may submit or be included as a funded subawardee/subcontractor in no more than three MRI proposals. No more than two proposal submissions may be for instrument acquisition.

- if an organization is on three MRI proposals, at least one of the three proposals must be for instrument development.

- Cost-sharing at the level of 30% of the total project cost is required for Ph.D.-granting institutions and non-degree-granting organizations. Cost-sharing is not required for non-Ph.D. granting institutions

- At the time of submission, PI's are asked to identify an NSF division to review proposal

Note: A revised version of the NSF Proposal & Award Policies & Procedures Guide (PAPPG), NSF 09-1, was issued on October 1, 2008. Proposals responding to a funding opportunity with a due date on or after January 5th must comply with the guidelines in NSF 09-1.



<http://www.nsf.gov/od/oia/programs/mri/>

OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Major Research Instrumentation (MRI)

Proposal Evaluation

• **What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

• **What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

• **Is management plan appropriate?**

• **For instrument acquisition proposals:** Evaluate whether the plan: 1) includes sufficient infrastructure and technical expertise to allow effective usage of the instrument; and 2) provides organizational commitments for operations and maintenance.

• **For instrument development proposals:** Evaluate whether the plan has a realistic schedule and mechanisms to deal with potential risks. In addition, evaluate the availability of appropriate technical expertise to design and construct the instrument and the cost of the new technology.



<http://www.nsf.gov/od/oia/programs/mri/>

OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Major Research Instrumentation (MRI) *2008 Award Snapshot - Overall*

Number Reviewed: 810

Dollars Requested : \$515.8 million

Number of Awards: 224 (39 DEV, 185 ACQ)

MRI Amount Awarded: \$93.2 million

NSF Amount Awarded: \$101.0 million

Overall Success Rate: 27.7%

Mean Award: \$451,000

Median Award: \$330,000

Number of Institutions that Participated: 449

Number of Institutions Awarded: 184

Data currently omit 1 MRI late award that
was made but not using MRI funds



OFFICE OF INTEGRATIVE ACTIVITIES

Programs

Major Research Instrumentation (MRI)

2008 Award Snapshot by Institution Type

	Ph.D.	non-Ph.D.	Non-degree	MSI
# reviewed	472	304	34	74
Mean request	\$765 K	\$430 K	\$704 K	\$555 K
Median request	\$568 K	\$323 K	\$559 K	\$397 K
# awards	129	84	11	24
NSF \$ awarded	\$73.7 M	\$22.4 M	\$4.8 M	\$9.8 M
MRI \$ awarded	\$67.8 M	\$21.2 M	\$3.9 M	\$9.3 M
Success rate	27.3%	27.6%	32.4%	32.0%
Mean award	\$571 K	\$267 K	\$440 K	\$407 K
Median award	\$465 K	\$211 K	\$474 K	\$309 K



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Programs

Major Research Instrumentation (MRI) *2008 Award Snapshot - EPSCoR*

Number of Proposals Reviewed: 181

Dollars Requested : \$116.5 M

Number of EPSCoR-eligible Awards: 50

Amount Awarded to EPSCoR-eligible Awards: \$20.2 M

EPSCoR Amount Awarded to MRI Awards: \$2.0 M

EPSCoR-eligible Success Rate: 27.6%

Eligible proposals co-funded by EPSCoR: 17

Mean award: \$404,000

Median award: \$295,000



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Programs

Major Research Instrumentation (MRI) *1998-2008 Award Snapshot¹*

FY	# Proposals	\$ Requested	# Awards	MRI Funding	Total NSF Funding*
1998	479	\$248.5	165	\$49.9	\$56.4
1999	472	\$261.5	166	\$49.9	\$56.8
2000	475	\$252.0	163	\$49.9	\$54.7
2001	741	\$305.5	311	\$74.6	\$78.7
2002	691	\$296.3	279	\$75.7	\$81.3
2003	757	\$351.2	280	\$83.2	\$91.0
2004	838	\$421.4	327	\$109.1	\$112.9
2005	784	\$473.0	256	\$88.8	\$95.6
2006	769	\$427.4	233	\$88.2	\$97.0
2007	774	\$478.3	222	\$89.7	\$96.9
2008	810	\$515.8	224	\$93.2	\$101.0
TOTAL:	7,590	\$4,030.9	2,626	\$852.2	\$922.3

¹includes only awards submitted directly to MRI program

*includes MRI funds and contributions from Directorates and Offices



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