As new faculty arrive on campus for the start of the next semester, learning how to write a successful research proposal will be a critical skill to master. Our eBook “New Faculty Guide to Competing for Research Funding” provides an invaluable tool to assist faculty in this process, or as a foundation used by research offices developing grantwriting workshops to help new faculty write more competitive proposals (more on next page).

**Table of Contents**

- Writing the DOE Early Career Preapplication
- Writing the NSF AGEP & Webinar Report
- Interviewing Schrödinger’s Cat
- Do You Have a Narrative Integration Plan?
- Why Halloween Is Bad for Proposals, Part 5
- Research Grant Writing Web Resources
- Educational Grant Writing Web Resources
- Agency Research News
- Agency Reports, Workshops & Roadmaps
- New Funding Opportunities
- About Academic Research Funding Strategies

**Topics of Interest**

- Facilitating Interdisciplinary Research and Education: A Practical Guide
- Comparison of Research Networking Tools and Research Profiling Systems
- Check out NIAID’s Resources for Researchers website
- NIH creates Office of Emergency Care Research
- Dept. of State Announces New Science Outreach Platforms
- NSF MSP/AGEP Ph.D. Fellowship Supplements
- DOE/OS Early Career Research Program
- U.S. Innovation Policy for Global Economy
- Curricula Should Support Development of Transferable Knowledge and Skills
- Improving Marine and Hydrokinetic and Offshore Wind Energy Resource Data
- DOE/EERE Accelerating Innovation Webinar Series

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New Faculty Guide to Competing for Research Funding

What all new faculty need to know about finding research funding & writing successful proposals.

Strategies to help new faculty get off to a successful start in identifying and competing for grants to support their research.

By Mike Cronan and Lucy Deckard, Authors
Katherine E. Kelly, Ph.D., Editor
Academic Research Funding Strategies, LLC
(Back to Page 1)

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TABLE OF CONTENTS

- About the Authors ................................................................. 1
- Introduction .............................................................................. 2

The Big Picture
- Developing a Research Funding Strategic Plan .................. 3
- Developing Your Research Agenda ................................. 5
- Developing Your Education Agenda ............................... 7

Finding Funding
- Finding Research Funding: an Overview ....................... 9
- Who Funds What? A Quick Guide .................................... 12
- Funding from Federal Agencies ..................................... 16
Research Development & Grant Writing News

Funding from Foundations..................................................... 17
Funding in the Humanities.................................................... 18
Funding Less Well-Supported Research Areas.......................... 19
Faculty at PUls: When You Need Equipment.......................... 23

Planning Your Proposal
Role of the RFP, Request for Proposals................................. 27
Role of the RFP in Proposal Organization................................. 28
Understanding Funding Agency Mission & Culture.................... 29
Program Officers and When to Contact Them........................... 31
Writing for Reviewers.......................................................... 34
Agency Review Criteria....................................................... 36
Finding Research Funding Mentors......................................... 38
Working with Research Collaborators...................................... 40
Scheduling Proposal Production.............................................. 43

Writing the Proposal
Typical Proposal Structure.................................................. 46
Writing a Compelling Project Summary................................... 47
Avoid the Generic Introduction.............................................. 48
Writing a Competitive Proposal Narrative............................... 50
The Role of Specificity in the Successful Proposal...................... 53
Vision, Goals, Objectives, Rationale, and Outcomes.................. 56
Don’t Build Your Proposal Out of Spare Parts.......................... 60
Research Affinity Groups..................................................... 63
The Challenge of Integrating Multiple Authors.......................... 68
Graphics as a Narrative Integrator......................................... 72
Writing Unsolicited Proposals and White Papers....................... 74

The Path Forward
Responding to Reviews and Strategies For Resubmission............... 77
Conclusion........................................................................... 81
A few weeks ago, the Office of Science (OS) of the Department of Energy (DOE) announced the 2013 Early Career Research Program (EC) in the following program areas: Advanced Scientific Computing Research; Biological and Environmental Research; Basic Energy Sciences, Fusion Energy Sciences; High Energy Physics; and Nuclear Physics. This program supports the development of individual research programs of outstanding scientists early in their careers and stimulates research careers in the areas supported by the DOE Office of Science. See DE-FOA-0000751 at FedConnect to download the 69-page EC solicitation in pdf format.

In 2012, 850 DOE EC proposals were submitted and 68 awards were made. By comparison, NSF awarded around 600 CAREER awards in 2012 and expects to make that number of awards for the 2013 CAREER program whose multiple due dates fell just weeks ago. However, for the DOE EC program, the preapplication (due September 6) serves as a gate to an invitation to submit or a recommendation not to submit a full proposal (due November 26). Therefore, it is crucial that this first step be successful.

Moreover, the brevity required by the DOE two-page preapplication demands clarity and precision together with an easily understood and compelling statement of significance. To write a successful EC preapplication, keep in mind the comment of Mark Twain who once wrote in a letter to a friend “if I had more time I would have written you a shorter letter.” Crafting a two-page preapplication requires a laser-like focus and distillation of your research idea into a description of the core research objectives and technical approach, followed by a convincing mapping of that research core to one of the six OS research program areas listed above, particularly in terms of program mission impact and relevance. Furthermore, a well-crafted two-page preapplication requires a carefully conceived organizational structure (not prescribed in the solicitation) and will benefit from multiple draft iterations that continuously hone the brief narrative and allow it to converge on your desired limit, i.e., perfection.

While this may seem like a straightforward and simple task, it is made more challenging by the lack of guidance in the EC solicitation on the organizational structure of the two-page preapplication. The solicitation advises that the brief narrative represent “a clear and concise description of the objectives and technical approach of the proposed research and responsiveness to the research topic area.” This may sound easy, but it will require intensity of focus and clarity of expression.

Several organizational strategies can be used to produce a compelling, optimally organized, and balanced DOE/OS EC preapplication. In many ways, this resembles the NSF CAREER proposal in which the applicant must decide how to organize the 15-page project narrative. In this instance as well, the initial CAREER narrative may be poorly structured and organized in a way that disguises or muffles rather than amplifies the significance of the research (see NSF CAREER: Structuring Your Project Description, in the February 15, 2011 issue). In both instances, EC and CAREER, the absence of an agency-imposed order for the narrative
does not license the absence of order, i.e., a meandering narrative that obscures rather than illuminates. If the organizational structure is not defined explicitly, as is the case with the EC and the CAREER, the first step in writing is to not write until the order of the document and its argumentative and logical structure have been defined and sequenced.

Given this, learning how to write a compelling two-page narrative description of your research, whether it is for the DOE/OS EC preapplication or for the introduction to a CAREER proposal, or any other research proposal, is a critical skill to learn. In many ways, the two-page preapplication required for the EC represents a generic model that addresses the key questions program officers and reviewers will want answered by any research narrative. A key factor in your success in writing this brief narrative is how successfully you use the characteristics of what constitutes good and persuasive writing to make your case. Of course, as always, this presupposes a competitive idea that clearly advances the research mission of the particular agency or program. However, good ideas are frequently disguised by poorly structured research narratives. It is easier to correct this problem than it is to provide a more inspiring idea, regardless of how well it is presented.

With the above in mind, the first step in a well organized research narrative is to quickly present program officers and reviewers with the answers to Heilmeier’s Catechism. George H. Heilmeier was director of DARPA in the 1970s. He expected every proposal for a new research program to answer a standard set of questions, now commonly referred to as the Heilmeier Catechism. These, and variants, still remain the core key questions that must be answered in a successful research narrative:

- What is the problem, why is it hard?
- How is it solved today?
- What is the new technical idea; why can we succeed now?
- What is the impact if successful?
- How will the program be organized?
- How will intermediate results be generated?
- How will you measure progress?
- What will it cost?

For the EC preapplication, or for other proposals such as the CAREER or proposals submitted to NSF or other federal agency programs, where the order of the project narrative is not rigidly prescribed, or is left entirely to the applicant, the Heilmeier Catechism provides a good start to an organizational template for a preapplication, proposal introduction, or entire proposal. It is scalable and can be adapted to your specific research context. However, one key question that must be answered before submitting an EC preapplication, or responding to any solicitation for that matter, is to decide whether or not your research tightly maps to the type of research fundable under a specific solicitation. Perhaps the most common mistake made in this regard is to submit a proposal for applied research to a solicitation designed for basic research. While your project as well as a solicitation may lie somewhere along an applied-basic continuum, it is an important question to consider and resolve before writing.

One way to think about this is to determine where your research falls on Pasteur’s Quadrant. The below Google image originated from Donald Stokes’s book Pasteur’s Quadrant:
Basic Science and Technological Innovation in his discussion of support for basic and applied research. But Pasteur’s Quadrant also serves as a visual heuristic to help determine where your research might fall in terms of mission objectives at a particular agency or program within an agency, an important distinction to make both for yourself and the reviewers, when you map your research expertise to a particular solicitation. Of course, boundaries are more often inherently fuzzy rather than brightly illuminated, and the below should be viewed only as a prompt to think about the question of how your research fits a specific solicitation. (Pasteur’s Quadrant brings to mind the “Quad-Chart” sometimes used by defense agencies as the first filtering gate to the submission of a full proposal.)

![Pasteur’s Quadrant Diagram]

Another aid to determining the order and structure of your research narrative might be found in implicit “suggestions” provided in review criteria and their order of importance. For example, the 2013 Early Career Research Program lists the following evaluation criteria in descending order of importance:

- Scientific and/or Technical Merit of the Project;
- Appropriateness of the Proposed Method or Approach;
- Competency of Applicant’s Personnel and Adequacy of Proposed Resources; and
- Reasonableness and Appropriateness of the Proposed Budget.

Additionally, the following EC-specific evaluation criteria will also be used during the scientific merit review (peer review):

- Relevance to the mission of the specific program (e.g., ASCR, BER, BES, FES, HEP, or NP) to which the application is submitted.
- Potential for leadership within the scientific community.

By melding Heilmeier’s Catechism with the EC review criteria, you can begin to build a template for an organized and logical preapplication narrative. Of course the next step, given the two-page limit, is to write a clear, simple, and concise introductory description of the significance of your research and its relevance to one of the six specific program areas in the
Office of Science. Writing compelling and brief descriptions of the significance of your research is a learned and practiced skill.

Fortunately, in the case of the EC preapplication, you can find good models for how this can be done. The Office of Science has posted online the research abstracts of successful EC applicants from the past three years:

- Fiscal Year 2012 Award Abstracts
- Fiscal Year 2011 Award Abstracts
- Fiscal Year 2010 Award Abstracts

The below abstract, from a 2012 EC award recipient, offers a good example of how to quickly and clearly answer the key questions program officers and reviewers will want answered about your research, as did Heilmeier. Reading these abstracts from past EC recipients will help you better understand how successful applicants organized and described their research in the preapplication and in the full proposal.

**Light-Stimulated Epitaxy of Novel Semiconductor Alloys and Heterostructures**

The realization of new semiconductor alloys and heterostructures is critical to materials research efforts, but kinetic limitations often impede the low temperature growth of such systems. Innovative approaches designed to tailor specific growth processes are needed to overcome these longstanding challenges. [Heilmeier: What is the problem, why is it hard?].

The principle objective of this research is to use light as an additional free parameter to control adatom dynamics [Heilmeier: What is the new technical idea?]. Specific goals of the project are to 1) expand our basic understanding of how photons affect semiconductor growth by molecular beam epitaxy, 2) selectively stimulate and manipulate surface processes that lead to atomistic growth control, and 3) systematically advance the boundaries of semiconductor synthesis and investigation. By establishing pathways that surmount current material synthesis constraints, this work will impact the development of advanced approaches to access new growth regimes, facilitate the exploration of novel materials systems and drive breakthroughs in photovoltaics and solid-state lighting technologies [Heilmeier: What is the impact if successful?].

*This research was selected for funding by the Office of Basic Energy Sciences, 2012*
The NSF program Alliances for Graduate Education and the Professoriate (AGEP) has completed many annual grant cycles. NSF has used these cycles to develop a feedback loop of best practices based on successful AGEP projects to continuously transform the program.

If you are considering submitting a proposal to the current AGEP competition due October 30, keep in mind the NSF mantra calling for applicants to promote research and education on the frontiers of new knowledge. To compete for an AGEP, or for any long-standing NSF program, you must understand the rationale, culture, context, and details of the ever-shifting programmatic boundary of any long-standing NSF program. AGEP, and other similar NSF programs, are dynamic rather than static; consequently, your competitiveness depends on understanding how NSF has used outcomes from earlier programs to define the evolving objectives of newer programs, and to demonstrate how your best ideas map to those programmatic changes. The take-away message about AGEP follows Wayne Gretzky’s advice: “skate to where the AGEP program [puck] is going to be... not to where the [puck] has been.”

How well you prepare the arguments you will make in an AGEP proposal depends upon the knowledge base you can draw upon while crafting your program objectives. Understanding programmatic evolution is a key waypoint on the path to funding. It is important to understand where the AGEP program has been (AGEP History) and where it is going (AAAS Role in AGEP) in order to best place your ideas for an AGEP in that very competitive continuum of programmatic evolution.

In terms of where the AGEP program is today, one informational complement to the current solicitation and the corresponding AGEP FAQs, is the recent AGEP [Transformation] Webinar (July 24 & 25) presented by Jessie DeAro, Ph.D., AGEP Program Officer (Questions: AGEP@NSF.gov phone: (703) 292-5350). Keep in mind, however, that NSF webinars help illuminate a solicitation and offer a more nuanced understanding of the solicitation, as well as offer a Q&A period that allows you to resolve any uncertainties or ambiguities you may have after reading the solicitation. But webinars, as Dr. DeAro emphasized in the AGEP webinar, “are not an official policy document.” For that, you need to reference the current AGEP solicitation and the NSF Grant Proposal Guide.

Moreover, while webinars offer helpful information, they do not substitute for a close and repeated reading of the program solicitation and referenced documents. Do not view webinars as the equivalent of “books on tape” that absolve you of the methodical task of closely studying a program solicitation. Rather, view them as one more information source that will give you a more nuanced and insightful understanding of how your good ideas best fit a particular program in terms of planning and developing a competitive proposal. To the extent that webinars offer a distillation and informational subset of the full solicitation, they do give you an important insight into how to weight, balance, and focus your project narrative to best map your ideas to the program objectives to enhance your competitiveness.
Importantly, the recent AGEP webinar emphasized the major differences between past AGEP Alliances and the current AGEP-Transformation, as in the presentation slide below, noting in particular item six related to a now expected social science research component. For the current AGEP-Transformation due October 30, a collaborator with social science expertise is expected and an additional five pages in the supplemental documents have been allowed to describe the social science research. This is not a trivial new program requirement and it will need to be addressed early in the planning because it will have a significant impact on how the proposal is written and structured.

This type of contextual information is important to the writing of any competitive proposal, regardless of agency. However, this is particularly the case at NSF where the development and writing of a proposal needs to be significantly influenced by a knowledge base that is current, substantive, and informed by an understanding of how research-based best practices have motivated the evolution of the program, thereby resulting in evolving models understood as best able to achieve current agency objectives. This is described in the following NSF presentation slides from the AGEP-Transformation Webinar.

**Major Differences Between Past AGEP Alliances and AGEP-Transformation**

- Award size was larger (now only up to $500K per year)
- Award length was longer (now 42 months)
- Only universities and community colleges could be partners in an alliance (now includes industry, national labs, non-profits, professional societies)
- Past awards had to be comprehensive including all STEM disciplines at all alliance partners
- There was no limit on the percent of the project award that could be used for direct student support (now 20% max)
- There was no requirement for a social science research component to study the project (now there is)

Additionally, item five above now limits the percent of the project award that can be used for direct student support to a maximum of 20 percent. The reason for this, as stated by Dr. DeAro, is to focus the program on organizational activities that build both long-term
partnerships and aligned alliance infrastructures needed to sustain the program beyond the grant period. Moreover, if you request scholarship support, you will need to explain how it advances the program’s goals and how former implementation strategies justify the request for this support.

Moreover, as explained on the following webinar slide, both a graduate student and a post-doctoral trainee mentoring plan are required if applicable, an AGEP-specific requirement.

Graduate Student and Postdoctoral Trainee Mentoring Plan Requirement

- NSF proposals requesting funding for postdoctoral researchers as project personnel must include a mentoring plan for the postdocs (an NSF GPG requirement).
- AGEP also requires a mentoring plan for graduate students (an AGEP solicitation requirement).
- Mentoring activities may include:
  - Career counseling;
  - Training in preparation of grant proposals;
  - Publications and presentations;
  - Guidance on ways to improve teaching and mentoring skills;
  - Guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas; and
  - Training in responsible professional practices.
- Proposed mentoring activities will be evaluated as part of the merit review process.

*Always use the most recent GPG for proposal preparation guidelines.*

Two particularly helpful slides from the Webinar better define from NSF’s vantage point what characterizes a successful AGEP proposal, as follows.
Successful Proposals: Key Components

- Relevant baseline data and contextual information about the partner organizations and institutions.

- Clear articulation of the problems and issues that will be addressed with the project activities and the expected outcomes of the project activities. (A clear conceptual framework.)

- Evidence-based strategies and activities with references to the relevant literature.

- A complete description of the proposed activities.

- Address both merit review criteria in the project summary and in the project description.
Importantly, AGEP evaluation will follow a different protocol, as below, than has been used in the past—specifically, NSF will identify an AGEP-wide program evaluator.

Successful Proposals: Key Components cont.

- Leadership commitment to the activities to be conducted and to the personnel to be involved.

- Involvement of a team of investigators with the appropriate expertise and clear roles and responsibilities. For example, social science expertise to support the research component of the AGEP-Transformation project.

- A realistic timeline and budget for the scope and impact of the project.

- Outcomes and lessons learned from previous NSF AGEP support
Project and Program Evaluation

- The AGEP-Transformation proposal must include a project evaluation plan which describes the allocation of appropriately skilled staff to:
  - Collect data and implement formative evaluation, and
  - Work with the “AGEP program evaluator” to provide project-level data and fulfill program-level evaluation requirements
  - Support annual data reporting to NSF for reporting and monitoring purposes

- NSF intends to identify an “AGEP program evaluator” to provide project-level summative evaluations for all AGEP-Transformation projects and perform the program level evaluation for NSF.

Additional AGEP Information
The National Institutes of Health (NIH) has several programs for institutions and for individuals related to the AGEP program goal. A summary of these programs can be found HERE.

Related Publications
- Frequently Asked Questions: Alliances for Graduate Education and the Professoriate (AGEP) Program (NSF 12-071)
- MPS AGEP-GRS Dear Colleague Letter (NSF 12-021)
- Dear Colleague Letter - DGE-REESE-AGEP-AISL Call for Research Proposals on STEM Graduate Education and Postdoctoral Training (NSF 12-091)
- Dear Colleague Letter - Prepare, Engage, and Motivate a Diverse STEM Workforce - Design Proposals to Develop a Broadening Participation in STEM Resource Network (NSF 12-034)

Related Programs
- Integrative Graduate Education and Research Traineeship Program
- NSF Graduate Research Fellowship Program
Related URLs

- Frequently Asked Questions (FAQ) for the AGEP Solicitation
- AGEP-Graduate Research Supplements by the Directorate for Mathematical and Physical Sciences (MPS)
- DGE-REESE-AGEP-AISL Call for Research Proposals on STEM Graduate Education and Postdoctoral Training
- NSF Postdoctoral Research Fellowships and Other Programs
- Programs at The National Institutes of Health (NIH) for institutions and for individuals related to the AGEP program goal
- Search for past AGEP awards
Ambiguity introduces significant uncertainty into the research narrative, although ambiguity in the narrative does offer one certainty— an unfunded proposal. This is because ambiguity in the project description imposes unwanted riddles on program officers and reviewers alike that may lead them to believe reading the research narrative is an experience somewhat akin to attempting to interview Schrödinger’s Cat without opening the box to determine its state, either dead or alive. However, narrative ambiguity exists in only one state— confusion.

Ambiguity originates from many sources, including ambiguous solicitations and researchers’ ambiguous readings and understandings of a well-crafted solicitation, the latter being the most common source. Ambiguity may also originate at the interface between the agency’s research vision, goals, and objectives and your research expertise and research interests. Ambiguity may arise when your research expertise does not map well to the agency mission priorities, or when you engage in some wishful thinking and try to force fit your research expertise and interests to an agency solicitation, or when you ignore the agency research interests and put yours forward in hopes the program officers and reviewers won’t notice the mismatch.

As the physicist Richard Feynman once commented, “The first principle [in science] is that you must not fool yourself - and you are the easiest person to fool.” This is also sage advice to follow when you are tempted to view a solicitation as a mirror of your own interests rather than as a reflector of the agency’s interests.

Unfortunately, ambiguity in the proposal process is like Whac-A-Mole, raising its ugly head throughout the proposal landscape. Ambiguity has the potential to lurk in every crook and cranny of a proposal, and eternal vigilance is needed to root it out, ensuring that it doesn’t metastasize throughout the project description. Regrettably, ambiguity is a scalable scourge. It can infect an abstract, a project summary, a section of a proposal, or the entire proposal. Larger proposals, partnership proposals, and proposals with multiple PIs representing multiple disciplines can often be a spawning ground for ambiguity. It is entirely appropriate in writing and editing a proposal narrative to adopt a rallying cry as strongly felt as the "Live Free or Die" motto seen on New Hampshire license plates. Perhaps “Eradicate Ambiguity!” would suffice for the research development and grant writing personalized license plate.

Other favorite hiding places of ambiguity include proposal planning and development meetings, proposal outlines and templates, draft narrative sections, emails among participants, visuals and graphics to amplify the text, as well as wherever communications among proposal team members takes place, regardless of team size. In fact, ambiguities are the grant writing equivalent of termites in wood, silently and relentlessly destroying the structural fabric and logic of the proposal narrative.

If this problem is not identified and corrected prior to submission, program officers and reviewers, who in this case can be seen as inspectors called in to examine your proposal, will
Research Development & Grant Writing News

determine that, unbeknownst to you but obvious to them, your proposal is “full of holes,”
created by linguistic termites identified as various species of the genus “ambiguous” and
thereby to observe that your proposal needs an “ambiguity exterminator” to correct the
problem if a resubmission is being considered.

Of course, the two arch enemies of ambiguity are simplicity and clarity, keeping in mind
Professor Albert Einstein’s observation: “If you can’t explain it simply, you don’t understand it
well enough. Most of the fundamental ideas of science are essentially simple, and may, as a
rule, be expressed in a language comprehensible to everyone.” Unfortunately, some authors
consider ambiguity as evidence of their own brilliance, making it difficult to suggest that clarity
is needed where the author sees only dazzling prose (See Observations on Critiquing a Proposal,
March 15, 2012). Very rarely does the ambiguity in a research narrative approach the heady
sort described by the late physicist John Wheeler-- “If you are not completely confused by
quantum mechanics, you do not understand it.” A more apt guideline will suggest that if
reviewers are even slightly confused by your proposal, they will not fund it. Reviewer confusion
is the progeny of ambiguity in the research narrative. Moreover, ambiguity is a function that
defies narrative integration and synthesis, two key characteristics of successful proposals.

Given the above, the best way to expunge ambiguity from a project narrative is to first
clearly understand the expectations of the research sponsor as defined in the solicitation, and
then draft an organizational template and outline of the project description to guide your
writing of draft iterations. Use the template as both a guide and a prophylactic, or linguistic
vaccine, to prevent ambiguity from occurring rather than trying to treat it after it has infected a
completed proposal.

In many cases, ambiguity can arise in proposal development meetings, or afterwards, as
in the children’s “telephone game” in which one person whispers a message to another,
passing stepwise around a circle of people until the last player announces the message to the
group. Invariably, errors accumulate in the retellings, so the statement announced by the last
player differs significantly from the original. Team meetings, particularly ones where so-called
brainstorming is encouraged, are fertile ground for ambiguity. In part this is because verbal
communication lacks the permanence and logical structure of written language, and so has a
half-life measured in days or even hours.

In the end, the cure for ambiguity lies in writing multiple drafts of a narrative, taking
care that each iteration of the proposal improves its clarity and eliminates ambiguity.

Expunging ambiguity from the proposal is as important to the proposal team members as it is
to the final reviewers. On multidisciplinary efforts, it is next to impossible to write an
integrated project narrative that achieves the needed research synergy and value-added
benefits when the contributions of research team members are bedeviled by ambiguity rather
than clarity at the disciplinary boundaries.
It is not uncommon to devote proposal development meetings to specific core sections of a proposal, such as plans for research themes, education and outreach, commercialization, innovation, societal benefits, diversity, and international partnerships, among others. However, plans to ensure narrative integration are less commonly addressed early on in the planning and development process. Unfortunately, integrating the proposal narrative is too often addressed late in the process when the lack of integration in a near final narrative becomes a deficiency identified during a red team or similar review process.

While integrative elements and statements can always be patched into a near final narrative draft under pressure from a due date, it is far from the optimum path to a successful proposal, and ultimately may not convince program officers and reviewers that your proposal can achieve the desired synergy and value-added benefits expected, nor answer the core question “What are the benefits of funding one large multidisciplinary and multi-PI proposal over funding multiple smaller proposals to single PIs?”

The ability to craft a well-integrated proposal narrative amounts to much more than a matter of style; it significantly impacts your research success over time. A well-planned and crafted integrative research narrative predisposes a proposal to success in a funding climate increasingly focused on transformative and interdisciplinary research occurring at disciplinary boundaries and intersections rich with the potential for technology development, innovation, and commercialization. For example, under the NSF vision for research and education in the university environment, disciplinary and geographic boundaries have become porous as NSF has adopted a global research environment as its benchmark (see OneNSF and Creative Research Awards for Transformative Interdisciplinary Ventures).

As stated in NSF’s Profiles in Team Science and the NSF Science and Technology Centers Report (2007; 2012), “Increasingly, researchers are tackling questions that transcend disciplinary boundaries, and federal agencies are creating new models for funding team science. Solving ‘big’ problems in science generally requires big teams, big budgets, and a long time frame. It usually involves the collaboration of many different scientists and engineers from a wide variety of disciplines in the context of a research center or institute, which often attempts to integrate research with education, technology transfer efforts, outreach activities, and diversity enhancement programs.”

Given this evolving research funding environment, creating an integration plan for your proposal is becoming a key requirement for success. An integration plan should be developed early on and should inform the development of all narrative drafts, not only for the proposed research themes but also for other sections of the proposal. It is particularly important, for example, that an integration plan should inform the writing of the management plan and the development of, for example, a five-year milestone chart for your research. This plan is as important to senior faculty submitting center and center-level proposals as it is to junior faculty submitting early CAREER awards to NSF, DOE, and the defense agencies. On many initiatives,
the synergy and value-added benefits of the research described in the project narrative can potentially move a proposal from very good to excellent in the minds of program officers and reviewers.

Creating an integration plan for the research narrative (see The Challenge of Integrating Multiple Authors in the November 15, 2012 issue) is an effective process for overcoming the common problem that arises when several individual team members contribute research narrative sections to a proposal with little or no recognition of how that research will integrate with other team members’ contributions to the proposed project. These stand-alone or siloed contributions to the overall research narrative too often fail to describe how each research strand complements every other strand, adding up to an integrated set of contributions to the project’s vision, goals, and objectives, and thereby achieving the synergy and value-added benefits required for success. These individual narrative contributions often do not address the overarching questions that motivate the research, nor do they describe each of the multiple research strands in a context that clearly demonstrates their relationship to the motivating questions or hypotheses.

Moreover, it is often the case that proposals benefit enormously from the illuminating interplay between a well-crafted narrative text and accompanying graphics. The graphical representation of a research vision, or diagrams that show how the component goals and objectives of a large research project relate and interact together to form a coherent, synergized whole, can make the proposal narrative less challenging both to write and to read. Such a graphic developed by the research team as part of a narrative integration plan can also make the writing of the proposal easier by ensuring that each member of the writing team understands the interdependencies of the research disciplines that collectively comprise the overall project.

Given the above, a narrative integration plan can be developed by bringing together those team members responsible for drafting contributions to the project description. Each member can help to define how each research domain intersects, enables, and complements each other to the point where the use of the term “synergy” to characterize the aggregate contributions of research strands in the proposal is no longer a slogan but a genuine operating principle.

For example, flexible and conformal photovoltaic technologies are an area of current research interest in overcoming the limitations of non-flexible, silicon-based PV panel technology. However, contributions to this research may come from several disciplines, e.g., materials science, mathematics and modeling, electrical engineering design, and manufacturing, among others. The goal of the narrative integration plan of such a proposal would be to clarify with team members the ways in which an assigned research section will contribute to the overall goal of overcoming challenges to the technology. What are the inputs needed by one research strand, e.g., design, that are outputs of another research strand, e.g., materials or modeling.

In the end, putting in place a narrative integration plan does not pose a large difficulty; rather, it’s a step often forgotten until close to the due date when some keen reader of a draft iteration notices that the key sections of the proposal read more like articles in an edited
collection rather than key sections woven seamlessly into the fabric of the proposal demonstrating how sections complement and amplify each other to achieve a common goal.
There are many scary Halloween costumes you might inadvertently wear to mask the identity of the research idea put forward in your proposal, and unfortunately any one of them will result in more tricks than treats when it comes to the success of your grant. Of course, the premise here assumes that a fundable idea lies cloaked beneath a number of correctable grant-writing mistakes identified sufficiently before the due date to allow for their correction. Unlike Halloween, when scary costumes earn treats, program officers and reviewers will not reward ideas cloaked in ghoulish disguises. Unfortunately, a number of all too common scary costumes can so successfully disguise a potentially fundable idea that the idea becomes unrecognizable to the reviewers. To avoid spooking reviewers, don’t submit your proposal cloaked or masked, or wearing one of the more common scary costumes guaranteed to horrify, as addressed in the below examples of possible proposal disguises.

The No-Value-Added Mask

While economists have long argued the merits of a value-added tax (VAT), there is no such debate over the importance of describing the value-added benefits of your research when it comes to writing a successful proposal. Describing the value-added benefits of your research—to an agency mission, to a scientific field, and in response to the program objectives defined in a solicitation—is a fundamental requirement for competitiveness across all agencies and foundations, regardless of your academic discipline. Surprisingly, such a description is often overlooked or stated unclearly in the project description on many proposals. Sometimes PIs neglect such a description because they simply have not thought sufficiently about how the proposed research fits into the overall context of an agency’s mission priorities, or considered how the proposed research meets the overall goals and objectives of a specific solicitation. At other times, unfortunately, the PI may be proposing research that does not offer sufficient value-added benefits to warrant funding. Funding agencies support research that advances the disciplinary field in some clear and significant way, or advances the agency’s mission-critical objectives in a clear way and significant way.

The key words here linked to value-added benefits are “clear,” “significant” and “advances.” The benefits that need to be described in the project narrative represent a “unit of change” that advances the current state of knowledge in a field or discipline and moves it forward in some significant way. The intertwining of value-added benefits and significance needs to be described clearly and succinctly in any research narrative if you hope to capture the interest of program officers and reviewers.

Moreover, the exact nature of the value-added benefits your research offers the funding agency is not a trivial consideration. To address it in the most compelling way requires an understanding of the agency mission objectives at multiple scales—from the level of the agency to a specific solicitation. It also needs your keen assessment of how well your research maps to the agency mission objectives and how it does so in the context of the current state of
knowledge in the field. Your ability to capture these multiple contexts and weave a compelling narrative statement describing how your proposed research brings value-added benefits to the funding agency will be a key factor in the success of your proposal.

The Overly Ambitious Disguise

While it is common during presidential election years to hear politicians promise the equivalent of “free beer and wide roads” on every conceivable political topic of potential interest to voters, it is not a good strategy when it comes to crafting a research narrative that you hope will impress program officers and reviewers sufficiently for them to recommend funding. They are a critical audience with sufficient experience to distinguish between what you hope to do and what you can realistically accomplish given the constraints on your time, resources, and expertise.

The overly ambitious project description is a fairly common reason for denying funding to proposals, particularly those submitted by more junior investigators whose earnest enthusiasm may charm reviewers but finally requires them to recommend against funding, with perhaps the suggestion to resubmit a more realistic proposal in the next grant cycle. The education and outreach component of an NSF CAREER proposal, for example, often tempts new investigators to overreach, while others may overreach in the proposal research plan.

In any proposal, however, getting this balance right is critical. If you submit a proposal in which the research narrative seems to suffer from inflationary promises that are out of balance with your budget, current and pending support, resources, expertise, and teaching obligations, among other constraints, you will likely not be funded. Be realistic in what you can and cannot accomplish within the constraints that set your operational boundaries, and then reflect that in your project narrative. Reviewers don’t fund promises; they fund promises that can be kept.

The Solipsist Disguise

While solipsism is largely dismissed as a frivolous philosophical notion best left to late night discussions in bars bordering college campuses, it does, nonetheless, occasionally manifest itself in proposal narratives. Like its philosophical counterpart, the solipsistic project description is self-absorbed and apparently oblivious to the external reality of an audience, i.e., program officers and reviewers, who must be convinced of the significance and value-added benefits to funding the proposed research; and ignoring or appearing to be unaware or indifferent to the fact that successful project narratives are written with an audience in mind—program officers and reviewers, who must be convinced of the significance and value-added benefits to funding the proposed research; and ignoring the need to write a research narrative that is easily read, responsive to the specifics of the solicitation, and accessible to program officers and reviewers in making their funding decision. The bottom line
here is that funding agencies are not interested in funding promotional “self portraits” of ideas only marginally relevant to the agency mission objectives.

The Slogan Mask

Passing slogans off as ideas may be sufficient for those running for political office, but it is a really bad idea for those writing a proposal. Slogans are not ideas. In writing a project description, particularly for certain types of institutional grants where research and educational objectives are intertwined, such as at NSF, or where institutional transformation of some kind is the desired outcome, such as an AGEP or IGERT, project narratives often over rely on slogans or on echoes of an agency phrases picked up from reports, presentations, and conferences.

While it is important to have a common language to describe common programmatic elements, that common language must be used judiciously and, most importantly, be grounded in the specific context of the institutional objectives that motivate the proposal. Making the claim, for example, that your research is transformational or your proposal integrates research and education in innovative ways amounts only to a slogan without substantive programmatic descriptions in the project narrative that outline the specifics and details to support such a claim. Some authors of what are often institutional proposals of one sort of another, as those mentioned above, or authors of educational components required of research proposals such as the NSF CAREER, make the mistake of sprinkling the narrative with key words and phrases used by the agency in multiple solicitations, reports, and presentations. This seems to be done under the mistaken belief that echoing the language used in agency vision statements can substitute for the hard work of grounding an agency’s overarching vision or goals in the unique context of the particular institution or research or educational program.

While echoing back an agency’s language or phrasing is important to demonstrate that you understand and are familiar with the agency’s mission objectives as well as the specific solicitation to which you are responding, the real work, as is always the case in proposal writing, comes when you must move from the general vision to the specific program that will allow that vision to be achieved within your unique institutional context.

So slogans, terms, and phrases adopted by an agency to describe their overarching vision, such as the NSF terms innovative, transformational, research and education integration, and numerous others, lack substantive meaning until you define them with the specific details of your research and/or educational objectives within your unique institutional or programmatic context. Until you perform that hard work, these terms are nothing more than agency vision slogans without substance. Throwing them back at program officers and reviewers without the specificity and detail that gives them substantive meaning will bring no value-added benefit to the agency and no reason to fund your proposal.
HRSA: How to Apply For A Grant
A large part of HRSA’s (Health Resources and Services Administration) mission to increase access to health care is accomplished by awarding grants and cooperative agreements. It is HRSA’s policy to promote competition, encourage eligible organizations to apply, and help applicants to succeed. HRSA expects to award more than $3 billion this year through 2,087 new grant awards from 95 grant programs in the several categories.

Facilitating Interdisciplinary Research and Education: A Practical Guide
Steve Olson, Technical Writer.

About the Guide
The scientific community is talking about the need to embrace interdisciplinary research and education. Many individuals, programs, and institutions have made great advances in developing a variety of interdisciplinary approaches, but systemic progress has been slow. The need to accelerate the adoption of interdisciplinary approaches is even more compelling in an era with increasingly complex problems, vast data sets, and powerful research tools. Many of the most interesting and important problems in science can be answered only through collaborative efforts. The increasing complexity of science demands that concepts and methods from different disciplines be merged. Calls for science to contribute even more substantially to human well-being re-emphasize that interdisciplinary research can no longer be an optional pursuit -- it must be front and center in any discussion of the future of science.

On March 28-29, 2011, the American Association for the Advancement of Science and the University of Colorado Biofrontiers Institute hosted a workshop entitled "Science on FIRE: Facilitating Interdisciplinary Research and Education." The workshop brought together more than 150 practitioners, administrators, and funders of interdisciplinary research to identify keys to success and strategies for overcoming barriers. Interdisciplinary approaches are necessarily varied, based on the problem being studied, the institution doing the research, and the individuals involved in the projects. Every project offers broader lessons. The workshop sought to distill these lessons into principles that anyone can use.

The workshop was more than a collection of success stories. Participants spoke frankly about the challenges they have faced and the disappointments they have endured. The incentive and reward systems within many institutions continue to discourage collaboration. Scientific disciplines have different cultures, languages, and standards. Most classes at the undergraduate and graduate levels remain limited by disciplinary boundaries. The workshop participants were not pessimistic about the challenges - they found them barriers to be overcome.

This document, which has been drawn from the presentations and discussions at the workshop, has been written for anyone involved with or interested in interdisciplinary research
and education, including funders, administrators, researchers, faculty, and students. It is a practical guide to motivating, organizing, and establishing interdisciplinary programs. It also discusses broad issues that transcend individual programs. This report features descriptions of current programs in sidebars as examples, but not necessarily as models to copy, since every institution and program is different. Some of the information in this guide is basic, and some involves the detailed steps of setting up an interdisciplinary program or center. At the end of each chapter there are suggestions for additional reading and other resources available in print and online.

The "Science on FIRE" workshop was designed to be thought-provoking and provocative. It turned out to be extremely productive as well. We hope that the lessons gleaned from the conversation will help interdisciplinary programs achieve the prominence they need and deserve.

Tom Cech, University of Colorado Biofrontiers Institute
Alan Leshner, American Association for the Advancement of Science
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.

**Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century**

Americans have long recognized that investments in public education contribute to the common good, enhancing national prosperity and supporting stable families, neighborhoods, and communities. Education is even more critical today, in the face of economic, environmental, and social challenges. Today's children can meet future challenges if their schooling and informal learning activities prepare them for adult roles as citizens, employees, managers, parents, volunteers, and entrepreneurs. To achieve their full potential as adults, young people need to develop a range of skills and knowledge that facilitate mastery and application of English, mathematics, and other school subjects. At the same time, business and political leaders are increasingly asking schools to develop skills such as problem solving, critical thinking, communication, collaboration, and self-management - often referred to as "21st century skills." *Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century* describes this important set of key skills that increase deeper learning, college and career readiness, student-centered learning, and higher order thinking. These labels include both cognitive and non-cognitive skills- such as critical thinking, problem solving, collaboration, effective communication, motivation, persistence, and learning to learn. 21st century skills also include creativity, innovation, and ethics that are important to later success and may be developed in formal or informal learning environments. This report also describes how these skills relate to each other and to more traditional academic skills and content in the key disciplines of reading, mathematics, and science. *Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century* summarizes the findings of the research that investigates the importance of such skills to success in education, work, and other areas of adult responsibility and that demonstrates the importance of developing these skills in K-16 education. In this report, features related to learning these skills are identified, which include teacher professional development, curriculum, assessment, after-school and out-of-school programs, and informal learning centers such as exhibits and museums.

**Master Teacher Corps a Go for 2012**

The White House doesn’t have to wait for Congress to approve the $1 billion price tag to launch its STEM (science, technology, engineering, and mathematics) Master Teacher Corps. Instead, the Department of Education will use $100 million from its current budget to start the program this year, under a different name. Next week, U.S. school districts will submit their applications to the Teacher Incentive Fund (TIF), a $285 million pot of competitive money aimed at rewarding teachers who have the largest impact on student learning across all subjects. Such a performance-based compensation system runs counter to the usual teacher salary structure.
based on longevity and education and has been viewed warily by teacher unions. But it's a pillar of the White House's strategy of providing incentives for school districts to improve STEM education.

**The Characteristics Necessary For A Mathematics Specialist**

Two fundamental beliefs that have guided me over the years in this work are: 1) the idea that all children can and need to learn mathematics with conceptual understanding; and, 2) the idea that both adults and students construct their mathematical knowledge. Both of these beliefs are controversial and demand time to occur. In a culture where time is money, and where the national and local politics of right versus wrong guide educational policy, these beliefs can be intentionally and unintentionally trampled and disregarded. I see it as a core piece of the Mathematics Specialist's work to raise these beliefs for examination and reflection when providing professional development to educators of all types.

In the aftermath of the March 2011 earthquake and subsequent tsunami in Japan, fields of debris are now washing up on the western shores of the United States. According to the National Oceanic and Atmospheric Administration (NOAA), Japanese authorities say that approximately five million tons of wreckage flowed into the Pacific Ocean following the earthquake and tsunami. While a majority of it likely sank, experts estimate that between one to two million tons was left floating and is heading toward North America. The debris fields are expected to reach and potentially threaten the west coast of North America from the spring of 2012 through late 2014. When unforeseen circumstances offer unique opportunities to advance basic knowledge, NSF has in place the Rapid Response Research (RAPID) funding mechanism. As noted in the GPG, this mechanism is used to support activities having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events. In the past RAPID funding supported fundamental research activities related to acute events such as the New Zealand earthquake in February 2011, the earthquake and tsunami in Japan in March 2011, and the Deepwater Horizon oil spill in 2010. The NSF Directorates for Biological Sciences (BIO), Geosciences (GEO), Engineering (ENG), Mathematical and Physical Sciences (MPS), and Computer & Information Science & Engineering (CISE) and the Office of Cyberinfrastructure (OCI) are accepting proposals to conduct research on the potential threat to the North American west coast from debris fields associated with the March 2011 Japanese earthquake and tsunami.

DOE/EERE Accelerating Innovation Webinar Series

In partnership with the Battelle Commercialization Council, the Energy Innovation Portal is hosting an Accelerating Innovation webinar series. Each session within this series will highlight cutting edge clean energy innovations featured on the Energy Innovation Portal. During these sessions a researcher or laboratory representative will present on their innovation and hold a Q&A session respond to questions from the audience.

Making Federal Resources More Accessible for Rural Communities

Federal agencies often get requests from local governments and organizations—especially those in rural America—to make information about available grants and resources easier to access and understand. The HUD-DOT-EPA Partnership for Sustainable Communities and USDA have just released a publication that does that. Federal Resources for Sustainable Rural Communities is a guide to programs from the four agencies that rural communities can use to promote economic competitiveness, protect healthy environments, and enhance quality of life. It provides key information on funding and technical assistance opportunities as well as
examples of how rural communities across the country have put these programs into action to achieve their goals. With this menu of options, local leaders can more easily identify federal resources that support community planning, cost-effective infrastructure, economic development, brownfields revitalization, and other activities that are part of achieving sustainable communities.

**Improving Marine and Hydrokinetic and Offshore Wind Energy Resource Data**

This is a Request for Information (RFI) only. Responses to the RFI will be treated as informational only and will not be viewed as a binding commitment for the respondent to develop or pursue the project or ideas discussed. DOE MAY decide at a later date to issue a FOA based on consideration of the input received from this RFI, but there is no guarantee that future funding opportunities or other activities will be undertaken as a result of this RFI. DOE invites input from the public regarding currently lacking data and technologies for characterization of marine and hydrokinetic (MHK) and offshore wind energy resources in support of deployment of wind and MHK technologies. For MHK power, comments regarding the advancement of wave and tidal resource characterization and data gathering for characterization of far-field hydrological and wave environment interactions with MHK energy devices are specifically requested. For wind power, comments regarding research and observation activities and partnerships for offshore wind energy resource characterization to complement, augment, or expand upon ongoing and planned offshore wind meteorological and oceanographic (metocean) data activities are specifically requested. The sole purpose of this Request for Information (RFI) is to gain input from industry, academia, local, state and federal government agencies, and other offshore wind and marine and hydrokinetic power stakeholders. The information gathered with this RFI will be used to help inform future strategic considerations and will inform the Wind and Water Power Program’s research and development portfolio with regards to offshore wind and marine and hydrokinetic resource characterization efforts. This does not constitute a request for specific project proposals. DOE will not pay for information provided under this RFI and there is no guarantee that future funding opportunities or other activities will be undertaken as a result of this RFI. Responses to this RFI should be submitted in Microsoft Word or PDF format to Resource.Characterization@go.doe.gov by 5:00 PM Eastern Standard Time on October 1, 2012. Responses should include: cover page, 1 page executive summary, and up to a 5 page full response.

**NIH creates Office of Emergency Care Research**

To help improve health outcomes of patients who require emergency care, the National Institutes of Health has created a new Office of Emergency Care Research (OECR). The office is a focal point for basic, clinical and translational emergency care research and training across NIH. “NIH has supported research to advance emergency care for years; however, now we have a single office to coordinate and foster our activities in this arena,” said NIH Director Francis S. Collins, M.D., Ph.D. “The NIH Office of Emergency Care Research will focus on speeding diagnosis and improving care for the full spectrum of conditions that require emergency
treatment.” Although OECR will not fund grants, it will foster innovation and improvement in emergency care and in the training of future researchers in this field by:

- Coordinating funding opportunities that involve multiple NIH institutes and centers.
- Working closely with the NIH Emergency Care Research Working Group, which includes representatives from most NIH institutes and centers.
- Organizing scientific meetings to identify new research and training opportunities in the emergency setting.
- Catalyzing the development of new funding opportunities.
- Informing investigators about funding opportunities in their areas of interest.
- Fostering career development for trainees in emergency care research.
- Representing NIH in government-wide efforts to improve the nation's emergency care system.

Department of State Announces Two New Science Outreach Platforms
Deputy Secretary of State Bill Burns announced the creation of Networks of Diasporas in Engineering and Science, or NODES, at an event organized by the Office of the Science and Technology Adviser to the Secretary of State (STAS). At the same event, Under Secretary of State for Public Diplomacy and Public Affairs Tara Sonenshine launched the Science, Technology and Innovation Expert Partnership. NODES is a joint effort among STAS, the American Association for the Advancement of Science (AAAS), and the National Academy of Sciences to convene diasporas with skills in science disciplines to build their capacity to develop and influence effective policies and connect their talents with needs in their countries of origin. The Science, Technology and Innovation Expert Partnership will introduce U.S science and technology experts to foreign audiences through U.S Embassy supported public diplomacy programs. The Partnership advances the Department’s efforts to promote economic prosperity, democratic governance, social development, and global scientific knowledge and to share that information with foreign audiences.

NSF MSP/AGEP Ph.D. Fellowship Supplements
The Directorate for Mathematical and Physical Sciences encourages Principal Investigators PIs of current MPS awards to support one (additional) Ph.D. student per award, through a partnership with the Division of Human Resource Development in the Directorate of Education and Human Resources (EHR). PIs with current MPS research awards whose academic units are participating in the EHR-sponsored "Alliances for Graduate Education and the Professoriate" (AGEP) program may apply to MPS for a supplement to defray the costs for: stipend, tuition, benefits and indirect costs for a graduate research student working on the MPS-funded research. For the purposes of this Dear Colleague Letter, this funding opportunity will be abbreviated to: AGEP - Graduate Research Supplements (AGEP-GRS).

Dear Colleague Letter – WiFiUS
Last year, NSF, Tekes (the Finnish Funding Agency for Technology and Innovation) and the Academy of Finland jointly funded the SAVI Wireless Innovation between Finland and U.S.
(WiFiUS, http://www.wifius.org) to help build long-term research and education collaboration between the two world leaders of wireless networking. We now seek to enlarge this effort. To do so, NSF expects to fund a small number of EAGER proposals as well as fund supplements to current NSF awards to enable US-based researchers to collaborate with Finland-based researchers on topics that fit the wireless and spectrum sharing goals of Networking (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503307&org=CNS) of the CISE Division on Computer and Network Systems. NSF strongly encourages new collaborations. Investigators interested in submitting an EAGER or a supplemental funding request are required to submit a one page description of the proposed joint research via email to the cognizant program director Min Song (msong@nsf.gov) by August 7, 2012. This description should include the name(s) of their intended Finnish collaborator(s) and the proposed collaboration plan. NSF will share these descriptions with Tekes and the Academy of Finland. The investigators will be provided with feedback regarding how well their request fits the priorities of NSF, Tekes, and the Academy of Finland, and where appropriate, be invited to submit an EAGER proposal or a standard supplemental funding request in accordance with NSF’s Award and Administration Guide I.E.4.

Dear Colleague Letter - Continental Scientific Drilling

This letter is to inform you of two actions that the National Science Foundation (NSF) will take to accommodate the needs of the continental scientific drilling community. (1) To facilitate the planning activities that are necessary to support earth science proposals requiring continental scientific drilling, the Division of Earth Sciences (EAR) will accept "planning grant proposals". Such a planning grant may be used to support pre-drilling activities that will strengthen a drilling proposal intended for submission to one of EAR's core science programs. These activities could include workshops, community planning activities, site surveys, equipment design, and drilling plan and budget preparation. These proposals should be submitted to the EAR/Instrumentation and Facilities Program as "unsolicited proposals" with a budget of less than $50,000. (2) EAR intends to release a solicitation to re-compete the management and operation of a Continental Scientific Drilling Program Office. This plan will address existing National Science Board policy requiring periodic re-competition of the management of major NSF facilities (NSB-08-16). NSF welcomes community feedback on this plan.

DOE RFI High-Accuracy Hydrogen Meters

This is a Request for Information (RFI) only, issued solely for information and program planning purposes; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. The Department of Energy (DOE) will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that DOE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind DOE to any further actions related to this topic. Through this RFI, the DOE seeks feedback from interested parties on the current and near-term status and availability of high-accuracy meters that can perform under hydrogen fueling conditions and meet measurement accuracy requirements. Specifically, this RFI requests information for three (3) areas of interest: Area of Interest 1: Current meter status Area of Interest 2: Accuracy status
Area of Interest 3: Market demand and availability All responses to this RFI must be provided as an attachment (in Microsoft Word or PDF format) to an e-mail message addressed to h2meters@go.doe.gov. Please specify the Area of Interest in your response and submit separate responses for each Area of Interest addressed, and include the name of the organization responding. The response should be limited to two (2) pages; however, the Fuel Cell Technologies Program encourages respondents to include references, tables and figures, which will not count toward the two-page limit. Additionally, the form provided for Area of Interest 1 will not count toward the two-page limit. DOE discourages the inclusion of proprietary or confidential information; however, if provided, it should be clearly marked as such.
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.

Rising to the Challenge: U.S. Innovation Policy for Global Economy
America's position as the source of much of the world's global innovation has been the foundation of its economic vitality and military power in the post-war. No longer is U.S. pre-eminence assured as a place to turn laboratory discoveries into new commercial products, companies, industries, and high-paying jobs. As the pillars of the U.S. innovation system erode through wavering financial and policy support, the rest of the world is racing to improve its capacity to generate new technologies and products, attract and grow existing industries, and build positions in the high technology industries of tomorrow. Rising to the Challenge: U.S. Innovation Policy for Global Economy emphasizes the importance of sustaining global leadership in the commercialization of innovation which is vital to America's security, its role as a world power, and the welfare of its people. The second decade of the 21st century is witnessing the rise of a global competition that is based on innovative advantage. To this end, both advanced as well as emerging nations are developing and pursuing policies and programs that are in many cases less constrained by ideological limitations on the role of government and the concept of free market economics. The rapid transformation of the global innovation landscape presents tremendous challenges as well as important opportunities for the United States. This report argues that far more vigorous attention be paid to capturing the outputs of innovation - the commercial products, the industries, and particularly high-quality jobs to restore full employment. America's economic and national security future depends on our succeeding in this endeavor.

Meeting Critical Laboratory Needs for Animal Agriculture: Examination of Three Options
Meeting Critical Laboratory Needs for Animal Agriculture: Examination of Three Options discusses the laboratory infrastructure needed to effectively address the threat posed by animal and zoonotic diseases and analyzes three options for creating this infrastructure: building NBAF as currently designed, building a scaled-back version of the NBAF, or maintaining current research capabilities at Plum Island Animal Disease Center while leveraging biosafety level-4 large animal capabilities at foreign laboratories.

Informatics Needs and Challenges in Cancer Research: Workshop Summary
As information technology becomes an integral part of health care, it is important to collect and analyze data in a way that makes the information understandable and useful. Informatics tools - which help collect, organize, and analyze data - are essential to biomedical and health research and development. The field of cancer research is facing an overwhelming deluge of data, heightening the national urgency to find solutions to support and sustain the cancer informatics ecosystem. There is a particular need to integrate research and clinical data to
facilitate personalized medicine approaches to cancer prevention and treatment - for example, tailoring treatment based on an individual patient's genetic makeup as well as that of the tumor - and to allow for more rapid learning from patient experiences.

**Bioenergy – Chances and Limits**
The Leopoldina’s statement “Bioenergy – Chances and Limits” provides a comprehensive analysis of the use of bioenergy. It was compiled by a working group of more than 20 expert scientists established in 2010 and outlines under which conditions the utilization of bioenergy is appropriate.

**Disaster Resilience: A National Imperative**
One way to reduce the impacts of disasters on the nation and its communities is to invest in enhancing resilience—the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events. *Disaster Resilience: A National Imperative* addresses the broad issue of increasing the nation's resilience to disasters. This book defines "national resilience", describes the state of knowledge about resilience to hazards and disasters, and frames the main issues related to increasing resilience in the United States. It also provide goals, baseline conditions, or performance metrics for national resilience and outlines additional information, data, gaps, and/or obstacles that need to be addressed to increase the nation's resilience to disasters. Additionally, the book's authoring committee makes recommendations about the necessary approaches to elevate national resilience to disasters in the United States. Enhanced resilience allows better anticipation of disasters and better planning to reduce disaster losses-rather than waiting for an event to occur and paying for it afterward. *Disaster Resilience* confronts the topic of how to increase the nation's resilience to disasters through a vision of the characteristics of a resilient nation in the year 2030. Increasing disaster resilience is an imperative that requires the collective will of the nation and its communities. Although disasters will continue to occur, actions that move the nation from reactive approaches to disasters to a proactive stance where communities actively engage in enhancing resilience will reduce many of the broad societal and economic burdens that disasters can cause.

**Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response**
Crisis Standards of Care is a seven-volume set: Volume 1 provides an overview; Volume 2 pertains to state and local governments; Volume 3 pertains to emergency medical services; Volume 4 pertains to hospitals and acute care facilities; Volume 5 pertains to out-of-hospital care and alternate care systems; Volume 6 contains a public engagement toolkit; and Volume 7 contains appendixes with additional resources.
New Funding Solicitations Posted Since July 15 Newsletter

**American Association of University Colleges and Universities**
Preparing Critical Faculty for the Future (PCFF): We invite applications from institutional leaders who are dedicated to improving undergraduate STEM education at their institutions. We are also looking for institutions whose leaders are committed to fostering leadership and professional development among faculty women of color faculty in various NSF STEM disciplinary program areas to advance such educational change efforts. **Due August 27.**

**DOD Advanced Computing Initiative (ACI)**
The ACI is a DoD-sponsored computer science research program initiated by the NSA and the ARL-ARO. It focuses on areas of strategic importance to U.S. national security policy. It seeks to increase the Department’s intellectual capital in the computer sciences and improve its ability to address future challenges and build bridges between the Department and the computer science community. ACI brings together universities, research institutions, companies, and individual scholars and supports multidisciplinary and cross-institutional projects addressing specific topic areas determined by the Department of Defense. The ACI aims to promote research in specific areas of computer science and to promote a candid and constructive relationship between DoD and the computer science community. **Due Sept. 12.**

**American Institute of Steel Construction**
Each year, AISC selects a promising young university faculty member as the AISC Milek Fellow (formerly the AISC Faculty Fellow). The award was renamed after William A. Milek, Jr., former AISC Vice President of Engineering and Research, to recognize his invaluable contributions to AISC and the structural steel industry as a whole. **Due September 15.**

**Laura Bush 21st Century Librarian Program**
In 2013, the Laura Bush 21st Century Librarian Program will support projects to develop faculty and library leaders, to recruit and educate the next generation of librarians and archivists, to build institutional capacity in graduate schools of library and information science, and to assist in the professional development of librarians and archivists. This grant program is especially interested in developing information professionals who can help manage the burgeoning data generated by the nation’s researchers, serve as stewards of the nation’s cultural legacy, and meet the information needs of the underserved. The program also seeks to help librarians
develop the information and digital literacy of their communities, as well as other critical skills their users will need to be successful in the 21st century. **Due September 17.**

**2013 Smith Postdoctoral Fellowship in Conservation Research; Bridging the Gap Between Research and Application**
The purpose of the David H. Smith Conservation Research Fellowship is: To create opportunities for leading conservation biologists to strengthen their skills through two years of applied post-doctoral research, supplemented by training programs, peer networking, and field learning experiences; so that they may: 1. Build productive partnerships with conservation practitioners; and 2. Contribute and communicate scientific knowledge to problems of critical importance in conservation. **Due September 1.**

**Establishment of a University Partnership in English Linguistics, Literature, and English Teaching with the National University of Modern Languages, Islamabad, Pakistan**
The Public Affairs Section of the U.S. Embassy in Islamabad announces an open competition for a cooperative agreement to establish a University Partnership between an accredited, four-year U.S. college or university and the National University of Modern Languages in English Linguistics, Literature, and English Language Teaching. Accredited U.S. four-year colleges and universities meeting the provisions described in Internal Revenue Code section 26 USC 501(c)(3) may submit proposals to pursue institutional or departmental objectives in partnership with the National University of Modern Languages. Objectives detailed as priorities for the National University of Modern Languages include curriculum development including long distance teaching via DVC/internet, collaborative research, faculty development and sharing of resources. The means of achieving these objectives is purposefully left broad to encourage the submission of innovative proposals tailored to the international education and research goals of both institutions. **Due September 7.**

**Establishment of a University Partnership in Psychology with the Shaheed Benazir Bhutto Women University, Peshawar, Pakistan**
The Public Affairs Section of the U.S. Embassy in Islamabad announces an open competition for a cooperative agreement to establish a University Partnership between an accredited, four-year U.S. college or university Shaheed Benazir Bhutto Women University in Psychology. Accredited U.S. four-year colleges and universities meeting the provisions described in Internal Revenue Code section 26 USC 501(c)(3) may submit proposals to pursue institutional or departmental objectives in partnership with Shaheed Benazir Bhutto Women University. Objectives detailed as priorities for the Shaheed Benazir Bhutto Women University include the development and implementation of faculty and student exchange programs; academic collaboration including: curriculum development, long distance teaching via internet/DVC, and professional development for faculty. The means of achieving these objectives is purposefully left broad to encourage the submission of innovative proposals tailored to the international education and research goals of both institutions. **Due September 7.**

**ONR Co-Prime Sensor Array Signal Processing**
This Basic Research Challenge will establish the theoretical foundations of co-prime signal processing – a new waveform sampling strategy that offers the promise of simplified sensor array design, streamlined signal processing, and efficient image formation techniques. In the spatial domain, co-prime array designs have been used to extend the concept of minimally redundant sensor arrays, which span large apertures using far few elements than classical antenna theory dictates. Due September 21.

**DOD FY 2013 Defense University Research Instrumentation Program (DURIP)**
The Department of Defense (DoD) announces the Fiscal Year 2013 Defense University Research Instrumentation Program (DURIP), a part of the University Research Initiative (URI). DURIP is designed to improve the capabilities of U.S. institutions of higher education (hereafter referred to as “universities”) to conduct research and to educate scientists and engineers in areas important to national defense by providing funds for the acquisition of research equipment. This announcement seeks proposals to purchase instrumentation in support of research in areas of interest to the DoD, including areas of research supported by the administering agencies. The research areas of interest for the administering agencies are available on-line herein. Due September 28.

**The 2013 K. Patricia Cross Future Leaders Award**
The K. Patricia Cross Future Leaders Award recognizes graduate students who show exemplary promise as future leaders of higher education; who demonstrate a commitment to developing academic and civic responsibility in themselves and others; and whose work reflects a strong emphasis on teaching and learning. Due October 1.

**Development of Therapeutics Medical Countermeasures for Biodefense and Emerging Infectious Diseases**
Research supported and conducted by the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Department of Health and Human Services (DHHS), strive to understand, treat and ultimately prevent the myriad infectious, immunologic, and allergic diseases that threaten millions of human lives. The NIAID Division of Microbiology and Infectious Diseases (DMID) supports extramural research to control and prevent diseases caused by virtually all infectious agents, with the exception of the human immunodeficiency virus (HIV). This includes basic and applied research to develop and evaluate therapeutics, vaccines, and diagnostics, which are funded through a variety of research grants and contracts. The NIAID also has a mission to advance the development of new medical countermeasures (MCM) against the biological agents that are most likely to be used in a terror attack on civilian populations. Due October 1.

**U.S. Nuclear Regulatory Commission Funding Opportunity Announcement, Nuclear Education Curricula Development Grant, Fiscal Year 2013**
The NRC Nuclear Education Grant Program’s primary purpose is supporting and developing the educational infrastructure necessary to allow the Nation to safely advance its nuclear energy initiatives. Due October 3.
U.S. Nuclear Regulatory Commission Funding Opportunity Announcement, Scholarship and Fellowship Education Grant, Fiscal Year 2013
This program provides funding to support nuclear science, engineering, and related disciplines to develop a workforce capable of supporting the design, construction, operation, and regulation of nuclear facilities and the safe handling of nuclear materials. This announcement is for scholarships and fellowships. As a condition for scholarships or fellowships, recipients must demonstrate satisfactory academic progress in their fields of study, as determined by criteria contained in this announcement and as established by the NRC. Consequently, NRC requires scholarship and fellowship recipients to serve six (6) months in nuclear-related employment for each full or partial year of academic support. The employment may be with NRC, other Federal agencies, State agencies, Department of Energy laboratories, nuclear-related industry, or academia in the recipients sponsored fields of study. NRC may waive, in whole or in part, the service obligation, upon determination that compliance by the individual is impractical. Scholarship and Fellowship recipients who fail to satisfy the service agreement requirements of the program must reimburse the United States Government for the entire amount of the assistance provided them under the scholarship plus interest at a rate determined by the NRC. Recipients must continue to comply with eligibility requirements and institutions must continue to comply with public policy requirements and maintain adequate management systems throughout the period of support. Due October 5.

U.S. Nuclear Regulatory Commission Funding Opportunity Announcement (FOA), Faculty Development Grant, Fiscal Year 2013
This program provides funding to support nuclear science, engineering, and related disciplines to develop a workforce capable of supporting the design, construction, operation, and regulation of nuclear facilities and the safe handling of nuclear materials. This announcement is for faculty development grants. The objectives of the Faculty Development Program are to attract and retain highly-qualified individuals in academic teaching careers. The grants specifically target probationary, tenure-track faculty during the first 6 years of their career and new faculty hires in the following academic areas: Nuclear Engineering, Health Physics, Radiochemistry, Probability Risk Assessment (Levels 2 & 3) and related disciplines. Grants may include support for developing applications for research and amounts for initiating or continuing research projects in their areas of expertise. Other areas might include course development, equipment, stipends, participation in professional society meetings, and preparation of papers, travel, and associated expenses. The NRC may increase funds to the extent that a portion of the award is matched by the institution. The program provides support to enable newer faculty to enhance their careers as professors and researchers in the university department where employed. The research supported by this announcement is intended to benefit the nuclear sector broadly. Due October 5.

U.S. Nuclear Regulatory Commission Funding Opportunity Announcement, Trade School and Community College Scholarship Grant, Fiscal Year 2013
The program provides funding to support for nuclear science, engineering, technology, and related disciplines to develop a workforce capable of supporting the design, construction,
operation, and regulation of nuclear facilities and the safe handling of nuclear materials. As a condition for receiving trade school or community college scholarships, recipients must demonstrate satisfactory academic progress in their fields of study, as determined by criteria contained in this announcement and as established by the NRC. The nuclear technology related discipline supported by this funding is intended to benefit the nuclear sector broadly. Consequently, NRC requires trade school and community college scholarship recipients to serve 6 months in nuclear-related employment for each full or partial year of academic support. **Due October 5.**

**CyberCorps: Scholarship for Service**
The CyberCorps: Scholarship for Service (SFS) program seeks proposals that address cybersecurity education and workforce development. The *Scholarship Track* provides funding to award scholarships to students in cybersecurity. In return for their scholarships, recipients will work after graduation for a Federal, State, Local, or Tribal Government organization in a position related to cybersecurity for a period equal to the length of the scholarship. The *Capacity Track* seeks innovative proposals leading to an increase in the ability of the United States higher education enterprise to produce cybersecurity professionals. **Due October 12.**

**Amy Lowell Poetry Travelling Scholarship**
The award for the 2013-2014 Scholarship year should be in the area of $52,000. The recipient must agree to spend the year abroad, as the will requires. **Due October 15.**

**Schallek Fellowship**
The Schallek Fellowship is funded by a gift to the Richard III Society-American Branch, from William B. and Maryloo Spooner Schallek. The fellowship supports an advanced graduate student who is writing a Ph.D. dissertation in any relevant discipline dealing with late-medieval Britain (ca. 1350-1500). The $30,000 fellowship helps defray research and living expenses for the equivalent of an academic year of study. The fellowship recipient must devote full time to the dissertation project and may not hold any job or teaching position or work on another project during the term of the fellowship. **Due October 15.**

**Fiscal Year 2013 University NanoSatellite Program**
AFOSR, in conjunction with the AFRL Space Vehicles Directorate (AFRL/RV) announces a program to promote and sustain university research and education focused on small satellites (nanosats) and related technologies. The primary outcome of individual projects funded under this program is the design, fabrication and functional testing of a nanosat. Secondary objectives are to foster research in enabling technologies for nanosats and the design of experiments that can be performed by nanosats in orbit. Selected proposers will compete in a competition to recognize a small number of nanosats that have displayed the ability for space launch and operation. **Due October 16.**

**Advanced Technological Education (ATE)**
With an emphasis on two-year colleges, the Advanced Technological Education (ATE) program focuses on the education of technicians for the high-technology fields that drive our nation’s economy. The program involves partnerships between academic institutions and employers to promote improvement in the education of science and engineering technicians at the undergraduate and secondary school levels. The ATE program supports curriculum development; professional development of college faculty and secondary school teachers; career pathways to two-year colleges from secondary schools and from two-year colleges to four-year institutions; and other activities. Another goal is articulation between two-year and four-year programs for K-12 prospective teachers that focus on technological education. The program also invites proposals focusing on research to advance the knowledge base related to technician education. Due October 18.

Mellon/ACLS Dissertation Completion Fellowships
ACLS invites applications for the seventh annual competition for the Mellon/ACLS Dissertation Completion Fellowships, which support a year of research and writing to help advanced graduate students in the humanities and related social sciences in the last year of Ph.D. dissertation writing. The program encourages timely completion of the Ph.D. Applicants must be prepared to complete their dissertations within the period of their fellowship tenure and no later than August 31, 2014. A grant from The Andrew W. Mellon Foundation supports this program. ACLS will award 65 Fellowships in this competition for a one-year term beginning between June and September 2013 for the 2013-2014 academic year. The Fellowship tenure may be carried out in residence at the Fellow’s home institution, abroad, or at another appropriate site for the research. These Fellowships may not be held concurrently with any other fellowship or grant (see Writing Proposals for ACLS Fellowship Competitions). Due October 24.

SBE Postdoctoral Research Fellowships (SPRF)
The Directorate for Social, Behavioral and Economic Sciences (SBE) offers Postdoctoral Research Fellowships in two tracks: (i) Broadening Participation (SPRF-BP), and (ii) Interdisciplinary Research in Behavioral and Social Sciences (SPRF-IBSS). Due October 29.

American College of Surgeons Faculty Research Fellowships
The American College of Surgeons is offering two-year faculty research fellowships, through the generosity of Fellows, Chapters, and friends of the College, to surgeons entering academic careers in surgery or a surgical specialty. The fellowship is to assist a surgeon in the establishment of a new and independent research program. Applicants should have demonstrated their potential to work as independent investigators. The fellowship award is $40,000 per year for each of two years, to support the research. Due November 1.

Program in Ultrafast Laser Science and Engineering (PULSE)
The Program in Ultrafast Laser Science and Engineering (PULSE) seeks to enable efficient and agile use of the entire electromagnetic spectrum by linking it to the output of an ultrafast laser. The expected outcome of the program is to develop novel sources of radiation that improve
upon existing state-of-the-art performance, size, weight, and power. In particular, PULSE aims to develop devices and techniques that will result in low phase-noise microwave oscillators, practical optical time/frequency transfer techniques, tabletop sources of high-quality secondary radiation and high flux isolated attosecond pulses, and other DOD-relevant applications. Due November 6.

**East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI)**

NSF and selected foreign counterpart science and technology agencies sponsor international research institutes for US graduate students in seven East Asia and Pacific locations at times set by the counterpart agencies between June and August each year. These Summer Institutes (EAPSI) operate similarly and the research visits to a particular location take place at the same time. Although applicants apply individually to participate in a Summer Institute, awardees become part of the cohort for each location. Applicants must propose a location, host scientist, and a research project that is appropriate for the host site and duration of the international visit. Due November 8.

**Doctoral Dissertation Improvement Grants in the Directorate for Biological Sciences (DDIG)**

The National Science Foundation awards Doctoral Dissertation Improvement Grants in selected areas of the biological sciences. These grants provide partial support of doctoral dissertation research to improve the overall quality of research. Allowed are costs for doctoral candidates to participate in scientific meetings, to conduct research in specialized facilities or field settings, and to expand an existing body of dissertation research. Due November 9.

**DOE/OS Terrestrial Ecosystem Science**

The Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE) hereby announces its interest in receiving research applications for terrestrial ecosystem science. The goal of the Terrestrial Ecosystem Science (TES) program is to improve the representation of terrestrial ecosystem processes in Earth system models thereby improving the quality of climate model projections and providing the scientific foundation needed to inform DOE’s energy decisions. The TES program will consider applications on measurements, experiments, modeling and synthesis that provide improved quantitative and predictive understanding of the terrestrial ecosystem that, in turn, can affect atmospheric greenhouse gas concentration changes and thereby affect the greenhouse gas forcing of climate. In addition, the Earth System Modeling (ESM) Program, which funds development of the Community Earth System Model (CESM) will consider applications focused on development and coupling of the CESM land model component. The emphasis of this Funding Opportunity Announcement (FOA) is to understand non-managed terrestrial ecosystems in the context of a changing climate. Applicants should pose their research applications in the context of representing terrestrial ecosystem processes in Earth system models. Due November 12.

The National Science Foundation (NSF) is working jointly with counterpart national, regional and multinational funding organizations worldwide to enhance opportunities for collaborative activities in materials research and education between US investigators and their colleagues abroad. This solicitation promotes joint activities between the NSF Division of Materials Research (DMR) and funding organizations in Africa, Asia, the Americas and Europe. Due November 14.

DOE/OS Early Career Research Program
The Office of Science of the Department of Energy hereby invites grant applications for support under the Early Career Research Program in the following program areas: Advanced Scientific Computing Research (ASCR); Biological and Environmental Research (BER); Basic Energy Sciences (BES), Fusion Energy Sciences (FES); High Energy Physics (HEP), and Nuclear Physics (NP). The purpose of this program is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by the DOE Office of Science. Due November 26.

Fellowships at The Huntington 2013-2014
The Huntington is an independent research center with holdings in British and American history, literature, art history, and the history of science and medicine. The Library collections range chronologically from the eleventh century to the present and include seven million manuscripts, 413,000 rare books, 275,000 reference works, and 1.3 million photographs, prints, and ephemera. The Burndy Library consists of some 67,000 rare books and reference volumes in the history of science and technology, as well as an important collection of scientific instruments. Within the general fields listed above there are many areas of special strength, including: Middle Ages, Renaissance, 19th- and 20th-century literature, British drama, Colonial America, American Civil War, Western America, and California. The Art Collections contain notable British and American paintings, fine prints, photographs, and an art reference library. In the library of the Botanical Gardens is a broad collection of reference works in botany, horticulture, and gardening. Due November 30.

George C. Marshall/Baruch Fellowships
The George C. Marshall/Baruch Fellowships are given to encourage doctoral or postdoctoral research in 20th-century U.S. military or diplomatic history and related fields. The fellowships are administered by the George C. Marshall Foundation—a non-profit, non-governmental institution—and generated from a gift provided annually by the Baruch Family Foundation of Encino, California. The fellowships honor the career of George C. Marshall, 20th-century soldier-statesman, and the Baruch family.

- Maximum grant: $7,500; requests for smaller grants are encouraged
- Projects to be funded may cover a broad range of studies in U.S. History and related fields pertaining to the changing role of the United States as a world power in the 20th century.
- Research may utilize holdings in the Marshall Research Library or may be conducted elsewhere.
SPIE Education Outreach Grants Program Supporting Optics And Photonics Related Education And Outreach Projects
As part of its education outreach mission, SPIE provides support for optics and photonics related education outreach projects. The award process is competitive; applications are judged on their potential to impact students and increase optics awareness. The key criterion in evaluation and ranking applications is the potential to impact students and to increase optics and photonics awareness. Qualifying not-for-profit organizations such as universities, optics centers, science centers, primary and secondary schools, youth clubs, industry associations and international optical societies are eligible for project support. Due January 13, 2013.

Coastal SEES (Coastal SEES) Science, Engineering and Education for Sustainability
Coastal SEES is focused on the sustainability of coastal systems. For this solicitation we define coastal systems as the swath of land closely connected to the sea, including barrier islands, wetlands, mudflats, beaches, estuaries, cities, towns, recreational areas, and maritime facilities; the continental seas and shelves; and the overlying atmosphere. These systems are subject to complex and dynamic interactions among natural and human-driven processes. Coastal systems are crucial to regional and national economies, hosting valued human-built infrastructure and providing ecosystem services that sustain human well-being. More than half of the world's human population lived in coastal areas in 2000, and this proportion is predicted to increase to 75 percent by 2025. Due January 13.

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 10.

Endangered Language Fund
The Endangered Language Fund provides grants for language maintenance and linguistic field work. The work most likely to be funded is that which serves both the native community and the field of linguistics. Work which has immediate applicability to one group and more distant application to the other will also be considered. Publishing subventions are a low priority, although they will be considered. Proposals can originate in any country. The language involved must be in danger of disappearing within a generation or two. Endangerment is a continuum, and the location on the continuum is one factor in our funding decisions. Due April 22.

Links to New & Open Funding Solicitations
- Open Solicitations from IARPA (Intelligence Advanced Research Projects Activity)
- Bureau of Educational and Cultural Affairs, Open Solicitations, DOS
- ARPA-E Funding Opportunity Exchange
- DOE Funding Opportunity Exchange
- NIAID Funding Opportunities List
- NPS Broad Agency Announcements (BAAs)
- NIJ Current Funding Opportunities
- NIJ Forthcoming Funding Opportunities
- 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 2012 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 2012 Funding Announcements
- Office of Minority Health
- Department of Justice Open Solicitations
- DOE/EEERE Funding Opportunity Exchange
- HHS/Administration for Children and Families Funding Opportunities
- New Funding Opportunities at NIEHS (NIH)
- National Human Genome Research Institute Funding Opportunities
- Army Research Laboratory Open Broad Agency Announcements (BAA)
- SBIR Gateway to Funding
- Water Research Funding
- Fellowship and Grant Opportunities for Faculty Humanities and Social Sciences
- Humanities Funding Sources A-to-Z
- DARPA Current Solicitations
- Office of Naval Research Currently Active BAAs
- HRSA Health Professions Open Opportunities
- NIH Funding Opportunities Relevant to NIAID
- Active Funding Opportunity Announcements (FOAs) for All NICHD
- National Institute of Justice Current Funding Opportunities
- Funding Opportunities by the Department of Education Discretionary Grant Programs
- Science and Technology Funding Sources A-to-Z
Cooperative Research Program
The Cooperative Research Program (CRP) provides opportunity to compete for financial assistance for projects which seek to increase and improve the working relationship between fisheries researchers from the NMFS, state fishery agencies, universities, and the U.S. fishing (recreational and commercial) in the Gulf of Mexico (FL, AL, MS, LA, TX), South Atlantic (FL, NC, SC, GA) and Caribbean (USVI and Puerto Rico). The program is a means of involving commercial and recreational fishermen in the collection of fundamental fisheries information in support of management and regulatory options. This program addresses NOAA’s mission goal to “Protect, Restore, and Manage the Use of Coastal and Ocean Resources through an Ecosystem Approach to Management.” Due August 24.

Software Infrastructure for Sustained Innovation
In order to nurture, accelerate and sustain this critical mode of scientific progress, NSF established the multi-tiered Software Infrastructure for Sustained Innovation (SI2) program, with the overarching goal of transforming innovations in research and education into sustained software resources that are an integral part of the cyberinfrastructure. Grand challenges in the chemical sciences will be advanced through the provision of enabling and sustainable software that allows researchers to flexibly and rapidly prototype and test new algorithms or methods; leverage new heterogeneous architectures; and explore new data-enabled scenarios. The NSF seeks to encourage collaborative software activities with foreign investigators which advance software innovation, capabilities, support and sustainability. This SI2 solicitation is for international software collaborations addressing grand challenges in the chemical sciences, in partnership with the EPSRC in the United Kingdom. Preliminary due August 27; full due September 27.

Louis Stokes Alliances for Minority Participation (LSAMP)
The LSAMP program assists universities and colleges in diversifying the STEM workforce through their efforts at significantly increasing the numbers of students successfully completing high quality degree programs in science, technology, engineering and mathematics (STEM) disciplines. This solicitation includes a new activity "Bridge to the Baccalaureate Alliances" (B2B) to support community college partner institutions to accelerate the transfer of under-represented minority STEM students to four-year institutions in pursuit of a Baccalaureate...
STEM degree. B2B Alliances will be made up entirely of two-year colleges. Proposals may be submitted directly by a single lead two-year institution of higher learning with sub-awards made to partners within the alliance. **Multiple due dates beginning August 28.**

**Higher Education Multicultural Scholars Program**
The purpose of this competitive undergraduate scholarship grant program is to increase the multicultural diversity of the food and agricultural scientific and professional workforce, and advance the educational achievement of all Americans by providing competitive grants to colleges and universities. The Multicultural Scholars Program is available every year. **Due August 29.**

**Energy Innovation Hub - Critical Materials**
The purpose of this FOA is to fund a Critical Materials Energy Innovation Hub to reduce materials criticality and prevent criticality of new materials that are essential for energy technologies. The Critical Materials Hub will coordinate Research and Development across the entire materials lifecycle. Research and Development will combine basic and applied research with engineering to accelerate scientific discovery utilizing highly collaborative teams across multiple scientific and engineering disciplines. The initial award period is for five years. The Hub will be funded up to a total of $20 million in the first year; up to $10 million of those funds can be devoted to infrastructure start-up for the Hub, including building renovation (but not new construction), lease arrangements, equipment, and instrumentation. It is anticipated that the Hub will be funded up to $25 million per year for Hub operations in the final four years of the initial award period, pending Congressional appropriations (more). **Due August 30.**

**PhRMA: Pre-Doctoral Fellowships (Pharmacology/Toxicology)**
Pharmacology/toxicology awards support career-development activities of scientists prepared to engage in research that integrates information on molecular or cellular mechanisms of action with information on the effects of an agent observed in an intact organism, either in experimental animal or clinical studies or both. This program provides up to two years of stipend funding to support the research activities of the doctoral program and only after course work has been completed. **Due September 1.**

**Sensors and Sensing Systems (SSS)**
The Sensors and Sensing System (SSS) program funds fundamental research on sensors and sensing systems. Such fundamental research includes the discovery and characterization of new sensing modalities, fundamental theories for aggregation and analysis of sensed data, fundamentally new approaches for data transmission, and approaches for addressing uncertain and/or partial sensor data. Innovative research in nonlinear prediction, filtering and estimation in the context of sensing systems is also considered in this program. **Full Proposal Window: September 1, 2012 - October 1, 2012.**

**AERA Grants Program**
With funding from the National Science Foundation (NSF), the American Educational Research Association (AERA) is pleased to announce the continuation of the AERA Grants Program, which
Research Development & Grant Writing News

provides small grants and training for researchers who conduct studies of education policy and practice using quantitative methods and including the analysis of data from the large-scale data sets sponsored by National Center for Education Statistics (NCES) and NSF. Due September 5.

USDA Small Business Innovation Research Program - Phase I
The U.S. Department of Agriculture (USDA) invites science-based small business firms to submit research applications under this program solicitation entitled “Small Business Innovation Research Program (SBIR) - Phase I, Fiscal Year 2013.” Firms with strong scientific research capabilities in any of the topic areas described in section 8.0 are encouraged to participate. USDA will support high-quality research or research and development (R/R&D) applications containing advanced concepts related to important scientific problems and opportunities that could lead to significant public benefit. Due September 6.

State and National Archival Partnership Grants
The National Historical Publications and Records Commission seeks proposals to strengthen archives and historical records programs in each of the states and build a national archival network. Due September 6.

FY 2013 Research Opportunities in High Energy Physics
The Office of High Energy Physics at the U. S. Department of Energy’s Office of Science, hereby invites new grant applications for support of research programs in high-energy physics. Due September 10.

Advances in Biological Informatics (ABI)
The Advances in Biological Informatics (ABI) program seeks to encourage new approaches to the analysis and dissemination of biological knowledge for the benefit of both the scientific community and the broader public. The ABI program is especially interested in the development of informatics tools and resources that have the potential to advance- or transform- research in biology supported by the Directorate for Biological Sciences at the National Science Foundation. The ABI program accepts three major types of proposals: Innovation awards that seek to pioneer new approaches to the application of informatics to biological problems, Development awards that seek to provide robust cyberinfrastructure that will enable transformative biological research, and Sustaining awards that seek to support ongoing operations and maintenance of existing cyberinfrastructure that is critical for continued advancement of priority biological research. Due September 10.

Research Experiences for Undergraduates (REU)
The REU program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program. This solicitation features two mechanisms for support of student research: (1) REU Sites are based on independent proposals to initiate and conduct projects that engage a number of students in research. REU Sites may be based in a single discipline or academic department or may offer interdisciplinary or multi-department research.
opportunities with a coherent intellectual theme. Proposals with an international dimension are welcome. (2) REU Supplements may be included as a component of proposals for new or renewal NSF grants or cooperative agreements or may be requested for ongoing NSF-funded research projects. **Due September 12.**

**Partnerships for Innovation: Accelerating Innovation Research (PFI: AIR)**

To continue to strengthen the innovation ecosystem, NSF is revising NSF 12-511 to promote two choices under the Partnerships for Innovation (PFI): Accelerating Innovation Research (AIR) subprogram. The first choice, Technology Translation, encourages the translation of technologically-promising research discoveries made by prior and/or current NSF-funded investigators toward a path of commercialization; while the second choice, Research Alliance, promotes synergistic collaborations between an existing NSF-funded research alliance (including consortia such as Engineering Research Centers, Industry University Cooperative Research Centers, Science and Technology Centers, Nanoscale Science and Engineering Centers, Materials Research Science and Engineering Centers, Centers for Chemical Innovation, and Emerging Frontiers in Research and Innovation grantees) and other public and private entities to motivate the translation and transfer of research discoveries into innovative technologies and commercial reality. Both of these choices are designed to accelerate innovation that results in the creation of new wealth and the building of strong local, regional, and national economies. **LOI due September 12; full November 13.**

**Geography and Spatial Sciences Program**

The goals of the NSF Geography and Spatial Sciences (GSS) Program are: To promote scientific research in geography and the spatial sciences that advances theory and basic understanding and that addresses the challenges facing society. To promote the integration of geographers and spatial scientists in interdisciplinary research. To promote education and training of geographers and spatial scientists in order to enhance the capabilities of current and future generations of researchers. To promote the development and use of scientific methods and tools for geographic research. The Geography and Spatial Sciences Program sponsors research on the geographic distributions and interactions of human, physical, and biotic systems on the Earth’s surface. Investigations are encouraged to propose plans for research about the nature, causes, and consequences of human activity and natural environmental processes across a range of scales. Projects on a variety of topics (both domestic and international) qualify for support if they offer promise of contributing to scholarship by enhancing geographical knowledge, concepts, theories, methods, and their application to societal problems and concerns. **Due September 13.**

**NEH Enduring Questions**

The NEH Enduring Questions grant program supports faculty members in the teaching and development of a new course that will foster intellectual community through the study of an enduring question. This question-driven course will encourage undergraduates and teachers to grapple with a fundamental concern of human life addressed by the humanities, and to join
together in a deep and sustained program of reading in order to encounter influential thinkers over the centuries and into the present day. Due September 13.

**SunShot Solar Energy Evolution and Diffusion Studies (SEEDS)**
Through the SEEDS FOA, the Department of Energy will invest up to $9 million over three years to support research on solar energy innovation dynamics and technology adoption patterns. SEEDS supports the development of a diversity of analytical, numerical, and computational tools and methods; implementation of pilot test strategies for modifying current business and policy practices; and assessment of pilot tests outcomes for impact and scalability. Through SEEDS, the Department of Energy seeks to launch a series of systematic investigations that will result in viable methods for dramatically transforming the operations of solar researchers, manufacturers, developers, installers, and policymakers. Due September 17.

**Joint DMS/NIGMS Initiative to Support Research at the Interface of the Biological and Mathematical Sciences (DMS/NIGMS)**
The Division of Mathematical Sciences in the Directorate for Mathematical and Physical Sciences at the National Science Foundation and the National Institute of General Medical Sciences at the National Institutes of Health plan to support research in mathematics and statistics on questions in the biological and biomedical sciences. Both agencies recognize the need and urgency for promoting research at the interface between the mathematical sciences and the life sciences. This competition is designed to encourage new collaborations, as well as to support existing ones. Due September 17.

**SunShot Solar Energy Evolution and Diffusion Studies (SEEDS)**
Through the Solar Energy Evolution and Diffusion Studies (SEEDS) Funding Opportunity Announcement (FOA), the Department of Energy will invest up to $9 million over three years to support research on solar energy innovation dynamics and technology adoption patterns. SEEDS supports the development of a diversity of analytical, numerical, and computational tools and methods; implementation of pilot test strategies for modifying current business and policy practices; and assessment of pilot tests outcomes for impact and scalability. Through SEEDS, the Department of Energy seeks to launch a series of systematic investigations that will result in viable methods for dramatically transforming the operations of solar researchers, manufacturers, developers, installers, and policymakers. Selected research efforts will be performed in tandem with industry partners to ensure that results can be applied, tested, and modified in real time. For more information, see the full solicitation. Due September 17.

**Kauffman Dissertation Fellowship Program in Entrepreneurship**
The Ewing Marion Kauffman Foundation is pleased to announce the Kauffman Dissertation Fellowship Program, an initiative of great significance to the faculty and students of your institution. During the 2012–2013 academic year, the Kauffman Foundation will award up to 15 Dissertation Fellowship grants of $20,000 each to Ph.D., D.B.A., or other doctoral students for the support of dissertations in the area of entrepreneurship. This initiative will help launch a cohort of world-class scholars into this exciting field, thus laying a foundation for future scientific advancement. We hope that the findings generated by this effort will be translated
into knowledge with immediate application for policy makers, educators, service providers, and entrepreneurs. **Due September 19.**

**Research in Engineering Education (REE)**
The Division of Engineering Education and Centers (EEC) supports creation of a more agile engineering education ecosystem, equally open and available to all members of society, that dynamically and rapidly adapts to meet the changing needs of society and the nation’s economy. Research is sought that will inform systemic change across all parts of the ecosystem. **Due September 20.**

**Digital Humanities Start-up Grants**
The National Endowment for the Humanities (NEH) invites applications to the Digital Humanities Start-Up Grants program. This program is designed to encourage innovations in the digital humanities. By awarding relatively small grants to support the planning stages, NEH aims to encourage the development of innovative projects that promise to benefit the humanities. Proposals should be for the planning or initial stages of digital initiatives in any area of the humanities. **Due September 25.**

**NEH Summer Stipends**
Summer Stipends support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. **Due September 27 for Projects Beginning May, 2013.**

**Alliances for Graduate Education and the Professoriate**
The Alliances for Graduate Education and the Professoriate (AGEP) program will support three types of projects described in this solicitation: 1) AGEP-Transformation; 2) AGEP-Knowledge Adoption and Translation; and 3) AGEP-Broadening Participation Research in STEM Education. This solicitation represents an expansion of the program to include strategic investments in the development and study of new models for STEM graduate education, postdoctoral training, and academic STEM career preparation that eliminate or mitigate negative factors and promote positive practices for underrepresented racial and ethnic minorities. **Due September 28 and October 30.**

**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. 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**

**Partnerships for Innovation: Building Innovation Capacity**
This program solicitation, Partnerships for Innovation: Building Innovation Capacity (PFI: BIC) starts with an existing sound scientific and/or engineering-based research discovery that can be
translated to market-valued solutions through a partnership between academe and small technology-based businesses. The funds will provide support to an academic institution to partner with at least two small technology-based businesses that are not in direct competition with each other to carry out early translational-research activities. The primary aims of the activities of this partnership are three-fold: (1) to build the innovation capacity of the individual participants from academe and from business; (2) to increase the viability of the small business concerns; and (3) to develop the next-generation workforce by providing opportunities for students at different levels to effectively learn from, participate in, and be profoundly changed by exposure to the process of building innovation capacity that occurs in BIC projects. The active collaboration between academe and business could result in solutions with potential for an impact on more than one market. **WEBINAR: A webinar will be held within 6 weeks of the release date of this solicitation to answer any questions about the solicitation.** Details will be posted on the Industrial Innovation and Partnerships (IIP) website as they become available. **LOI due Sept. 26; Full Dec. 12.**

**NEH/DFG Bilateral Digital Humanities Program**
The National Endowment for the Humanities (NEH) in the United States and the German Research Foundation (Deutsche Forschungsgemeinschaft e.V., DFG) are working together to offer support for projects that contribute to developing and implementing digital infrastructures and services for humanities research. **Due September 27.**

**Hal Rothman Dissertation Fellowship**
The Hal Rothman Research Fellowship was created to recognize graduate student achievements in environmental history research in honor of Hal Rothman, recipient of ASEH's Distinguished Service award in 2006 and editor of *Environmental History* for many years. The fellowship provides a single payment of $1,000 for Ph.D. graduate student research and travel in the field of environmental history, without geographical restriction. **Open to September 30.**

**International Affairs Fellowship Program**
Launched in 1967, the International Affairs Fellowship (IAF) is a distinguished program offered by the Council on Foreign Relations (CFR) to assist mid-career scholars and professionals in advancing their analytic capabilities and broadening their foreign policy experience. The program aims to strengthen career development by helping outstanding individuals acquire and apply foreign policy skills beyond the scope of their professional and scholarly achievements. The distinctive character of the IAF Program lies in the contrasting professional experiences fellows obtain through their twelve-month appointment. Selected fellows from academia and the private sector spend fellowship tenures in public service and policy-oriented settings, while government officials spend their tenures in a scholarly atmosphere free from operational pressure. **Open to October 1.**

**EPSCoR Research Infrastructure Improvement Program Track-1: (RII Track-1)**
Research Infrastructure Improvement Program Track-1: (RII Track-1) awards provide up to $4 million per year for up to 5 years to support physical, human, and cyber infrastructure.
improvements in research areas selected by the jurisdiction's EPSCoR steering committee as having the best potential to improve future R&D competitiveness of the jurisdiction. **Due October 3.**

**Documenting Democracy: Access to Historical Records**
The National Historical Publications and Records Commission seeks proposals that promote the preservation and use of the nation's most valuable archival resources. Projects should expand our understanding of the American past by facilitating and enhancing access to primary source materials. **Due October 4.**

**Innovation in Archives and Documentary Editing**
The National Historical Publications and Records Commission seeks projects that are exploring innovative methods to improve the preservation, public discovery, or use of historical records. **Due October 4.**

**Publishing Historical Records**
The National Historical Publications and Records Commission seeks proposals to publish historical records of national significance. New Republic through the Modern Era. **Due Oct. 4.**

**Advancing Digitization of Biodiversity Collections (ADBC)**
This program seeks to enhance and expand the national resource of digital data documenting existing vouchered biological and paleontological collections and to advance scientific knowledge by improving access to digitized information (including images) residing in vouchered scientific collections across the United States. **Due October 19.**

**Agriculture and Food Research Initiative: Food Safety**
This AFRI Challenge Area promotes and enhances the scientific discipline of food safety, with an overall aim of protecting consumers from microbial and chemical contaminants that may occur during all stages of the food chain, from production to consumption. This requires an understanding of the interdependencies of human, animal, and ecosystem health as it pertains to foodborne pathogens. The long-term outcome for this program is to reduce foodborne illnesses and deaths by improving the safety of the food supply, which will result in reduced impacts on public health and on our economy. In order to achieve this outcome, this program will support single-function Research Projects and multi-function Integrated Research, Education, and/or Extension Projects, and Food and Agricultural Science Enhancement (FASE) Grants that address one of the Program Area Priorities (see Food Safety RFA for details). **Due November 14.**

**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.

**World Bank Internships**
The Bank Internship offers highly motivated and successful individuals an opportunity to improve their skills while working in a diverse environment. Interns generally find the experience to be rewarding and interesting. To be eligible for the Internship, candidates must possess an undergraduate degree and already be enrolled in a full-time graduate study program (pursuing a Master's degree or PhD with plans to return to school in a full-time capacity. Generally, successful candidates have completed their first year of graduate studies or are already into their PhD programs. This *Internship typically seeks candidates in the following fields*: economics, finance, human development (public health, education, nutrition, population), social science (anthropology, sociology), agriculture, environment, private sector development, as well as other related fields. Fluency in English is required. Prior relevant work experience, computing skills, as well as knowledge of languages such as French, Spanish, Russian, Arabic, Portuguese, and Chinese are advantageous. Due December 1 to January 31.

**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.
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. Open to January 12, 2013.

**Mexican Partnership Program**
The United States Agency for International Development (USAID) Mission in Mexico is seeking concept papers and, later, applications from Mexican for-profit and non-for-profit organizations to implement activities to support the Mexican Partnership Program related to global climate change, economic competitiveness, youth, human rights and rule of law. Eligible organizations include, but are not limited to, non-government organizations (NGOs), associations, cooperatives, universities, civil society organizations, foundations, and private companies. Open to January 29, 2013.

**GDA APS 2012 - Addendum Mexico**
Through this Addendum to the FY 2012 Global Development Alliance (GDA) Annual Program Statement (APS) No. APS-OAA-12-000003 (the GDA APS), USAID/Mexico is making a special call for the submission of concept papers related to the USG development pillars of private sector competitiveness, environment and education for work in Mexico. The objectives supported under this addendum are to: 1) help mitigate the effects of global climate change, with a focus on the energy and forestry sectors; 2) improve the availability, relevance and quality of youth leadership and workforce development programs in communities most affected by crime and violence; and 3) support Mexico’s implementation of a new criminal justice system. Open to January 31, 2013.

**Initiative for Conservation in the Andean Amazon Phase II**
The United States Agency for International Development (USAID) is seeking concept papers and later, applications, from Non-Governmental Organizations (NGOs), education institutions, partnerships and consortia to implement activities to support the Initiative for Conservation in the Andean Amazon (ICAA) with Landscape-based programs. Please note, at this time we are not accepting full applications or proposals. Only concept papers will be reviewed. Instructions on how to prepare a concept paper are provided within this APS. Open to May 2, 2013.

**APS for Food Security, Nutrition, Biodiversity and Conservation**
The U.S. Agency for International Development (USAID) continues its commitment to foster more strategic alliances with the private sector’s “solution holders” who are often well positioned to address specific development challenges. The purpose of this APS is to announce USAID/Uganda’s plans to fund a limited number of Public Private Alliances to enhance food security and address issues of biodiversity and conservation. Competition under this APS will
Research Development & Grant Writing News

consist of a two-step process where applicants first submit a Concept Paper for an initial competitive review. All Concept Papers received will be evaluated for responsiveness to the application criteria specified in this APS. Open to September 15, 2013.

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. Open until September 30, 2013.

National Geospatial-Intelligence Agency Academic Research Program
The National Geospatial-Intelligence Agency (NGA) is releasing this solicitation for its sponsored academic research program. This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Department of Defense (DoD) Grant and Agreement Regulations (DoDGARs) 22.315(a). Awards will take the form of grants. However, other instruments may be considered as appropriate based on the proposals. Open to September 30, 2013.

Research Interests of the Air Force Office of Scientific Research
AFOSR plans, coordinates, and executes the Air Force Research Laboratory’s (AFRL) basic research program in response to technical guidance from AFRL and requirements of the Air Force; fosters, supports, and conducts research within Air Force, university, and industry laboratories; and ensures transition of research results to support USAF needs. The focus of AFOSR is on research areas that offer significant and comprehensive benefits to our national warfighting and peacekeeping capabilities. These areas are organized and managed in three scientific directorates: Aerospace, Chemical and Material Sciences, Physics and Electronics, and Mathematics, Information and Life Sciences. Open until superseded.

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.

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

Open Solicitations from IARPA (Intelligence Advanced Research Projects Activity)
Army Research Laboratory Broad Agency Announcement for Basic and Applied Scientific Research
This Broad Agency Announcement (BAA), which sets forth research areas of interest to the Army Research Laboratory (ARL) Directorates and Army Research Office (ARO), is issued under the paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of basic research proposals. Proposals submitted in response to this BAA and selected for award are considered to be the result of full and open competition and in full compliance with the provision of Public Law 98-369, "The Competition in Contracting Act of 1984" and subsequent amendments. Open June 1, 2012 to March 31, 2017.

ARL Core Broad Agency Announcement for Basic and Applied Scientific Research for Fiscal Years 2012 through 2017
**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.

**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)

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