Research Development & Grant Writing News

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Check Out Our eBook!

New Faculty Guide to Competing for Research Funding is an invaluable tool for faculty writing research grants, or for use by research offices developing grantwriting workshops to help faculty write more competitive proposals. **Table of Contents**.

This year we will again offer a **CAREER Webinar** for faculty interested in pursuing an NSF CAREER grant. The webinar is scheduled for **Thursday, April 18ᵗʰ from 2 – 4 pm Eastern Time**. Cost is $275 per institution. Registration page and more info is posted at our website (here).

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Topics of Interest

Research Development & Grant Writing News ©

About the co-publishers

Mike Cronan, **PE** (Texas 063512, inactive) has 23 years of experience developing and writing successful proposals at Texas A&M University. He was named a **Texas A&M University System** *Regents Fellow* (2001-2010) for developing and writing A&M System-wide grants funded at over $100 million by NSF and other funding agencies. He developed and directed two research development and grant writing offices, one for Texas A&M's VPR and the other for the Texas Engineering Experiment Station (15 research divisions state-wide).

Lucy Deckard (BS/MS Materials) worked in research development and grant writing at Texas A&M University and across the A&M System for nine years. She directed A&M's *New Faculty Research Initiative (2004-09)*, helping junior faculty System-wide jumpstart their research careers with federal agency funding. She served as associate director of two research development and grant writing offices. She founded **ARFS** in 2010.

About the editor

Katherine E. Kelly, Ph.D., is a retired English professor from Texas A&M University. She is the author of several books and numerous articles and served as a contributing editor for an academic journal for five years. She provides editorial services to *RD&GW News* and to **ARFS** clients on proposals, journal articles, and manuscripts.

Getting the Writing Right

By **Katherine E. Kelly**, Ph.D., Editor
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Effective writing emerges over time

How often have you re-read drafts of your proposals, reports, or even scholarly papers after letting them set for a few days and been perplexed (or dismayed) by the sentences you encounter? The crucial element here is "set for a few days," as re-reading your prose within hours of completing it is likely to convince you that it sounds just fine.   It takes time away from a draft to make it truly visible and audible to yourself, and when you do see and hear it one or more days after you've written it, you will know whether it conveys the sense you intend or whether it's likely to confuse, distract, and generally annoy the reader. And so we encounter the first principle of getting the writing right: *good writing emerges gradually through a process of successive drafts separated by at least 24 hours.* Don't forget to build this time into your proposal planning.

But the truth is that, no matter how many drafts you create, your writing will benefit from another set of eyes, preferably the eyes of a colleague who knows the field, the state of the field's funding, and who has successfully secured funding from the same or a similar funding source. But before asking that colleague to read your draft, do them and yourself the service of telling them how you would like them to read and respond to your document. They won't be able to read your mind on this point—if you don't give them guidance, expect a cursory and superficial review. As you consider how to approach asking for a review, let's clear away a false assumption. It's customary to think about writing as if it were divided into two parts: content and style. But, contrary to that belief, the content of a proposal will be conveyed as fully through the author's writing choices, or style, as it will by the concepts they've selected as worthy of funding. Style and content inform one another. So, for example, it would not be helpful to ask a colleague, "Please review this proposal for its content. I'll worry about the style later." If the style is poor—riddled with errors, long-winded, scattered in focus, unevenly developed, and siloed into isolated sections—even the most fascinating concept will be sabotaged by gaps in the argument, ambiguities in language, organizational distractions, and the appearance of sloppiness. You can, of course, ask a colleague for a review of isolated sections of a proposal, but you will want someone to look at the entire document in its near-finished state to gain the full advantage a review can give you.

Ask for a frank review

So how might you ask for a review? A second principle of getting the writing right is to ask for a *frank review* of the nearly completed proposal that pays attention to the proposal's ideas and to the writing itself. Time for this review will also need to be set aside in the proposal planning process. Give the reviewer sufficient lead time to complete a detailed reading and response. You might note that you are submitting this after careful thought and would appreciate attention to the document's effectiveness with respect to the ideas advanced and to how well the writing conveys those ideas. For example, you might ask the reviewer whether

the proposal adequately answers all of the questions posed by the funder using clear and consistent prose. Does field-specific jargon get in the way at any point? Are the terms used appropriate and consistent throughout the document? Let your reviewer know that you welcome close attention to the writing itself. Without such an assurance, some reviewers might steer clear of commenting on the proposal's language either to save any possible embarrassment or to minimize the time needed to complete the review.

Select a level of review

Yes, commenting on the style-content of a proposal can take more or less time, depending upon the thoroughness of the review. The third principle of getting the writing right is deliberately to select the level of review you give or solicit from others. If you are asked to review a colleague's proposal, or if you are seeking a professional editor to check your current draft, keep in mind a level of editing you would like to perform yourself or to have performed by a professional. The first or most elementary level would include checking the document for correct spelling, punctuation, and grammar. Second-language speakers are likely to benefit from an editing at this level, if not also from the other two levels described below. Spell checking programs accompanying text programs like "Word" can be used to find most spelling errors. But remember they do not identify whether "their" or "there" should appear in a sentence. The author/editor has to make that decision. This technology has made spelling errors close to inexcusable, so be sure to use a spell checker and also to read through a document for any words that may have been spelled correctly but used incorrectly.
The second level of editing includes suggested rewriting to improve the logical coherence of sentences, paragraphs, and sections; to ensure that transitions help the reader from one paragraph and section to the next; and to cut out excess words where necessary. At this level, look hard at the author's use of verbs. Does some form of the verb "to be" appear in nearly every sentence? If so, suggest more active verbs to give the writing a clearer sense of agency, energy, and focus.

The third level of editing includes reviewing the solicitation and other background as needed to prepare for a deep rewriting of the document. This rewriting will ensure that the proposal actually addresses the terms used in the solicitation, and that it does so using clear, precise, and accessible language. It will also ensure that paragraphs within the proposal feel connected to one another and to the proposal's primary claim. This level of rewriting will need the author's cooperation and consent; otherwise, she may feel offended or criticized by the sheer amount of change suggested.

In summary, the three principles for getting the writing of a proposal right for both authors and reviewers include: (1) allowing time in the proposal planning process to produce multiple drafts of the document following a series of reviews; (2) requesting/offering a frank review of the document; and (3) specifying the review level expected or offered given the constraints of time. In all cases, writers and editors will be aiming for linguistic precision and compression. To quote Dr. Seuss, "***The writer who breeds more words than he needs, is making a chore for the reader who reads***." You don't want to burden your reviewer at a granting agency; instead, ***make it easy for them to say yes to your proposal***.

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Boost Your Grants IQ with RSS Feeds

By **Mike Cronan**, co-publisher

"Lost time is not found again," according to the lyrics in the Bob Dylan song "Odds and Ends." While musicologists may debate whether or not Dylan was singing about grant writing in this song, the advice, nonetheless, applies to every aspect of identifying an appropriate solicitation and developing and writing a successful proposal. Successful grant writing is a **knowledge-based enterprise that can be amplified by RSS feeds that accelerate your knowledge acquisition** in many of the ways that contribute to that success.

The beauty of RSS feeds is that they save you time in multiple ways—instantly delivering to you content information you select, such as newly posted research solicitations, as soon as these are published by the content provider, saving you the time taken to return repeatedly to a content source for the information you need. Most importantly, you no longer have to wait for dated and often disciplinarily useless information to be forwarded to you through a wilted daisy chain of multiple institutional emails that are more spam than ham. When it comes to RSS feeds, the answer to the old sailor's adage *"What comes first, the compass or the clock?"* is that they cross the finish line together in a virtual tie. RSS feeds save you significant time and point you in the right directions **for content you want** saving you from having to dumpster dive for information in outdated emails.

Why? Because **you make the choices** when it comes to RSS feeds. How neat is that! You decide which agencies or foundations will send you new research and educational solicitations and agency information **and which will not**. If you are a humanities professor, you don't have to receive a cascade of solicitations related to the *Materials Genome Initiative* unless you chose to get it; likewise, if you are an engineering professor, you don't have to receive emails on funding opportunities for *Documenting Endangered Languages*, unless, of course, you chose to do so. The take-away message from RSS feeds is that they allow **you to elect the content you wish to receive, thereby avoiding having to sort through an information dump. Too much undifferentiated information is as useless as no information because it will be ignored**. Of course, if you sign up for too many RSS feeds, you may end up spamming yourself, but in that case, you know who to blame for the problem and how to correct it.

Moreover, when you subscribe to an RSS feed, you select which of the content posts you have received and reviewed that you will archive as a depository of important content information or solicitations by title and URL. Perhaps you want to save the last 200 or 500 RSS feeds you have received from a specific content provider. Easily done with a right click of the mouse to find "feed properties." It is also a nice organizational tool, since it keeps the information chronologically unless you choose to save it by subject title.

How can you access an RSS feed? Use an RSS reader, also called an aggregator. These programs allow you to subscribe to RSS feeds. You can set up RSS readers to check for updated content information at intervals (30 minutes, 60 minutes, 2 hours, etc.) of your choosing in the feeds to which you subscribe. So the content comes to you, rather than you having to go to the content. Most RSS readers are integrated into your browser, or may be freeware programs that

you download. RSS readers may be standalone programs, but more than likely are integrated into a program that you already use, such as Internet Explorer, Microsoft Outlook, or other browsers (detailed instructions on subscribing to RSS feeds in these browsers are provided on their web sites at: Firefox, IE7, Opera, Safari). A list of available readers can be found at the Open Directory Project and Yahoo!

In most cases, the RSS reader will be part of your browser. When you go to a webpage that offers RSS feeds, you will see a link to the feed, often with the letters **XML** in an orange box. The NSF site identifies content available as an RSS feed with an orange button: . In the case of Internet Explorer, a small orange box with white lines will illuminate in the menu bar if you are on a page with an RSS feed available.

For example, the AAAS (American Association for Advancement of Science) has numerous disciplinary and topic-specific RSS feeds that you may subscribe to at **AAAS RSS Feeds.** Perhaps you want to subscribe to the RSS feed for Chemistry, Physics, and Materials Sciences. Easily done. Just click on the link and the notice (following page) will provide you with the "**Subscribe to this feed**" link. Click on this link and a pop-up box (following page) will appear that allows you to finalize the subscription after electing possible options about the file name for the feed, location of the feed, folder location, and whether it will be displayed on your favorites bar. Make your choices and click "**Subscribe**." Done!

Whenever new content is posted on this topic by AAAS, your browser will notify you by a method you select, e.g., sound of your choice or bolding of the RSS feed itself. In this case, **Chemistry, Physics, and Materials Sciences** would be bolded in your browser's RSS feeds list. When you check your feed on this topic, it is un-bolded until new content is added. As a cautionary note, if you have a computer or laptop in your bedroom that is set to receive RSS feeds and you have elected the sound notification option, recall that RSS feeds are pushed out all night long automatically from content providers. So if you hear strange sounds in the night, it may be an updated RSS feed.

Once you have determined the RSS reader you will use, likely the default reader in your browser, you are ready to start identifying those RSS feeds that are most important to advancing your research interests by notifying you of upcoming funding solicitations and other key information that will help you develop, plan, and write a more competitive proposal.

New funding opportunities are time-sensitive documents and the timeliness with which you receive them can significantly impact the competitiveness of your proposal. If an agency publishes a new solicitation today**, *you want it <u>today</u>* ** and not a week from today or a month from today. ***The time available to develop and write a proposal is a very precious commodity and must not be wasted***. Fortunately, all federal agency grants are published on Grants.gov. One key component to your "RSS Feed Toolkit" is to subscribe to one of these Grants.gov feeds:

- New Opportunities by Agency
  Receive a listing of new opportunities by agency name.
- New Opportunities by Category
  Receive a listing of new opportunities by category.
- Modified Opportunities by Agency
  Receive a listing of recently modified opportunities by agency name.

- Modified Opportunities by Category
  Receive a listing of recently modified opportunities by category.

[*Article continues following below graphics*]
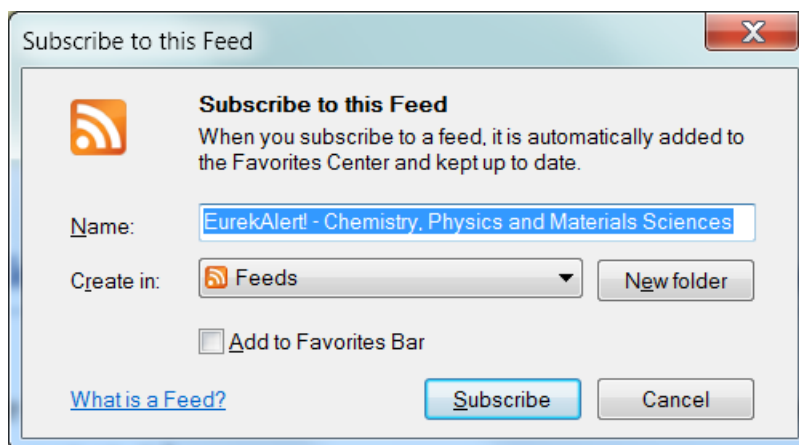
Moreover, many of the research agencies that publish upcoming funding opportunities to Grants.gov also publish them at the agency website. However, additional information is also offered by federal agencies and made available through RSS feeds that you will find invaluable in developing and writing proposals, ***particularly information that helps you better understand the culture, mission, and investment priorities, strategic plans, upcoming webinars, agency reports and workshops***, etc., as the below URLs demonstrate.

- http://www.epa.gov/newsroom/rssfeeds.htm
- http://news.science360.gov/syndication/
- http://grants.nih.gov/grants/guide/rss_info.htm
- http://videocast.nih.gov/rss/
- http://science.energy.gov/bes/efrc/news-and-events/rss-feeds/
- http://science.energy.gov/rss/
- http://www.usa.gov/Topics/Reference-Shelf/Libraries/RSS-Library/Agriculture.shtml
- http://www.netl.doe.gov/rss/index.html
- http://www.rss.noaa.gov/
- http://www.csrees.usda.gov/newsroom/rss.html
- http://www.ars.usda.gov/News/docs.htm?docid=6697

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Perhaps the best way to identify RSS feeds in your particular area of research and interests is through a simple Google search. For example, a search on "RSS feeds at the National Science Foundation" comes up with the result appearing below as the first entry in the search results (**US NSF - RSS Feeds and Podcasts**). So, with a well-crafted Google search for RSS feeds at a particular funding agency or other source of information important to your field, e.g., the National Academies, you can easily build your own "RSS Feed Toolkit" that will offer invaluable help for writing more successful proposals. In crafting your Google search, however, remember the advice of geologists—"*if you don't ask the right question, the rock won't answer*."

NSF RSS Feeds and Podcasts

Click on the icon for the RSS feed to which you want to subscribe. **If your browser supports RSS, the feed will be displayed along with an option to subscribe to it.** If you use a standalone reader, you may need to drag the RSS icon into your reader or click on the icon and copy and paste the URL from your browser. For more RSS information read the RSS FAQ page.

Current RSS feeds include:

PODCAST **The Discovery Files**
"The Discovery Files" covers projects funded by the government's National Science Foundation. Federally sponsored research -- brought to you, by you!

Discoveries
RSS View Discoveries Web page
You may also be interested in News.

Events
RSS View Events Web page

Funding
RSS Program Announcements and Information
View Program Announcements and Information Web page

RSS Upcoming Due Dates
View Upcoming Due Dates Web page

Images and Video
RSS View Images and Video Web page

News
RSS View News Web page
You may also be interested in Discoveries.

RSS View News From the Field Web page

Publications
RSS View Publications Web page

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Statistics on U.S. Science and Engineering Resources
[RSS] [View new Statistics on U.S. Science and Engineering Resource releases Web page](#)

Vacancies
[RSS] All Positions
[View All Positions Vacancies Web page](#)

[RSS] Administrative
[View Administrative Vacancies Web page](#)

[RSS] Clerical and Technical
[View Clerical and Technical Vacancies Web page](#)

[RSS] Executive
[View Executive Vacancies Web page](#)

[RSS] Scientific and Professional
[View Scientific and Professional Vacancies Web page](#)

[RSS] Special Emphasis Programs
[View Special Emphasis Programs Vacancies Web page](#)

Gain a Competitive Edge by Viewing Agency Webinars

By Mike Cronan, co-publisher
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If you are linked to a funding agency through email alerts or RSS feeds, you will likely receive notification of agency-specific webinars. In the aggregate, agency webinars typically address issues of interest to everyone in the external grants community, although the topic addressed in any specific webinar will most often be tightly focused and of interest to a more narrowly defined audience. For example, professional staff in sponsored projects offices might represent a large portion of the audience for the November NSF webinar on changes to the PAPPG (NSF Webinar: *Revisions to the NSF Proposal & Award Policies & Procedures Guide (PAPPG)*, whereas a broader audience of research professional and faculty researchers might find it helpful to view the NIH webinar RePORT Webinar 2012 - NIH Research Portfolio Online Reporting.

However, like quarks and Girl Scout Cookies, agency webinars come in many flavors and colors, and the audience members that view the webinars typically self select based on the role they play in the university's research enterprise. Regardless, viewing judiciously selected agency webinars offers research development professionals and faculty alike the opportunity to gain a more nuanced understanding of the agency's expectations at multiple scales, ranging from overarching requirements at the agency level to very specific requirements unique to the individual program solicitation.

For faculty researchers and those who assist them in the planning, development, and writing of a grant , the agency webinars at the solicitation level often prove to be the most helpful in providing a competitive advantage. Perhaps your research interests lie at NIH, for example, where a webinar announcing new programs would give you a competitive edge, such as the NIH Webinar on New Programs to Accelerate Drug Discovery or Funding Opportunities Webinar - NIEHS - NIH - NIEHS - National . Perhaps there are webinars sponsored by the NIH Office of Extramural Research that could potentially give you a competitive edge. In this regard, it is important to remember that *agencies often archive webinars for later viewing*, or provide listings of both archived and upcoming webinars, such as that provided by USDA/NIFA Stakeholder Input Webinars for FY 2013 RFA Development , EPA, OneNOAA Science Seminars, ARPA-E University, DOE/EERE, or AAAS Webinars . [*Note: URL links herein are to current or archived webinars meant for illustration; they do not indicate future webinars*]

This is a key point to keep in mind because successful grants are those that gain a marginal advantage over the competition. You are always competing at the margins or boundaries of excellence, and to do that well means that every opportunity you have to write a better proposal needs to be fully exploited. Viewing a webinar that gives you a deeper and more nuanced understanding of the funding agency's reasons for supporting a program will provide critical information when crafting the arguments you will put forward to convince program officers and reviewers to fund your proposal. For instance, many of the most sought after NSF funding opportunities (e.g., STC, IGERT, GRF, DR K-12, MSP, I-CORPS, STTR, AGEP, ADVANCE, etc.) will often have dedicated webinars addressing the program requirements and

NSF expectations, and allow questions to be submitted to NSF program officers in real time by email, which often proves to be the most useful part of the webinar in terms of gaining a better insight into agency thinking.

For example, perhaps you subscribe to NSF Events RSS Feed. You notice that a webinar is scheduled April 24 for those submitting PAESMEM nominations: **PAESMEM Nomination Preparation and Submission Webinar**. In this case, NSF staff will go over the content of the nomination materials, the PAESMEM certification form, the criteria for the review of the nomination, and the instructions for submission of the materials. There will be an opportunity for questions and answers. This is fairly typical of the format of most webinars that are specific to a solicitation or program area.

Upcoming webinars will often be noted in the solicitation or on the program webpage at the sponsoring agency such as the BRIGE Solicitation FY-2013 webinar presented and archived by NSF addressing the upcoming April 29 due date for the BRIGE program. So keep in mind the several communication protocols used by research funding agencies to inform potential applicants of upcoming webinars, including notification in the solicitation, webinar announcements on the program-specific agency website, agency email notifications, and RSS feeds, among others.

Moreover, a well crafted Google query will very often take you directly to a webinar of interest, or at least close enough that you are only a few mouse clicks away from the information.   It is helpful to search Google by limiting the search to a specific agency; for example, entering the following search string www.nsf.gov: **webinars** will provide links to webinars for I-CORPS, 2013 SBIR, BIG DATA, Noyce Fellowships, MSP, among numerous other webinars, either upcoming or achieved. While the Google search often will require some sifting through relevant URLs, it is a very helpful tool. Of course, querying the program officer is the simplest and best way to determine whether an achieved or upcoming webinar has been scheduled on a topic or solicitation of interest to you.

That said, it is helpful to keep in mind that no one has reported cases of viewers becoming addicted to watching webinars, or developing anxiety awaiting the next agency webinar as if it were the next season of Downton Abby, Game of Thrones, Walking Dead, or Homeland, or staying up until the early hours of the morning watching archived agency webinars one after the other. Agency webinars never rise to that level of compelling excitement. In fact, many webinars are best watched while drinking coffee or, in some cases, even Red Bull to "give you wings" while streaming a 90-minute agency presentation by program officers that, at times, make you think of Mr. Rogers on tranquilizers.

Of course, agency webinars are not meant to be exciting, but rather to convey important agency information that can potentially help you submit a more competitive proposal than you otherwise might have had you not watched the webinar. Moreover, agencies have marked clear boundaries for webinars related to solicitations, such as the rule that program officers cannot give you information unavailable in the solicitation itself given your careful reading and explication of that document. So, watching a webinar will not give you new information unavailable to those who do not watch the webinar, but who do read the solicitation carefully.

However, even for those who do read the solicitation carefully, webinars offer some competitive advantages for those that are willing to view or multitask while viewing a streaming video of a webinar. Webinars follow a fairly common format. In the first portion of the webinar, agency program officers give an abbreviated overview of the program and the program solicitation with verbatim sections of the solicitation presented in PowerPoint (downloadable) for discussion. While no information is presented that is not in the solicitation, the very fact that the presentation is an abbreviation of the solicitation means that the program officers have made some choices that tell you the relative importance of various sections of the solicitation, i.e., what the program officers have chosen to emphasize gives you key information in planning your proposal narrative outline.

Moreover, in this section of the webinar, program officers typically go beyond just a reading of the solicitation sections; for example, if the program has five core objectives, you will learn something about the relative importance of the listed objectives by how much time each is discussed and by the examples given to better illustrate the objectives. In this discussion of the program objectives, program officers may not be giving you "new" information but they are certainly giving you *new ways to understand the information you are given in the solicitation*. This part of the webinar presentation is never exciting. The program officers will never jump up and pump their fist in the air and claim they "will tell you the secret of guaranteed success," but they will give you a lot of information that will enhance the competitiveness of your proposal if you listen carefully to their often nuanced and subtle communications. *Remember, information is communicated both by what is said and by what is not said.*

Finally, the second part of the webinar is most often a question and answer session during which those streaming the webinar in real time can email questions to the program officers who will answer them in real time. In other cases, a webinar may allow the use of VOIP or the joining of a conference call where a protocol allows questions to be asked. This Q&A session can be a very helpful part of the webinar, either in posing your own questions or in listening to the questions posed by others. In the Q&A, the program officers often give a deeper and more nuanced insight into what best characterizes a successful proposal and, often, what characterizes an unsuccessful proposal.

Moreover, the Q&A part of the webinar is a much less structured session than the first portion of the webinar; consequently, it offers more opportunities for program officers to delve deeper into why the agency funds the particular program, to explain more fully what the agency looks for in proposals, and to offer examples and other observations that go a long way towards helping you interpret the solicitation in a more insightful way. As a result, you may gain a better understanding of the program culture and agency rationale for making investments in certain research and/or educational areas.

Agency webinars will not magically give you the "keys to the funding kingdom," so to speak, but they will give you a better understanding of what it takes to be successful in a certain program area specific to a solicitation of interest to you.

Quantifying the Project Narrative

By **Mike Cronan**, co-publisher

If you want to earn a reviewer's question mark next to your proposal, fill your narrative with adjectives, adverbs, and superlatives in place of quantified descriptions. The excessive use of adverb/verb combinations, such as claiming a proposed project "***will dramatically increase***" [take your pick: wind turbine efficiency, battery storage capacity, women entering doctoral STEM fields, technology innovation, success of students in algebra II, etc.], or claiming your project will "***significantly reduce***" [take your pick: footprint storage of solar thermal power systems, impact of oil drilling on sensitive coastal ecosystems, student attrition in Calculus I, risk of Type II diabetes, obesity, and cardiovascular disease, etc.], is a common but correctable reason why some proposals fail to capture reviewers' interest.

As Mark Twain observed: "*Clothes make the man. Naked people have little or no influence on society*." The same might be said of adverb/verb combinations not clothed in quantitative modifiers. In this case, as Mark Twain likely knew, these "*numerically naked" adverb/verb combinations will have little or no influence on reviewers*. Numbers matter. Numbers are the basis of comparative claims that inform program officers and reviewers alike and allow them to better judge the relative worthiness of your proposal.

Using the above example again, but with the verb properly clothed rather than numerically naked, would result in the following: claiming a proposed project "***will increase***" [take your pick: wind turbine efficiency **by 18%**, battery storage capacity **by 40%,** women entering doctoral STEM fields **by 30%**, technology innovation **by 18 months**, success of students in algebra II **to 100%,** etc.] or perhaps your project "***will reduce***" [take your pick: **by 52%** the footprint storage of solar thermal power systems, **to near zero** the impact of oil drilling on sensitive coastal ecosystems, **by 75%** student attrition in Calculus I, **by 24%** risk of Type II diabetes, obesity, and cardiovascular disease, etc.]. The absence of the adverbs "dramatically" and "significantly" is not noticed in the second example because they are not needed.

The old adage about a picture being worth a thousand words applies to the judicious use of quantitative information or data in the project narrative. You don't want to overwhelm reviewers with a cascade of quantitative information, ***but neither do you want to leave them frustrated by its absence***. The successful proposal relies on knowing the difference between sufficient and excessive quantitative information to ensure the wise use of allocated space and an appropriately balanced project narrative. For example, knowing how much background information-- technical detail, preliminary data, etc.--will satisfy your readers is a key factor in writing a well-balanced proposal narrative. Finding this level is not always an easy task, but it is an important part of writing a well-crafted project narrative.

In this regard, too much quantification can be as problematic as too little. So it is important to be mindful of reviewers' reluctance to sift through extensive quantitative data to determine the merit of your proposed project. That is not their job. It is the job of the author, however, to explain the significance of any data used in a narrative in the most economical way possible. A blizzard of quantitative data is likely to give reviewers a "brain freeze," along with

heartburn. Proposals are about ideas, and data need to be judiciously selected to support the merit of the ideas described in the narrative. ***But data in and of themselves are not ideas***. You don't want, to paraphrase H. L. Mencken, an army of quantitative data marching across the page in search of an idea. Rather, your narrative needs to explain and illuminate the significant patterns in the data you present rather than pass that task onto reviewers.

Moreover, the amount of quantitative information or data required in a proposal varies greatly and is often a function of the specific solicitation and the author's ability to find the Goldilocks' Solution of not too much and not too little—but just right. In some cases, the data required in a proposal are specified in great detail by the sponsor, so much so that finding it in the appropriate format becomes a major challenge. This is often the case in various kinds of institutional transformation proposals, e.g., an NSF AGEP or ADVANCE, where extensive student data or institutional data may be required. In other cases, the research itself dictates the data that need to be incorporated into the project description.   However, in most cases, the use of quantitative information is left entirely to the proposal's author. In the absence of agency guidelines describing a standard for sufficient quantitative information, the overreliance on adjectives, adverbs, and superlatives can become problematic and work against the proposal's merits.

This often becomes the case when descriptions of the goals, objectives, and anticipated outcomes of the proposed research are described in glowing but general terms (e.g., *novel, groundbreaking, frontiers of new knowledge*, etc.) insufficiently supported by quantitative information that allows program officers and reviewers to judge the impact of the proposed research, particularly in terms of its relative importance to the field.. In many cases, a "unit of change" will be associated with your proposed research that translates your goals and objectives to outcomes. That "unit of change" begs for quantification rather than gushing adverbs and superlatives. As Sergeant Joe Friday always explained when interviewing witnesses to a crime in the old "Dragnet" series, "All we want are the facts."

That is an important point to keep in mind. You do not want the program officer and the reviewers of your proposal to ruminate on the difference it would have made had you provided judiciously selected quantitative information to validate the impact and value-added benefits of your proposed project. Moreover, quantitative information plays a key role in evaluating the success of your research over time. It provides a way of answering the question, "How can the success of this project be measured?"

In thinking about the benefits of quantitative information in your research narrative, recall the Heilmeier Catechism. George Heilmeier directed DARPA in the 1970s. He had a set of questions he expected every proposal to answer:

1. What is the problem, why is it hard?
2. How is it solved today?
3. What is the new technical idea; why can we succeed now?
4. What is the impact if successful?
5. How will the program be organized?
6. How will intermediate results be generated?
7. How will you measure progress?
8. What will it cost?

It is likely that the answers to each of these questions would benefit from well-selected, succinct, and illuminating quantitative information. Such information will better enable reviewers to more accurately judge the merit of your proposed research and **hence be more likely to fund it.**

Observations on Writing the NSF ERC FY 2014

By **Mike Cronan**, co-publisher
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If director John Huston's classic movie *The Treasure of the Sierra Madre* were being remade today, it might very well recast the Humphrey Bogart role as the PI leading a research team "prospecting" for an NSF Engineering Research Center FY 2014. It is not clear from the movie whether or not the dysfunctional gold prospectors were aware of the benefits of team science, but they were clearly not practitioners. However, that question is best left for discussion in a class on the history of film. Fortunately, for the research team awaiting the information from NSF needed to better finalize the process of planning, developing, and writing an ERC, that word came from NSF on March 27 in the form of a ***Dear Colleague Letter*** - **FY 2014 Engineering Research Centers (ERC) Program Solicitation.** This document needs to be read carefully, particularly information related to the submission of a letter of intent and the submission of a preliminary proposal.

FROM DCL/March 27/NSF 13-081: "*A seven-page preliminary proposal is required and, depending on the release date of the solicitation, will be **due around the end of June 2013**. The preliminary proposal will include only a project description with sections covering the **vision, strategic plan, research, workforce development, and innovation ecosystem components** of the proposed ERC, plus a letter from the Dean of Engineering in support of the proposed center*."

It is not uncommon at this stage of the ERC competition for some teams planning an ERC submission to be ahead of the curve, while others are behind the curve. This holds especially true with respect to team composition and how the team will answer the five questions NSF requires for submission of the preliminary proposal. However, persistence, determination, and a great research idea are a powerful competitive combination when put forward by a research team able to find and mine the true gold of a competitive submission—***a synergistic research vision***. There are always surprises in the final ERC awards; if not, why have a competition? So don't avoid competing if you think you are not an odds on favorite at the start of the competition, or because your research team has not planned for this as long as some other research team. It is a long road to success where outcomes are not cast in stone, as was amply illustrated in the recent March Madness women's and men's basketball tournaments. There are many gates to the ERC gauntlet, e.g., preliminary proposal, full proposal, site visit, etc. Only one thing is certain—***if you don't compete for an ERC, you won't win one***.

If you feel your research team is somewhat behind the planning curve required for a competitive ERC submission, there is still time to make that work and get ahead of the curve. After all, you still have 2.5 months from the date of this newsletter to plan, develop, and write a seven-page preliminary proposal. The preliminary is a gate. If you get invited to submit a full proposal, you are seen as competitive for an ERC award. That is a very good thing for your long term research objectives. If you are not invited to full, you still will have gained some very valuable experience in writing large team grants that will benefit you long term. Moreover, the

"center journey" typically begins with a significant amount of (pick your adjective) chaos, uncertainty, vagueness, ambiguity, false starts, and indecision about how to best respond to the solicitation. But all this can be overcome by developing two key strategic plans:(1) a strategic plan for the planning, development, and writing of the proposal; and (2) a strategic plan for your proposed research (required in preliminary, full, and site visits).

Three important documents can help you develop your research vision and research strategic plan (remember that synergy is the Yellow Brick Road of ERCs). One is the continuously updated ***ERC Best Practices Manual***. The document is intended as a "how-to" manual for those involved in, or contemplating involvement in, the operation of an ERC or similar university-industry center. The chapters are organized according to management roles and functional areas in an ERC. The manual is broken down as follows:

- [Authoring Committee](#)
- [Acknowledgements](#)
- [Chapter 1: Introduction](#)
- [Chapter 2: Center Leadership and Strategic Direction](#)
- [Chapter 3: Research Management](#)
- [Chapter 4: Education Programs](#)
- [Chapter 5: Industrial Collaboration and Innovation](#)
- [Chapter 6: Administrative Management](#)
- [Chapter 7: NSF/ERC Interface](#)
- [Chapter 8: Student Leadership Councils](#)
- [Chapter 9: Multi-University Centers](#)
- [Appendices](#)

A second key document is the ***[Engineering Innovation](#): Strategic Planning In National Science Foundation-Funded Engineering Research Centers***. This NSF-sponsored report summarizes findings from a large-scale examination of the operational functioning of 22 Engineering Research Centers in the United States. Specifically, the authors studied the use of the National Science Foundation's ***[three-plane framework](#)*** in strategic planning (the third key document). Further, they investigated the effect of strategic planning on three facets of organizational effectiveness: research, educational, and commercialization productivity.

Moreover, while the above documents can give you guidance in how to best craft a competitive response to the ***vision, strategic plan, and research*** required sections of the preliminary proposal, responses to the ***workforce development and innovation ecosystems sections*** will benefit from information contained here: [Engineering Research Centers Association](#) . [Also see: *[The Role of the National Science Foundation in the Innovation Ecosystem](#)*; *[NSF Innovation Corps (I-Corps)](#)*]

Also, when writing a preliminary proposal, it is important to keep in mind where you are going, hopefully to an invitation to submit a full proposal and an eventual site visit. Your strategic plan needs to reflect that in the preliminary proposal. So when the full solicitation comes out, be sure to read it closely as a critical companion document to writing a competitive preliminary proposal.

If you haven't done so already, now is the time to address several key planning and development activities needed to submit a preliminary proposal, including, for example:

- Create a proposal narrative template with the five required sections and start discussions among your team members on how to address them, particularly on how the research team will ***transition research from silos to synergy***.
  - Synergy requires a conceptual foundation that serves as the center of gravity and ***illuminates the relational framework and interconnectedness of the center's research vision***.
  - ***It is key that synergy be understood as the relational framework among component parts rather than just a discrete explanation of each part***.
- Identify the proposal production team—particularly who will write each section
- Create a schedule and task assignment table that starts today and goes to the submittal date of the preliminary proposal—specify who contributes what and when for production of the preliminary proposal
- Schedule development meetings of the research team to define the vision, goals, objectives, etc. of the project
- Integrate each PI at each partner institution into the project
- Identify the keeper of the proposal master file
- Establish document contribution protocols
- Secure required institutional support

Successful preliminary proposal planning strategies include:
- Holding regular face-to-face meetings
- Getting everyone on the same page early
- Allowing ambiguity and creativity early in the process
- Forming your team based on the needs of the center
- Documenting discussions and ensuring that meetings move the process forward
- Beginning to make decisions and focusing on specifics as the process progresses.

Unsuccessful planning strategies include:
- Communicating mainly by email
- Neglecting to read and understand the solicitation and program
- Shutting down early meetings too soon without allowing creative ideas to form
- Forming your team based on who shows up at the meetings
- Allowing long, rambling meetings without clear outcomes, thereby discouraging continued attendance
- Taking too long to focus and make decisions – plans remain vague

NSF will expect you to make the case that your vision for the proposed ERC is sufficiently compelling, ambitious, and complex to justify the large-scale focus of resources that can only be provided by a center mode of support. You will want to make clear the value-added benefits of the center structure to the proposed research and that the strategic management plan enables

transformational research--not just incremental research--under the center mode of operations. In the last ERC competition, NSF stated: "***Visions that focus on incremental advances to current practices will not be competitive***." The inability to define a compelling center vision (its raison d'être) is often the Achilles' heel of center efforts.

Moreover, the research team must clearly articulate why the proposed research center represents an advantage over funding the individual research thrust areas proposed by the center as individual grants, i.e., the value-added benefits of the proposed center structure must be clearly stated. Also, it is important to express the significance of new center ideas and contributions in newly-crafted writing. ***Successful center proposals are not renovations of the past but a creation for the future***. Don't build your preliminary proposal out of "spare parts" copied and pasted from other documents. ***Think it through and write it new!***

Bringing clarity to the proposal development process typically starts with ideas, concepts, and directions expressed verbally among researchers related to meeting the research objectives of the solicitation. ***Ideas initially expressed verbally can be illusory when attempting the first narrative draft, particularly on very complex grants such as the ERC***. The team challenge is to translate ideas expressed verbally into the narrative language required in the preliminary and, hopefully, full proposal. Verbal "understandings" among the team can be transitory with team members carrying away multiple understandings from meetings.

Individual team members typically contribute individual narrative statements featuring their prior and future research when writing a center proposal. But too often these statements contain little or no recognition of how that research will integrate with other team members' contributions to the proposed project. The vagueness or incompleteness of the research vision can increase the likelihood that a first full draft of the center proposal will read as a series of siloed statements unintegrated with one another. ***Too often team members attempt to do too many important tasks simultaneously but in isolation from each other***.

Moreover, just as Feynman's diagrams brought clarity to an understanding of the interactions of subatomic particles, on a less grand scale, diagrams, graphics, figures, tables, logic diagrams, and other ***visuals play a key, but often overlooked, role as an integrator of the research narrative in center proposals***. Good ideas benefit enormously from the illuminating interplay between well-crafted narrative text and accompanying graphics, particularly when you are trying to communicate a synergistic vision. A case in point is the prior mentioned NSF three-plane diagram that graphically describes the agency vision for the ERC program.

Of course a competitive preliminary proposal will require more than just a research vision. It also requires providing the reviewers with the specificity and detail needed to achieve your ERC vision. ***Specificity grounds your vision and goals in the key performance details unique to your center objectives and illuminates the importance of your research and outcomes***. Specifics serve to both test and prove the value of your ideas, and when they are lacking, it tells a reviewer that your ideas may also be lacking, or have yet to become fully developed. Stating a goal without then offering specifics that reveal the process you will use to transition that goal to reality is only sloganeering.

As a counterpoint to specificity, generalities are deadly and will quickly suffocate your research narrative. Generalities are glaring flaws to reviewers looking for the specificity needed to make an informed judgment on your center's merit and what specifically you propose to do

in a transformational rather than incremental way. The overly generalized narrative is nothing more than an IOU representing an implied promise to accomplish something important if funded, **but leaving the actual performance details vague until the money arrives**.

Another common failing of center research narratives comes from writing that is ambiguous, either because the author is a poor writer or perhaps the author does not fully understand the expectations of the funding agency. ***Ambiguity often originates from a failed reading of the solicitation***. It occurs in the narrative at the interface between an agency's goals and objectives and your proposed research. It may arise when you engage in wishful thinking and try a force fit to a solicitation, ignoring the agency research interests and putting yours forward instead. In this case, consider why NSF is funding the ERC program. Moreover, ambiguity introduces significant uncertainty into the research narrative, although ambiguity in the narrative does offer one certainty—**an unfunded center**. Ambiguity in the project description **imposes unwanted riddles on program officers and reviewers** that may lead them to believe reading your center narrative is as frustrating as attempting to interview Schrödinger's Cat to determine its state. Narrative ambiguity exists in only one state—confusion.

In writing a seven-page preliminary proposal for the ERC, it will be critical to pay close attention to proportionality and sequence in your narrative. Proportionality and sequence contribute significantly to the overall quality and readability of the project description. Proportionality is the linguistic analog of the geometric aesthetic expressed in the Golden Ratio. Proportionality brings balance to the project narrative and **establishes the relative importance of the component sections at various scales**. Sequence provides the underlying order or logic to the narrative structure--a convincing, stepwise rationale for funding the proposed center. The seven-page ERC preliminary proposal you submit to NSF in the end of June needs to be perfect. You will not have the luxury of wasting space, or, at this point in the ERC process, wasting time.

Research Grant Writing Web Resources
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NASA Guidebook for Proposers, 2013

Presentations: NSF Grants Conference hosted by Howard University - March 11-12, 2013
- **Introduction and NSF Overview**
- **Proposal Preparation**
- **NSF Merit Review Process**
- **Award Management**
- **NSF Policy Update**
- **Crosscutting and Special Interest Programs**
- **International Programs**
- **Office of the Inspector General**
- **Breakout Sessions:**
  - **Biological Sciences**
  - **Post-Award Monitoring and Compliance**
  - **Computer and Information Science and Engineering**
  - **Education and Human Resources**
  - **Engineering**
  - **Faculty Early Career Development (CAREER) Program**
  - **Geosciences**
  - **Mathematical and Physical Sciences**
  - **NSF Award Cash Management $ervices**
  - **Office of International and Integrative Activities**
  - **Science, Engineering & Education for Sustainability (SEES)**
  - **Social, Behavioral and Economic Sciences**
  - **Research.gov**

AFRI will solicit its core program through seven separate RFAs
AFRI will solicit its core program through seven separate RFAs. Applicants are encouraged to review each RFA to explore all the opportunities available to them. Additional AFRI information is available on the AFRI More Information Page. See **Abstracts of AFRI Projects** and NIFA Frequently Asked Questions - **Applying for a Grant**.

FY 2014:
- **FY 2014 Foundational Program**
  Release date August 15, 2013
- **FY 2014 NIFA Fellowships Grant Program**
  Release date August 15, 2013
- **FY 2014 Agricultural and Natural Resources Science for Climate Variability and Change**
  Release date October 1, 2013

- **FY 2014 Food Safety**
  Release date October 1, 2013
- **FY 2014 Food Security**
  Release date November 1, 2013
- **FY 2014 Sustainable Bioenergy**
  Release date November 1, 2013
- **FY 2014 Childhood Obesity Prevention**
  Release date December 1, 2013

Educational Grant Writing Web Resources
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Monitoring Progress Toward Successful K-12 STEM Education: A Nation Advancing?
Following a 2011 report by the National Research Council (NRC) on successful K-12 education in science, technology, engineering, and mathematics (STEM), Congress asked the National Science Foundation to identify methods for tracking progress toward the report's recommendations. In response, the NRC convened the Committee on an Evaluation Framework for Successful K-12 STEM Education to take on this assignment. The committee developed 14 indicators linked to the 2011 report's recommendations. By providing a focused set of key indicators related to students' access to quality learning, educator's capacity, and policy and funding initiatives in STEM, the committee addresses the need for research and data that can be used to monitor progress in K-12 STEM education and make informed decisions about improving it.

The recommended indicators provide a framework for Congress and relevant deferral agencies to create and implement a national-level monitoring and reporting system that: assesses progress toward key improvements recommended by a previous National Research Council (2011) committee; measures student knowledge, interest, and participation in the STEM disciplines and STEM-related activities; tracks financial, human capital, and material investments in K-12 STEM education at the federal, state, and local levels; provides information about the capabilities of the STEM education workforce, including teachers and principals; and facilitates strategic planning for federal investments in STEM education and workforce development when used with labor force projections. All 14 indicators explained in this report are intended to form the core of this system. *Monitoring Progress Toward Successful K-12 STEM Education: A Nation Advancing?* summarizes the 14 indicators and tracks progress towards the initial report's recommendations.

Do you have questions about U.S. students' knowledge and skills in comparison to their international peers?
With the International Data Explorer (IDE) you can create statistical tables and charts to help you find answers. Explore student performance in reading, mathematics, and science, as well as contextual data including student demographics, instructional experiences, and school characteristics.

- The PISA IDE provides results for the United States and other jurisdictions (including both countries and education systems) from the administration of PISA in 2000, 2003, 2006, and 2009. Results include mathematics, science, and reading literacy results for 15-year-old students; responses to a student questionnaire about students' background, attitudes, and school experiences; and responses to a school questionnaire about school characteristics and resources.
- The PIRLS IDE provides results for the United States and other countries and subnational education systems from the administration of PIRLS in 2001, 2006, and 2011. Results include reading achievement of fourth-grade students; responses to a student

questionnaire about students' background, attitudes, and school experiences; responses to a teacher questionnaire about instructional practices, resources, and background and training; and responses to a school questionnaire about school characteristics and resources.

- The TIMSS IDE provides results for the United States and other countries and subnational education systems from the administration of TIMSS in 1995, 1999, 2003, 2007, and 2011. Results include mathematics and science achievement of fourth and eighth-grade students; responses to a student questionnaire about their background, attitudes, and school experiences; responses to a teacher questionnaire about instructional practices, resources, and background and training; and responses to a school questionnaire about school characteristics and resources.

2013 Brown Center Report: How Well Are American Students Learning?

This is the twelfth edition of the Brown Center Report. The structure of the report remains the same from year to year. Part I examines the latest data from state, national, or international assessments. This year the focus is on the latest results from the Progress in International Reading Literacy Study (PIRLS) and Trends in International Math and Science Study (TIMSS) released in December, 2012. The U.S. did relatively well, posting gains in reading, math, and science. Finland made headlines by registering declines from the last time it took the TIMSS math tests. At both fourth and eighth grades, the scores of Finland and the U.S. are now statistically indistinguishable in math. Part I also looks at the so-called 'A+ countries,' named that because they were the top nations on the first TIMSS, given in 1995. Part I offers 'A Progress Report on the A+ Countries,' and finds that, surprisingly, three of the six have registered statistically significant declines since 1995.

Compendium of MSP MIS Data for Comprehensive, Targeted, and Institute Projects: 2002-03 Through 2010-11 School Years

The Math and Science Partnership Management Information System (MSP MIS) presents annual findings from the MSP MIS for Comprehensive, Targeted, and Institute MSP projects for 2002-03 through the 2010-11 school years. Key Findings include:

- What organizations were involved in the MSP program?
- What were the contributions of the individuals involved in the design and delivery of MSP activities?
- What MSP activities were targeted to IHE recipients?
- What MSP activities were targeted to K-12 recipients?
- What challenges did MSP projects face?

Compendium of MSP MIS Data for Institute Teacher Leaders: 2004-05 Through 2010-11 School Years

The MSP Institute Partnerships, also called Teacher Institutes for the 21st Century, make up the fourth component of the National Science Foundation (NSF) Math and Science Partnership (MSP) program. The purpose of this report is to summarize key longitudinal findings from the MSP MIS relating to characteristics of (1) Institute participants, (2) professional development

activities, (3) professional community building, (4) dissemination of Institute information, (5) leadership roles and responsibilities, and (6) other factors contributing to teacher leader development. These data are derived from ongoing efforts to monitor K-12 Institute participants as they mature as teacher leaders and begin to use knowledge and skills gained from their participation.

NCSER Summary of Research Findings 2006–2012

This document highlights findings from NCSER's program of research that targets infants, toddlers, children, and youth with disabilities or who are at risk for developing disabilities. Findings include the identification of efficacious interventions, validation of assessments to identify children for earlier intervention, and the development of technological innovation to provide support and instruction for children with disabilities and their families.
Download, view, and print in MS Word format (430 KB)
View, download, and print as a PDF file (401 KB)

NCSER Projects and Programs

This booklet lists research grants and contracts that represent NCSER's current investments. These investments will evaluate the effectiveness of programs, intervention, strategies, and assessment tools to determine what works in addressing the needs of infants and children with disabilities. Browse this web page

Previous IES Research Funding Opportunities Webinars & Grant Writing Workshops

IES Procedures for Peer Review of Grant Applications,
adopted by the National Board for Education Sciences January 24, 2006.
Download, view, and print as a PDF file (134 KB)
Download, view, and print as an MS Word file (97 KB)

IES Procedures for Peer Review of Reports,
adopted by the National Board for Education Sciences January 24, 2006.
Download, view, and print as a PDF file (73 KB)
Download, view, and print as an MS Word file (53 KB)

Implementing the Common Core State Standards for Mathematics: What We Know about Teachers of Mathematics in 41 States

The adoption of the Common Core State Standards in Mathematics (CCSSM) by nearly ever state represents an unprecedented opportunity to improve U.S. mathematics education and to strengthen the international competitiveness of the American labor force. The mere adoption of the Common Core, however, will amount to little if it is not implemented appropriately. Successful implementation will require coordinated efforts on the part of all education leaders: state education agencies, college/university faculty, school district administrators, curriculum specialists, and teachers. Teachers are particularly important as they operate in the critical arena where educational intentions are translated into learning opportunities and experiences

for students. Teachers must digest what students are expected to learn as embodied in standards and in concert with the pedagogical material found in existing textbooks and craft appropriate learning experiences for their students. Indeed, the primary importance of other education leaders is in their support of the efforts of teachers in the classroom.

Implementing the Common Core State Standards for Mathematics: A Comparison of Current District Content in 41 States

Beginning in the spring of 2011 the Center for the Study of Curriculum at Michigan State University conducted a survey of school district curriculum directors/supervisors in the 41 states that had officially adopted the new Common Core State Standards for Mathematics (CCSSM). The Center's goal was to provide baseline information to inform and guide the efforts of states, local districts, and schools as each entity moves toward implementation of the newly adopted CCSSM. The challenge of implementing the world-class and demanding CCSSM is likely to vary from state to state depending, for example, on the age and quality of a state's former mathematics standards. Additional factors likely to affect CCSSM implementation include the ability of a state education agency to disseminate information and expectations about the standards to local districts, schools, and teachers.

Implementing the Common Core State Standards for Mathematics: What Parents Know and Support

A wide range of actors will be involved in the implementation of the Common Core Standards in Mathematics (CCSSM) which has been adopted over the past several years by nearly every state. This represents an unprecedented opportunity to improve U.S. mathematics education and to strengthen the international competitiveness of the American labor force. A set of standards, no matter how outstanding they may be, can only affect the quality of students' education as they are implemented in classrooms. This will require a concerted effort by all stakeholders in the education process including not only education leaders and professionals but students and their parents as well.

GETREALMATH

Mathematics is a lens through which we can see and better understand the world. Yet, too often, teachers and textbooks fail to help students connect the mathematics they are learning to their personal lives. In our classrooms we use numerous and varied real world contexts to introduce mathematical concepts. Readers of this blog will help answer for their students the question, "When am I ever going to use this?" We want students to learn the mathematical concepts behind the procedures and discover how to apply quantitative thinking in their daily lives. We hope this blog will provide you the tips and tools to try this approach in your classrooms.

Algebra I and Geometry Curricula: Results from the 2005 High School Transcript Mathematics Curriculum Study

The Mathematics Curriculum Study explores the relationship between student coursetaking and achievement by examining the content and challenge of two mathematics

courses taught in the nation's public high schools—algebra I and geometry. Conducted in conjunction with the 2005 National Assessment of Educational Progress (NAEP) High School Transcript Study (HSTS), the study uses textbooks as an indirect measure of what was taught in classrooms, but not how it was taught (i.e., classroom instruction). The study uses curriculum topics to describe the content of the mathematics courses and course levels to denote the content and complexity of the courses. The results are based on analyses of the curriculum topics and course levels developed from the textbook information, coursetaking data from the 2005 NAEP HSTS, and performance data from the twelfth-grade 2005 NAEP mathematics assessment.

Highlights of the study findings show that about 65 percent of the material covered in high school graduates' algebra I was devoted to algebra topics, while about 66 percent of the material covered in graduates' geometry courses focused on geometry topics. School course titles often overstated course content and challenge. Approximately 73 percent of graduates in "honors" algebra I classes received a curriculum ranked as an intermediate algebra I course, while 62 percent of graduates who took a geometry course labeled "honors" by their school received a curriculum ranked as intermediate geometry. Graduates who took rigorous algebra I and geometry courses scored higher on NAEP than graduates who took beginner or intermediate courses.

Resources for Preparing Middle School Mathematics Teachers

Middle school mathematics teachers occupy a unique place in the mathematical development of students. These teachers need to be proficient in all elementary mathematics topics, together with some secondary mathematics topics. They demand a special kind of preparation that differs from both that of their elementary and secondary colleagues. The Mathematics Education of Teachers (MET) document published by the Conference Board of the Mathematical Sciences set forth criteria for the preparation of mathematics middle school teachers which made it critical that special programs and courses for this group emerge.

This collection of articles is in response to the MET document and the result of several gatherings of mathematics educators and mathematicians training middle school teachers. We, the editors of this volume, under the sponsorship of the Committee on the Mathematical Education of Teachers, organized two contributed paper sessions at the Joint Mathematics Meetings entitled "Content Courses for the Mathematical Education of Middle School Teachers" in 2007 and "Curriculum Materials for Pre-service Middle School Mathematics Teachers" in 2008. We invited participants from these two sessions as well as colleagues heavily involved in the mathematics education of middle school teachers to write articles on both programs and courses.

Opportunity by Design: New High School Models for Student Success

The report analyzes the impact of the daunting preparation shortfall many students face as they enter high school, and argues that without a radical change in how school districts support high school design, it will be difficult for all students to graduate ready for college and career. As the new standards, which are designed to be "fewer, clearer, and higher" than existing state

standards, are implemented, schools must hold all students to a significantly more challenging bar for graduation, while supporting and motivating students who may be further behind.

Mathematics Education Leadership Imperatives: An Agenda for Ensuring that All Students Benefit from the Common Core
The purpose of this document is to describe an agenda that includes a set of imperatives for systemic change in curriculum, instruction, assessment and professional culture which are aligned with, and supports, the implementation of the Common Core State Standards. To ensure that what is released in April, 2014 is the strongest and most helpful document, NCSM seeks your critical feedback on the March, 2013 Public Review Draft of this work.

The Next Generation Science Standards and the Life Sciences: The Important Features of Life Science Standards for Elementary, Middle, and High School Levels
Using the life sciences, this article first reviews essential features of the NRC Framework for K-12 Science Education that provided a foundation for the new standards. Second, the article describes the important features of life science standards for elementary, middle, and high school levels. Finally, several implications of the new standards are discussed.

The Next Generation Science Standards: A Focus on Physical Science
This article focuses on the NGSS disciplinary core ideas in physical science, the development of those ideas across time, the importance of blending core ideas with scientific and engineering practices to build understanding, and the development of performance expectations.

Next Generation Science Standards
Twenty six states and their broad-based teams worked together for two years with a 41-member writing team and partners to develop these standards which identify science and engineering practices and content that all K-12 students should master in order to be fully prepared for college, careers and citizenship. The NGSS were built upon a vision for science education established by the Framework for K-12 Science Education, published by the National Academies' National Research Council in 2011.

Research Development & Grant Writing News

Agency Research News

NIH Updates Team Science Toolkit

The Team Science Toolkit is a user-generated collection of information and resources that support the practice and study of team science. The Toolkit connects professionals from many disciplines, providing a forum for sharing knowledge and tools to maximize the efficiency and effectiveness of team science initiatives. A growing body of knowledge about team science is emerging from disciplines as diverse as public health, communications, management sciences, and psychology. The Team Science Toolkit aims to integrate this knowledge, disseminate effective practices, and prevent the unnecessary duplication of efforts.

BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative

Beginning in fiscal year 2014, the National Institutes of Health, the Defense Advanced Research Projects Agency, and the National Science Foundation will support approximately $100 million in "research to accelerate the development and application of new technologies that will enable researchers to produce dynamic pictures of the brain that show how individual brain cells and complex neural circuits interact at the speed of thought." Federal agencies will partner with companies, foundations, and other private institutions, such as the Allen Institute, the Howard Hughes Medical Institute, the Kavli Foundation, and the Salk Institute for Biological Studies.

- **White House Fact Sheet: BRAIN Initiative**
- **White House Blog: BRAIN Initiative Challenges Researchers to Unlock Mysteries of Human Mind**
- **NIH: Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative**
- **NIH Director's Blog**
- **National Science Foundation Participates in White House Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative**
- **DARPA: Better Understanding of Human Brain Supports National Security**

NSB Task Force on Administrative Burdens

Over the past decade, there has been a variety of reports suggesting that federal requirements are an increasing burden on academic researchers. A 2012 report by the National Research Council's (NRC) Committee on Research Universities, Research Universities and the Future of America: Ten Breakthrough Actions Vital to Our Nation's Prosperity and Security, found that "the problem of excessive regulatory burdens … puts a drag on the efficiency of all university research" **more**...

Lithium-Ion Battery Technology Topic of Dozens of New Scientific Reports

Research Subcommittee Reviews Industrial and Non-Profit Philanthropic STEM Education

…Lipinski highlighted the role of the National Science Foundation (NSF) in funding education programs stating that the "NSF is one of the most important sources of funding for education research. Industry rightly wants to put their money into proven programs. For that to happen, somebody has to provide the funding to develop and prove out those programs. NSF grants allow education researchers and organizations to test out and evaluate new ideas, and to improve our understanding of how people learn and what effective pedagogy really means. Much of what we know and use in STEM education today started out with NSF funding." He was concerned that federal investments in STEM education have stagnated and are being questioned as he noted that one "can't take the top notch US researchers and universities for granted."

National Research Council Framework Leads to Development of Next Generation Science Standards

Marking the culmination of a three-year, multiphase process, a 26-state consortium has released the Next Generation Science Standards (NGSS), a detailed description of the key scientific ideas and practices that all students should learn by the time they graduate from high school. The standards are based largely on the 2011 National Research Council report *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. Shepherded by the nonprofit educational organization Achieve Inc., the 26 lead states and a team of 40 writers used the framework as a foundation to develop internationally benchmarked science education standards. Two public drafts in 2012 and 2013 drew input from stakeholders in science, science education, higher education, business, and industry. With the final release, all states can now discuss whether to voluntarily adopt the standards in their public schools.

NSF/DCL - Stimulating Research Related to the Use and Functioning of the Civil Justice System

Law and Social Sciences (LSS) scholars have a rich tradition of describing and explaining how people and organizations mobilize the law, and, in turn, how legal institutions respond to legal demands. In order to stimulate research concerning the use and functioning of the civil justice system, the Law & Social Sciences program announces its continuing interest in supporting research in this area. LSS scholars have developed useful knowledge concerning how people understand the law, what they do about their legal concerns, and how organizations define, mediate and answer legal concerns. In turn, courts and other legal institutions shape and impact people's family lives, their housing choices, and their business and employment options. These impacts are central both to theory-building concerning legal mobilization and decision making by institutions and to understanding where and how law structures people's lives. The Law & Social Sciences program invites research on how people and organizations define legal claims, whether and how they mobilize the law on their behalf, and how legal institutions respond to questions about civil justice.

NSF/DCL - United States and United Kingdom Clean Water Collaboration

The Global Grand Challenges Summit initiative between the national academies of engineering in the UK, US, and China brings together leading international engineers, future engineers,

innovators, and policy makers to share their ideas on solutions to the world's most pressing challenges. This event is based on the firmly held belief that future solutions to these global challenges will rely on cooperation, both interdisciplinary and international. In the context of the Grand Challenges Summit, the UK Engineering and Physical Sciences Research Council (EPSRC) and NSF announce a joint, parallel activity to encourage collaborative research between leading researchers and students from the UK and US. The basis of the activity will be to add value to the existing engineering portfolios in both nations through the supplementation of existing grants to enable collaboration, for example through travel and people exchanges. The provision of clean water is a global issue with societal, health, and economic implications. It has been identified by the international research community, including the US National Academy of Engineering, as a grand challenge for engineering in the area of sustainability. In the global context, particularly when addressing clean water issues, researchers and educators must be able to operate effectively in teams with partners from different nations and cultural backgrounds.

The NSF Directorate for Engineering (ENG) announces a special opportunity for collaborative research with UK-based research groups in the area of clean water. This NSF/ENG activity complements the recently begun NSF Graduate Research Opportunities Worldwide effort, and it parallels a call from the EPSRC. This cooperative effort promotes excellence in engineering research through international collaboration and facilitates development of a diverse, globally-engaged, US engineering workforce.

About Science, Engineering & Education Innovation

NSF's Science, Engineering & Education Innovation (SEE Innovation) is a new service to provide policy makers, science-related organizations, and the public with clear, accessible information about the outcomes of NSF-funded research and education projects. To access SEE Innovation, **click here** !

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

SEE Innovation offers a view of NSF-funded research and education projects by sharing details about the outcomes of select NSF awards, coupled with information about the scientists, engineers, researchers, educators, and other resources (research assets) that make discoveries possible.

Learn more about NSF-funded research and education:
- View **Award Highlights** for snapshots about select NSF awards, with summaries describing the outcomes of the projects.

- Read about **People of Distinction**, exceptional members of the research, science, and education community across the country. View their bios and learn about their accomplishments.
- Learn about NSF's investments in **Research Assets -** the centers, facilities & networks, telescopes & observatories, and vehicles that help enable large scale research and discoveries.

Find information intuitively using SEE Innovation's dynamic search capabilities:

- Learn more about research and discoveries in NSF-funded **Research Areas**, including Astronomy & Space, Biology, Chemistry & Materials, Computing, Earth & Environment, Education, Engineering, Mathematics, Nanoscience, People & Society, Physics, and Polar.
- Search for NSF-supported projects in your geographic area using an interactive **States and Territories** map. Find information about the awards granted in each state including total amount of funds obligated in a fiscal year, recent award information, and award abstracts. You can even refine your search by congressional district!

PCAST Hears Updates on Education, the State of Energy and Climate, and Forensic Science

Fundamental changes are needed in the education of chemical scientists, said Professor Bassam Shakashiri from the University of Wisconsin-Madison to members of the President's Council of Advisors on Science and Technology (PCAST). PCAST held a March 15 meeting at the National Academies of Sciences to review a report by the American Chemical Society's (ACS) Presidential Commission on Advancing Graduate Education in the Chemical Sciences, and a report focused on climate. They heard about a partnership between the Department of Justice and National Institute of Standards and Technology established to strengthen the role of forensic science in criminal investigations. Tom Luce, Chairman of the National Math and Science Initiative, also gave a presentation on best practices for implementing PCAST reports.

The NIH TOOLBOX: Building the Right Tool Kit

NIH announced the development of a toolbox of measures for neurological and behavioral functioning. This new toolbox offers a standard set of measures that could be used as "common currency" across a variety of different studies and settings. The NIH Toolbox includes measures for cognition, emotion, motor functioning, and sensation. The NIH Toolbox gathers some established and some newly developed measures into a shorter but well-tested format. The measures are royalty free and may be accessed for examination and administration at www.nihtoolbox.org .

An example is the cognition battery, which includes measures of executive function, attention, episodic memory, language, processing speed, and working memory. The motor battery includes components for balance, dexterity, endurance, locomotion, and strength. The sensation battery includes measures to assess hearing, smell, pain, taste, balance and movement senses, and vision.

The NIH Toolbox will make research investigators' jobs easier and will lead to higher quality science in which results are more comparable across studies. For more information see www.nihtoolbox.org .

Home-based Medical Monitoring: Big Data Challenges

Changing the way health care is delivered (out of the hospital and into the home), presents a series of challenges. At a recent OBSSR lecture, Dr. Holly Jimison discussed the use and challenges of home-based monitoring technologies for managing in-home patient care. Dr. Jimison studies medical monitoring technology, such as in-home motion sensors, wireless devices, and mobile apps. While the data can detect trends in patient behavior and point to required medical interventions in real time, the technologies generate an overwhelming amount of 'big data.' Dr. Jimison discussed the challenges related to acquiring mass amounts of data, such as the need for new modeling techniques to effectively analyze and interpret the data, the importance of being able fuse data from different sources, and the crucial ability to interpret all data as it relates to patient care.

Research Development & Grant Writing News

Agency Reports, Workshops & Research Roadmaps

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.

National Patterns of R&D Resources: Future Directions for Content and Methods: Summary of a Workshop

National Patterns of R&D Resources: Future Directions for Content and Methods addresses the following questions: (1) what additional topics and tabulations could be presented without modifying the current portfolio of R&D censuses and surveys, (2) what additional topics and tabulations might be presented by expanding these current data collections, (3) what could be done to enhance international comparability of the tabulations, (4) since much of the information on non-profit R&D providers and recipients is estimated from 15 year-old data, what impact might this be having on the quality of the associated National Patterns tabulations, (5) what statistical models could be used to support the issuance R&D estimates at state-level and geographic regions below the national level, (6) what use could be made from the recent development of administrative sources of R&D information, and finally, (7) what graphical tools could be added to the current tabulations to enhance the communication of R&D patterns to the users of this series of publications.

Future U.S. Workforce for Geospatial Intelligence

Future U.S. Workforce for Geospatial Intelligence assesses the supply of expertise in 10 geospatial intelligence (GEOINT) fields, including 5 traditional areas (geodesy and geophysics, photogrammetry, remote sensing, cartographic science, and geographic information systems and geospatial analysis) and 5 emerging areas that could improve geospatial intelligence (GEOINT fusion, crowdsourcing, human geography, visual analytics, and forecasting). The report also identifies gaps in expertise relative to NGA's needs and suggests ways to ensure an adequate supply of geospatial intelligence expertise over the next 20 years.

Digital Data Improvement Priorities for Continuous Learning in Health and Health Care: Workshop Summary

Digital health data are the lifeblood of a continuous learning health system. A steady flow of reliable data is necessary to coordinate and monitor patient care, analyze and improve systems of care, conduct research to develop new products and approaches, assess the effectiveness of medical interventions, and advance population health. The totality of available health data is a crucial resource that should be considered an invaluable public asset in the pursuit of better care, improved health, and lower health care costs.

   The ability to collect, share, and use digital health data is rapidly evolving. Increasing adoption of electronic health records (EHRs) is being driven by the implementation of the Health Information Technology for Economic and Clinical Health (HITECH) Act, which pays hospitals and individuals incentives if they can demonstrate that they use basic EHRs in 2011.

Only a third had access to the basic features necessary to leverage this information for improvement, such as the ability to view laboratory results, maintain problem lists, or manage prescription ordering.

In addition to increased data collection, more organizations are sharing digital health data. Data collected to meet federal reporting requirements or for administrative purposes are becoming more accessible. Efforts such as Health.Data.gov provide access to government datasets for the development of insights and software applications with the goal of improving health. Within the private sector, at least one pharmaceutical company is actively exploring release of some of its clinical trial data for research by others. *Digital Data Improvement Priorities for Continuous Learning in Health and Health Care: Workshop Summary* summarizes discussions at the March 2012 Institute of Medicine (2012) workshop to identify and characterize the current deficiencies in the reliability, availability, and usability of digital health data and consider strategies, priorities, and responsibilities to address such deficiencies.

Returning Home from Iraq and Afghanistan: Assessment of Readjustment Needs of Veterans, Service Members, and Their Families

The study consisted of two phases. The Phase 1 task was to conduct a preliminary assessment. The Phase 2 task was to provide a comprehensive assessment of the physical, psychological, social, and economic effects of deployment on and identification of gaps in care for members and former members, their families, and their communities. The Phase 1 report was completed in March 2010 and delivered to the Department of Defense (DOD), the Department of Veterans Affairs (VA), and the relevant committees of the House of Representatives and the Senate. The secretaries of DOD and VA responded to the Phase 1 report in September 2010. Returning Home from Iraq and Afghanistan: Assessment of Readjustment Needs of Veterans, Service Members, and Their Families fulfills the requirement for Phase **2.**

Safety and Security of Commercial Spent Nuclear Fuel Storage: Public Report

In response to a request from Congress, the Nuclear Regulatory Commission and the Department of Homeland Security sponsored a National Academies study to assess the safety and security risks of spent nuclear fuel stored in cooling pools and dry casks at commercial nuclear power plants. The information provided in this book examines the risks of terrorist attacks using these materials for a radiological dispersal device. *Safety and Security of Commercial Spent Nuclear Fuel* is an unclassified public summary of a more detailed classified book. The book finds that successful terrorist attacks on spent fuel pools, though difficult, are possible. A propagating fire in a pool could release large amounts of radioactive material, but rearranging spent fuel in the pool during storage and providing emergency water spray systems would reduce the likelihood of a propagating fire even under severe damage conditions. The book suggests that additional studies are needed to better understand these risks. Although dry casks have advantages over cooling pools, pools are necessary at all operating nuclear power plants to store at least the recently discharged fuel. The book explains it would be difficult for terrorists to steal enough spent fuel to construct a significant radiological dispersal device.

U.K. Report Offers Nuclear Research Road Map

The U.K. government today published an industrial strategy to help its businesses make the most of expected growth in nuclear energy as the United Kingdom and other countries begin to build more nuclear plants to reduce carbon emissions. The strategy acknowledges that a burgeoning nuclear industry will need government support for research and development, and so it commissioned a review, also published today, on the current state of British nuclear R&D and a road map outlining what needs to be done in the future.

[Emerging Workforce Trends in the U.S. Energy and Mining Industries: A Call to Action](#)

Energy and mineral resources are essential for the nation's fundamental functions, its economy, and security. Nonfuel minerals are essential for the existence and operations of products that are used by people every day and are provided by various sectors of the mining industry. Energy in the United States is provided from a variety of resources including fossil fuels, and renewable and nuclear energy, all with established commercial industry bases. The United States is the largest electric power producer in the world. The overall value added to the U.S. gross domestic product (GDP) in 2011 by major industries that consumed processed nonfuel mineral materials was $2.2 trillion. Recognizing the importance of understanding the state of the energy and mining workforce in the United States to assure a trained and skilled workforce of sufficient size for the future, the Department of Energy's (DOE's) National Energy technology Laboratory (NETL) contracted with the National Research Council (NRC) to perform a study of the emerging workforce trends in the U.S. energy and mining industries. Emerging Workforce Trends in the U.S. Energy and Mining Industries: A Call to Action summarizes the findings of this study.

[Adapting to a Changing World--Challenges and Opportunities in Undergraduate Physics Education](#)

Adapting to a Changing World was commissioned by the National Science Foundation to examine the present status of undergraduate physics education, including the state of physics education research, and, most importantly, to develop a series of recommendations for improving physics education that draws from the knowledge we have about learning and effective teaching. Our committee has endeavored to do so, with great interest and more than a little passion. The Committee on Undergraduate Physics Education Research and Implementation was established in 2010 by the Board on Physics and Astronomy of the National Research Council. This report summarizes the committee's response to its statement of task, which requires the committee to produce a report that identifies the goals and challenges facing undergraduate physics education and identifies how best practices for undergraduate physics education can be implemented on a widespread and sustained basis, assess the status of physics education research (PER) and discuss how PER can assist in accomplishing the goal of improving undergraduate physics education best practices and education policy.

[The Long Term Ecological Research (LTER) Network](#)

[Worker Health and Safety on Offshore Wind Farms - Special Report 310](#)

New Funding Opportunities

Content Order
New Funding Posted Since March 15 Newsletter
Links to New & Open Funding Solicitations
Solicitations Remaining Open from Prior Issues of the Newsletter

New Funding Solicitations Posted Since March 15 Newsletter

AAUW Educational Funding and Awards

Homeland Security BioWatch Program
The BioWatch Program is a cornerstone of the Department of Homeland Security's (DHS) comprehensive strategy for countering biological terrorism. The BioWatch Program is an early warning system that is designed to detect the intentional release of select aerosolized biological agents. The BioWatch Program's mission is to provide and maintain a continuous bio-terrorism air monitoring system in metropolitan areas and coordinate with state and local public health communities to prepare for and respond to a bioterrorist event. This mission is accomplished by serving as an early warning system which enhances the security of jurisdictions by providing the needed time to execute their comprehensive concept of operations plans to counter biological terrorism. The Biowatch Program is a critical part of an ongoing national effort to build and sustain preparedness which helps the United States to maintain momentum through targeted jurisdictional planning that highlights preventative actions necessary to allow for a proper and timely response and begin the process to recovery from a biological agent release. **Rolling applications.**

"Turn Key" Open Source Software Solutions for Energy Management of Small to Medium Sized Buildings
This funding opportunity seeks proposals for new technical, business and implementation solutions to deliver energy efficiency in small commercial buildings (50,000 sq. ft. or smaller) resulting in energy savings of at least 20% in existing buildings and meeting or exceeding Architecture 2030 50% Challenge targets in new construction.   Proposers should identify and address the key barriers in the market, and demonstrate how their solution will address these barriers, through demonstration and deployment activities, resulting in uptake at scale in the target market. Proposals should concisely describe how the team, as led by a partner that exhibits deep understanding and orientation to the small commercial buildings market, and has a demonstrated ability to successfully implement market uptake programs, will move innovative energy efficiency solutions forward in at least one subsector of the small commercial buildings market. Successful proposals must demonstrate a clear plan for further scalability so that projects come out of the funding period with the necessary elements to support a robust multi-region or national program.   Successful awards will fund the design and development of

innovative technical and market uptake solutions, demonstration of the solution to reach energy performance targets in at least one sub-market (geographic and/or building type), and development or implementation of a plan to take the model to national scale. **Required concept paper due April 22; full proposal due June 24.**

DOED Investing in Innovation Fund, Development Grants

The Investing in Innovation Fund (i3), established under section 14007 of the American Recovery and Reinvestment Act of 2009 (ARRA), provides funding to support (1) local educational agencies (LEAs), and (2) nonprofit organizations in partnership with (a) one or more LEAs or (b) a consortium of schools. The i3 program is designed to generate and validate solutions to persistent educational challenges and to support the expansion of effective solutions across the country to serve substantially larger numbers of students. The central design element of the i3 program is its multi-tier structure that links the amount of funding that an applicant may receive to the quality of the evidence supporting the efficacy of the proposed project. Applicants proposing practices supported by limited evidence can receive relatively small grants that support the development and initial evaluation of promising practices and help to identify new solutions to pressing challenges; applicants proposing practices supported by evidence from rigorous evaluations, such as large randomized controlled trials, can receive sizable grants to support expansion across the Nation. **Preapplication due April 26.**

Small-Business/ ERC Collaborative Opportunity: (SECO)

Funded by the ERC Translational Research Fund and the SBIR Program.
This opportunity aims to facilitate the translation of NSF's technology investments in Engineering Research Centers (ERC) and in Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) projects into the market place. Furthermore, in instances where an ERC is funded with a mission to support the public good through the implementation of critical public engineering systems (the infrastructure), this includes facilitating implementations that realize the intended public benefit.
The specific goals of this opportunity are to:
1. Speed the translation of ERC-generated research and technology advances to the marketplace or its implementation into critical public engineered systems and engage undergraduate and graduate students more directly in the innovation process through collaboration between an ERC and a small business concern, (OPTION 1) and
2. Strengthen the research capacity of active NSF SBIR/STTR Phase II awardees to speed the entry of their innovations into the marketplace and broaden its portfolio of marketable products through collaboration with an ERC (OPTION 2).

Required LOI due May 6; full due July 2.

Developing Research Capacity to Assess Health Effects Associated with Volcanic Emissions and other Environmental Exposures (R01)

The purpose of this FOA is to build research capacity, through a multidisciplinary approach and collaborations, in order to study the short- and long-term health effects of volcanic emissions and other environmental exposures. **Due May 14.**

[Establishment of a University Partnership in Textile Design with National College of Arts, Lahore, Pakistan](#)

The Public Affairs Section of the U.S. Embassy in Islamabad and U.S Consulate General in Lahore announces an open competition for a cooperative agreement to establish a University Partnership between a four-year college or university in the U.S. and the National College of Arts in Textile Design. 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 College of Arts. Objectives detailed as priorities for this partnership include: collaborative research, curriculum development, faculty exchange, long distance teaching via internet/DVC and sharing of manuals and literature. 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. Applicants should consult the National College of Arts when developing their proposal. The timeframe for achieving the objectives must be clearly outlined in the proposal funding request. The project implementation period should be 36 months. **Due May 16.**

[Marine and Hydrokinetic Environmental Effects Assessment and Monitoring](#)

In conjunction with the National Oceanographic Partnership Program, the Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy, Wind and Water Power Technologies Office, is issuing a Funding Opportunity Announcement (FOA) entitled Marine and Hydrokinetic (MHK) Environmental Effects Assessment and Monitoring. DOE is working closely with the Bureau of Ocean Energy Management to support and promote increased understanding of the potential environmental effects of marine and hydrokinetic energy devices. This FOA will support the collection of environmental monitoring and experimental data from MHK devices and analyses of existing data. For more information, see the [full solicitation](#). **Due May 16.**

[Probabilistic Programming for Advancing Machine Learning (PPAML)](#)

DARPA is soliciting innovative research proposals in the area of probabilistic programming languages and accompanying tools to facilitate the construction of new machine learning applications across a wide range of domains. **Due May 16.**

[Theoretical Research in Magnetic Fusion Energy Science](#)

The Office of Fusion Energy Sciences (FES) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving new or renewal grant applications for theoretical and computational research relevant to the U.S. magnetic fusion energy sciences program. Applications selected in response to this Funding Opportunity Announcement (FOA) will be funded in Fiscal Year 2014, subject to the availability of appropriated funds. The specific areas of interest are: 1. Macroscopic Stability 2. Confinement and Transport 3. Boundary Physics 4. Plasma Heating & Non-inductive Current Drive, and 5. Energetic Particles Specific

information about each topical area is included in the supplementary information section in the FOA document which is located on FedConnect. **Due May 22.**

Atmospheric System Research Program (ASR)

The Atmospheric System Research Program (ASR) in the Climate and Environmental Sciences Division (CESD), Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE), supports research on key cloud, aerosol, precipitation, and radiative transfer processes that has the potential to improve the accuracy of regional and global climate models. The ASR program hereby announces its interest in research grant applications for observational, data analysis, and/or modeling studies that use data from the Atmospheric Radiation Measurement (ARM) or ASR programs to address current scientific uncertainties in the properties of boundary layer and mixed phase clouds, ice nucleation processes, and aerosol processes; that make use of new ARM field campaign data to address ASR science goals; or that develop new integrated datasets or new algorithms from ARM observations that can be used to address ASR science questions. **Due May 29.**

Minority Science and Engineering Improvement Program

The MSEIP is designed to effect long-range improvement in science and engineering education at predominantly minority institutions and to increase the flow of underrepresented ethnic minorities, particularly minority women, into scientific and technological careers. The eligibility of an applicant is dependent on the type of MSEIP grant. There are four types of MSEIP grants: Institutional projects, special projects, cooperative, and design. Institutional project grants are grants that support the implementation of a comprehensive science improvement plan, which may include any combination of activities for improving the preparation of minority students for careers in science. There are two types of special projects grants. **Due May 31.**

SSA Retirement Research Consortium

As authorized under section 1110 of the Social Security Act, SSA announces the solicitation of applications for a cooperative agreement to re-compete a Retirement Research Consortium to help inform the public and policy makers about Social Security issues. In the first year, the Consortium will be composed of one or more research centers.

United Engineering Foundation Grants - 2014

The United Engineering Foundation Inc. (UEF) is the successor organization to the United Engineering Society (UES) which was founded in 1904 with the generous support of Andrew Carnegie. The members of the UEF are the American Institute of Chemical Engineers (AIChE), American Institute of Mining Engineers (AIME), American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers, and Institute of Electrical and Electronics Engineers (IEEE). **Concept paper due June 1.**

Camille and Henry Dreyfus Special Grant Program in the Chemical Sciences

The Foundation encourages proposals that are judged likely to significantly advance the chemical sciences. Examples of areas of interest include (but are not limited to): the increase in

public awareness, understanding, and appreciation of the chemical sciences; innovative approaches to chemistry education at all levels (K-12, undergraduate, and graduate); and efforts to make chemistry careers more attractive. Research proposals are not customarily considered. **Initial inquiry deadline: June 5**

[NSF Small Business Innovation Research Program Phase I Solicitation FY-2014](#)
The SBIR program solicits proposals from the small business sector consistent with NSF's mission. A main purpose of the legislation is to stimulate technological innovation and increase private sector commercialization. The NSF SBIR program is therefore in a unique position to meet both the goals of NSF and the purpose of the SBIR legislation by transforming scientific discovery into both social and economic benefit, and by emphasizing private sector commercialization. Accordingly, NSF has formulated broad solicitation topics for SBIR that conform to the high-technology investment sector's interests. The topics are:

- **[Biological and Chemical Technologies (BC)](#)**
- **[Education Applications (EA)](#)**
- **[Electronics, Information and Communication Technologies (EI)](#)**
- **[Nanotechnology, Advanced Materials, and Manufacturing (NM)](#)**

Due June 11.

[Bridging Cultures through Film: International Topics](#)
The *Bridging Cultures* through Film: International Topics program supports documentary films that examine international and transnational themes in the humanities. These projects are meant to spark Americans' engagement with the broader world by exploring countries and cultures outside of the United States. Proposed documentaries must be analytical and deeply grounded in humanities scholarship. **Due June 12.**

[NIJ FY 13 Research on Offender Decision-Making](#)
The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is seeking applications for funding for research related to adult offender decision-making with respect to crime. With this solicitation, NIJ seeks research to extend the rational choice models or expand into other theories and models (e.g., behavioral economics, business models, or cognitive models) in order to advance our understanding of adult offenders' decision-making process. This program furthers the Department's mission by sponsoring research intended to provide objective and independent knowledge to meet the challenges of crime and justice, particularly at the State and local levels. **Due June 17.**

[DOE Cost-Shared Development of Innovative SMR Designs](#)
The U.S. Department of Energy (DOE) Office of Nuclear Energy, through this Funding Opportunity Announcement (FOA), seeks to facilitate the development of innovative SMR designs that have the potential to address the nation's economic, environmental and energy security goals. Specifically, the DOE is soliciting applications for SMR designs that offer unique and innovative features that can serve to improve nuclear safety, operability, efficiency, economics, security, and performance over existing plants and previously certified nuclear plant

designs and that can achieve NRC design certification on a schedule that supports deployment in the 2025 timeframe. **Due July 1.**

Widening Implementation & Demonstration of Evidence-Based Reforms (WIDER)

The chief goal of WIDER is to transform institutions of higher education into supportive environments for STEM faculty members to substantially increase their use of evidence-based teaching and learning practices. The first recommendation in the Report of the President's Council of Advisors on Science and Technology (PCAST), "Engage to Excel," is to increase widespread implementation of evidence-based practices in order to increase persistence in STEM and contribute to the goal of producing 1 million additional STEM graduates. Through this process, WIDER seeks to substantially increase the scale of application of highly effective methods of STEM teaching and learning in institutions of higher education, by employing instructional materials and methods that have a convincing evidentiary basis of effectiveness. In particular WIDER seeks this transformation for high enrollment, lower division courses required for many STEM majors and taken by many other students to fulfill general education distribution requirements.

Included in our broad definition of effective STEM teaching and learning are not only instructional practices in traditional learning environments, but also modern laboratory methods and field research, proven distance education methods (or hybrid designs incorporating both face-to-face and distance methods), and improved approaches to motivating student interest in STEM. In all cases, the primary goal of WIDER is to increase substantially the scale of these improvements within and across the higher education sector in order to achieve:

> (1) Improved student learning;
> (2) Increased numbers of students choosing STEM majors, particularly from demographic groups underrepresented in STEM;
> (3) Improved retention in the first two years of undergraduate study and to graduation of all STEM majors.

Due July 3.

ONR Computational Methods for Decision Making

The purpose of this topic is to identify, understand, and resolve key issues, develop and mature algorithms and methods; determine and demonstrate performance of algorithms, methods, techniques, and strategies for automated computational methods and information systems that support decision making. The algorithms, methods, techniques, and strategies must support autonomous information processing systems that can successfully and securely execute a variety of missions in complex environments while exploiting multiple sources of sensor and open domain data. The program will pursue a wide variety of approaches that enable automated systems to, within the context of a mission, automatically analyze multiple sources of data supporting interpretation of the data; combine data and generate interpretations from multiple data sources to provide understanding of the battle space, provide management of sensor and other resources to maintain and improve the battle space

picture, and to enable and build high performance software systems that are defect free and trustworthy to implement these algorithms, methods, techniques, and strategies. **Due July 15.**

Bridging Cultures at Community Colleges
NEH invites proposals for a cooperative agreement to develop and administer a national or regional (multistate) project to advance the role of the humanities at community colleges through curriculum and faculty development focused on the theme of *Bridging Cultures*. **Due August 27.**

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 12.**

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 12.**

Documenting Endangered Languages
The Documenting Endangered Languages (DEL) program is a partnership between the National Endowment for the Humanities (NEH) and the National Science Foundation (NSF) to develop and advance knowledge concerning endangered human languages. Made urgent by the imminent death of an estimated half of the 6000-7000 currently used languages, this effort aims also to exploit advances in information technology. Awards support fieldwork and other activities relevant to recording, documenting, and archiving endangered languages, including the preparation of lexicons, grammars, text samples, and databases. DEL funding is available in the form of one- to three-year project grants as well as fellowships for six to twelve months. At least half the available funding will be awarded to projects involving fieldwork. All DEL applications are submitted to NSF for review. Upon completion of the review process, the administration of awards is conducted separately by NEH or NSF. **Due September 16.**

NEH Summer Stipends
Summer Stipends support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Recipients usually produce articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources. Summer Stipends support full-time work on a humanities project for a period of two months.

Summer Stipends support projects at any stage of development.   Summer Stipends are awarded to individual scholars. Organizations are not eligible to apply. **Due September 26.**

DARPA Innovative Systems for Military Missions
The Tactical Technology Office of the Defense Advanced Research Projects Agency is soliciting executive summaries, white papers and proposals for advanced research and development of Innovative Systems for Military Missions. This solicitation seeks system and subsystem level technologies that enable revolutionary improvements to the efficiency and effectiveness of the military. Novel concepts are sought in the following focus areas: Ground Systems, Maritime Systems, Air Systems, and Space Systems. Proposals may be submitted at any time while this solicitation is open. TTO may publish groups of special topics as modifications to this BAA throughout the year. **Open to April 9, 2014**.

Links to New & Open Funding Solicitations
Links verified: Monday, February 11, 2013

- **SAMHSA FY 2013 Grant Announcements and Awards**
- **DARPA Microsystems Technology Office 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**
- **EPA 2013 Science To Achieve Results (STAR) Research Grants**
- **NASA Open Solicitations**
- **Defense Sciences Office Solicitations**
- **The Mathematics Education Trust**
- **EPA Open Funding Opportunities**
- **DOE Funding Opportunity Exchange**
- **CDMRP FY 2013 Funding Announcements**
- **Office of Minority Health**
- **Department of Justice Open Solicitations**
- **DOE/EERE Funding Opportunity Exchange**

Research Development & Grant Writing News

- [**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**](#)
- [**DARPA Current Solicitations**](#)
- [**Office of Naval Research Currently Active BAAs**](#)
- [**HRSA Health Professions Open Opportunities**](#)
- [**NIH Funding Opportunities Relevant to NIAID**](#)
- [**National Institute of Justice Current Funding Opportunities**](#)
- [**Funding Opportunities by the Department of Education Discretionary Grant Programs**](#)
- [**EPA's Office of Air and Radiation (OAR) Open Solicitations**](#)
- [**NETL Open Solicitations**](#)
- [**DoED List of Currently Open Grant Competitions**](#)
- [**Foundation Center RFP Weekly Funding Bulletin**](#)

Solicitations Remaining Open from Prior Issues of the Newsletter

[USDA Farm to School Grant Program](#)

The purpose of the USDA Farm to School Grant Program is to assist eligible entities in implementing farm to school programs that improve access to local foods in eligible schools. On an annual basis, USDA awards up to $5 million in competitive grants for training, supporting operations, planning, purchasing equipment, developing school gardens, developing partnerships, and implementing farm to school programs.

In this funding round, USDA is soliciting applications for three types of grants:

1. **Planning grants** are intended for school districts or schools just starting to incorporate farm to school program elements into their operations.
2. **Implementation grants** are intended for school districts or schools to help scale or further develop existing farm to school initiatives.
3. **Support Service grants** are intended for state and local agencies, Indian tribal organizations, agricultural producers or groups of agricultural producers, and non-profit entities working with school districts or schools to further develop existing farm to school initiatives and to provide broad reaching support services to farm to school initiatives. **Due April 24.**

[The Impact of Safety Equipment Modalities on Reducing Correctional Officer Injuries](#)

NIJ seeks proposals to conduct research on differences in safety equipment modalities; that is, policies and practices among correctional agencies regarding what safety equipment staff may use, when and how it may be used, and how those modalities affect officers' physical safety.

Research Development & Grant Writing News

For the purpose of this solicitation, safety equipment is defined as equipment used by correctional officers to protect them from assaults and to reduce injuries. **Due April 25.**

Evaluating the Efficacy of Lighting, Markings, and Paint Schemes in Reducing the Incidence of Law Enforcement Vehicle Crashes
The purpose of the National Institute of Justice (NIJ) Research, Evaluation, and Development Project Grants program is to encourage and support research, development, and evaluation to improve criminal justice policy and practice in the United States. With this solicitation, NIJ seeks proposals to conduct evaluations of the impact of alternative lighting, markings, and painting schemes for law enforcement vehicles on the incidence of traffic accidents involving law enforcement vehicles. NIJ is also interested in determining how these schemes may otherwise affect law enforcement operations. **Due April 25.**

NIJ FY 13 Establishing a National Criminal Justice Technology Research, Test, and Evaluation Center
NIJ seeks proposals to establish a Criminal Justice Technology Research, Test, and Evaluation (RT&E) Center within the NIJ-funded NLECTC System. This Center will conduct focused RT&E activities to inform NIJ's non-forensic technology research and development (R&D) efforts. It will also conduct RT&E activities to support NIJ's efforts to inform practitioners, policymakers, and researchers ('the field') regarding technologies or technology-related issues for purposes of improving criminal justice policy and practice. **Due April 25.**

NIJ FY 13 Identifying the Highest Priority Criminal Justice Technology Needs
NIJ seeks proposals to help inform development of NIJ's technology research, development, test, and evaluation (RDT&E) investments. Many different considerations shape the goals and objectives of NIJ's technology RDT&E programs. The most important are the technology needs of the criminal justice practitioner. This solicitation seeks applications to assist NIJ in identifying and assessing the highest priority technology needs of law enforcement, courts, and corrections agencies and potential solutions to those needs.   **Due April 25.**

NIJ FY 13 Applied Technology Research and Development to Optimize Criminal Justice Use of Social Media in the "Web 3.0" Environment
NIJ seeks proposals for research and development leading to the introduction into practice of needed technologies to enhance the ability of criminal justice agencies to use social media as "Web 3.0" continues to develop and mature. **Due April 25.**

NIJ FY 13 Applied Technology Research and Development for Criminal Justice Purposes
NIJ seeks proposals for applied technology research and development projects leading to the introduction into practice of improved technologies for use by law enforcement, courts, and corrections agencies. NIJ is particularly interested in (1) the application of expert systems technologies to enhance the performance of non-expert practitioners and (2) improved devices to locate and track offenders that are under supervision in the community. NIJ will also entertain proposals for applied technology research and development to meet other

demonstrated, high-priority needs of law enforcement, courts, and corrections agencies. **Due April 25.**

Research and Evaluation on the Impact of Social Media on Policing
NIJ seeks proposals for research that will explore the impact of the current state of social media technology on police practices and outcomes. Although social media technology is now ubiquitous in our society and particularly within law enforcement agencies, it is unclear how this technology is being used by departments, both officially and unofficially, and how this use has translated into public safety outcomes. **Due April 26.**

The Impact of Probation/Parole Officer Home Visits on Offender Outcomes
NIJ seeks proposals for research on the impact that probation/parole officer home visits have on offender outcomes, specifically what practices agencies are using, what offender outcomes can be attributed to these practices, and what dosage is needed to achieve these outcomes. **Due April 26.**

Research and Evaluation on Justice Systems: Investigator-Initiated
NIJ seeks proposals for social and behavioral science research on, and evaluations related to, justice systems topics relevant to State, local, tribal, or Federal criminal and juvenile justice policy and practice. Application titles should clearly indicate the justice systems focus area selected. Most justice systems topics, including but not limited to general policing, corrections (institutional, community, and offender reentry), and courts (prosecution, defense including indigent, adjudication, and sentencing) that are relevant to policymakers and practitioners are eligible for consideration. **Due April 26.**

Research and Evaluation on Policing
NIJ seeks proposals to conduct research on policing to promote officer safety and wellness, understand the impact of police technology on crime control and disorder, promote police integrity, and explore the costs and benefits of the consolidation of police agencies at the State, local, and tribal levels. Effective practices in these areas are of critical importance to improving law enforcement operations and ensuring trust and confidence in the police in communities throughout the country. **Due April 26.**

Physics of Reliability: Evaluating Design Insights for Component Technologies in Solar
The Physics of Reliability: Evaluating Design Insights for Component Technologies in Solar (PREDICTS) Funding Opportunity Announcement (FOA) that is being issued by the U.S. Department of Energy (DOE) is seeking applications that attempt to identify and evaluate only fundamental, intrinsic failure mechanisms. This FOA is NOT intended to determine or otherwise evaluate extrinsic failures. In addition to addressing intrinsic failure mechanisms, solar component lifetime and reliability evaluations must transition from a correlation-based approach to a causation-based approach. This transition will require the development of physics-based models that allow for the accurate and precise determination of the lifetime and the failure/degradation mechanisms of solar installation systems and components based upon

their fundamental composition, method of assembly, and (accelerated) environmental exposure conditions. **Due April 29.**

Broadening Participation Research Initiation Grants in Engineering 2013 (BRIGE)
The Broadening Participation Research Initiation Grants in Engineering (BRIGE) solicitation is designed to promote the development of early career faculty who will become champions for diversity and broadening participation of underrepresented groups in engineering throughout their careers. BRIGE awards will enable early career faculty to integrate effective diversity and broadening participation strategies in their engineering research, education, and innovation activities. **Due April 29.**

Preservation and Access Research and Development
Preservation and Access Research and Development grants support projects that address major challenges in preserving or providing access to humanities collections and resources. These challenges include the need to find better ways to preserve materials of critical importance to the nation's cultural heritage—from fragile artifacts and manuscripts to analog recordings and digital assets subject to technological obsolescence—and to develop advanced modes of searching, discovering, and using such materials. Applicants should define a specific problem, devise procedures and potential solutions, and explain how they would evaluate their projects and disseminate their findings. Project results must serve the needs of a significant number of humanists. **Due May 1.**

Solar Utility Networks - Replicable Innovations in Solar Energy (SUNRISE)
The two FOA topics are intended to support two types of entities - those that are experienced in solar PV resource management, interconnection, and deployment; and those that have little to no experience in photovoltaics (PV) deployment, management and interconnection. This FOA is part of the DOE SunShot Initiative and addresses the Energy Efficiency and Renewable Energy (EERE) performance metric of increasing the viability and deployment of renewable energy technologies. Launched in 2011, the SunShot Initiative aims to make subsidy-free solar energy cost-competitive with conventional forms of energy by 2020. Under this FOA, applicants are invited to propose work scope in either Topic A or Topic B or both to be reviewed and considered for award. Within Topic A, applicants can choose either A-1 or A-2 or both to address in their proposal to be reviewed and considered for award. For a more detailed explanation for each topic area and a breakdown of each requirement, please see the FOA. **Due May 1.**

Fellowships for Advanced Social Science Research on Japan
The Fellowship Program for Advanced Social Science Research on Japan is a joint activity of the Japan-U.S. Friendship Commission (JUSFC) and the National Endowment for the Humanities. Awards support research on modern Japanese society and political economy, Japan's international relations, and U.S.-Japan relations. The program encourages innovative research that puts these subjects in wider regional and global contexts and is comparative and contemporary in nature. Research should contribute to scholarly knowledge or to the general

public's understanding of issues of concern to Japan and the United States. Appropriate disciplines for the research include anthropology, economics, geography, history, international relations, linguistics, political science, psychology, public administration, and sociology. Awards usually result in articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources. **Due May 1.**

NEH Fellowships

Fellowships support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Recipients usually produce articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources in the humanities. Projects may be at any stage of development. **Due May 1.**

NEH Challenge Grants

NEH challenge grants are capacity-building grants, intended to help institutions and organizations secure long-term improvements in and support for their humanities programs and resources. Through these awards, many organizations and institutions have been able to increase their humanities capacity and secure the permanent support of an endowment. Grants may be used to establish or enhance endowments or spend-down funds that generate expendable earnings to support and enhance ongoing program activities. Challenge grants may also provide capital directly supporting the procurement of long-lasting objects, such as acquisitions for archives and collections, the purchase of equipment, and the construction or renovation of facilities needed for humanities activities. Funds spent directly must be shown to bring long-term benefits to the institution and to the humanities more broadly. Grantee institutions may also expend up to 10 percent of total grant funds (federal funds plus matching funds) to defray costs of fundraising to meet the NEH challenge. Because of the matching requirement, these NEH grants also strengthen the humanities by encouraging nonfederal sources of support. Applications are welcome from colleges and universities, museums, public libraries, research institutions, historical societies and historic sites, scholarly associations, state humanities councils, and other nonprofit humanities entities. Programs that involve collaboration among multiple institutions are eligible as well, but one institution must serve as the lead agent and formal applicant of record. **Due May 1.**

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.**

NIJ FY 13 Research on Firearms and Violence

This solicitation seeks applications for research on firearms and violence such as, but not limited to, the effects of criminal justice interventions on reducing gun violence, improving data

systems for studying gun violence, illicit gun markets, and the effects of firearm policies and legislation on public safety.   **Due May 2.**

ONR Electronic Warfare Technology
The goal of Electronic Warfare (EW) is to control the Electro-Magnetic Spectrum (EMS) by exploiting, deceiving, or denying enemy use of the spectrum while ensuring its use by friendly forces. To that end, the Office of Naval Research (ONR) EW Discovery and Invention (D&I) program invests in Science and Technology (S&T) initiatives that will provide naval forces (including Navy and Marine Corps) with improved threat warning systems; Electronic warfare Support (ES); decoys and countermeasures against weapon tracking and guidance systems; Electronic Attack (EA) against adversary Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR); and Electronic Protection (EP) of our own weapons and C4ISR from intentional and unintentional interference. **Due May 7 (See BAA for White Paper Due Dates).**

Desistance From Crime Over the Life Course
This solicitation seeks proposals to conduct research that enhances knowledge of the process of desistance from crime. NIJ encourages applicants to submit proposals for bold, innovative approaches to enhancing understanding of the processes underlying desistance from crime. **Due May 9.**

Vanishing Programmable Resources (VAPR)
Sophisticated electronic microsystems can now be made at such low cost that they are increasingly pervasive throughout the battlefield and large numbers can be widely proliferated and used for applications such as distributed remote sensing and communications. However, it is nearly impossible to track and recover every device, resulting in unintended accumulation in the environment as well as subsequent unauthorized use. DARPA seeks innovative proposals to address this pervasive challenge by developing electronic systems capable of physically disappearing in a controlled, triggerable manner. The goal of the Vanishing Programmable Resources (VAPR) BAA is to develop and establish a basis set of materials, components, integration, and manufacturing capabilities to undergird this new class of electronics. **Due May 14.**

Military Medical Photonics Program
AFOSR is seeking research proposals from medical and scientific organizations for research that is aimed at using lasers and other light source technology to develop applications in medicine, photobiology, surgery, and closely related materials sciences. Proposals for work of up to three years duration to be conducted by interdisciplinary teams of physicians, biomedical scientists, physical scientists, and engineers are desired. Applications to combat casualty care and other military medicine are a high priority. Proposals will be evaluated by peer review. Awards may take the form of grants or contracts. **Due May 15.**

NIJ FY 13 Social Science Research on Forensic Science

NIJ is seeking applications for funding social science research on forensic science. Some of the forensic disciplines, particularly in the area of DNA, have experienced numerous advances over the last decade. NIJ is interested in stimulating research to examine the impact of these forensic advances on the criminal justice system and changes in policies to adapt to the greater use of forensic evidence. **Due May 15.**

Violet and Cyril Franks Scholarship
The APF Violet and Cyril Franks Scholarship supports graduate-level scholarly projects that use a psychological perspective to help understand and reduce stigma associated with mental illness. The scholarship helps address research which shows that stigma is a significant barrier to treatment and recovery for many of the 50 million Americans living with mental illness. **Due May 15.**

NIH Summer Research Experience Programs (R25)
The purpose of the NIH Summer Research Experience Program (referred to as the Summer Research Program) is to provide a high quality research experience for high school and college students and for science teachers during the summer academic break. The NIH expects that such programs will: help attract young students to careers in science; provide opportunities for college students to gain valuable research experience to help prepare them for graduate school; and enhance the skills of science teachers and enable them to more effectively communicate the nature of the scientific process to their students. The programs would also contribute to enhancing overall science literacy. Summer Research Programs that expand and complement existing summer educational and training programs are encouraged. Note: Not all participating Institutes and Centers (ICs) support all aspects of this program. Therefore, prospective applicants must consult the Table of IC-Specific Information, Requirements and Staff Contacts in this announcement to determine if your application will be accepted for review, and should contact staff at the relevant IC (see also Section VII) to discuss the proposed Program. **Due May 21.**

Agriculture and Food Research Initiative: Foundational Program
The U.S. Department of Agriculture (USDA) established the Agriculture and Food Research Initiative (AFRI) under which the Secretary of Agriculture may make competitive grants for fundamental and applied research, education, and extension to address food and agricultural sciences (as defined under section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)), as amended, in six priority areas. The six priority areas include: 1) plant health and production and plant products; 2) animal health and production and animal products; 3) food safety, nutrition, and health; 4) renewable energy, natural resources, and environment; 5) agriculture systems and technology; and 6) agriculture economics and rural communities. **Due May 22.**

Nanotechnology Undergraduate Education (NUE) in Engineering
This solicitation aims at introducing nanoscale science, engineering, and technology through a variety of interdisciplinary approaches into undergraduate engineering education. The focus of the FY 2013 competition is on nanoscale engineering education with relevance to devices and

systems and/or on the societal, ethical, economic and/or environmental issues relevant to nanotechnology. Related funding opportunities are posted on the web site for the National Nanotechnology Initiative, www.nsf.gov/nano . In addition, research and education projects in nanoscale science and engineering will continue to be supported in the relevant NSF programs and divisions. **Due May 22.**

Theoretical Research in Magnetic Fusion Energy Science

The Office of Fusion Energy Sciences (FES) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving new or renewal grant applications for theoretical and computational research relevant to the U.S. magnetic fusion energy sciences program. Applications selected in response to this Funding Opportunity Announcement (FOA) will be funded in Fiscal Year 2014, subject to the availability of appropriated funds. The specific areas of interest are: 1. Macroscopic Stability 2. Confinement and Transport 3. Boundary Physics 4. Plasma Heating & Non-inductive Current Drive, and 5. Energetic Particles Specific information about each topical area is included in the supplementary information section in the FOA document which is located on **FedConnect**. **Due May 22.**

NIJ Graduate Research Fellowship Program

The NIJ Graduate Research Fellowship (GRF) program provides awards for research on crime, violence, and other criminal justice-related topics to accredited universities that offer research-based doctoral degrees. NIJ invests in doctoral education by supporting universities that sponsor students who demonstrate the potential to successfully complete doctoral degree programs in disciplines relevant to the mission of NIJ and who are in the final stages of graduate study. Applicants sponsoring doctoral students are eligible to apply only if the doctoral research dissertation has direct implications for criminal justice policy and practice in the United States and is in an NIJ-supported discipline; e.g., social and behavioral sciences, operations technology, information and sensors research and development, and investigative and forensic sciences. Awards are granted to successful applicants in the form of a grant to cover a doctoral student fellowship. The GRF award for research projects using qualitative research methods is anticipated to be $30,000. The GRF award for research projects using a quantitative approach is anticipated to be $25,000. Applicants should submit an appropriate funding request based on the type of research proposed. Final award decisions, including decisions on funding amounts, will be made by the Director of the National Institute of Justice. **Due May 23.**

NSF Research Experiences for Undergraduates

The Research Experiences for Undergraduates (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. Undergraduate student participants in either REU Sites or REU Supplements must be U.S. citizens, U.S. nationals, or permanent residents of the United States. Students do not apply to NSF to participate in REU activities. Students apply directly to REU Sites or to NSF-funded investigators who receive REU Supplements. To identify appropriate REU Sites, students should consult the directory of active REU Sites on the Web at http://www.nsf.gov/crssprgm/reu/reu_search.cfm . **Due May 24.**

Antarctic Artists and Writers Program

The Antarctic Artists and Writers Program furnishes U.S. Antarctic Program operational support, and round-trip economy air tickets between the United States and the Southern Hemisphere, to artists and writers whose work requires them to be in the Antarctic to complete their proposed project. The Program does not provide any funding to participants, including for such items as salaries, materials, completion of the envisioned works, or any other purpose. U.S. Antarctic Program infrastructure consists of three year-round stations and numerous austral-summer research camps in Antarctica, research ships in the Southern Ocean, and surface and air transportation. These assets support the artist and writer projects. The main purpose of the U.S. Antarctic Program is scientific research and education. The Antarctic Artists and Writers Program supports writing and artistic projects specifically designed to increase understanding and appreciation of the Antarctic and of human activities on the southernmost continent. The program does not support short-term projects that are essentially journalistic in nature. **Due May 31.**

Bioengineering Research Grants (BRG) (R01)

The purpose of this funding opportunity announcement is to encourage collaborations between the life and physical sciences that: 1) apply a multidisciplinary bioengineering approach to the solution of a biomedical problem; and 2) integrate, optimize, validate, translate or otherwise accelerate the adoption of promising tools, methods and techniques for a specific research or clinical problem in basic, translational, or clinical science and practice. An application may propose design-directed, developmental, discovery-driven, or hypothesis-driven research and is appropriate for small teams applying an integrative approach that can increase our understanding of and solve problems in biological, clinical or translational science. **Due June 5.**

Digitizing Historical Records

The National Historical Publications and Records Commission seeks proposals that use cost-effective methods to digitize nationally significant historical record collections and make the digital versions freely available online. Projects must make use of existing holdings of historical repositories and consist of entire collections or series. The materials should already be available to the public at the archives and described so that projects can re-use existing information to serve as metadata for the digitized collection. **Due June 11.**

Consolidated Innovative Nuclear Research

The Department of Energy's (DOE) Office of Nuclear Energy (NE) conducts crosscutting nuclear energy research and development (R&D) and associated infrastructure support activities to develop innovative technologies that offer the promise of dramatically improved performance for advanced reactors and fuel cycle concepts while maximizing the impact of DOE resources. NE funds research activities through both competitive and direct mechanisms, as required to best meet the needs of NE. These efforts are essential to balancing NE's R&D portfolio and encourage new nuclear power deployment with creative solutions to the universe of nuclear energy challenges. The competitive portion of NE's R&D portfolio is accomplished in part by promoting integrated and collaborative research conducted by university, industry, international and national laboratory partners under the direction of Office of Nuclear Energy's programs: Nuclear Energy University Programs (NEUP), elements of the Nuclear Energy Enabling Technologies (NEET) Crosscutting Technology Development Program, the Advanced Test Reactor (ATR) National Scientific User Facility (NSUF), and Small Business Innovative Research (SBIR) / Small Business Technology Transfer (STTR). Specifically, *NE designates up to 20 percent of funds appropriated to its R&D programs for R&D and infrastructure support at university and research institutions, through open, competitive solicitations*. Additionally, through the NEET Crosscutting Technology Development Program, NE provides direct and competitive awards for university, industry and national laboratory-led research that crosscuts the NE R&D portfolio. The primary objective of consolidating fiscal year (FY) 2013 competitive research sought by NE in the area of innovative nuclear research into a single FOA is to promote efficiency and the effective use of resources. **Due June 12.**

Science for Sustainable and Healthy Tribes Climate Change Impacts

The U.S. Environmental Protection Agency (EPA), as part of its Science to Achieve Results (STAR) program, is seeking applications proposing research on science for sustainable and healthy tribes. This solicitation is focused on research to develop sustainable solutions to environmental problems that affect tribes. The objectives of the awards to be made under this solicitation are to improve understanding of: 1) the health impacts of climate change on tribal populations; and 2) the health impacts of indoor air pollution exposures that derive from or are directly affecting traditional tribal life-ways and cultural practices. In both cases, projects should focus on impacts to vulnerable sub-populations of the Tribal communities. Proposals should also consider sustainable, culturally appropriate and acceptable pollution prevention, and adaptation/mitigation strategies. EPA plans to host three webinars to discuss this RFA and respond to questions. **Due June 25.**

Early Career Projects: Science for Sustainable and Healthy Tribes Climate Change Impacts

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Partnerships for Biodefense (R01)
This Funding Opportunity Announcement (FOA) issued by the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), invites research applications for projects that support preclinical development of lead candidate therapeutics, vaccines and related technologies, or diagnostics against NIAID Category A, B, or C priority agents. Applications must include a Product Development Strategy attachment and demonstrate substantive investment by at least one industrial participant.   **Due July 2.**

Water Sustainability and Climate
The goal of the Water Sustainability and Climate (WSC) solicitation is to enhance the understanding and predict the interactions between the water system and land use changes

(including agriculture, managed forest and rangeland systems), the built environment, ecosystem function and services and climate change/variability through place-based research and integrative models. Studies of the water system using models and/or observations at specific sites, singly or in combination, that allow for spatial and temporal extrapolation to other regions, as well as integration across the different processes in that system are encouraged, especially to the extent that they advance the development of theoretical frameworks and predictive understanding. **Due September 10.**

High-End Instrumentation Grant Program (S10)
The ORIP High-End Instrumentation Grant (HEI) program encourages applications from groups of NIH-supported investigators to purchase a single major item of equipment to be used for biomedical research that costs at least $750,000. The maximum award is $2,000,000. Instruments in this category include, but are not limited to, biomedical imaging systems, NMR spectrometers, mass spectrometers, electron microscopes and supercomputers. **Due Sept. 13.**

Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology
This BAA is intended for proposals related to basic research, applied research, or advanced technology development. **Open to September 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 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.**

[FY 2013 Continuation of Solicitation for the Office of Science Financial Assistance Program](#)
The Office of Science of the Department of Energy hereby announces its continuing interest in receiving grant applications for support of work in the following program areas: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, and Workforce Development for Teachers and Scientists. This annual FOA DE-FOA-0000768 succeeds FOA DE-FOA-0000600, which was published September 30, 2011. **Open to September 30. 2013.**

[U.S. Army Medical Research and Materiel Command Broad Agency Announcement for Extramural Medical Research](#)
The U.S. Army Medical Research and Materiel Command's (USAMRMC) mission is to provide solutions to medical problems of importance to the American Warfighter at home and abroad. The scope of this effort and the priorities attached to specific projects are influenced by changes in military and civilian medical science and technology, operational requirements, military threat assessments, and national defense strategies. The extramural research and development program plays a vital role in the fulfillment of the objectives established by the USAMRMC. General information on USAMRMC can be obtained at: (https://mrmc.detrick.army.mil/). This Broad Agency Announcement (BAA) is intended to solicit extramural research and development ideas, and is issued under the provisions of the Competition in Contracting Act of 1984 (Public Law 98-369), as implemented in Federal Acquisition Regulation 6.102(d)(2) and 35.016. This announcement provides a general description of USAMRMC's research programs, including research areas of interest; general information; proposal/application preparation instructions; and the evaluation and selection criteria. This fiscal year's BAA contains several changes from previous USAMRMC BAAs. Read each section carefully. **Open to September 30. 2013.**

[Long Range BAA for Navy and Marine Corps Science and Technology](#)
ONR is constantly looking for innovative scientific and technological solutions to address current and future Navy and Marine Corps requirements. We want to do business with educational institutions, nonprofit and for-profit organizations with ground-breaking ideas, pioneering scientific research and novel technology developments. The following list includes currently active broad agency announcements (BAAs) -- each announcement provides technical and contracting points of reference. Required: All BAAs incorporate a standardized template for the submission of technical and cost proposals for all contract awards. Guidance and assistance in completing the form and spreadsheet can be obtained from points of contact provided in the BAA. [Download the forms](#) (updated for 2012) | [Email your feedback](#) **Open to September 30, 2013.**

[FAA Center of Excellence for Environment and Energy](#)

The FAA is forming a Center of Excellence for Environment and Energy during FY-13. The COE will be a consortium of the FAA, university partners, and private industry affiliates selected by the FAA Administrator to work collectively on business and operational issues of mutual interest and concern. **Due October 4, 2013.**

Nuclear Energy University Programs - Fellowship and Scholarship
This program supports education and training for future nuclear scientists, engineers and policy-makers who are attending U.S. universities and colleges in nuclear-related graduate, undergraduate and two-year study programs. These are zero-dollar awards that will be funded as students apply through the Department of Energy, Office of Nuclear Energy. **Open until November 30, 2015.**

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.**

DARPA Microsystems Technology Office-Wide
The Microsystems Technology Office (MTO) supports DARPA's mission of maintaining technological superiority and preventing technological surprise by investing in areas such as microelectromechanical systems (MEMS), electronics, system architecture, photonics, and biotechnology. In recent years, the proliferation of commercial components and manufacturing processes has allowed our adversaries to achieve capabilities that were previously not possible. **Open to September 1, 2014.**

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.**

Army Engineer Research and Development Center BAA

The U.S. Army Engineer Research and Development Center (ERDC) has issued a Broad Agency Announcement (BAA) for various research and development topic areas. The ERDC consists of the Coastal and Hydraulics Lab (CHL), the Geotechnical and Structures Lab (GSL), the Environmental Lab (EL) and the Information Technology Lab (ITL) in Vicksburg, Mississippi; the Cold Regions Research and Engineering Lab (CRREL) in Hanover, New Hampshire; the Construction Engineering Research Lab (CERL) in Champaign, Illinois; and the Topographic Engineering Center (TEC) in Alexandria, Virginia. The ERDC is responsible for conducting research in the broad fields of hydraulics, dredging, coastal engineering, instrumentation, oceanography, remote sensing, geotechnical engineering, earthquake engineering, soil effects, vehicle mobility, self-contained munitions, military engineering, geophysics, pavements, protective structures, aquatic plants, water quality, dredged material, treatment of hazardous waste, wetlands, physical/mechanical/ chemical properties of snow and other frozen precipitation, infrastructure and environmental issues for installations, computer science, telecommunications management, energy, facilities maintenance, materials and structures, engineering processes, environmental processes, land and heritage conservation, and ecological processes*. **This research is conducted by Government personnel and by contract with educational institutions, non-profit organizations and private industries.** The BAA is available at http://erdc.usace.army.mil/ and is open until superseded. Proposals may be accepted at any time. For questions regarding proposals to CHL, EL, GSL, TEC & ITL, contact Allison Hudson at 601-634-5233 or via email at Allison.B.Hudson@usace.army.mil . For questions concerning proposals to CERL, contact Jim Dowling at 217-373-4479 or via email at james.p.dowling@usace.army.mil or Andrea Krouse at 217-373-6746 or via email at andrea.j.krouse@usace.army.mil . For questions concerning proposals to CRREL, contact Wendy Adams at 603-646-4323 or via email at Wendy.A.Adams@usace.army.mil . Contact the technical personnel listed at the end of each topic area for questions concerning the topic areas themselves. **Open to January 31, 2014.**

Science, Technology, Engineering & Mathematics BAA

ERDC solicits basic research proposals in the general DoD STEM Education and Outreach Program from colleges, universities, and non-profit organizations. Depending upon the availability of appropriated funds, ERDC may: (1) Make multiple awards under this BAA; and (2) Consider options exercisable for multi-year performance. Area of performance for proposals may be limited to one of the selected locations listed above or may address multiple locations. Funding is limited and proposals are primarily sought in the not-to-exceed $30,000 range; however, larger awards may be considered when appropriate. Geographically targeted. **Open to January 31, 2014.**

Small University Grants Open 5-Year Broad Agency Announcement

Research Development & Grant Writing News

Open to August 26, 2015

[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.

[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](#)

Air Force Research Laboratory, Directed Energy Directorate
[University Small Grants Broad Agency Announcement](#)
This is a five-year, open-ended Broad Agency Announcement (BAA) to solicit research proposals for the United States Air Force Research Laboratory (AFRL) Directed Energy (RD) Directorate. This BAA is a university grant vehicle that can provide small grants of $100k or less to students/professors in a timely manner for the purpose of engaging U.S./U.S. territories' colleges and universities in directed energy-related basic, applied, and advanced research projects that are of interest to the Department of Defense. **Open to April 1, 2017.**

[United States Army Research Institute for the Behavioral and Social Sciences Broad Agency Announcement for Basic, Applied, and Advanced Scientific Research (FY13-18)](#)
Announcement for Basic, Applied, and Advanced Scientific Research. This Broad Agency Announcement (BAA), which sets forth research areas of interest to the United States Army Research Institute for the Behavioral and Social Sciences, is issued under the provisions of paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of 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 provisions of Public Law 98-369 (The Competition in Contracting Act of 1984)and subsequent amendments. The US Army Research Institute for the Behavioral and Social Sciences is the Army's lead agency for the conduct of research, development, and analyses for

the improvement of Army readiness and performance via research advances and applications of the behavioral and social sciences that address personnel, organization, training, and leader development issues. Programs funded under this BAA include basic research, applied research, and advanced technology development that can improve human performance and Army readiness. The funding opportunity is divided into two sections- (1) Basic Research and (2) Applied Research and Advanced Technology Development. The four major topic areas of research interest include the following: (1) Training; (2) Leader Development; (3) Team and Inter-Organizational Performance in Complex Environments; and (4) Solider/Personnel Issues. Funding of research and development (R&D) within ARI areas of interest will be determined by funding constraints and priorities set during each budget cycle. **Open to February 5, 2018.**

[Research Interests of the Air Force Office of Scientific Research](#)
The Air Force Office of Scientific Research (AFOSR) manages the basic research investment for the U.S. Air Force (USAF). To accomplish this task, 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 of the BAA, Funding Opportunity Description. 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 five scientific directorates: Dynamical Systems and Control (RTA), Quantum & Non-Equilibrium Processes (RTB), Information, Decision, and Complex Networks (RTC), Complex materials and Devices (RTD), and Energy, Power, and Propulsion (RTE). The research activities managed within each directorate are summarized in Section I of the BAA**. Open until superseded.**

Academic Research Funding Strategies, LLC (Page 1)

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mjcronan@gmail.com

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.
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