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NEW DOE Releases its Critical Materials Strategy
NEW Research.gov’s new service provides clear, accessible information about NSF-funded research and education projects.


Workshops by Academic Research Funding Strategies
We offer workshops on research development and grant writing for faculty and research professionals based on all published articles. (View Index of Articles)

Our workshops emphasize the key generic strategies required for funding success at federal agencies and foundations.
Workshops also include targeted presentations specific to achieving funding success at each of the major federal research agencies specific to their mission.
All workshops topics are designed in consultation with the client.

Back issues of the newsletter, containing over 100 articles on research development and grant writing topics and strategies, can be ordered at a subscriber discount from our website.

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The NSF Webinar (December 20, 2011) on the Math and Science Partnership (MSP) program illuminated some of the changes in the new solicitation (NSF 12-518) and helped clarify the solicitation in several ways. **However, it is important to understand that NSF webinars on any program do not offer new interpretations of already published solicitations.** They do, however, offer a competitive advantage in the sense that they present a full explanation of areas of emphasis within a solicitation, resolve possible ambiguities related to potential interpretations of the solicitation, and offer program officer comments on viewer questions submitted during the webinar. In the case of the MSP webinar, program officers responded to questions at designated points during the webinar and then again at the end. The MSP webinar was scheduled for two hours but concluded in about 90 minutes. (To complement the MSP webinar see MSP evaluation reports funded by NSF at the end of this article.)

There will be two opportunities to submit MSP proposals during 2012: **March 5 and December 18** in the areas of either (1) Targeted Partnerships or (2) Research, Evaluation, and Technical Assistance (RETA), including STEM Education Resource Collaboratory. On these two due dates, two years’ worth of federal funding can be requested. **NSF expects to receive around 120 proposals on each due date and to fund about 10% of submitted proposals.**

The targeted partnerships have four focal areas: (1) community enterprise for STEM learning; (2) current issues related to STEM content; (3) identifying and cultivating exceptional STEM talent; and (4) K-12 STEM teacher preparation. Item 2, STEM content, is the most traditional focus of an MSP. According to the webinar, it should address “what is the deep conceptual knowledge needed in the STEM disciplines and what STEM content is needed to achieve it?” NSF is looking for proposals that make “exceptional talent thrive” (3 above) and “new innovations in teacher preparation” (4 above). NSF does not know what these new innovations will be, but sees the MSP as offering applicants the opportunity to present new ideas in this area.

NSF made one comment at the beginning of the webinar worth noting and taking to heart. Reviewers of the MSP proposals have only one informational meeting related to the review process, but get no additional information beyond being given the solicitation itself to make review determinations. Reviewers are given the MSP solicitation with no further explanation or elaboration on the solicitation to ensure that reviewers do not have information unavailable to applicants. It is therefore important to put yourself in the place of the reviewers when interpreting the solicitation and to write your response in the form of a project narrative.

The new solicitation places a greater emphasis on all STEM disciplines. It requires the substantial engagement of STEM disciplinary faculty, and proposals can benefit from the engagement of faculty from education and from the social and behavioral sciences. The
disciplinary PIs included on the proposal should have *published in their STEM discipline*—not in the areas of education or pedagogy. *How the applicant engages the STEM faculty in the proposed MSP needs to be described throughout the proposal narrative.* NSF is very interested in supporting community colleges where many important issues can be addressed in the two-year institutional setting.

The goals of the MSP program are:

- Ensuring that all students have access to, are prepared for, and are encouraged to participate and succeed in challenging and advancing STEM courses;
- Enhancing the quality, quantity, and diversity of the K-12 STEM teacher workforce;
- Developing evidence-based outcomes that contribute to our understanding of how students effectively learn the knowledge, skills and ways of thinking inherent in mathematics, computer science, engineering, and/or natural sciences.

These goals addressing student outcomes must link to current research and literature in this topic area. *MSP reviewers judge proposals lacking appropriate references to current research to be very weak.* References, especially theoretically-grounded references, are extremely important. In this context, the MSP must have a clear research question and define the underpinning mechanisms for answering that question. The MSP must have an external evaluator who can look at the large-scale impacts of the program to identify what is effective and to note the clear elements announcing institutional change. The MSP is about institutional change, e.g., tenure and promotion policies that promote STEM faculty engagement in STEM education. The evaluator must be external to the program but not necessarily to the institution. All MSPs involve human subjects and the appropriate IRB protocols must be met.

*NSF program officers made a point of mentioning that sections of proposals describing the results of prior NSF funding are often presented very poorly. These sections* thereby forego an opportunity to strengthen the proposal by explaining how past NSF support led to current research questions and helped build current research to achieve the long-term goals of the proposed MSP. The officers also noted *that the supplemental documents section frequently falls short of their expectations* (see *Data Management for NSF EHR Directorate*). They pointed out that tables can be “a rich way to show the project leadership team.” Moreover, nearly identical letters of support amount to “the kiss of death” in the review process.

The solicitation-specific review criteria offer an important insight into NSF’s understanding of how the above MSP program goals are achieved; specifically, they will ask reviewers of MSP Partnership proposals to consider the following questions:

- Are mathematics, engineering, and/or science faculty members from Core higher education partners deeply and broadly involved in the proposed work? (See *Participation by STEM Faculty in Mathematics and Science Partnership Activities for Teachers.*)
- Does the proposal clearly identify one of the four focal areas and provide an implementation plan explicitly linked to the project’s stated theory of action?
• Is the proposed work strategic and innovative, and informed by the current research literature on teaching and learning?
• Is the evaluation plan comprehensive in nature, including both formative and summative components, and will it be conducted by objective expert parties external to the project?
• Does the proposal present the research question(s) to be studied and show how the design of the project will allow warranted claims that the activities conducted by the Partnership contribute to the measured outcomes?
• Is the potential for positive impact on teaching and learning and the importance of the research to STEM education high?

It will be helpful to understand the above in the context of new publications from the MSP Program, including:
• Evidence: An Essential Tool - A Math and Science Partnership Program Publication
• NSF’s MSP at a Glance
• National Science Foundation MSP Program Impact Report
• NSF’s Math and Science Partnerships Demonstrate Continued Increases in Student Proficiency
• Student Results Show Benefits of Math and Science Partnerships
• Closing the Achievement Gap in Math and Science
• All Students Proficient on State Tests by 2014?
• K-12 Resources for Science, Technology, Engineering and Mathematics Education

The archived webinar can be viewed here, along with the webinar presentation slides.

NSF Funded Reports on MSP Program

MSP-PE Year-7 Report, December 2011

The Math and Science Partnership Program Evaluation's (MSP-PE) Year-7 Report covers the project's seventh year, ending on September 30, 2011. The report discusses the methodological lessons learned to strengthen future program evaluations. The program evaluation, conducted under Contract No. EHR-0456995, is led by COSMOS Corporation, with Robert K. Yin serving as Principal Investigator. Additional Co-Principal Investigators are Darnella Davis (COSMOS), Kenneth K. Wong (Brown University), and Patricia Moyer-Packenham (Utah State University). Since 2007, Bernice Anderson, Ed.D., Senior Advisor for Evaluation, has served as the NSF Program Officer.

Understanding the Role of Partnership Configuration in the NSF-MSP Program

This paper explores how different configurations influence the types of partnering and educational activities undertaken by partnerships. It further provides illustrative examples of education partnerships from the National Science Foundation’s (NSF’s) Math and Science Partnership (MSP) Program, which calls for inter-institutional partnerships among institutions of higher education (IHEs), local education agencies (LEAs), state education agencies (SEAs), and
other for-profit and nonprofit entities. The study examines partnerships awarded in three
cohorts during FY2002, 2003, and 2004 in three categories: Comprehensive Partnerships,
Targeted Partnerships, and Institute Partnerships (Teacher Institutes for the 21st Century).

**Evaluation of NSF’s Math and Science Partnership Program**
The findings in this report come from a series of substudies conducted as part of an ongoing
and independent evaluation of the MSP Program. The findings are based on data collected from
the programs initial set of 48 partnerships, who received their initial awards from 2002 to 2004.
These partnerships then operated for an average of five to seven years, with NSF-MSP funds
ending around 2007-09. The data collection consisted of site visits to each of these
partnerships as well as reviews of their annual reports, evaluation reports, and submissions of
data into the MSP Programs management information system. The evaluation design and
results have been published in 19 separate research articles and 24 other unpublished reports.
The evaluation substudies relevant to the present report have been cited throughout the text
so that they can be consulted by readers wishing to learn additional details about the findings.

**The Math and Science Partnership Program Evaluation (MSP-PE): Year-6 Update**
The findings in this report come from a series of substudies conducted as part of the Math and
Science Partnership Program Evaluation (MSP–PE), conducted for the National Science
Foundation’s Math and Science Partnership Program (NSF-MSP). The report is based directly on
an earlier version that appeared in March 2010 but updates some of the data in the earlier
version. The MSP–PE is conducted under Contract No. EHR-0456995. Since 2007, Bernice
Anderson, Ed.D., Senior Advisor for Evaluation, Directorate for Education and Human
Resources, has served as the NSF Program Officer. The author is Robert K. Yin, Ph.D., of
COSMOS Corporation.

**Evaluation of NSF’s Math and Science Partnership Program: A Summary After Five Years**
This study is one in a series of briefs for the Math and Science Partnership Program
Evaluation (MSP-PE), conducted for the National Science Foundation’s Math and
Science Partnership Program (NSF-MSP). The MSP-PE is conducted under Contract No.
EHR-0456995. Since 2007, Bernice Anderson, Ed.D., Senior Advisor for Evaluation,
Directorate for Education and Human Resources, has served as the NSF Program Officer.
The author is Robert K. Yin, Ph.D., of COSMOS Corporation.

**A Continuation of Earlier Studies Comparing MSP and Non MSP Schools: Whether
Distinguishing Different Levels of Participation Makes Any Difference**
This study is one in a series of briefs for the Math and Science Partnership Program Evaluation
(MSP-PE), conducted for the National Science Foundation’s Math and Science Partnership
Program (NSF-MSP). The MSP-PE is conducted under Contract No. EHR-0456995. Since 2007,
Bernice Anderson, Ed.D., Senior Advisor for Evaluation, Directorate for Education and Human
Resources, has served as the NSF Program Officer. The authors are Kenneth Wong, Ph.D. and
Megan Boben, M.P.P. of Brown University.
Math and Science Partnership Program Evaluation (MSP-PE): Final Year-4 Report

Processes and Pathways: How do Mathematics and Science Partnerships Measure and Promote Growth in Teacher Content Knowledge
This study examines processes for measuring growth in teachers’ mathematics and science content knowledge in the National Science Foundation’s Math and Science Partnership (NSF MSP) Program. The evidence of growth in teachers’ content knowledge was examined with respect to the pathways provided by the partnerships in the MSP Program to impact knowledge growth. Data gathered in this study were obtained from site visits to each of the Math and Science Partnerships (MSPs), presentations by the MSPs at an annual NSF MSP conference, and secondary source documents from each MSP, including self-report surveys, annual reports, and evaluation reports. These data were used to develop a framework of processes for measuring growth and pathways promoting growth used by the partnerships.

Increasing the Diversity of Teachers in Mathematics and Science Partnerships
This study examines teacher diversity in a federally-funded mathematics and science partnership program. Each of the partnerships in the program provided preservice and/or inservice education for teachers in mathematics, science, or both. Researchers used qualitative and quantitative methods to examine the effect of strategies implemented by the partnerships to influence teacher diversity and the relationship of strategy implementation to changes in teacher diversity. There were no significant changes in teacher diversity for the program overall; however, there were significant changes in individual partnerships. Researchers identified categories of strategies for increasing teacher diversity among the partnerships and found that some partnerships employed numerous strategies in a comprehensive manner. While there were no significant relationships between strategies implemented and changes in teacher diversity, the findings suggest the potential for relationships to be revealed with further longitudinal study. Particularly useful among these findings is the identification of a typology of specific strategies known to influence changes in the diversity of mathematics and science teachers.
Whether required or simply appropriate, the management plan will play a critical role in your proposal’s overall competitiveness. It convinces program officers and reviewers that a funded project will be well managed and hence likely to meet the sponsor’s research expectations. Before drafting a management plan, it is important to first understand what the sponsor expects of such a plan, which is often described in detail in the solicitation; secondly, think about how your management structure will bring added value to a project in terms of meeting your proposed research goals, objectives, expected outcomes, and other performance metrics that validate a sponsor’s investment in your research.

Moreover, effective management plans may vary widely by program type and by funding agency, e.g., a management plan for research instrumentation and equipment will have different objectives than a plan for an interdisciplinary research center. Both, however, must address the funding agency’s fundamental expectation that the proposal demonstrates your capacity to perform. The management plan offers an opportunity to instill confidence in both agency program officers and reviewers that you will function as an effective and efficient steward of an agency’s research investment. While the research plan (vision, goals, and objectives) of the proposal must address the compelling significance of your ideas, the management section must make a compelling case that project resources will be well managed, thereby ensuring that you fully realize your research ideas.

Ultimately, the proposal’s management plan plays a very significant role in determining the proposal’s success. When both of these key sections are well crafted, the full research narrative achieves a completeness that inspires reviewers’ confidence in your capacity to perform, and hence, a willingness to invest in your ideas. PIs transitioning from smaller grants to larger grants requiring detailed management plans will want to guard against the perception that this section of the proposal has been treated as an afterthought in relation to the proposal’s other narrative sections. If the PI does not write the management plan, then the person assigned that task, perhaps another member of the research management team, or an experienced grant writer working with the PI, should draft the plan in continuous consultation with the PI. It must appear clear to program officers and reviewers that the management plan optimizes both your efficient use of agency resources and the potential inherent in your research ideas.

Weak management plans are often characterized by a lack of contextual specificity. This results in a management narrative that appears disconnected from the research vision, goals, and operational objectives. Another sign of a weak management plan appears when the plan fails to reflect the proportional continuity of the proposal’s budget, especially within the budget justification narrative. In the worst scenario, the research plan, management plan, and budget justification sections are essentially stovepiped or siloed statements, written as stand-alone
sections that fail to explain how they interconnect. A robust narrative synthesis of these key sections of the proposal must be provided to achieve success.

Weak management plans occur when members of a proposal development and writing team treat them as nothing more than generic boilerplate text easily transplanted from old proposals to current ones with a few minor adjustments. Attempts to find “spare parts for proposals” salvaged from prior efforts that now populate the “grant writing cloud” are ill advised. (See Do Not Build Your Proposal Out of Spare Parts, October 2011)

A successful proposal grows from the seed of a compelling and exciting research vision. Every required proposal component that evolves from that vision must do so in an internally integrated manner that adds a logical synthesis, and hence strength, to the core research vision. Attempts to transplant a modified management plan from an existing into a new proposal will most likely weaken both the management plan as well as the overall proposal. Writing a successful project narrative requires many thoughtful iterations of each proposal section that reveal to the reader the relational symmetry of one section to another. The well-written and convincing management plan must clearly evolve to reflect and serve the needs of your specific research vision and the performance metrics required for your success.

So it is important to beware the notion that a management plan can be a largely borrowed or heavily modeled statement based upon other proposals, or a tattered template shared “in the grant writing cloud.” There are not enough immunosuppressant grant writing techniques available to disguise such “borrowing” from the astute reviewer, particularly given that the good program officer and reviewer will function as the immune system of a proposal under consideration. If they detect a transplanted management plan, they should reject it.

The researcher is advised to become a judicious reviewer of best practices in writing the management plan for a specific proposal and a careful interviewer of the PI or members of successful management teams, particularly those funded by the agency and program for which you are preparing a submittal. For example, one short-term test of a well-designed management plan lies in determining how well it functions during the first six or twelve months of a new project, often considered the project start-up period. The start-up period of a large research or educational program can often require some level of adjustment in the face of operational realities not anticipated by the proposal. Or, as General Colin Powell observed once, “everybody has a plan until they are shot at.”

It is helpful, particularly for new PIs or PIs transitioning to larger and more complex research proposals, to take advantage of best management practices that have evolved over time as part of long-standing, center-level proposals under specific programs or at specific agencies. In many cases, these best practices represent a partnership over time between the directors of major research centers and the funding agency to find the most effective operational models for specific research domains. For example, if you are submitting a center-level proposal to NSF, it will be helpful to familiarize yourself with the Engineering Research Centers Association, especially the ERC Best Management Practices Manual, and the STC program, because many NSF programs beyond just the ERC and STC require a management plan to include program components related to such areas as education, diversity, and
technology transfer, among others. Large proposals from several federal agencies often require the management of knowledge transfer across various research, education, and societal domains. But reviewing best practices will be insufficient if the review is not conjoined to the PI’s demonstrated track record of successfully managing prior research projects of increasing size and complexity. On very large grants from federal agencies the successful PI will likely be a senior faculty member highly recognized for research, leadership, and management skills. If you are a more junior faculty member, begin developing a management track record on research grants that will position you over time to compete for center grants.
Several types of grants require a project description describing the research activities of multiple user groups. These types of grants fund such research infrastructure as equipment, instrumentation, and facilities (hereafter referenced as EIF), among other infrastructures specific to funding agencies. For example, the NSF Major Research Instrumentation Program (MRI) with proposals due this January 26, NIH Shared Instrumentation Grant Program with proposals due this March 21, NSF Instrument Development for Biological Research (IDBR) due the last Friday in July, and the Defense University Research Instrumentation Program (DURIP) are representative of these shared user grants. However, federal budget issues have introduced some ambiguity into the funding opportunities for research facilities, e.g., NSF temporarily suspended CRIF and the NIST FY 2011 Construction Grant Program (NCGP) was cancelled. The recent elimination of the NIH National Center for Research Resources (NCRR), described in another article herein, may also effect EIF solicitations in 2012.

For the PI and those assisting with the writing of EIF proposals, shared user grants that fund various components of the research infrastructure share some common characteristics related to the project description. These characteristics distinguish it from typical project narratives focusing on an integrated research vision to be implemented by multiple researchers. The latter was addressed in the November 15 issue of this newsletter in the article, “The Challenge of Integrating Multiple Authors.”

Unlike other multiple-author proposals, the project description of user grants for equipment, instrumentation, or facilities need not necessarily be integrated into a seamless narrative with a single, focused research vision; rather, **the expectation is that each user will define the user specific research to be enabled by the EIF**. Typically, authors of these proposals need not demonstrate any research connection between the multiple users authoring user specific sections of the project narrative for a specific EIF grant. Unlike multiple researcher grants that must integrate text from multiple contributors, the EIF proposal challenges the PI to collect multiple narrative contributions from **each key user or each user group** that answer questions specific to the EIF solicitation and review criteria. **These user specific criteria commonly include some or all of the following generic questions.**

**Research/User Contribution Text**

- What research are you doing now and why is it important?
- What research can’t you do now that the proposed EIF grant will enable you to do, and why is that EIF-enabled research significant?
- How will the EIF grant contribute to research that makes an important contribution to the research mission of the specific agency funding the EIF?
- How will research grants you (i.e., the user) may currently have funded by the specific agency be advanced by the EIF?
• How will your EIF-enabled research contribute to a scientific field, your research advancement, emerging research fields, important shifts in research fields, etc.?
• How does the requested EIF advance institutional capacity and/or research collaborations for important research?
• Demonstrate the meaningful contributions your research makes to the field.
• Demonstrate how your EIF request advances your institutional mission and give details of that within the institutional context.
• How will scientific research be advanced in a way not otherwise possible without the requested EIF — be specific.
• Explain why no infrastructure available to you can adequately fill the expected role of the proposed EIF request; include in this a comparison of performance criteria to currently available and proposed EIF. Provide explicit examples of research that would be enabled by the EIF.
• What are the outcomes expected should the EIF grant be funded?
• Particularly in the case of NSF, how will the requested EIF advance the education and training of students in the STEM disciplines at the undergraduate, graduate, and post-doctoral levels by integrating the requested EIF with education? Clearly identify any anticipated benefits of the EIF to research training, education, and outreach activities.
• Explain the value of these outcomes/contributions to a scientific discipline(s).
• Provide the amount and kind of technical detail required to evaluate whether the EIF request is appropriate, would be effectively employed, and would provide advantages over other methods.

Given the above, it is important to note that EIF grants differ from standard research grants, particularly in terms of the structure of the project description. In the case of EIF grants, each user or user group must write competitive contributions to the proposal that answer specific questions as above, but in the context of the user research to be enabled. Whereas stove-piped or siloed narrative contributions in standard research grants present the PI with the challenge of integrating various statements, the narrative contributions for EIF proposals require the PI to ensure that each user or user group fully responds to the sponsor’s core questions as those questions relate to enabling user specific research and research training.

PIs will further aid reviewers, and hence strengthen their competitiveness, by requiring each user or user group to adopt a common EIF template when describing the user-specific research to be enabled by the grant. A template will impose a common structure on the pages allocated each user or user group that, together, comprise the EIF project description. A user template also helps ensure that all of the users and user groups fully understand the sponsor’s expectations as detailed in the solicitation and review criteria. This helps ensure that user contributions to the project narrative are appropriately detailed and that they directly address the significance of the research to be enabled by the EIF.

The PI of a multiple user EIF grant should guard against users submitting overly general or fragmented first drafts that may have been copied and pasted from other narratives. Overly general, poorly structured text contributions related to the research enabled by the EIF request
pose challenges to the PI and those assisting the PI on the proposal. In particular, since EIF proposals typically include multiple investigators and, in addition to research, must address issues such as how the EIF will be managed, who will use the EIF and how much, and how the EIF will be shared beyond the lead institution, the PI must insist on high quality text contributions early on in the proposal writing process. These contributions will likely go through several iterations, but user write-ups also provide the PI with important information for writing the management plan and the budget justification of the EIF request. Moreover, particularly for NSF, these user write-ups will provide the underpinnings for narrative text that explain the research training and education benefits of the EIF request.

In the case of EIF requests specific to facilities construction and facilities renovations, or facilities build-outs of new but not completed laboratory space, the EIF template is critical. Facilities requests can be significantly more challenging to write than standard equipment and instrumentation proposals. In addition to multiple users of the facility, who may or may not have connected research, the PI and each user or user group will also have to work with architects, engineers, campus facilities offices, general counsel offices, and the like in producing a final project description and linked plans and schematics that typically appear in the narrative or in appendices specific to each user group. Facilities grants are challenging grants to write; therefore, using an EIF template to guide the process and keep it focused on the sponsor’s expectations as defined in the solicitation and review criteria can determine the proposal’s success.
Changes at NIH: NCRR Dissolved, NCATS Created

By Mike Cronan, co-publisher

Dissolution of the National Center for Research Resources
Creation of National Center for Advancing Translational Sciences

On December 23, 2011, President Barack Obama signed the Fiscal Year 2012 Omnibus Appropriations bill. As part of this legislation, the National Center for Research Resources (NCRR) is dissolved and the National Center for Advancing Translational Sciences (NCATS) is established. Principal investigators of former NCRR grants will receive more specific information from the NIH by e-mail within the next few weeks. Please direct all questions regarding the new location of a former NCRR grant to ncrrtransition@mail.nih.gov.

NCRR’s programs have been transferred to the following NIH Institutes and Centers:
National Center for Advancing Translational Sciences (More Below)
• Clinical and Translational Science Awards
• Related Small Business (SBIR/STTR) Grants

NIH Office of the Director, Division of Program Coordination, Planning and Strategic Initiatives (DPCPSI), Office of Research Infrastructure Programs

The Office of Research Infrastructure Programs (ORIP) is a new program office in DPCPSI dedicated to supporting research infrastructure and related research programs, and coordinating NIH’s science education efforts. ORIP consists of the Division of Comparative Medicine; Division of Instruments, Infrastructure Resources, and Construction; and the Office of Science Education. The Shared Instrumentation Grant program continues to operate on its regular schedule with a due date of March 21, 2012. NCRR programs transferred here include:
• All Division of Comparative Medicine Programs
  o Nonhuman Primate Resources
  o Vertebrate and Invertebrate Animal Resources
  o Genetic, Biological and Other Resources
  o Human Tissue and Organ Resource for Research Program
  o Career Development
• Extramural Construction
• Research and Animal Facilities Improvement
• Shared and High-End Instrumentation Grants
• Science Education Partnership Awards
• Small Business (SBIR/STTR) Grants for Comparative Medicine and for K-12 Educational Resources

National Institute of Biomedical Imaging and Bioengineering (NIBIB)
NIBIB Funding Opportunities
NCRR programs transferred here include:

- Imaging and Point-of-Care Diagnostics Biomedical Technology Research Centers
- Investigator-Initiated Research Grants for Technology Research and Development
  - R21 Instrument Development Grants Specific to Imaging and Point-of-Care Diagnostics
  - All Other Research Project Grants Related to Imaging and Point-Of-Care Diagnostics
  - Small Business Grants Related to Imaging and Point-Of-Care Diagnostics

National Institute of General Medical Sciences (NIGMS)

NIGMS Funding Opportunities

January 4, 2012. The National Institute of General Medical Sciences (NIGMS), a part of the National Institutes of Health that supports basic research and research training, has established two new divisions. Each will administer existing NIGMS programs along with programs transferred to NIGMS from the former NIH National Center for Research Resources (NCRR). “This reorganization will synergize and strengthen our activities in several critical mission areas,” said NIGMS Acting Director Judith H. Greenberg, Ph.D. “We also look forward to working with the staff, investigators, institutions and other groups associated with the highly regarded NCRR programs we are receiving,” she added.

The new Division of Training, Workforce Development, and Diversity merges NIGMS research training programs with activities that were previously in the institute’s Division of Minority Opportunities in Research (MORE).

The new Division of Biomedical Technology, Bioinformatics, and Computational Biology administers research and research training in areas that join biology with the computer sciences, engineering, mathematics and physics. It includes programs of the former NIGMS Center for Bioinformatics and Computational Biology (CBCB) along with NCRR biomedical technology programs.

For more information about the Division of Training, Workforce Development, and Diversity, visit HERE. For more information about the Division of Biomedical Technology, Bioinformatics, and Computational Biology, visit HERE.

NCRR programs transferred here include:

- Institutional Development Awards
- Basic, Molecular and Cellular Research Biomedical Technology Research Centers
- Investigator-Initiated Research Grants for Technology Research and Development
  - R21 Instrument Development Grants Specific to Basic, Molecular and Cellular Research
  - All Other Research Project Grants Related to Basic, Molecular and Cellular Research
  - Small Business Grants Related to Basic, Molecular and Cellular Research
- Biomedical Informatics Research Network
- Technology Centers for Networks and Pathways
- All Synchrotron-Related Activities
National Institute on Minority Health and Health Disparities (NIMHD)

NIMHD is funding a new AAMC initiative to address health disparities called **U-HEALTH** (Universities for Health Equity through Alignment, Leadership, and Transformation of the Healthcare Workforce).

**NCRR programs transferred here include:**
- Research Centers in Minority Institutions

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

NIDDK Funding Opportunities

**NCRR programs transferred here include:**
- Pancreatic Islet Cell Resource Centers

National Heart, Lung, and Blood Institute (NHLBI)

NHLBI Funding Opportunities

**NCRR programs transferred here include:**
- National Gene Vector Biorepository

**NIH establishes National Center for Advancing Translational Sciences**

The National Institutes of Health (NIH) has established a new center, called the National Center for Advancing Translational Sciences (NCATS). Currently, many costly, time-consuming bottlenecks exist in the translational pipeline. Working in partnership with the public and private sectors, the Center will develop innovative ways to reduce, remove, or bypass these bottlenecks. This will speed the delivery of new drugs, diagnostics, and medical devices to patients. (See [Reengineering Translational Science: The Time Is Right](#), Francis S. Collins.)

**The following programs will comprise NCATS:**
- Bridging Interventions Development Gaps, which makes available critical resources needed for the development of new therapeutic agents
- Clinical and Translational Science Awards, which fund a national consortium of medical research institutions working together to improve the way clinical and translational research is conducted nationwide
- Cures Acceleration Network, which enables NCATS to fund research in new and innovative ways
- FDA-NIH Regulatory Science, which is an interagency partnership that aims to accelerate the development and use of better tools, standards and approaches for developing and evaluating diagnostic and therapeutic products
- Office of Rare Diseases Research, which coordinates and supports rare diseases research
- Components of the Molecular Libraries, which is an initiative that provides researchers with access to the large-scale screening capacity necessary to identify compounds that can be used as chemical probes to validate new therapeutic targets
Therapeutics for Rare and Neglected Diseases, which is a program to encourage and speed the development of new drugs for rare and neglected diseases. The budget for NCATS is primarily derived from a reallocation of funds from the NIH Office of the Director, the National Human Genome Research Institute, and the National Center for Research Resources. According to the release, NIH does not expect the establishment of NCATS to adversely affect funding for basic or applied research.

In a move to re-engineer the process of translating scientific discoveries into new drugs, diagnostics, and devices, the National Institutes of Health has established the National Center for Advancing Translational Sciences (NCATS). The action was made possible by Congress’ approval of a fiscal year 2012 spending bill and the president’s signing of the bill, which includes the establishment of NCATS with a budget of $575 million. NCATS will serve as the nation’s hub for catalyzing innovations in translational science.

A prime example of the type of innovative projects that will be led by NCATS is the new initiative between NIH, the Defense Advanced Research Projects Agency, and the U.S. Food and Drug Administration to develop cutting-edge chip technology. This new technology will allow researchers to screen for safe and effective drugs far more swiftly and efficiently than current methods. A great deal of time and money can be saved testing drug safety and effectiveness much earlier in the process.

To learn more about the impetus and development of NCATS and related developments, go to:

- [NCATS web page](#)
- NCATS on the [Feedback NIH website](#)
- [NCRR Dissolution](#)
- [NCRR and the National Center for Advancing Translational Sciences](#)
- [NIH establishes National Center for Advancing Translational Sciences](#)
- [NIH, DARPA and FDA collaborate to develop cutting-edge technologies to predict drug safety](#)
- [Office of Research Infrastructure Programs](#)
- [A Present for NIH: President Signs Law Creating New Translational Center](#)
Dear Colleague Letter on Supplements for Student to Participate in the FY 2012 Sandia National Labs NINE Summer Scholars Program

The National Science Foundation has entered into a collaboration with the Sandia National Laboratories (SNL) to enable graduate students to spend the summer of 2012 working at the SNL National Institute for Nano-Engineering, NINE (http://www.sandia.gov/NINE/), under the mentorship of SNL researchers. In order to facilitate this collaboration, relevant programs in the NSF Division of Civil, Mechanical, and Manufacturing Innovation (CMMI) plan to provide small supplements to existing awards. It is expected that approximately 10 supplements will be made in the range of $10,000 to $12,000. The awarded supplement is designed to provide funding for student salary during the program, fringe benefits, travel costs, and other supplies & materials needed for the research project.

NCR-SARE 2012 Call for Proposals, Graduate Student Grant Program

The Graduate Student Grant Program is one of five NCR-SARE grant programs. The Graduate Student Grant Program provides funds to students enrolled in graduate programs or in veterinary medicine residence programs at accredited colleges or universities who are exploring some aspect of sustainable agriculture as part of their educational program. Proposals are to be written by the student who will coordinate and conduct the project, with input from her or his major adviser. It is expected that the project will benefit the North Central Region at least as much as it benefits other parts of the world. Due January 26.

Intelligence Community (IC) Postdoctoral Research Fellowship Program

The Intelligence Community (IC) Postdoctoral Research Fellowship Program was established in 2000 to fund basic research in areas of interest to the Intelligence Community. Today, the Program annually funds first- and second-year Postdoctoral Fellows researching topics as varied as molecular biology, nanotechnology, and robotics. The IC Postdoctoral Research Fellowship Program ensures that the IC research agenda addresses issues critical to effective intelligence capabilities. Every year, senior scientists in the Intelligence Community identify research topics covering a range of disciplines. Principal Investigators submit research proposals and, once selected, partner with a qualified Postdoctoral Fellow and an advisor in the Intelligence
Community to research the designated topic. Together, they produce state-of-the-art research while creating invaluable relationships for the future. **Grants Office: Issue Research Solicitations for Overall Program and Young Investigator Award, December 9; Principal Investigators (Overall Program) and Postdoctoral Fellow Alumni (Young Investigator Award): Submission Date for Research Proposals, January 27.**

**National Network for Environmental Management Studies**
EPA established the National Network for Environmental Management Studies (NNEMS) in 1986 to foster a growing interest among higher education students in environmental careers. The NNEMS program is a comprehensive fellowship program that provides undergraduate and graduate students an opportunity to participate in a fellowship project that is directly related to their field of study. The NNEMS program is sponsored by the EPA Office of External Affairs and Environmental Education (OEAEE). **Due January 30.**

**The Thomas R. Pickering Graduate Foreign Affairs Fellowship**
The Thomas R. Pickering Graduate Foreign Affairs Fellowship Program provides funding to participants as they are prepared academically and professionally to enter the United States Department of State Foreign Service. Women, members of minority groups historically underrepresented in the Foreign Service, and students with financial need are encouraged to apply. The goal of the Fellowship Program is to attract outstanding students who enroll in two-year master’s degree programs in public policy, international affairs, public administration, or academic fields such as business, economics, political science, sociology, or foreign languages, who represent all ethnic, racial and social backgrounds and who have an interest in pursuing a Foreign Service career in the U.S. Department of State. The program develops a source of trained men and women who will represent the skill needs of the Department and who are dedicated to representing America's interests abroad. **NOTE: The application for the 2012 Thomas Pickering Graduate Fellowship competition is now open. All application materials are due by January 30, 2012. Register/Apply here.**

**Methodology, Measurement, and Statistics**
The Methodology, Measurement, and Statistics (MMS) Program is an interdisciplinary program in the Social, Behavioral, and Economic Sciences that supports the development of innovative analytical and statistical methods and models for those sciences. MMS seeks proposals that are methodologically innovative, grounded in theory, and have potential utility for multiple fields within the social and behavioral sciences. As part of its larger portfolio, the MMS Program partners with a consortium of federal statistical agencies to support research proposals that further the development of new and innovative approaches to surveys and to the analysis of survey data. **The MMS Program supports a variety of different types of awards, including: 1) Regular Research Awards; 2) Mid-Career Research Fellowships; 3) Doctoral Dissertation Research Improvement Grants; 4) Research Experience for Undergraduates (REU) Supplements.** Due January 30.
Conservation Innovation Grants
Conservation Innovation Grants (CIG) is a voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging Federal investment in environmental enhancement and protection, in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program funds are used to award competitive grants to non-Federal governmental or non-governmental organizations, Tribes, or individuals. The deadline to submit pre-proposal applications is January 31, 2012.

2012-2013 William L. Fisher Congressional Geoscience Fellowship
The AGI Fellow will join more than two dozen other scientists and engineers for an intensive orientation program on the legislative and executive branches, organized by the American Association for the Advancement of Science (AAAS), which also guides the placement process and provides educational and collegial programs for the fellows throughout the year. A flyer about the fellowship which can be posted on career placement bulletin boards is available as a PDF. Due February 1.

2012-2013 Research Fellowship Application Instructions
The Harry Ransom Center at the University of Texas at Austin annually awards over 50 fellowships to support projects that require substantial on-site use of its collections. The fellowships support research in all areas of the humanities, including literature, photography, film, art, the performing arts, music, and cultural history. Applicants must demonstrate the necessity of substantial on-site use of the Center's collections. Due February 1.

American Center of Oriental Research
ACOR in Amman, Jordan is a private, international, non profit 501(c)(3), academic institution dedicated to promoting research and publication in the fields of archaeology, anthropology, ancient through Islamic history, art history, cultural resources management, conservation and preservation studies, Near Eastern languages, religion, and other aspects of Middle East and Near Eastern area studies. Due February 1.

SBE Doctoral Dissertation Research Improvement Grants (DDRIG)
Science, Technology, and Society (STS) Program
Division of Social and Economic Sciences
STS DDRIG Deadline Dates: February 1st and August 1st.

The John Dana Archbold Fellowship
The John Dana Archbold Fellowship program was established in 1979 with an endowment by Mr. Archbold for the purpose of supporting educational exchange between the United States and Norway. It is administered by the Nansen Fund, Inc. in Houston, Texas, in cooperation with the Norway-America Association. Fellowships are offered to Americans and Norwegians for a year of graduate, post-doctoral, or professional study/research. Americans may apply to come
to Norway in even-numbered years (2012, 2014, 2016..) and Norwegians may apply to come to America in odd-numbered years (2013, 2015, 2017..). The primary purpose of the program is to increase understanding between scholars from the two countries. Due February 1.

**Fiscal Year 2012 NMFS-Sea Grant Fellowships in Population Dynamics**
The Graduate Fellowship Program awards at least two new PhD fellowships each year to students who are interested in careers related to the population dynamics of living marine resources and the development and implementation of quantitative methods for assessing their status. Fellows will work on thesis problems of public interest and relevance to NMFS under the guidance of NMFS mentors at participating NMFS Science Centers or Laboratories. The NMFS-Sea Grant Fellowships in Population Dynamics meets NOAA's Mission goal of "Protect, Restore and Manage the Use of Coastal and Ocean Resources Through Ecosystem-Based Management". Due February 17.

**Fiscal Year 2012 NMFS-Sea Grant Fellowships in Marine Resource Economics**
Prospective Fellows must be United States citizens. At the time of application, prospective Marine Resource Economics Fellows must be admitted to a PhD degree program in natural resource economics or a related field at an institution of higher education in the United States or its territories or submit a signed letter from the institution indicating provisional acceptance to a PhD degree program conditional on obtaining financial support such as this fellowship. Applications must be submitted by the institution of higher education, which may be any such institution in the United States or its territories. Due February 17.

**Environmental Public Policy & Conflict Resolution Ph.D. Fellowship**
The Udall Foundation awards two one-year fellowships of up to $24,000 to doctoral candidates whose research concerns U.S. environmental public policy and/or environmental conflict resolution and who are entering their final year of writing the dissertation. Due February 24.

**New York Public Library**
The New York Public Library is delighted to announce the availability of short-term fellowships to support visiting scholars conducting research in the Library’s unique research and special collections. Fellowships stipends up to $4,000 are available to scholars from outside the New York metropolitan area engaged in graduate-level, post-doctoral, or independent research. Scholars researching in the humanities including but not limited to art history, cultural studies, history, literature, performing arts and photography are welcome to apply. Applicants must be United States citizens or permanent residents with the legal right to work in the U.S. Due March 18.

**National Fellowship Databases**

**About GRAPES**
The GRAPES database catalogs extramural funding opportunities of interest to prospective and current graduate students, students working on a master's thesis or doctoral dissertation, and postdoctoral scholars. It contains information on over 500 private and publicly funded awards, fellowships, and internships. Advanced search options allow users to refine their search by field, academic level, award type, award amount, and other criteria. GRAPES is maintained by the Graduate Outreach, Diversity and Fellowships Office. Access the database through the GRAPES Search Form.

Cornell Fellowships Database (Updated URL)

Michigan State University Graduate Fellowships Database

Duke Humanities & Social Science Fellowships and Grants for Graduate and Professional Students.

Externally Funded Fellowships, University of Texas, Arlington National Postdoctoral Association
Headquartered at AAAS; an independent voice for postdocs.

American Psychological Association, Scholarships, Grants and Awards
APA and its affiliate organizations provide a wide range of grants, scholarships, awards with the aim of advancing the science and practice of psychology.

APA Scholarships, Fellowships and Dissertation Awards
Psychology cannot thrive without nourishing our most intelligent and inquiring minds to pursue the discipline. To this end, the Foundation supports a number of programs aimed at helping graduate students further their education in psychology.

University of California, Berkeley Links
- Postdoc Funding in the Biosciences
- Postdoc Funding in the Social Sciences
- Postdoc Funding in the Humanities

Advice on Writing Fellowship Proposals

Writing Fellowship and Grant Proposals
UCLA Writing Center

Guide to Proposal Development in the Humanities For Graduate Students
Hall Center, Humanities Grant Development Office, The University of Kansas
Writing Proposals for ACLS Fellowship Competitions
Christina M. Gillis, American Council of Learned Societies

Fellowship Personal Statements and Essays
Worcester Polytechnic Institute

Grant-Writing Tips for Graduate Students, The Chronicle Of Higher Education
By Lisa Patrick Bentley, a National Science Foundation postdoctoral fellow in bioinformatics at the University of Arizona's department of ecology and evolutionary biology.

Developing Graduate Fellowship Proposals, A Guide for Students
By Colgate University (More)

Writing and Presenting Your Thesis or Dissertation
S. Joseph Levine, Ph.D., Michigan State University

Dissertation Proposal Resources, University of California, Berkeley, IIS
Writing research and grant proposals is one of the most difficult -- and unavoidable -- requirements of graduate study in the social sciences. When it comes time to write them, however, many graduate students feel left to their own devices. This website is designed to help you navigate the hazards this process entails. This site comprises a collection of tips, samples, and links. It is not meant as a class, nor a substitute for feedback from colleagues and advisors. It is merely an amiable guide meant to help you through an important phase in your academic career. Although biased in favor of "area studies" specialists and those planning to spend extended periods overseas, the content of this workshop is intended to be useful for all students hoping to conduct empirical social-scientific fieldwork.

- NIH Fellowships
  - Applying for a Fellowship
  - Writing a Fellowship Application
  - Promote Your Research Plan
  - Advice for Predoctoral Fellowship Candidates
  - Submitting Your Fellowship Forms, Contacting NIAID

Funding Your Research: How to Apply for an NRSA
Co-Sponsored by Career Services and the Office of Postdoctoral Programs
This presentation was given by Laura Stark Malisheski, Ph.D., Postdoctoral Fellow in Neuroscience at the University of Pennsylvania.

UNC-Chapel Hill's Writing Center
A handout provided by to help graduate students write and revise grant proposals for research funding in all academic disciplines.

Proposal Writer's Guide
by Don Thackrey, University of Michigan

NIH Early-Stage Postdoctoral Grants Fit Different Interests
If you recently earned a doctoral degree and are beginning your career as a junior researcher or faculty member, you qualify for several types of research support. Choose the award type that matches your area of interest.

- To obtain training, apply for an NRSA Postdoctoral Fellowship (F32).
- If you have independent funding, such as an R01 grant, apply for an Independent Scientist Award (K02).
- If your background is in quantitative science and engineering and you want to integrate this expertise with biomedicine, apply for a Mentored Quantitative Research Development Award (K25). To qualify, you'll need experience at the junior-faculty level, such as early- to mid-level assistant professor or research assistant professor.
- To work in a clinical field, apply for a Mentored Clinical Scientist Development Award (K08). However, if you have a significant publication history, reviewers may consider you overqualified for a K08.
- To pursue an assistant professorship, apply for a Research Scholar Development Award (K22) or NIH Pathway to Independence Award (K99/R00). You should have no more than five years of postdoctoral experience.
- To conduct patient-oriented research, apply for a Mentored Patient-Oriented Research Career Development Award (K23). You'll need a Ph.D. or clinical degree and have just completed specialty or subspecialty training.
National Academies Press
NAP makes all PDF versions of Academies reports free to download; more than 4,000 titles available free to users. Read More National Academy RSS feeds.

NORDP Research Development Resources

Institutional Repositories Published with Digital Commons

NIH CSR Peer Review Notes
The Center for Scientific Review publishes Peer Review Notes to inform our reviewers, NIH staff and others of news related to our grant application review policies, procedures and plans. Comments may be sent to Don Luckett, Communications Director, Center for Scientific Review, National Institutes of Health. E-mail: Luckettd@csr.nih.gov. Join the Peer Review Notes LISTSERV to receive the Peer Review Notes, CSR press releases and other news as soon as they are released.

NIH Sample R01 Applications and Summary Statements
Four investigators who wrote exceptional R01 applications in the shorter format— with a 12-page Research Strategy— have allowed NIH to post them online. NIH selected these applications as sound examples for new investigators as well as experienced investigators who are new to the shorter format. To highlight the excellent grantsmanship attributes, NIH has lightly annotated the Abstracts and Research Plans. While you are free to read and benefit from the text, please note that these applications are copyrighted. You may use the text verbatim for nonprofit educational purposes only, and you must credit the PI, grantee organization, and NIAID.

Writing educational grants to federal agencies and foundations is helped by developing a knowledge base of proven and successful educational models and STEM standards at the K-12, community college, and university level.

Department of Education Resources: Federal Register notices from the Department of Education via Twitter or RSS. Read past messages from the discontinued EDInfo listserv here. You can find out about federal teaching resources at:

- Twitter: http://twitter.com/FreeResources
- RSS: http://www.ed.gov/free/free-rss.xml

Education Funding Watch
The Foundation Center's newsletter devoted to education-related topics.

MSP-PE Year-7 Report, December 2011
The Math and Science Partnership Program Evaluation's (MSP-PE) Year-7 Report covers the project's seventh year, ending on September 30, 2011. The report discusses the methodological lessons learned to strengthen future program evaluations. The program evaluation, conducted under Contract No. EHR-0456995, is led by COSMOS Corporation, with Robert K. Yin serving as Principal Investigator. Additional Co-Principal Investigators are Darnella Davis (COSMOS), Kenneth K. Wong (Brown University), and Patricia Moyer-Packenham (Utah State University). Since 2007, Bernice Anderson, Ed.D., Senior Advisor for Evaluation, has served as the NSF Program Officer.

STEMConnector.org
STEMConnector is a nationwide collaboration of companies, nonprofit associations and professional societies, STEM-related research & policy organizations, and academic institutions concerned about the plight of STEM education in the United States. The newly launched website aims to be one-stop shop for who's doing what in Science, Technology, Engineering, and Math. STEMConnector will be a repository of descriptions and links to over 2600 STEM-related organizations, including corporations, education, foundations, professional and trade associations, government, states, national laboratories, technology centers, and diversity and women's organizations, as well as leaders and fact sheets for all 50 states.

National Academies Press
NAP makes all PDF versions of Academies reports free to download; more than 4,000 titles available free to users. Read More National Academy RSS feeds.

STEM Professional Learning Communities
Professional learning communities (PLCs) have become a popular mechanism for improving teaching and learning in the K-12 STEM topics. What factors should be considered in determining whether or not to use PLCs, the appropriate structure and composition of PLCs, necessary knowledge and skills for quality facilitation, and how to ensure teacher and administrative buy-in and support of PLCs? The MSP-Knowledge Management and Dissemination (KMD) project is pleased to announce the publication of a series of reviews from research and practice in the area of K-12 STEM professional learning communities. The knowledge reviews provide guidance to those who design or support STEM PLCs. By following the link below, you will have an opportunity to learn from the information related to five topics:

- Considerations for Using STEM PLCs
- Composition of STEM PLCs
- Structuring the Work of STEM PLCs
- Facilitation of STEM PLCs
- Garnering and Maintaining Support for STEM PLCs

**Common Features of Professional Development Activities for Math and Science Teachers**

This study examines the professional development activities provided for mathematics and science teachers in the National Science Foundation’s Math and Science Partnership (MSP) Program by analyzing a cross-sectional sample of over 2,000 professional development activities provided by partnerships in the program. Data were gathered from secondary source documents and self-report surveys to examine core and structural features of the professional development provided in the program. The features examined in the analysis included professional development form, collective participation, content, duration, and outcomes. The results from this sample of partnership-supported professional development activities for mathematics and science teachers were mixed. There was evidence of research-based effective professional development practices for mathematics and science teachers, including the collective participation by teachers at the same grade levels, a focus on content-specific training such as algebra and physical science, and sufficient duration with large portions of teachers in the sample participating in over 20 hours of professional development in mathematics and science. However, this sample of professional development activities also shows that there is room for growth. Courses and workshops continue as the dominant form of professional development delivery, there are few measures used to assess the professional development activities, and the partnerships did not connect professional development efforts for mathematics and science teachers with classroom practices and student achievement outcomes. These findings indicate that the delivery of professional development has adopted important research-proven methods and that there is still room for growth.

**Establishing Long-Term Partnerships between K-12 Districts and Science, Technology, Engineering, and Mathematics (STEM) Faculty**

This study is one in a series of briefs for the Math and Science Partnership Program Evaluation (MSP-PE), conducted for the National Science Foundation’s Math and Science Partnership Program (NSF-MSP). The MSP-PE is conducted under Contract No. EHR-0456995. Since 2007,
Bernice Anderson, Ed.D., Senior Advisor for Evaluation, Directorate for Education and Human Resources, has served as the NSF Program Officer. The author is Robert K. Yin, Ph.D., of COSMOS Corporation. Darci Terrell and Laura Cooper (COSMOS) provided research assistance.

**Designing Professional Development Activities for Mathematics Specialists**

In response to calls for the improvement of mathematics instruction on national, state, and local levels, many school systems have begun to develop programs in which a key player is a mathematics specialist, mathematics teacher leader, or mathematics coach. While each system defines the work of these educators in slightly different ways, these terms generally indicate an educator who has been given the responsibility for supporting other teachers as they seek to improve their mathematics instruction. For the purpose of this paper, we will use the term Mathematics Specialist to refer to these educators. The work of Mathematics Specialists may include conducting professional development activities, working with teachers in their classrooms, interpreting local curriculum goals in the light of national standards and published curriculum, and communicating with parents and the general public about the purposes and accomplishments of the school’s mathematics program.

**Bridging Engineering and Education: Content, Curriculum, and Pedagogy from a K-20 Perspective**

This engineering content and curriculum study is one in a series of substudies for the Math and Science Partnership Program Evaluation (MSP-PE) conducted for the National Science Foundation’s Math and Science Partnership Program (NSF MSP). The MSP-PE is conducted under Contract No. 0456995, Gabriel Della-Piana, Ph.D., Program Director, Division of Research, Evaluation, and Communication, serves as the NSF Program Officer. Diane Spresser, Ph.D., serves as the Senior Program Coordinator, Directorate for Education and Human Resources for NSF. The author is Margret A. Hjalmarson, Ph.D., Assistant Professor of Education, George Mason University, Fairfax, Virginia.

**STEM Professional Learning Communities**

Professional learning communities (PLCs) have become a popular mechanism for improving teaching and learning in the K-12 STEM topics. What factors should be considered in determining whether or not to use PLCs, the appropriate structure and composition of PLCs, necessary knowledge and skills for quality facilitation, and how to ensure teacher and administrative buy-in and support of PLCs? The knowledge reviews provide guidance to those who design or support STEM PLCs. By following the link below, you will have an opportunity to learn from the information related to five topics:

- **Considerations for Using STEM PLCs**
- **Composition of STEM PLCs**
- **Structuring the Work of STEM PLCs**
- **Facilitation of STEM PLCs**
- **Garnering and Maintaining Support for STEM PLCs**
Academic Technology Transfer and Commercialization of University Research
Section 520 of the America COMPETES Reauthorization Act of 2010 requires higher education institutions that have NSF research support and at least $25,000,000 in total Federal research grants in the most recently completed Federal fiscal year to submit to NSF the universal resource locator (URL) that contains information on their transfer of technology and commercialization of research results efforts. The URLs are displayed as submitted to the National Science Foundation. Awardees are responsible for the information contained on these websites. NSF has not approved or endorsed the content of these websites. This requirement is effective for all new awards and funding amendments to existing NSF grants awarded on or after February 1, 2012.

Dissolution of the National Center for Research Resources
On December 23, 2011, President Barack Obama signed the Fiscal Year 2012 Omnibus Appropriations bill. As part of this legislation, the National Center for Research Resources (NCRR) is dissolved and the National Center for Advancing Translational Sciences (NCATS) is established.

National Institute of General Medical Sciences Reorganizes
January 4, 2012. The National Institute of General Medical Sciences (NIGMS), a part of the National Institutes of Health that supports basic research and research training, has established two new divisions. Each will administer existing NIGMS programs along with programs transferred to NIGMS from the former NIH National Center for Research Resources (NCRR). “This reorganization will synergize and strengthen our activities in several critical mission areas,” said NIGMS Acting Director Judith H. Greenberg, Ph.D. “We also look forward to working with the staff, investigators, institutions and other groups associated with the highly regarded NCRR programs we are receiving,” she added.

The new Division of Training, Workforce Development, and Diversity merges NIGMS research training programs with activities that were previously in the institute’s Division of Minority Opportunities in Research (MORE). The division also houses the Institutional Development Award program from NCRR. It is led by former MORE Director Clifton A. Poodry, Ph.D. “We created the new division because we recognize that training and the development of an outstanding and diverse biomedical workforce are intimately connected. The reorganization is consistent with key elements of our strategic plans and reflects input we received from many stakeholders,” said Greenberg.

The new Division of Biomedical Technology, Bioinformatics, and Computational Biology administers research and research training in areas that join biology with the computer sciences, engineering, mathematics and physics. It includes programs of the former NIGMS Center for Bioinformatics and Computational Biology (CBCB) along with NCRR biomedical technology programs. Former CBCB Director Karin Remington, Ph.D., is the division director.
“Great progress is often made at the intersections of scientific fields, and the Division of Biomedical Technology, Bioinformatics, and Computational Biology is well-positioned to facilitate just such advances,” Greenberg noted.

The amount of money allocated to programs in the new divisions will not change as a result of the reorganization or transfer of NCRR programs. Most grants in the new divisions will continue to be managed by the same staff members.

For more information about the Division of Training, Workforce Development, and Diversity, visit [HERE](#). For more information about the Division of Biomedical Technology, Bioinformatics, and Computational Biology, visit [HERE](#).

**The National Institute on Minority Health and Health Disparities**

Some of the programs that NIMHD supports includes the [Centers of Excellence](#), the [Research Endowment Program](#), the [Loan Repayment Program](#), the [Community Based Participatory Research](#), [Minority Health and Health Disparities International Research Training](#), [Research Infrastructure in Minority Institutions](#), and the [Small Business Innovation Research/Small Business Technology Transfer Program](#).

**NSF Notice of Intent to Revise American Recovery and Reinvestment Act (ARRA) Award General Terms and Conditions to Ensure Project Completion by September 30, 2013**

This notice applies to all NSF grantees with active awards that were issued pursuant to the American Recovery and Reinvestment Act of 2009 (ARRA). **The purposes of this notice are to:**

1. notify grantee organizations, Principal Investigators (PIs) and co-Principal Investigators (co-PIs) that NSF will be amending the terms and conditions of active ARRA awards as described below. These amendments will revise the current automatic no-cost extension authority by **eliminating the ability of awardees to extend the expiration date beyond September 30, 2013 without prior NSF approval**;
2. establish a procedure for grantees to request prior NSF approval for extensions beyond September 30, 2013;
3. provide options for those grantees that are unable to accept the terms and conditions, as revised; and
4. notify grantees of ARRA awards with expiration dates after September 30, 2013 of a potential amendment limiting the award expiration to September 30, 2013.

**NIH Recovery Act: Notice of Revised Term of Award for All Recovery Act Awards to Ensure Project Completion by September 30, 2013**

The purposes of this Guide Notice are to 1) notify recipient institutions and Program Director(s)/Principal Investigator(s) (PDs/PIs) that NIH is revising the terms and conditions on some active Recovery Act awards to amend the current automatic no-cost extension authority by limiting the ability for awardees to extend the final budget period of a project period to no later than September 30, 2013 without prior NIH approval; 2) establish a procedure for recipients to request prior NIH approval for extensions beyond September 30, 2013; and 3)
provide options for those recipients unable to accept the revised terms of award described herein.

**SEE Innovation Science, Engineering & Education Innovation**
Research.gov’s new service, available at [www.research.gov/seeinnovation](http://www.research.gov/seeinnovation), provides policymakers, science-related organizations, and the public with clear, accessible information about NSF-funded research and education projects. SEE Innovation offers transparent insight into NSF investments:

- Find out how NSF investments in basic science, engineering, research, and education foster learning, discovery, and breakthroughs that advance the frontier of knowledge and benefit society.
- Discover the NSF-funded research assets, including facilities & networks, telescopes, and ships being used to make ground-breaking discoveries.
- Quickly and intuitively find information by scientific area of interest and geographic location with the click of a button.
- Access information from multiple resources in one location, eliminating the need to sift through multiple sources to find what you are looking for.

**NSF’s Research.gov: CalNet ID Login Now Available**
NSF’s [Research.gov web site](http://www.research.gov) provides services and research-related information for NSF, USDA, and NASA. Researchers can use the site to check the status of NSF and USDA National Institute of Food and Agriculture grant applications. NSF recently added financial functions to Research.gov. In 2013 NSF will require Research.gov for submission of annual, final, and interim progress reports.

**Dear Colleague Letter - Interdisciplinary Research across the SBE Sciences**
"Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice." National Academies’ Report "Facilitating Interdisciplinary Research, 2004" and the [NSF Interdisciplinary Research web site](http://www.nsf.gov/), [Rebuilding the Mosaic](http://www.nsf.gov/public/2004/interdisciplinary/), which reports the results of the year-long SBE 2020 visioning process, finds that scholars in the social, behavioral, and economic sciences believe that future research will be interdisciplinary, collaborative, and data intensive. The Directorate for Social, Behavioral & Economic Sciences (SBE) therefore encourages investigators to submit proposals that go beyond the boundaries of traditional disciplines, span across the existing core SBE programs, or extend outside the SBE sciences. The report identifies four cross-cutting themes that appear to be potentially fertile areas for this model of research: population change; disparities in experience and access to resources; language and cognition, including communication, linguistics, and the brain; and new technology/new media and social network analysis. This DCL does not limit eligible proposals to these cross-cutting umbrella topics. The directorate does anticipate future activities that will
support research in some or all of these thematic areas, and proposals that address research problems from an interdisciplinary perspective within these broad topics are welcome.

**Dear Colleague Letter - EarthCube: The Next Steps**

EarthCube is a community driven activity aimed at creating and nurturing transformative approaches to integrated data management infrastructures across the Geosciences. The Geosciences Directorate (GEO) and the Office of Cyberinfrastructure (OCI) have established a partnership to address the multifaceted challenges of modern, data-intensive science and education. The expected outcome is an environment where obstacles associated with low adoption thresholds and new capabilities are overcome so as to greatly increase the productivity and capability of researchers and educators working at the frontiers of Earth system science. A "Dear Colleague Letter" (**NSF 11-065**) initiated EarthCube in June 2011, followed by a Charrette held Nov. 1-4, 2011. The Charrette provided the opportunity for the community to come together (on-site and virtually) to clarify the long-term breadth and scope of EarthCube and identify potential new science that could be accomplished within a future framework for EarthCube. Information on the Charrette and its outcomes is available at the EarthCube website. Community dialogue has also been facilitated by webinar presentations. Dialogue continues in order to hone a strategic framework for EarthCube and encourage convergence of broad-based collaborations within the geosciences and beyond.

At this point in the process, NSF will accept EAGER proposals or supplemental funding requests that are consistent with the guidance provided by the Charrette, this letter and supplemental guidance.

**Dear Colleague Letter on Supplements for Student to Participate in the FY 2012 Sandia National Labs NINE Summer Scholars Program**

The National Science Foundation (NSF) has entered into a collaboration with the Sandia National Laboratories (SNL) to *enable graduate students to spend the summer of 2012 working at the SNL National Institute for Nano-Engineering*, NINE (**http://www.sandia.gov/NINE/**), under the mentorship of SNL researchers. In order to facilitate this collaboration, relevant programs in the NSF Division of Civil, Mechanical, and Manufacturing Innovation (CMMI) plan to provide small supplements to existing awards. It is expected that approximately 10 supplements will be made in the range of $10,000 to $12,000. The awarded supplement is designed to provide funding for student salary during the program, fringe benefits, travel costs, and other supplies & materials needed for the research project.

**Dear Colleague Letter on Attendance at the 2012 NSF CMMI Research and Innovation Conference**

The Division of Civil, Mechanical, and Manufacturing Innovation (CMMI) of the National Science Foundation (NSF) is pleased to announce that the 2012 NSF CMMI Research and Innovation Conference will take place in Boston, MA from July 9-12, 2012. The theme of the conference is "Engineering Transformation through Partnerships". The goal of the conference is to highlight the innovative and transformative research presently funded in CMMI; to provide researchers
the opportunity to network and form collaborations; and to learn about new and upcoming funding opportunities within CMMI, across NSF, and within partner agencies. This conference will be held along with the 2012 George E. Brown Network for Earthquake Engineering Simulation (NEES) Annual Meeting.

**Frequently Asked Questions** for NSF 12-523: Climate Change Education (CCE): Climate Change Education Partnership (CCEP) Program, Phase II (CCEP-II)

1. **Can I submit a proposal for CCEP Phase II funding if I did not receive a CCEP Phase I award?**
2. **Are there any required formats or forms for submitting a proposal to the NSF CCEP-II program?**
3. **How many pages am I allowed in the Project Description section?**
4. **Can we have more than four PIs/Co-PIs on the proposal?**
5. **What does NSF mean by the term "education" in this solicitation?**
6. **What does NSF mean by the term "expertise in climate science" in this solicitation?**
7. **What type of expertise is needed for a CCEP Phase II Partnership proposal to be successful?**
8. **What is the difference between a Regional and a Thematic Partnership?**
9. **Are there any climate impact themes that are viewed as being of higher priority in this competition?**
10. **What is NSF looking for in terms of scale or impact of the CCEP projects?**

MORE at above URL

**New Five-Year Contracts for Regional Educational Laboratories Began on January 3**
The New Year marked the start of ten new five-year contracts for the Regional Educational Laboratories (RELs). The mission of the REL program is to help states and school districts systematically use research and data to answer important issues of policy and practice with the goal of improving student outcomes. The RELs’ research and technical assistance addresses issues of regional importance that often are of national concern, as well. For example, they will address issues related to improving early childhood education; identifying and retaining effective teachers and principals; adopting and implementing rigorous academic standards and assessments; increasing college readiness, access, and completion; and improving low-achieving schools. Each REL will build research capacity and a knowledge base by assisting states, districts, and schools in using their data systems; conducting high quality research and evaluation; providing opportunities for practitioners to learn about the best education research; and helping education policy makers and practitioners incorporate data-based practices into regular decision-making. The RELs will carry out these priorities primarily through "research alliances," which are partnerships among practitioners, policy makers, the REL and others to develop a thorough understanding of an education issue of concern.

**Request for Information: Improving Accuracy of Solar Forecasting**

**Funding:** No funding available; request for information only
Open Date: 01/05/2012; Close Date: 02/03/2012
Funding Organization: SunShot Initiative; Funding Number: DE-FOA-0000637
DOE is soliciting feedback on ways to improve the accuracy of solar forecasting models as they relate to integrating high penetrations of photovoltaic systems onto the utility grid. This request for information (RFI) also seeks to gather information on uniform and comprehensive metrics to standardize solar forecasting. Accurate solar forecasts are essential for power system operators to ensure grid reliability. Respondents are asked to comment on the questions in the RFI. Respondents are also encouraged to comment on the importance of accurate forecasting and universal metrics, as well as your organization's anticipated interest in participating in a possible funding opportunity. For more information, see the full solicitation.

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All reports available on the National Academies Press (NAP) website are now offered free of charge to web visitors.
The competitiveness of proposals can be enhanced by grounding the arguments you make in the proposal narrative, as appropriate, on national reports, agency research roadmaps, and research workshops that demonstrate your understanding of the national research agenda and how your research advances and maps to that agenda.

Reengineering Translational Science: The Time Is Right, Francis S. Collins


Report of a Workshop on Science, Technology, Engineering, and Mathematics (STEM) Workforce Needs for the U.S. Department of Defense and the U.S. Defense Industrial Base is the summary of a workshop held August 11, 2011 as part of an 18-month study of the issue. This book assesses the STEM capabilities that the Department of Defense (DOD) needs in order to meet its goals, objectives, and priorities; to assess whether the current DOD workforce and strategy will meet those needs; and to identify and evaluate options and recommend strategies that the department could use to help meet its future STEM needs.

New Research Opportunities in the Earth Sciences

The 2001 National Research Council (NRC) report Basic Research Opportunities in Earth Science (BROES) described how basic research in the Earth sciences serves five national imperatives: (1) discovery, use, and conservation of natural resources; (2) characterization and mitigation of natural hazards; (3) geotechnical support of commercial and infrastructure development; (4) stewardship of the environment; and (5) terrestrial surveillance for global security and national defense. This perspective is even more pressing today, and will persist into the future, with ever-growing emphasis. Today's world-with headlines dominated by issues involving fossil fuel and water resources, earthquake and tsunami disasters claiming hundreds of thousands of lives and causing hundreds of billions of dollars in damages, profound environmental changes associated with the evolving climate system, and nuclear weapons proliferation and testing-has many urgent societal issues that need to be informed by sound understanding of the Earth sciences. A national strategy to sustain basic research and training of expertise across the full spectrum of the Earth sciences is motivated by these national imperatives. New Research Opportunities in the Earth Sciences identifies new and emerging research opportunities in the Earth sciences over the next decade, including surface and deep Earth processes and interdisciplinary research with fields such as ocean and atmospheric sciences, biology, engineering, computer science, and social and behavioral sciences. The report also identifies key instrumentation and facilities needed to support these new and emerging research opportunities. The report describes opportunities for increased cooperation in these new and emerging areas between EAR and other government agency programs, industry, and international programs, and suggests new ways that EAR can help train the next generation of
Earth scientists, support young investigators, and increase the participation of underrepresented groups in the field.

**Climate Change Education: Goals, Audiences, and Strategies: A Workshop Summary**
The public’s limited understanding of climate change is partly the result of four critical challenges that have slowed development and delivery of effective climate change education. As one response to these challenges, Congress, in its 2009 and 2010 appropriation process, requested that the National Science Foundation (NSF) create a program in climate change education to provide funding to external grantees to improve climate change education in the United States. To support and strengthen these education initiatives, the Board on Science Education of the National Research Council (NRC) created the Climate Change Education Roundtable. The Roundtable convened two workshops. *Climate Change Education Goals, Audiences, and Strategies* is a summary of the discussions and presentations from the first workshop, held October 21 and 22, 2010. This report focuses on two primary topics: public understanding and decision maker support. It should be viewed as an initial step in examining the research on climate change and applying it in specific policy circumstances.

**Biosecurity Challenges of the Global Expansion of High Containment Biological Laboratories**
During July 10-13, 2011, 68 participants from 32 countries gathered in Istanbul, Turkey for a workshop organized by the United States National Research Council on Anticipating Biosecurity Challenges of the Global Expansion of High-containment Biological Laboratories. The United States Department of State's Biosecurity Engagement Program sponsored the workshop, which was held in partnership with the Turkish Academy of Sciences. The international workshop examined biosafety and biosecurity issues related to the design, construction, maintenance, and operation of high-containment biological laboratories - equivalent to United States Centers for Disease Control and Prevention biological safety level 3 or 4 labs. Although these laboratories are needed to characterize highly dangerous human and animal pathogens, assist in disease surveillance, and produce vaccines, they are complex systems with inherent risks.

**Is sustainability science really a science?**
The idea that one can create a field of science out of thin air, just because of societal and policy need, is a bold concept. But for the emerging field of sustainability science, sorting among theoretical and applied scientific disciplines, making sense of potentially divergent theory, practice and policy, the gamble has paid off. In a recent issue of the *Proceedings of the National Academy of Sciences*, scientists from Los Alamos National Laboratory, Santa Fe Institute, and Indiana University analyzed the field’s temporal evolution, geographic distribution, disciplinary composition, and collaboration structure. “We don’t know if sustainability science will solve the essential problems it seeks to address, but there is a legitimate scientific practice in place now,” said Luís Bettencourt of Los Alamos National Laboratory and Santa Fe Institute, first author on the paper, “Evolution and structure of sustainability science.”
Report Challenges Ambitious Plan for U.S. Climate Research

A report from the National Research Council (NRC) released today points out that a draft federal plan to coordinate research into how to respond to climate change is unlikely to succeed without added resources and new ways to manage the program. The NRC committee—chaired by climate modeler Warren Washington of the National Center for Atmospheric Research in Boulder, Colorado—commends the 21-year-old U.S. Global Change Research Program (USGCRP) for proposing to broaden its scope beyond coordinating basic climate research. Its new draft strategic plan includes research that would support society's efforts to reduce the magnitude of greenhouse warming and other climate change -- and to adapt to any unavoidable change. "Now that we have a pretty good handle on the climate science," says Washington, it is appropriate that USGCRP begin fulfilling Congress's intent in 1990 legislation that created a federal interagency group to coordinate research.

DOE Releases its Critical Materials Strategy

DOE released on December 22, 2011, its Critical Materials Strategy, a report that examines the role that rare earth metals and other key materials play in clean energy technologies such as wind turbines, electric vehicles, solar cells, and energy-efficient lighting. The report found that several clean energy technologies use materials at risk of supply disruptions in the short term, with risks generally decreasing in the medium and long terms. Supply challenges for five rare earth metals (dysprosium, neodymium, terbium, europium, and yttrium) may affect clean energy technology deployment in the years ahead. In the past year, DOE has developed its first critical-materials research and development plan, provided new funding for priority research, convened international workshops that brought together leading experts, and participated in substantial new coordination among federal agencies working on critical materials. Also, the Fiscal Year 2012 spending bill includes $20 million to fund an energy innovation hub focused on critical materials, which will help advance the three pillars of the DOE strategy: diversifying supply; developing substitutes; and improving recycling, reuse, and more efficient use. The 2011 Critical Materials Strategy is DOE's second report on this topic and provides an update to last year's analysis. Using a methodology adapted from the National Academy of Sciences, the report includes criticality assessments for 16 elements based on their importance to clean energy and supply risk. See the DOE press release and the report summary.

Integrating Variable Wind Energy into the Grid

Wind doesn't always blow consistently and sometimes doesn't blow at all, but wind energy is not unreliable—just ask grid operators. In a new report, Strategies and Decision Support Systems for Integrating Variable Energy Resources in Control Centers for Reliable Grid Operations, they offer their first-hand perspectives on how variable energy sources, including wind energy, actually impact grid operations. Grid operators are the individuals who ensure that you receive electricity reliably and at an economical price. They balance electricity supply and demand 24 hours a day, 7 days a week, 365 days a year. You can think of them as the air traffic controllers for the power system, constantly monitoring and directing activities on the grid to keep the lights on in your home.
The study, a first-of-its-kind review, finds that the ability to forecast variable energy output is vital to successfully integrating variable energy into the electrical grid. The study also finds that decision support tools are also essential to helping grid operators incorporate wind forecasts and obtain optimal power flow in their grids. The study describes several decision support tools that are currently used by grid operators. However, existing decision support tools in the United States need to evolve further as more domestic variable energy enters the electrical grid. See Energy Blog post.

A Review of the U.S. Global Change Research Program's Strategic Plan
In mid-2011, a new NRC Committee to Advise the USGCRP was formed and charged to provide a centralized source of ongoing whole-program advice to the USGCRP. The first major task of this committee was to provide a review of the USGCRP draft Strategic Plan 2012-2021 (referred to herein as "the Plan"), which was made available for public comment on September 30, 2011. A Review of the U.S. Global Change Research Program's Strategic Plan addresses an array of suggestions for improving the Plan, ranging from relatively small edits to large questions about the Program's scope, goals, and capacity to meet those goals. The draft Plan proposes a significant broadening of the Program's scope from the form it took as the CCSP. Outlined in this report, issues of key importance are the need to identify initial steps the Program will take to actually achieve the proposed broadening of its scope, to develop critical science capacity that is now lacking, and to link the production of knowledge to its use; and the need to establish an overall governance structure that will allow the Program to move in the planned new directions.

Research Frontiers in Bioinspired Energy: Molecular-Level Learning from Natural Systems: A Workshop
Building upon the 2007 workshop, the National Academies Board on Chemical Sciences and Technology convened the Committee on Research Frontiers in Bioinspired Energy to organize a second workshop in 2011 which, according to the statement of task, would explore the molecular-level frontiers of energy processes in nature through an interactive, multidisciplinary, and public format. Specifically, the committee was charged to feature invited presentations and include discussion of key biological energy capture, storage, and transformation processes; gaps in knowledge and barriers to transitioning the current state of knowledge into applications; and underdeveloped research opportunities that might exist beyond disciplinary boundaries. Research Frontiers in Bioinspired Energy is an account of what occurred at the 2011 workshop, and does not attempt to present any consensus findings or recommendations of the workshop participants. It summarizes the views expressed by workshop participants, and while the committee is responsible for the overall quality and accuracy of the report as a record of what transpired at the workshop, the views contained in the report are not necessarily those of the committee.
New Funding Solicitations Posted Since December 15 Newsletter

Climate Change Education Partnership (CCEP) Program, Phase II (CCEP-II)
The Climate Change Education Partnership (CCEP) program seeks to establish a coordinated national network of regionally- or thematically-based partnerships devoted to increasing the adoption of effective, high quality educational programs and resources related to the science of climate change and its impacts. Each CCEP is required to be of a large enough scale that it will have catalytic or transformative impact that cannot be achieved through other core NSF program awards. The CCEP program is one facet of a larger NSF collection of awards related to Climate Change Education (CCE) that has two goals: (1) preparing a new generation of climate scientists, engineers, and technicians equipped to provide innovative and creative approaches to understanding global climate change and to mitigate its impact; and, (2) preparing today's U.S. citizens to understand global climate change and its implications in ways that can lead to informed, evidence-based responses and solutions. **LOI due January 24; full March 21.**

NOAA Sea Grant Aquaculture Research Program 2012
This is part of the overall plan to support the development of environmentally and economically sustainable ocean, coastal, or Great Lakes aquaculture. Aquaculture that occurs in the Great Lakes or its coastal zone is considered marine aquaculture for this competition. Priorities for this FY 2012 competition include: Research to inform specific regulatory decisions; Research that supports multi-use spatial planning; and Socio-economic research targeted to understand aquaculture in a larger context. Proposals must be able to express how the proposed work will have a high probability of significantly advancing U.S. marine aquaculture development in the short-term (1-2 years) or medium-term (3-5 years). This Federal Funding Opportunity includes information on application and criteria for aquaculture research projects requesting a total of $50,000 to $500,000 in federal funding for up to a two-year period. Matching funds are required. Given the anticipated amount of funding and the anticipated number and quality of proposals submitted, it is anticipated that at least seven projects will be awarded in FY 2012. **Due February 7.**

Hispanic-Serving Institutions Education Grants Program (HSI)
This competitive grants program is intended to promote and strengthen the ability of Hispanic-Serving Institutions to carry out higher education programs in the food and agricultural sciences. Programs aim to attract outstanding students and produce graduates capable of
enhancing the Nation's food and agricultural scientific and professional work force. Due February 9.

**USDA/NIFA Policy Research Centers Grant Program**

NIFA announces the availability of grant funds and requests applications for Policy Research Centers (PRC) Grant Program for fiscal year FY 2012. A PRC is defined to have the analytical capacity to either perform policy analysis across multiple sets of public policy issues or have a specialized capacity in a single policy area. A center may reside in a single institution or be a collaborative effort across multiple institutions. These centers will conduct research and education programs that are objective, operationally independent, and external to the Federal Government and that concern the effect of public policies and trade agreements on the following areas: (1) The farm and agricultural sectors (including commodities, livestock, dairy, and specialty crops); (2) the environment; (3) rural families, households, and economies; and (4) consumers, food, and nutrition. The amount available for support of this program in FY 2012 is approximately $3,840,000. Due February 13.

**IES SBIR Fiscal Year 2012 Program Solicitations are Now Open**

The Institute has released three Fiscal Year 2012 solicitations.

- **Phase I in Education**: Solicitation #ED-IES-12-R-0006 is a request for Phase I proposals for awards up to $150,000 for the research and development of prototypes of education technology products to improve student learning directly or indirectly (e.g., through teacher practices) in authentic education delivery settings (e.g., schools, after-school programs, or distance learning programs), or to facilitate research in the field of education. *Note: The Institute is not offering the Fast-Track option through its education track in Fiscal Year 2012. The Institute does anticipate that the Fast-Track option will be offered in Fiscal Year 2013.* This solicitation can be found by clicking here. The due date and time for the receipt of proposals is 11 A.M. EST on February 22, 2012.

- **Phase I in Special Education**: Solicitation #ED-IES-12-R-0007 is a request for Phase I proposals for awards up to $150,000 for the research and development of prototypes of technology products used by infants, toddlers, or students with or at risk for disabilities, or teachers (or other instructional personnel, related services providers, or family members) in early interventions or special education. This Phase I solicitation can be found by clicking here. The due date and time for the receipt of proposals is 11 A.M. EST on February 22, 2012.

- **Fast-Track in Special Education**: Solicitation #ED-IES-12-R-0005 is a request for Fast-Track (Phase I & II) proposals for awards up to $1,050,000 for the research and development of technology products used by infants, toddlers, or students with or at risk for disabilities, or teachers (or other instructional personnel, related services providers, or family members) in early interventions or special education. *Note: In order to apply for Fast-Track funding in Special Education, applicants must submit both (1) a full SBIR Phase I proposal and (2) a Fast-Track proposal. SBIR Fast-Track proposals that are submitted without a full Phase I proposal will not be evaluated.* This Fast-Track...
Research Development & Grant Writing News

solicitation in special education can be found by clicking here. The due date and time for the receipt of proposals is 11 A.M. EST on February 22, 2012.

**National Nuclear Forensics Expertise Development Program**
The objectives of this program are: (1) to provide a stable foundation from which to develop and maintain the nuclear forensics workforce; (2) to provide a academic pathway from undergraduate to post-doctorate study in disciplines directly relevant to nuclear forensics, including radiochemistry, geochemistry, nuclear physics, nuclear engineering, materials science, and analytical chemistry; and (3) to increase a diverse and highly talented cadre of new and emerging forensics experts who will fill specific expertise gaps in the area of nuclear forensics, an important homeland security mission. Due Feb. 24.

**Distance Education Grants Program for Institutions of Higher Education in Insular Areas (DEG)**
The purpose of this program is strengthen the capacity of Institutions of Higher Education in Insular Areas to carry out resident instruction, curriculum, and teaching programs in the food and agricultural sciences through distance education technology. The Distance Education Grants Program for Institutions of Higher Education in Insular Areas (DEG) is a NIFA-administered competitive grants program focused on improving formal, postsecondary agricultural sciences education. Due March 1.

**USAID Improving Higher Education Quality Program in Vietnam**
The primary objective of this program is to strengthen the human and institutional capacity of Vietnamese higher education institutions to develop and deliver education, training and research programs that underpin economic growth. Due March 2.

**Long-Term Ecological Research (LTER)**
To address ecological questions that cannot be resolved with short-term observations or experiments, NSF established the Long Term Ecological Research Program (LTER) in 1980. Three unique components differentiate LTER research from projects supported by other NSF programs: 1) the research is located at specific sites chosen to represent major ecosystem types or natural biomes; 2) it emphasizes the study of phenomena over long periods of time, based upon data collection in five core areas; and 3) projects include significant integrative, cross-site, network-wide research. Research at LTER sites provides experiments, databases, and research programs for use by other scientists. It must test important ecological or ecosystem theories including, but not limited to, ecosystem stability, biodiversity, community structure, and energy flow. Recognizing that the value of long-term data extends beyond use at any individual site, NSF requires that data collected by all LTER sites be made broadly accessible. Due March 21.

**National Institute of Standards and Technology (NIST) Research Experience for Teachers**
NIST is soliciting applications from eligible public school districts and accredited private educational institutions located in the U.S. and its territories nominating middle school science teachers, who have successfully completed the NIST Summer Institute for Middle School
Science Teachers (NIST Summer Institute) Program, to participate in the NIST RET Program. The NIST RET Program will allow the selected teachers to participate in scientific research with NIST scientists and engineers at the NIST Campus in Gaithersburg, Maryland. Due March 21.

NIST Summer Institute for Middle School Science Teachers (NIST Summer Institute) Program
NIST is soliciting applications from eligible public school districts and accredited private educational institutions located in the U.S. and its territories nominating middle school science teachers to participate in the NIST Summer Institute Program. The NIST Summer Institute Program will provide selected teachers hands-on activities, lectures, tours, and visits with NIST scientists and engineers at the NIST Campus in Gaithersburg, Maryland. Due March 21.

Robert Noyce Teacher Scholarship Program
The Robert Noyce Teacher Scholarship Program seeks to encourage talented science, technology, engineering, and mathematics majors and professionals to become K-12 mathematics and science teachers. The Noyce Scholarship Track provides funds to institutions of higher education to support scholarships, stipends, and academic programs for undergraduate STEM majors and post-baccalaureate students holding STEM degrees who earn a teaching credential and commit to teaching in high-need K-12 school districts. The NSF Teaching Fellowship/Master Teaching Fellowship Track provides funding to support STEM professionals who enroll as NSF Teaching Fellows in master’s degree programs leading to teacher certification by providing academic courses, professional development, and salary supplements while they are fulfilling a four-year teaching commitment in a high-need school district. Due March 26.

University Center of Excellence for Integrated Computational Material Science and Engineering of Structural Materials
This is a special BAA in support of the AFRL’s University Center of Excellence for Integrated Computational Material Science and Engineering of Structural Materials. In collaboration with AFRL Materials and Manufacturing Directorate (Wright Patterson AFB, OH), AFOSR invites proposals for research in the areas described in detail below. The schedule for this announcement is given in Section II, Award Information. This research effort will consist of interdisciplinary teams of researchers with the skills needed to address the relevant research challenges necessary to meet the program goals. Multi investigator and/or multi university teaming is encouraged but not required. Proposals should describe cutting-edge efforts on basic scientific problems. Further, in order to satisfy AFOSR Policy on University CoE (e.g. “Educate students within the US in vital technology areas and offer opportunities for AFRL new employee recruitment”) students involved in the program will be US nationals or permanent residents. The duration of the proposed effort is three years. Also, only one award is anticipated. The amount of resources made available to this BAA will depend on the quality of proposals received and the availability of funds, but probably will not exceed $1,000,000/year. Proposers are highly encouraged to confer with the designated points of contact as soon as possible. Their contact information can be found in the text of the published BAA. White Papers
briefly summarizing your ideas and why they are different from what others are doing are highly encouraged, but not required. Coordination with the AFOSR and the Materials and Manufacturing Directorate is highly encouraged but not required. Due April 2.

**Professional Research Experience Program – Material Measurement Laboratory (PREP-MML)**
NIST announces that the PREP-MML is soliciting applications for financial assistance from accredited institutions of higher education in the United States and its territories to enable those institutions to provide laboratory experiences and financial assistance to undergraduate and graduate students and post-doctoral associates in the MML at the NIST Laboratories in Gaithersburg, Maryland and Charleston, South Carolina. Due April 13.

**Centers for Sustainable Molecular Design**
The U.S. Environmental Protection Agency, as part of its Science to Achieve Results (STAR) program, is seeking applications for an interdisciplinary center focusing on the sustainable molecular design of chemicals. The aim of the center will be to develop a set of parameters and strategies that will establish design criteria regarding the properties of chemicals that will lead to the development of intrinsically less hazardous substances when compared to those currently used in society. These newly acquired criteria and design principles will direct researchers towards the generation of novel chemicals that will minimize, and preferably eliminate, associated potential environmental and human health impacts that may occur during the life cycle of that chemical. The advent of these novel chemicals and their respective discovery of correlations between a chemical’s inherent properties and their adverse impacts require the development of improved methods for the design of next generation chemicals. Due April 25.

**Climate Change and Health: Assessing and Modeling Population Vulnerability to Climate Change (R21)**
This FOA encourages research applications to examine the differential risk factors of populations that lead to or are associated with increased vulnerability to exposures, diseases and other adverse health outcomes related to climate change. Applications may involve either applied research studies that address specific hypotheses about risk factors or population characteristics associated with increased vulnerability, or research projects to develop general models or methods for identifying and characterizing population vulnerability to climate change. The ultimate goal of this research program is to help inform climate change adaptation and public health interventions to reduce current and future vulnerability of various populations to the health effects of climate change. Applications are anticipated to involve a multidisciplinary research team, including experts in health sciences and climatology as well as geography, modeling, statistics, demography, and social and behavioral sciences as appropriate. In addition, partnerships with community-based or advocacy organizations, public health officials, urban planners and others are encouraged. Due May 24.
FY 12 Funding Opportunity For The National Consortium For Measurement And Signature Intelligence (MASINT) Research Program

FY12 Program: Offerors are invited to present related work, on-going research activities and proposed future activities associated with the following areas: (A) Remote assessment of missile performance characteristics such as location, thrust, throw weight, warhead accuracy, defensive capabilities, etc. (B) Remote assessment and detection of weapons of mass destruction such as nuclear, biological, chemical and radiological weapons. This thrust area does not include improvised explosive devices utilizing standard explosives such as dynamite, TNT, C4, ANFO, etc. (C) Remote assessment and detection of directed energy weapons. This would include all lasers that are primarily designed as weapons as well as high-powered microwave (HPM) and electromagnetic pulse (EMP) weapons.  Open to Dec. 31, 2012.

DARPA Strategic Technologies
The Defense Advanced Research Projects Agency's (DARPA) Strategic Technology Office (STO) is soliciting innovative proposals under this Broad Agency Announcement (BAA) for the performance of research, development, design, and testing that directly supports Strategic Technology Office (STO). This includes Finding Difficult Targets; Communications, Networks and Electronic Warfare; Shaping the Environment; and Foundational Technologies that support multiple STO focus areas. DARPA-BAA-12-09, entitled Strategic Technologies, is provided as an attachment to this presolicitation notice and includes information on the specific areas of interest, the submission process, proposal formats, as well as all other pertinent administrative information.  DARPA-BAA-12-09 at FedBizOpps  Open through January 16, 2013.

Links to New & Open Funding Solicitations

- Engineering Information Foundation Grant Program
- Comprehensive List of Collaborative Funding Mechanisms, NORDP
- ARL Funding Opportunities — Open Broad Agency Announcements (BAA)
- HHS Grants Forecast
- American Psychological Association, Scholarships, Grants and Awards
- NIAID Funding Blog
- EPA 2011 Science To Achieve Results (STAR) Research Grants
- NASA Open Solicitations
- Defense Sciences Office Solicitations
- The Mathematics Education Trust
- Opportunities for Humanities Funding Announced
- EPA Open Funding Opportunities
- DOE Funding Opportunity Exchange
- CDMRP FY 2011 Funding Announcements
- Office of Minority Health
- Department of Justice Open Solicitations
The National Science Foundation encourages the submission of industry-defined fundamental research proposals from NSF Industry/University Cooperative Research Centers (I/UCRC) in areas of shared value to both centers and their members. Industry-defined fundamental research broadens the scientific and engineering understanding beyond the more specific applied research interests of the industries traditionally served by the I/UCRC. Industry
participation extends the scope and horizon of center research projects so as to drive innovation with industrially relevant fundamental research projects. Due February 1.

2012-2013 Research Fellowship Application Instructions
The Harry Ransom Center at the University of Texas at Austin annually awards over 50 fellowships to support projects that require substantial on-site use of its collections. The fellowships support research in all areas of the humanities, including literature, photography, film, art, the performing arts, music, and cultural history. Applicants must demonstrate the necessity of substantial on-site use of the Center's collections. Due February 1.

FY12 DoD High Energy Laser Multidisciplinary Research Initiative (HEL-MRI)
The primary focus of the FY2012 HEL MRI is to enhance the capabilities of US institutions of higher education to perform fundamental science and engineering research related to lasers, optics, laser interaction physics, and relevant advanced concepts. This research is authorized by Public Law No. 106-398 Sections 241-250. Awards will be made to degree-granting US institutions of higher education. Federally Funded Research and Development Centers (FFRDCs) and Government laboratories are not eligible for awards under this announcement, although they may participate as subawardees. Entities other than US institutions of higher education, to include non-profit organizations, not-for-profit organizations, private industry concerns, and foreign universities/research institutions are not eligible for awards under this announcement, although they may participate as subawardees. Due February 1.

Challenge Grants for Two-Year Colleges
The National Endowment for the Humanities invites two-year colleges to apply in a special Challenge Grant competition to strengthen their long-term humanities programs and resources. Two-year colleges are major educational assets that have too often been overlooked, even though over half of students in post-secondary education attend two-year institutions. The humanities can and should play a vital role in community colleges. The perspectives of history, philosophy, and literature can enrich the educational experience of students attending two-year colleges, deepening their understanding of questions related to differences among cultures, as manifested in diverse understandings of citizenship, politics, and ethics. NEH seeks to encourage two-year colleges to develop models of excellence that enhance the role of the humanities on their campuses. The goals of this initiative are • to enable two-year colleges to strengthen programs in the humanities, especially the study of the world’s many cultures and civilizations; • to support model humanities curricula at two-year colleges that may be replicated at other institutions; and • to encourage two-year colleges to broaden the base of financial support for the humanities. Due February 2.

Smart Health and Wellbeing (SHB)
Through the Smart Health and Wellbeing Program, NSF seeks to address fundamental technical and scientific issues that would support much needed transformation of healthcare from reactive and hospital-centered to preventive, proactive, evidence-based, person-centered and
focused on wellbeing rather than disease. The issues to be addressed include, but are not limited to, sensor technology, networking, information and machine learning technology, modeling cognitive processes, system and process modeling, and social and economic issues. Effective technology-based solutions must satisfy a multitude of constraints arising from clinical needs, social interactions, cognitive limitations, barriers to behavioral changes, heterogeneity of data, semantic mismatch and limitations of current cyberphysical systems. **February 6 and February 21 by program type.**

**SunShot Concentrating Solar Power Research and Development**  
The Department of Energy (DOE) seeks to support research into technologies that have the potential to dramatically increase efficiency, lower costs, and deliver more reliable performance than existing commercial and near-commercial concentrating solar power (CSP) systems. This funding opportunity seeks to develop innovative concepts that could lead to performance breakthroughs like improving efficiency and temperature ranges, and demonstrate new approaches in the design of collectors, receivers, and power cycle equipment used in CSP systems. Each of these subsystems is critical to CSP operation: the collectors collect and concentrate the sun's energy onto the receiver; the receiver accepts and transfers the heat energy to the power cycle; and the power cycle converts the heat energy into electricity. Developing low-cost collectors, high-temperature receivers, and high-efficiency power cycles should lead to subsequent system integration, engineering scale-up, and eventual commercial production for clean electricity generation applications. For more information, see the full solicitation. **Due February 7.**

**Nuclear Energy University Programs - General Scientific Infrastructure Support**  
The goal of the Department of Energy Nuclear Energy University Programs (NEUP) is to support outstanding, cutting-edge, and innovative research at U.S. universities. **Due February 8.**

**Nuclear Energy University Programs - Reactor Upgrades**  
The goal of the Department of Energy Nuclear Energy University Programs (NEUP) is to support outstanding, cutting-edge, and innovative research at U.S. universities. **Due February 8.**

**Camille Dreyfus Teacher-Scholar Awards Program**  
The Camille Dreyfus Teacher-Scholar Awards Program supports the research and teaching careers of talented young faculty in the chemical sciences. Based on institutional nominations, the program provides discretionary funding to faculty at an early stage in their careers. Criteria for selection include an independent body of scholarship attained within the first five years of their appointment as independent researchers, and a demonstrated commitment to education, signaling the promise of continuing outstanding contributions to both research and teaching. The Camille Dreyfus Teacher-Scholar Awards Program provides an unrestricted research grant of $75,000. **Due February 12.**

**Physical and Engineering Sciences in Oncology**
In FY 2012, NSF in collaboration with the Office of Physical Sciences-Oncology (OPSO) of the National Cancer Institute will accept and review investigator-initiated proposals related to the application of physical and engineering sciences knowledge towards understanding cancer diseases. Competitive proposals submitted in response to this announcement should (1) develop novel non-traditional physical and engineering sciences based approaches, materials, or platforms to understand and/or control cancer; (2) generate unique sets of physical measurements that can provide insight into molecular mechanisms of oncogenesis, metastasis, drug resistance or other aspects of cancer that could eventually lead to more effective disease treatment; (3) develop and evaluate theoretical approaches (using simulation or control theory, for example) to provide a comprehensive and dynamic understanding of cancer. Due February 15.

Advancing Health Services through System Modeling Research
NSF, in collaboration with the Health Information Technology (IT) Portfolio at the Agency for Healthcare Research and Quality (AHRQ), will accept and review investigator-initiated proposals that address systems modeling in health services research. The Service Enterprise Systems program in the Civil, Mechanical, and Manufacturing Innovation (CMMI) division of the Engineering Directorate will be the lead program on this interdisciplinary topic. Through this partnership, NSF and AHRQ look to foster new collaborations among health services researchers and industrial and systems engineers with a specific emphasis on the supportive role of health IT. Full Proposal Window: January 15, 2012 - February 15, 2012.

Jacobs Research Funds
A grant program supporting anthropological research (socio-cultural or linguistic in content) on the indigenous peoples of Canada, Mexico, mainland United States, including Alaska, with a focus on the Pacific Northwest. Grants are given for work on problems in: language, social organization, political organization, religion, mythology, music, other arts, psychology and folk science. To apply for a Jacobs Research Fund Grant, complete the Application Form. Application forms and further information can be found at www.jacobsgrants.org. Deadline for receipt of proposals is February 15.

Water Resources Research National Competitive Grants Program
The U.S. Geological Survey in cooperation with the National Institutes for Water Resources requests proposals for matching grants to support research on the topic of improving and enhancing the nation’s water supply, including (but not limited to) enhancement of water supply infrastructure, development of drought impact indicators, evaluation of the dynamics of extreme hydrological events and associated costs, development of methods for better estimation of the physical and economic supply of water, integrated management of ground and surface waters, the resilience of public water supplies, and the evaluation of conservation practices. Proposals are sought in not only the physical dimensions of supply, but also the role of economics and institutions in water supply and in coping with extreme hydrologic conditions. Any investigator at an accredited institution of higher learning in the United States is eligible
to apply for a grant through a Water Research Institute or Center established under the provisions of the Water Resources Research Act of 1984. Due February 23/March 8.

**Plant Feedstock Genomics for Bioenergy: A Joint Research Funding Opportunity**  
**Announcement USDA, DOE**  
The U.S. Department of Energy's Office of Science, Office of Biological and Environmental Research (BER), and the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA), hereby announce their interest in receiving applications for genomics based research that will lead to the improved use of biomass and plant feedstocks for the production of fuels such as ethanol or renewable chemical feedstocks. Specifically, applications are sought for fundamental research on plants that will improve biomass characteristics, biomass yield, or sustainability. Systems biology approaches to identify genetic indicators enabling plants to be efficiently bred or manipulated, or research to predict phenotype from underlying genotype that could lead to improved feedstock characterization and sustainability are also encouraged.  
*(FedConnect)* Due February 24.

**Smart Grid Data Access**  
The U.S. Department of Energy National Energy Technology Laboratory, on behalf of the Office of Electricity Delivery and Energy Reliability is seeking applications aimed at empowering consumers to better manage their electricity use by enabling access to electricity consumption data by customers and their authorized third parties and providing or supporting the use of third party tools and software products that utilize the available data to deliver a value added service to the customer. Due March 1.

**SciDAC: Scientific Computation Application Partnerships in Materials and Chemical Sciences**  
The BES SciDAC Partnership portfolio will focus on the development of new algorithms and computational approaches which could dramatically accelerate the discovery of new materials and processes as well as provide fundamental understanding and improvement of current materials and processes. These elements are critical to the recently announced Materials Genome Initiative (MORE). Implementing these new algorithms on current and next generation massively parallel computers requires a team approach which includes materials and chemical scientists, applied mathematicians and computer scientists *(Fedconnect)*. Due March 12.

**Supporting Universities to Partner Across the Pacific**  
The purpose of this APS is to support partnership between institutions of higher education in Indonesia and the United States. Component I of the APS is directed toward partnerships which support fields of applied science underlying USAID Indonesia's strategic objectives in health, economic growth and the environment; Component II is to support university partnerships, supporting science, technology and math education at the secondary level, by creating model secondary science and technology schools. Due March 16.

**Air Force Defense Research and Development Rapid Innovation Fund (RIF) Program**
The National Defense Appropriation Act (NDAA) for FY2011 provided the Department of Defense (DoD) with the authorities and funds to facilitate the rapid insertion of innovative technologies into military systems or programs meeting critical national security needs. It is primarily for the transition of technologies developed by small businesses, including those resulting from the Small Business Innovation Research (SBIR) Program and DoD-reimbursed Independent Research and Development (IR&D). **Due May 5.**

**Small Research Grant Program, American Astronomical Society**
The Small Research Grant (SmRG) Program is administered by the AAS Executive Office. The program is funded by a grant from NASA and is thus intended mainly to support investigators in the U.S. working on NASA-relevant projects. A small amount of additional funding may be provided by income from the AAS operating-reserve fund to support particularly meritorious proposals from outside the U.S. and/or not strictly relevant to current or future NASA missions. The amount of money available during any proposal cycle depends on the sources of support available to the Society at that time. There are two opportunities to apply each year, one in May and the other in November. **Due May 7; November 26, 2012.**

**Opportunities for Promoting Understanding through Synthesis (OPUS)**
All four clusters within the Division of Environmental Biology (Population and Community Ecology, Ecosystem Science, Evolutionary Processes and Systematic Biology and Biodiversity Inventories) encourage the submission of *proposals aimed at synthesizing a body of related research projects conducted by a single individual or a group of investigators over an extended period*. **Due August 1.**

**DARPA-BAA-11-65: Defense Sciences Research and Technology, Response Date 8/09/2012**
The mission of the Defense Advanced Research Projects Agency’s (DARPA) Defense Sciences Office (DSO) is to pursue and exploit fundamental science and innovation for National Defense. Therefore, DSO is soliciting proposal abstracts and full proposals for advanced research and development in a variety of enabling technical areas ([more](#)). **Due August 9.**

**Research Interests of the Air Force Office of Scientific Research**
AFOSR solicits proposals for basic research through this general Broad Agency Announcement (BAA). This BAA outlines the Air Force Defense Research Sciences Program. AFOSR invites proposals for research in many broad areas. These areas are described in detail in Section I, Funding Opportunity Description. AFOSR is seeking unclassified, white papers and proposals that do not contain proprietary information. We expect our research to be fundamental. **Open until superseded.**

**Fiscal Year 2012 Funding Opportunity Announcement (FOA) for Navy and Marine Corps Science, Technology, Engineering and Mathematics (STEM) Programs 12-002**
The purpose of this announcement is to receive proposals in support of the Naval Strategic Plan and the Office of Naval Research's scientific outreach and education mission to develop its next
generation of scientists and engineers. **The objective of these activities will be to:** 1. Establish successful, sustainable, and affordable long-term, national Navy-sponsored programs targeted at elementary and secondary schools as well as institutions of higher learning. 2. Increase the awareness of and exposure to Naval relevant STEM content, research experience and career options through education and outreach programs. 3. Establish and maintain a pipeline of students, particularly women and under-represented minorities, who will apply for and participate in Naval education and outreach programs. 4. Increase the number of domestic students (particularly students from under-represented groups) completing STEM degrees through enhancing student interest and attitudes toward science, technology, engineering, and mathematics. 5. Strengthen peer, family, and school support for STEM programs. 6. Ensure long-term inclusiveness of women and minorities in Naval science and technology programs. 7. Increase the number of students taking college-prep science and mathematics courses. 8. Strengthen the resources and training offered to STEM teachers. For more information on these priorities, please review the Naval STEM Strategic Plan at [www.onr.navy.mil](http://www.onr.navy.mil). (MORE). **Open to September 30, 2012**

**National Oceanic and Atmospheric Administration (NOAA)**
The purpose of this notice is to request applications for special projects and programs associated with NOAA's strategic plan and mission goals, as well as to provide the general public with information and guidelines on how NOAA will select proposals and administer discretionary Federal assistance under this Broad Agency Announcement (BAA). This BAA is a mechanism to encourage research, education and outreach, innovative projects, or sponsorships that are not addressed through our competitive discretionary programs. It is not a mechanism for awarding congressionally directed funds or existing funded awards. Funding for potential projects in this notice is contingent upon the availability of Fiscal Year 2012, Fiscal Year 2013 and Fiscal Year 2014 appropriations. Applicants are hereby given notice that funds have not yet been appropriated for any potential activities in this notice. Publication of this announcement does not oblige NOAA to review an application, or to award any specific project, or to obligate any available funds. **Open until September 30, 2013.**

**FY2011 – 2016 Basic Research for Combating Weapons of Mass Destruction (C-WMD) Broad Agency Announcement (BAA)**

This **BAA is focused on soliciting basic research projects** that support the DTRA mission to safeguard America and its allies from WMD (e.g., chemical, biological, radiological, nuclear, and high-yield explosives) by providing capabilities to reduce, eliminate, and counter the threat and mitigate its effects.

**NINDS SBIR Technology Transfer (SBIR-TT [R43/R44])**

This Funding Opportunity Announcement (FOA) encourages Small Business Innovation Research (SBIR) grant applications from small business concerns (SBCs) for projects to transfer technology out of the NIH intramural research labs into the private sector. If selected for SBIR funding, the SBC will be granted a royalty-free, non-exclusive internal research-use license for
the term of and within the field of use of the SBIR award to technologies held by NIH with the intent that the SBC will develop the invention into a commercial product to benefit the public. **Open November 5, 2011, to September 8, 2014.**

**Small University Grants Open 5-Year Broad Agency Announcement**
**Open to August 26, 2015**

**Fiscal Year 2012 Basic Research Initiative (BRI)**

The Air Force Office of Scientific Research (AFOSR) manages the basic research investment for the U.S. Air Force (USAF). As a part of the Air Force Research Laboratory (AFRL), AFOSR’s technical experts foster and fund research within the Air Force Research Laboratory, universities, and industry laboratories to ensure the transition of research results to support USAF needs. AFOSR announces a competition for the Fiscal Year 2012 Basic Research Initiative (BRI) program, for the topics listed below. Detailed descriptions of the topics may be found in Section I of this announcement. It is expected that multiple awards will be made. **The Air Force Defense Research Sciences Program is open to November 23, 2012.**
Correction to last month’s MRI article: In our outline for NSF’s Major Research Instrumentation proposals, we stated that the institutional letter required in Supplemental Documents that commits to funding operation and maintenance of the requested instrument was limited to one page in length. In fact, that letter must now also include a list the MRI awards made to the organization during the previous five years and a description of the status of the instrumentation obtained from each award, and may be up to 2 pages in length.
What We Do--

We provide consulting for colleges and universities on a wide range of topics related to research development and grant writing, including:

- **Strategic Planning** - Assistance in formulating research development strategies and building institutional infrastructure for research development (including special strategies for Predominantly Undergraduate Institutions and Minority Serving Institutions)

- **Training for Faculty** - Workshops, seminars and webinars on how to find and compete for research funding from NSF, NIH, DoE and other government agencies as well as foundations. Proposal development retreats for new faculty.

- **Large proposals** - Assistance in planning and developing institutional and center-level proposals (e.g., NSF ERC, STC, IGERT, STEP, Dept of Ed GAANN, DoD MURI, etc.)

- **Assistance for new and junior faculty** - help in identifying funding opportunities and developing competitive research proposals, particularly to NSF CAREER, DoD Young Investigator and other junior investigator programs

- **Facilities and Instrumentation** - Assistance in identifying and competing for grants to fund facilities and instrumentation

- **Training for Staff** - Professional Development for research office and sponsored projects staff

**Note to Potential Contributors**

If you have an idea for an article related to academic research development and grant writing you would like to write for Research Development & Grant Writing News email co-publisher Mike Cronan with a query proposal of up to ~75 words.

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