

July 2008 – Grant Opportunities

Dear Sciences Faculty Members –

Here is our July 2008 listing of grant opportunities for faculty members in Science. We are still working on establishing a good list of grant opportunities, and would appreciate any suggestions you might have.

Please let my office know if we can help in any way with grant proposals for these or other opportunities.

1. Department of Defense - Defense University Research Instrumentation Program (DURIP)

DEADLINE: August 26, 2008

Synopsis: The Department of Defense (DoD) announces the Fiscal Year 2009 Defense University Research Instrumentation Program (DURIP), a part of the University Research Initiative (URI). DURIP is designed to improve the capabilities of U.S. institutions of higher education (hereafter referred to as “universities”) to conduct research and to educate scientists and engineers in areas important to national defense, by providing funds for the acquisition of research equipment.

This announcement seeks proposals to purchase instrumentation in support of research areas of interest to the DoD, including areas of research supported by the administering agencies. The research areas of interest for the administering agencies are available on-line at the following addresses:

Army Research Office:

<http://www.aro.army.mil/> (select “For the Researcher” and then “Funding Opportunities”)

See BAA W911NF-07-R-0003 U.S. Army Research Office BAA FY 2007 - 2011
Office of Naval Research:

<http://www.onr.navy.mil/> (select “ONR Science and Technology Departments”)

(Refer questions about appropriate program managers to contact to Dr. Bill Lukens, 703-696-4668)

Air Force Office of Scientific Research:

<http://www.wpafb.af.mil/AFRL/afosr/> (select “Main Areas of Interest - Research”)

For detailed information regarding technical goals, potential proposers are advised to refer to the announcements cited above and may contact DoD program managers listed therein to explore mutual interest before submitting proposals. A proposal may be submitted to more than one agency; however, only one award will be given.

A central purpose of the DURIP is to provide equipment to enhance research-related education. Therefore proposals must address the impact of the equipment on the institution’s ability to educate students, through research, in disciplines important to DoD missions.

For More Information:

<http://www.grants.gov/search/announce.do;jsessionid=L1bK66lLyL9MvHp06LyQRP6rhNmP635vmpTzZLncn82K2RPBfSRy!820188535>

2. National Science Foundation - Mathematical Sciences Postdoctoral Research Fellowships (MSPRF)

DEADLINE – October 15, 2008

Synopsis - The purpose of the Mathematical Sciences Postdoctoral Research Fellowships (MSPRF) is to support future leaders in the mathematical sciences by enabling them to participate in research environments that will have maximal impact on their future scientific development. There will be two options for awardees: Research Fellowship and Research Instructorship. Awards will be made for appropriate research in areas of the mathematical sciences, including applications to other disciplines.

For More Information:

http://www.nsf.gov/pubs/2008/nsf08582/nsf08582.htm?govDel=USNSF_25

3. National Institutes of Health – Exploratory/Developmental Grant for Complementary and Alternative Medicine (CAM) Studies using Cells, Tissues, and Animal Models of Disease (R21)

(DEADLINE – December 31, 2008)

Synopsis – The Infrastructure Program provides support for activities that differ from the research projects supported by the disciplinary programs of the Division of Mathematical Sciences. These include working research sessions, such as conferences, symposia, colloquia, and special years, as well as training programs, such as grants for broadening education in the mathematical sciences or increasing the number of individuals in disciplines that are based in the mathematical sciences.

For More information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=6203>

4. National Science Foundation – Computational Mathematics

(DEADLINE – December 4, 2008)

Synopsis – Supports mathematical research in areas of science where computing plays a central and essential role, emphasizing algorithms, numerical methods, and symbolic methods. The prominence of computation in the research is a hallmark of the program. Proposals ranging from single-investigator projects that develop and analyze innovative computational methods to interdisciplinary team projects that not only create new mathematical and computational techniques but use them to model, study, and solve important application problems are encouraged.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=10635>

5. National Science Foundation – Theoretical Physics
(DEADLINE – September 24, 2008)

Synopsis – Supports the development of qualitative and quantitative understanding of fundamental physical systems, ranging from the most elementary constituents of matter through nuclei and atoms to astrophysical objects and the cosmos. This includes formulating new approaches for theoretical, computational, and experimental research that explore the fundamental laws of physics and the behavior of physical systems; formulating quantitative hypotheses; exploring and analyzing the implications of such hypotheses analytically and computationally; and, in some cases, interpreting the results of experiments. Support is given for research and conferences in the following categories: elementary particle physics; nuclear physics; atomic, molecular, optical, and plasma physics; astrophysics and cosmology; gravitational physics, and a broad spectrum of topics in mathematical physics, described below. The effort also includes a considerable number of interdisciplinary grants. In addition, the program supports infrastructure activities such as short- and long-term visitor programs, workshops, and research centers involving the participation of external scientists from universities, national laboratories, and industry, as well as graduate students and postdoctoral fellows. Information for Principal Investigators The categories listed above have separate Program Directors. These personnel are listed in the MPS/PHY Staff Directory. The names and descriptions are given below:

Atomic, Molecular, Optical, and Plasma Theory The Atomic, Molecular, Optical and Plasma Theory program supports research in all areas of atomic and molecular structure, electron and atomic collisions, time-dependent interactions with atoms and molecules, quantum optics, and ultracold phenomena in Bose and Fermi gases.

Nuclear Theory The Nuclear Theory program encompasses the structure and reactions of nuclei and of hadrons in few-nucleon and nuclear environments, and the quark/gluon substructure expressed by QCD. Thrusts include applications to the experimental programs at facilities such as RHIC and the Jefferson Laboratory and to astrophysical phenomena.

Elementary Particle Theory The Elementary Particle Theory program encompasses different theoretical tools for understanding the interaction of elementary particles at different energy scales. These include String Theory, Quantum Field Theory, Lattice Field Theory, Effective Field Theories, and Phenomenology based on the above theoretical tools. The program supports both formal string theory as well as string theory inspired model building. Predictions for upcoming experiments at the LHC involve Supersymmetric Model building, Grand Unified Theories, as well as high order calculations in the Standard Model (of strong weak and electromagnetic interactions) to sort out what new physics might be discovered at the next generation of accelerators. High precision simulations of QCD processes using lattice gauge theory are also a crucial ingredient for understanding present and future experiments at various colliders. Certain aspects of formal string theory are supported in Mathematical Physics.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=10669>

6. National Science Foundation – Joint DMS/NIGMS Initiative to Support Research in the Area of Mathematical Biology
(DEADLINE – October 1, 2008)

Synopsis – The Division of Mathematical Sciences in the Directorate for Mathematical and Physical Sciences and the National Institute of General Medical Sciences at the National Institutes of Health plan to support research in mathematics and statistics related to mathematical biology research. Both agencies recognize the need and urgency for additional research at the boundary between the mathematical sciences and the life sciences. This competition is designed to encourage new collaborations at this interface, as well as to support existing ones.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=10967>

7. Department of Health and Human Services – Large-Scale Collaborate Project Awards

(DEADLINE – June 17, 2010)

Synopsis – The National Institute of General Medical Sciences (NIGMS) re-announces the program of large-scale collaborative project awards (glue grants), last issued as PAR-04-128 in July, 2004. These awards are intended to solve critical, complex biological problems within the mission of NIGMS by supporting a team of independently funded investigators to synergize and integrate their research efforts. -A phase I award consists of \$50,000 in direct costs for up to one year, for project planning. -Because the nature and scope of the proposed research will vary from phase II application to application, it is anticipated that the size and duration of each award will also vary. The maximum phase II award is \$25 million in direct costs over a five-year period; applications for fewer years may not exceed an average annual direct cost of \$5 million. Direct costs for one year may not exceed \$7 million. This high level of resources is intended to allow investigators to form a consortium to solve a research problem by using a comprehensive and highly integrated approach. Indirect costs for consortium arrangements are not counted toward the maximum amounts.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=14912>

8. Department of Health and Human Services – Grants for Injury Control Research Centers (R49)

(DEADLINE – September 2, 2008)

Synopsis – CDC’s Procurement and Grants Office has published a funding opportunity announcement entitled, “Grants for Injury Control Research Centers (R49)” Approximately \$5,400,000 will be available in fiscal year 2009 to fund 6 awards. The purposes of this announcement are to 1) solicit applications from new or existing injury centers to conduct injury and violence prevention research, 2) build the scientific base for the prevention and control of injuries and violence, 3) integrate professionals from a wide spectrum of disciplines to perform injury and violence prevention research, 4) encourage research that involves intervention development and testing and intervention adoption and maintenance methods.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=16978>

9. National Science Foundation – Theoretical Atomic, Molecular, and Optical Physics

(DEADLINE – September 24, 2008)

Synopsis – The Theoretical Atomic, Molecular, and Optical Physics (TAMOP) program supports theoretical and computational research in all areas of atomic structure, the molecular structure of small molecules, electron, and atomic collisions, photoionization and photodetachment of electrons from atoms and small molecules, time-dependent interactions with atoms and small molecules, quantum optics, ultracold phenomena in Bose and Fermi gases, and quantum information. Investigations primarily directed toward a theoretical understanding of larger molecules or condensed matter systems should be directed toward the appropriate programs in the Division of Chemistry or the Division of Materials Research.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=17741>

10. National Science Foundation – Computational Mathematics

(DEADLINE – December 15, 2008)

Synopsis – Supports mathematical research in areas of science where computing plays a central and essential role, emphasizing algorithms design, numerical methods and their analysis, and symbolic methods. The prominence of computation in the research is a hallmark of the program. Proposals ranging from single-investigator projects that develop and analyze innovative computational methods to interdisciplinary team projects that not only create new mathematical and computational techniques but use them to model, study, and solve important application problems are encouraged.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=17743>

11. National Science Foundation – Integrative Hybrid and Complex Systems (IHCS)

(DEADLINE – October 7, 2008)

Synopsis – The Integrative, Hybrid and Complex Systems (IHCS) program supports innovative research in areas that integrate device concepts and systems principles in the design, development and implementation of new nano/micro/macro hybrid and complex systems with engineering solutions for domain specific applications. Hybrid systems incorporating both continuous and discrete representations are of increasing interest in the study of distributed networks. Proposals are sought that address fundamental research issues associated with modeling, design, simulation and development of engineering systems with applications in telecommunications, homeland security, biotechnology and manufacturing. Examples include: 1. Miniature implantable devices that combine sensors, actuators, computational algorithms and microcircuits for biomedical applications

ranging from drug delivery to microsurgery; 2. Wireless networks of handheld or wearable computing devices that incorporate microsystem transmitters, receivers, antennas and sensors, and constitute a complex distributed network with high bandwidth and high information-transfer rates; 3. Optoelectronic and photonic integrated circuits, scalable in density and functionality, for chip-based wavelength division multiplexing; 4. Power grids and systems designed to be reliable, efficient and environmentally sustainable; 5. Control methods for image-guided therapy and surgery; and 6. Cyberengineering systems that integrate the physical layer (devices, sensors) with the informational layer (communication networks, computational intelligence, decision/control) to optimize the performance of distributed systems. Such integrative systems offer new challenges in basic research and promise for future applications. Proposals for the Integrative, Hybrid and Complex Systems program may involve collaborative research among investigators to capture the breadth of expertise needed for such multidisciplinary integrative activities. Areas of opportunity are announced and updated on the ECS Division home page. In addition, researchers are invited to propose, and are encouraged to discuss, with the IHCS Program Directors, potential innovative systems and associated areas of research. Areas of current interest include: hybrid and complex systems at the nano, micro and macro scales.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=1255>

**12. National Science Foundation – Doctoral Dissertation Improvement Grants in
The Directorate for Biological Sciences**
(DEADLINE – November 21, 2008)

Synopsis – Proposals may only be submitted by the following: -U.S. institutions and organizations that are eligible for awards from the National Science Foundation, including colleges, universities, and other nonprofit research organizations such as botanical gardens, marine and freshwater institutes, and natural history museums may submit proposals. See Chapter I, Section E of the NSF Grant Proposal Guide (GPG) for specific definitions of these categories of proposers. The NSF encourages collaborations with scientists at foreign organizations; however, primary support for any foreign participants' activities must be secured through their own national sources. *PI Limit: A student must have advanced to candidacy for a Ph.D. degree before the submission deadline to be eligible to submit a proposal. A statement that the student has advanced to candidacy for a Ph.D., signed and dated by the department chairperson, graduate dean, or similar administrative official is required (see "Proposal Preparation and Submission Instructions"). The proposal must be submitted through regular organizational channels by the dissertation advisor(s) on behalf of a graduate student who is at the point of initiating or is already conducting dissertation research. The student must be enrolled at a U.S. institution, but need not be a U.S. citizen. Organizations should limit applications to outstanding dissertation proposals with unusual financial requirements that cannot be met otherwise. Preference may be given to projects that are underway and for which feasibility is demonstrated.

For More Information:

<http://www.grants.gov/search/search.do?&mode=VIEW&flag2006=true&oppId=17727>.

Postdoctoral Fellowships – Biology

Applications for postdoctoral fellowships in the Department of Molecular and Cellular Biology at Harvard University. Contact:

<http://www.mcb.harvard.edu/jobs/PostDocs.html>.

Deadline is October 15, 2008