

Research Development & Grant Writing News

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Topics of Interest URLs

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[“Refueling America’s Research,” by Sen. Ed Markey \(D-MA\), *The Huffington Post*, 23 April 2015](#)
[Cantor Pushes for Boosts in Science Funding, by Sam Stein, *The Huffington Post*, 9 April 2015](#)
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NORDP 2015 Conference Report

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By Lucy Deckard, co-publisher

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The annual conference of the [National Organization for Research Development Professionals \(NORDP\)](#) was held April 29 – May 1st in Bethesda, Maryland, and the sessions and speakers were especially good this year. Due to the location close to Washington DC, the conference benefited from very informative talks by a number of funding agency insiders in addition to excellent session presentations by NORDP members and guests on a [wide variety of topics](#) related to research development. Below are some of the highlights from the sessions we attended.

- Jon Lorsch, Director of NIH's National Institute of General Medical Science ([NIGMS](#)) discussed a new program-based (rather than project-based) funding model currently being piloted by NIGMS. (See the next article for details.)
- Keynote speaker and President of the American Association of Universities, Hunter Rawlings III, discussed future trends in research funding. He said that while it's unlikely we'll be able to halt the current trend of flat (and, taking into account purchasing power, decreasing) research funding, there is an opportunity to reduce the burden of overlapping and conflicting compliance regulations which cause PIs to spend more time on administration than on actually conducting research. He also recommended a recent MIT report ([The Future Postponed: Why Declining Investment in Basic Research Threatens a U.S. Innovation Deficit](#)) that analyzed what research is **not** being done because of cuts in funding. He also warned against the growing utilitarian focus of universities.
- Director of NSF's I-Corps program, Anita LaSalle, discussed I-Corps and the National Innovation Network (NIN). She mentioned that they are establishing a new component, called ***I-Corps Mentors*** which will aim to help provide entrepreneur mentors for I-Corps teams that are in locations where there isn't a big pool of entrepreneurs. She also mentioned I-Corps has resulted in more than 250 start-ups in the last 3.5 years, with a larger proportion of them being women compared to the usual pool of start-ups. These results have resulted in an almost disconcerting amount of attention (I-Corps was even mentioned in the President's State of the Union speech), and the Office of Science and Technology Policy now wants to **scale this model up nationally** through additional agencies and across all states. Dr. LaSalle also reminded everyone that I-Corps holds a webinar about the program every first Tuesday of the month at 2 pm Eastern Time.
- Kristina Thorsell, from the University-Industry Demonstration Partnership (UIDP) discussed best practices for collaborating with industry. She recommended the [UIDP Researcher Guidebook](#) as a helpful guide for developing and fostering successful institutional-industrial collaborations. In response to a question about collaborating with National Labs, she mentioned that DOE has established a new [Office of Technology Transitions](#), headed by Jetta Wong, to catalogue resources and way sot connect with DOE labs. She recommended we keep an eye on this.
- Jing Liu from the Michigan Institute for Clinical and Health Research discussed a very

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interesting study she conducted where she rigorously analyzed the types of support clinical and translational researchers needed during planning and writing grant proposals. Their office convenes a team of 2 key faculty consultants, staff specialists, biostatisticians, and ad hoc consultants to assist faculty. Interestingly, they found that, in addition to more conventional grantsmanship assistance, a significant proportion of the clinical and translational researchers they work with (many of whom are relatively early career investigators) benefited from expert help with scientific aspects of their applications, including study design, crafting specific aims, and assistance with biostatistics. For example, 38% of investigators changed their Specific Aims significantly in response to expert advice provided by faculty consultants working with office; 68% changed their study design, and 42% asked for biostatistics help. These results point to a potential disconnect between the types of assistance research development offices usually offer (which tend to be more grantsmanship-oriented services) and the needs of clinical and translational researchers (which include more science mentorship). Dr. Liu will be publishing these results.

- Cassandra Rauser, Michelle Popowitz, Tara Roth McConaghy, and Marjorie Dusie from UCLA discussed UCLA's ambitious Grand Challenges program, and the strategies they used to build not only large interdisciplinary research teams but also partnerships with industry and local foundations to address selected grand challenges such as helping Los Angeles attain carbon neutrality by 2025. Matt Sharp from the Goldhirsh Foundation, which is partnering with UCLA in this effort, talked about the importance of: 1) sharing a futurist vision (looking at the long game and tracking trends over time); 2) regional data tracking (having a report card so you can see what's happening); and 3) engaging multiple assets (universities can provide not only faculty but also thousands of engaged students and activists).
- In a session entitled, "Going Big: Developing Multiple Ideas and Proposals, to Scale" Faye Farmer from Arizona State University, Sharon Franks from UC San Diego, Peg AtKisson from Grant Writers' Seminars and Workshops, and Lynne Dahmen from Purdue talked about challenges and successful approaches to use when a research development office is called upon to support multiple large proposals simultaneously. Faye talked about their experience supporting multiple ERC and STC proposals. She mentioned that pre-positioning with the sponsor is key. Anticipating opportunities and proactive teaming is important to success. She also mentioned that they have one full-time person who conducts ethical information collection and analysis to improve understanding of funding programs and agency priorities (for example, taking into account that the ERC had a new director). Other speakers discussed issues related to resource allocation, what information should and should not be shared with other proposal teams, and what to do when demands outstrip your office's capacity. They also discussed the value of project management experience (e.g., formal project management professional training) and the role of proposal managers.
- In a session entitled, "Innovations in Research" presented by Margaret Hilton (National Research Council, James Gentile (Hope College and Research Corporation for Science Advancement) and Kara Hall (National Cancer Institute and member of National Research Council), they discussed the just released report, "[Enhancing the Effectiveness of Team Science](#)" and a report released in 2014, "[Convergence: Facilitating Transdisciplinary Integration of Life Sciences, Physical Sciences, Engineering, and Beyond](#)." Dr. Gentile

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mentioned discussed the fact that science is becoming more problem-centered, which requires true interdisciplinary innovation and collaboration. Dr. Hilton gave an overview of the new report, and Dr. Hall delved into the recommendations. Many of the recommendations related to composing your team, team professional development, leadership, and dealing with geographically dispersed teams. A common theme was that many of these issues have been studied for contexts outside of science (e.g., in business) and that knowledge needs to be translated and applied to science teams. They also mentioned the importance of funding agencies supporting research on team science, and universities aligning their reward structures to reward collaboration.

NIGMS Pilots New Funding Model

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By Lucy Deckard, co-publisher

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Jon Lorsch, Director of NIH's National Institute of General Medical Science ([NIGMS](#)) was one of the speakers at the recent National Organization for Research Development Professionals ([NORDP](#)) conference. In his talk, entitled "Developing a More Productive, Efficient and Sustainable Biomedical Research Enterprise," he discussed a new model for funding biomedical researchers that NIGMS is investigating as an alternative to the R01. Researchers who look to NIH for funding should definitely keep an eye on this since, if results are promising, this new approach could dramatically change the way NIH funds research. A summary of Dr. Lorsch's talk follows.

The Problem

Dr. Lorsch noted that over the years, NIGMS had gradually increased their emphasis on using targeted Funding Opportunity Announcements (FOAs) as an alternative to investigator-initiated proposals. This trend, which peaked in the 90s with about 20% of research funded using targeted FOAs, resulted in a top-down research approach, with research topics designated in the FOAs. They have since come to the conclusion that they get better ideas and better research if they allow scientists come to them with their ideas, so they are backing off of using targeted FOAs in favor of funding more investigator-initiated projects, which typically are funded as R01s.

There is a central problem, however, with NIH's model of funding project-based research in 4- to 5-year increments: this is not how science really works. Some of the best science comes when researchers are allowed to follow their noses. Many of the most important discoveries have resulted from unexpected or serendipitous results that took research in a new direction. However, with the current R01 project model, scientists often feel constrained to stick to their Specific Aims. How many times, he wondered, have we missed out on important discoveries because PIs felt they couldn't follow up on intriguing results because they had a renewal coming up in 18 months and they needed to show results for the Specific Aims they had proposed 4 years earlier?

Another problem is that successful PIs have figured out how to subdivide their research as finely as they can and then get funded for each of those parts. As a result, about 5% of grantees have 24% of the pool of NIH funds, and 20% of grantees have half of the pool, because successful PIs have multiple R01s. They conducted an analysis to determine the returns they get from these labs with multiple R01s. Using a number of different metrics to quantify research productivity (including number of papers, impact factors, etc.), they found that for each additional R01 a lab received, returns diminished. For example, the first R01 to a new PI yields 5 papers per year, while a third R01 to a PI yields 1 additional paper per year. Their conclusion is that they can get better results for the same of money by supporting more investigators.

Another issue with project-based funding is that funding isn't stable. PIs who don't get their grant renewed suddenly have no funding and can eventually lose their labs. This is incredibly disruptive and a waste of skills and resources. What's more, it's very difficult to re-

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establish a lab. As a result PIs tend to play it safe rather than proposing new ideas that they aren't sure the study section will like, and PIs also spend a lot of time and effort pursuing funding. This also motivates them to pursue multiple R01s as a safety measure.

A New Model for Funding

In response to these disadvantages of project-based funding, NIGMS is piloting a new approach: program-based funding. The idea is that a PI will receive one grant to support his/her lab for a number of years. This will provide greater **flexibility** for the PI to pursue promising new ideas and follow up on surprising results. PIs will be judged on their general research agendas and track records but will be free to follow new research direction as they arise. To address the problem of **instability** in funding, renewal decisions will not be binary (i.e., either the PI gets the full amount or he gets nothing) but, instead, if the PI has not made as much progress as is expected, renewal funding may be ramped down but will not be cut off. This gives the PI some time to recover. The hoped for results are:

- An improved distribution of funding among more investigators, with an increased chance of breakthroughs since more people will be exploring more ideas
- Less time spent writing grant applications
- Less time spent renewing grant applications

To determine if this model will work as hoped, NIGMS is pilot testing this model and will be assessing the results. They have already issued one FOA just for established investigators (have received two or more R01s, or one large R01). The program, called [Maximizing Investigators Research Award \(MIRA\)](#) through the R35 activity code. This award would provide up to \$750/year for up to 5 years. If a PI accepts this award, they agree not to pursue any additional R01s. The application for this grant **does not include Specific Aims**. Instead, the applications are judged on the PI's track record and overall research ideas. The budget can be modulated based on the results of a competing review. In this way, funding can be ramped up or down based on results, but there will not be an abrupt termination.

Dr. Lorsch mentioned that a **new FOA for new investigators** following a similar model is in process and will be released next. In order to ensure fairness, these applications will be reviewed by a different panel from the one evaluating the MIRA for established investigators. For these applications, mentoring will be an important review criterion.

These pilots will be evaluated based whether more investigators are supported, and whether the pool of investigators is broad and diverse, and do the investigators get enough funds to get the research done? On the subject of diversity, Dr. Lorsch also mentioned that NIGMS is planning to increase their support for R15s, and that these might also eventually have this mechanism.

Dr. Lorsch said he presented this program to Congress and has gotten a very positive reaction so far. They would like to see greater efficiency while still maintaining accountability.

If the results of this pilot program are positive, it's very possible that this new model may be adopted elsewhere at NIH and could eventually spread to other agencies.

Agency Wide Insights from the NSF Cyberlearning Webinar

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By [Mike Cronan](#), co-publisher

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The [NSF Cyberlearning Solicitation Webinar](#) of May 5 is an excellent example of how specific NSF information at the programmatic scale can achieve ***generic agency wide relevance*** for anyone seeking to write more competitive proposals to other NSF program areas (see *Generic vs. Specific Characteristics of Proposals* in this issue). Cyberlearning is a cross-directorate program inclusive of CISE, EHR, ENG, and SBE. Moreover, a diverse portfolio of projects is funded by the [NSF Cyberlearning Program](#) and other programs at NSF, including agency flagship programs such as [DRK-12](#), [AISL](#), [ITEST](#), [Core](#), [S-STEM](#), [STEM-C](#), [ATE](#).)

The webinar offers links to complementary information from the [Center for Innovative Research in Cyberlearning](#) (CIRCL). All Cyberlearning and Future Learning Technologies projects are required to share their findings with CIRCL, to participate in at least some of the meetings and in synthesis activities, and to respond to requests for information from other cyberlearning PIs and from CIRCL.

The new program name, [Cyberlearning and Future Learning Technologies](#), reflects the program's aim: to teach participants how to design and effectively use the learning technologies of the future, and to understand learning processes permitted only by technology. NSF notes that "every proposed Cyberlearning project should address three thrusts: (1) Innovation, (2) Advancing understanding of how people learn in technology-rich learning environments, and (3) Promoting generalizability and transferability of the newly proposed technological genre."

However, the webinar also offers many instances in which advice specific to writing a successful Cyberlearning proposal is described as advice that is "***common NSF wide.***" This is an important point to keep in mind, especially for researchers submitting large-team and center-level research proposals to NSF that may require educational and related broader impacts components. In fact, ***many researchers may not fully appreciate the dramatic transformation that has occurred in the competitive expectations for NSF educational programs over the past five years.*** This is often the case when education or broader impacts components of larger research grants must, as NSF notes, "***advance understanding of how people learn.***" This is not a trivial requirement given the domains of learning now important to NSF, including "cognitive, neurobiological, behavioral, cultural, social, volitional, epistemological, developmental, affective, and other perspectives."

Bottom line: If your role in a research office is to support faculty developing large-team and center-level grants, especially to NSF, this webinar and [related materials](#) available for download in pdf format are important documents to help you, and the faculty you support, better understand where NSF is going, not just in cyberlearning but also in identifying the evolving principles of effective STEM education and learning that play such a major role across that agency. As NSF pointed out in the webinar, "***NSF is going long***" when it comes to

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supporting novel learning environments that break with existing models for advancing technology-enabled and rigorous science focused on how people learn. ***It is important to note that “going long” is a common theme across many NSF program areas looking to promote transformational breakthroughs and paradigm-shifting research.***

Additional generic NSF observations offered during the webinar include, for example:

- Locate key literature in the field, in this case cyberlearning, to review and reference in your proposal (literature cited). Begin by looking at NSF grantees’ publications, using the NSF awards database to identify principal investigators and then searching for their publications;
- Recognize that NSF looks for research that advances the theory in the field, something common agency wide;
- When submitting large proposals to NSF for which you have identified an advisory board, involve those members in the proposal writing process; and
- Create a Collaboration and Management Plan, a key to success in all team-based proposals, that specifically addresses:
 - The collaborators, their expertise, and the specific roles of each in the proposed project, including ***specific descriptions of how expertise required for the project is distributed across the team***;
 - How the project will be managed across all the investigators, institutions, and/or disciplines;
 - ***Specific*** coordination mechanisms that will enable cross-investigator, cross-institution, and/or cross-discipline scientific integration (e.g., yearly workshops, graduate student exchange, project meetings at conferences, use of videoconferencing resources or social media technologies, software repositories, etc.); and
 - References to ***budget line items that support collaboration*** and coordination mechanisms.

In this context of collaboration, NSF instructs reviewers to evaluate the team proposing the research using the following criteria as they apply to the collaboration described in the project narrative:

- To what extent does your team have the expertise to carry out the project?
- To what extent has that expertise clearly been used in putting the proposal together?
- What is your ***plan for using that expertise*** well while carrying out the project?
- How well have you ***articulated team member expertise, roles, collaboration, and coordination*** in your Collaboration and Management Plan?

The above are some of the ***core generic questions that must be answered on all team-based proposals, regardless of agency, program, or discipline***. If you propose research of any kind that requires a team, then you will need to answer these key questions, and more.

Moreover, the NSF “checklist” presented during the webinar shows not only what reviewers will look for when reviewing the Cyberlearning proposals but also what reviewers look for generally at all funding agencies when evaluating proposed research. They are worth

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noting here because ***these fundamental generic questions are often not answered simply, clearly, and quickly enough in descriptions of proposed research, regardless of program or agency or discipline.*** Answering these key questions about your proposed research is key to a successful proposal:

- How important is it [your proposed research]?
- How well have you justified its importance?
- How clear are you about what it will take to get there [achieve research goals]?
- How well do your innovation [plans] and research [rationale, methodology] address it?
- How well poised is your approach for eventually achieving that purpose [research goals]?
- What are the research questions?
- How well formed are they and how well informed are they by prior work?
- How important are they?
- To what literature(s) will they [research questions] contribute?
- What are your research methods, study design, and study context?
- How appropriate are your methods to answering the questions?
- How appropriate are your questions and methods to the stage of the innovation's development?
- How will your research add to theory?
- What new conceptual understandings will we learn from your research?
- What will we know at the end of your proposed research project that we did not know before (i.e., what is the "unit of change")?

Finally, the webinar offers important specific ***as well as generic information*** about the common reasons proposals are not recommended for funding at NSF:

- Fit with program
 - Not appropriate to the mission of the Cyberlearning Program
 - Lack of an innovation/proposed innovation does not represent a new genre;
 - Proposed innovation is insufficiently informed by the research literature;
- Clarity and specificity
 - Not clear exactly what will be built;
 - Not clear exactly how it will be used;
 - Insufficient detail overall;
- Research and development plans
 - Lack of a plan for iterative refinement;
 - Lack of research questions;
 - Research methods underspecified;
 - Research methods and project activities are not clearly linked;
- Expertise and collaboration
 - Important expertise missing from the team;
 - Collaboration plan is insufficient;
- Innovation and impact
 - Makes only incremental advances/does not sufficiently advance the field;

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- Important issues are not problematized/challenges are not identified.

In conclusion, this particular webinar is more informative than most agency webinars. It imparts some very important information about how to succeed when submitting a Cyberlearning proposal. But most importantly, it offers compelling generic information about how NSF considers a range of topics that, in aggregate, amounts to excellent advice for writing a successful proposal to NSF, regardless of program area. Reading through the URL-referenced documents from this webinar and applying the lessons learned and imparted by NSF to your own research proposals, either as the PI or as a member of a research office, will give you a much deeper understanding of how to write competitive proposals to NSF as well as to other funding agencies.

Generic vs. Specific Characteristics of Proposals

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By [Mike Cronan](#), co-publisher

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Those working in offices supporting faculty research and proposal development must become adept at differentiating between the generic characteristics and the agency-specific characteristics of successful proposal writing. In particular, this is a very useful distinction to make for any research office offering grant-writing workshops, or other grant-training programs and assistance to faculty. For example, making this distinction between generic and agency specific allows grant-writing workshops to be structured in a much more efficient and effective manner.

To begin with the roughly 80% of topic information generic to successful grant writing regardless of disciplinary area can form the core of any training activity. The roughly 20% of agency-specific topic information can then be addressed in highly focused training sessions targeting a single agency of interest to faculty by disciplinary area. For example, the generic characteristics of a successful proposal submitted to any federal agency(or foundation for that matter), from the National Endowment of the Humanities to the National Science Foundation, are largely the same and of equal value and importance to faculty across colleges and departments, from Colleges of Liberal Arts to Colleges of Engineering.

The generic characteristics of a successful proposal can be thought of in much the same way as the fundamental or first principles underpinning any disciplinary area, e.g., the conservation laws (mass, energy, momentum, charge) that are foundational to science and engineering, or, in the case of the humanities or social sciences, the basic assumptions within disciplinary areas that underlie research directions related to understanding human and social structures. Moreover, the generic first principles of grantwriting represent the most important knowledge base to master for success in obtaining external funding because, like any first principles, new knowledge and understanding can be derived from them in multiple ways.

For instance, regardless of discipline or funding agency, faculty seeking external funding to support their research will have to master three core, i.e., generic, areas of grantwriting: (1) proposal planning, (2) proposal development, and (3) proposal writing. Of course, in practice, these core areas are not siloed but meld one into the other, generally spanning the time at which a funding opportunity is identified until the proposal is submitted. It is here that an understanding of the generic attributes of a successful proposal come into play and lay the groundwork for understanding the agency-specific attributes of a successful proposal.

The desired end result is an integration of the 80% of generic grant-writing knowledge with the 20% of agency-specific knowledge required to submit a successful proposal. However, the latter part of this equation, i.e., agency-specific knowledge, is often an area that requires a significant amount of self-study by faculty considering whether or not to submit a proposal to a particular agency, or to a particular program area within an agency, or, in the end, to a specific solicitation.

Research office workshops and grant-training activities will generally give overviews of an agency, as well as more focused training in very targeted areas of some of the more

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prestigious annual funding opportunities. For example, it is safe to assume that hundreds of research offices nationally that provide faculty grant-writing support have already or are in the process now of offering workshops and training for faculty eligible to submit an NSF CAREER award in July. However, in most cases, the most effective and efficient grant training offered by research offices lies in the area of the generic or foundational first principles of successful grant writing that form the foundation for targeted training related to the mission, culture, and investment priorities of a specific agency.

To illustrate further, ***all of the following topics are generic activities*** related to writing a successful proposal that can be put in workshop and other training formats for all faculty ***regardless of discipline and agency of interest***: finding funding opportunities; proposal planning strategies; analyzing the funding solicitation; mapping your research to the funding solicitation; understanding how an agency's mission, culture, and investment priorities impact how you write a proposal; characteristics of the well-written and well-organized proposal; writing as a team; placing your research in the context of the field; writing a project summary; writing the introduction and overview section of the proposal narrative; writing white papers and concept papers for submission of unsolicited proposals; understanding the role of the program office and review criteria; approaching program officers, etc.

The following, however, are agency-specific topics appropriate for inclusion in breakout sessions or targeted ***training activities for faculty based on their discipline and agency of interest***: understanding the NSF culture related to the integration of research and education and broader impacts; what NEH looks for in successful proposals; decoding NIH paylines in determining where to submit your proposal; the role of BAAs in obtaining funding from DOD agencies; the use of logic models for USDA/NIFA; an overview of the DOE handbook for submitting unsolicited proposals to that agency; the areas of social, behavioral and economic sciences appropriate for submission to NSF; understanding the mission, culture, and research priorities at DARPA; submitting proposals to the DoED, etc.

The take-away message here is that grant-training activities such as workshops that offer generic information are foundational to agency-specific training and impart most of the important and substantive information needed to be successful in grant writing, regardless of discipline or agency. It also prepares those who attend generic training programs to have a much better understanding of the types of information they need to explore on their own agency-specific topics, whether at the agency, directorate, or center level, program level, or solicitation level.

The Myth that Agencies Fund Good Ideas

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By [Mike Cronan](#), co-publisher

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An all too common “urban legend” among prospective but inexperienced grant applicants is the notion that agencies fund good ideas. This example of “*putting the cart before the horse*” is a challenge for those who support research development activities, or otherwise advise new faculty on research grant writing. Where this notion takes a foothold in the thinking of those seeking support, it can result in a frustrating experience for all involved, not to mention a wasteful commitment of time, resources, and personnel.

In this sixteenth-century analogy for doing things in the wrong order, you can think of the “cart” as the proposed research idea and the “horse” as the goals and objectives of the funding agency as defined in a solicitation. ***Having a good idea is a necessary but insufficient requirement for funding success.*** A good idea cannot stand alone, at least in the world of funded grants, without first being preceded by and intertwined with the mission objectives and investment priorities of the funding agency.

A good idea that does not offer value-added benefits and impact the agency mission or the field in a significant way will not be funded by a federal agency. In the world of writing research grants, the facts of life, so to speak, are simple: it is not about the research goals the applicant would like to address; rather, it is about the research goals the funding agency requires the applicant to identify in support of its mission.

Too often, those new to grant writing do not fully appreciate how tightly constrained federal funding agencies are in what they fund and why they fund it, or the very high degree of fidelity required of any successful proposal to meet all the research goals and objectives defined in the solicitation. A meticulous reading of the solicitation, an explication of text, if you will, is often the first casualty of unbridled enthusiasm neither bounded nor tempered by the constraints imposed on the proposal process by agency guidelines.

Understandably, those new to grant writing often feel exuberant at the prospect of seeing their ideas made real by funding from a federal agency—so much so that they become distracted and inattentive to the basic reality of successful grant writing: ***a funded grant is not so much about your good idea as it is about the value of your good idea to the funding agency.*** Unfortunately, human nature being what it is, it is often difficult for those who believe in the importance of their idea to make this necessary distinction. The longer the notion persists that a good idea largely untethered to an agency’s research goals is sufficient for funding, , **the more certain a declined proposal will result.**

The reality of competitive grant writing is that money does not flow to good ideas unless they pay homage to the agency’s reasons for funding proposed research in the first place. **Bottom line:** there is a lot of ***strategic “market” planning*** done by those who are successful in obtaining external funding, ***not the least of which is how best to “pitch” a good idea to the funding agency so as to convince it of the value-added benefits the proposed research will bring to an agency’s goals.*** Making this strategic connection is key to success in obtaining

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external funding, and critical to the success of research grant writers, particularly those new to the external funding arena.

Of course, few grant applicants write proposals whose research falls totally outside the domain of the funding agency, and, in such cases, the flaw in the funding plan is evident to everyone. In practice, however, the disconnect between the research proposed by the grant applicant and the research goals required by the funding agency is often blurred to varying degrees. While there may not be “50 shades of blurriness” when it comes to characterizing the disconnect between what an applicant hopes might be funded and what an agency is willing to fund under any specific solicitation, ***there is often sufficient blurriness to result in a declined proposal, or a deeply flawed proposal.*** In either case, time and resources have been squandered proposing research with a poor fit to a specific solicitation. Any blurriness and ambiguity in mapping your proposed research idea to the agency goals and objectives specified in the solicitation is a cardinal sin in grant writing and severely punished by reviewers and program officers, i.e., by declining funding for such a proposal.

Successful grantwriting has “***zero tolerance***” for violations of the fundamental principles of successful proposal writing. Submitting a proposal that pays little or no attention to the funding agency’s research goals is one of the most frequently punished mistakes made by those new to grant writing. Fortunately, in most cases, it is also one of the more easily identified and corrected mistakes. Colleagues, mentors, or research offices supporting those new to writing research grants can intervene and head off this error, thereby gaining researchers a reprieve from certain failure, i.e., a declined proposal.

Research Grant Writing Web Resources

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Tips for a Winning Research Proposal

Experts suggest ways to gain favor with funding agencies.

“The numbers look scary. Of the 48,999 research proposals it received in fiscal year 2013, the National Science Foundation funded just 10,829, or 22 percent. At the National Institutes of Health, the “success rate” was less than 17 percent. For new faculty members making their first try as a principal investigator (PI), things were more intimidating. At NSF, 17 percent of these proposals got funded; at NIH, fewer than 10 percent. The rates are unlikely to improve much in the near future, with government research funding essentially flat. But strip away the one-third of proposals rejected because they don’t meet basic requirements like deadlines and add to that the ones so badly composed as to insult reviewers, and the picture starts to look brighter. “If you do your job before you submit, things aren’t so bleak,” says Susan Kemnitzer, deputy director of NSF’s Electrical Communications and Cyber Systems Division in the Engineering Directorate.

George Hazelrigg, deputy director of the Civil, Mechanical and Manufacturing Innovation Division of the Engineering Directorate, contends that “fully half the proposals submitted” flagrantly fail to adhere to criteria that are nothing more than common sense. He’s the author of a four-page primer, *Twelve Steps to a Winning Research Proposal*. Randolph Moses, associate dean of engineering for research at Ohio State University and chair of ASEE’s Engineering Research Council, says well-written, compliant proposals stand a good chance of rejection the first time they’re submitted but tend to fare much better the second or third time around – provided the researcher corrects shortcomings found by program directors and reviewers.” ([MORE](#))

Research Funding Webinars by IES Scheduled

The National Center for Special Education Research (NCSE) and the National Center for Education Research (NCER) within the Institute of Education Sciences (IES) host a series of webinars related to research funding opportunities. Webinars for the FY16 funding opportunities will be offered in Spring 2015.

- *Overview of Researcher-Practitioner Partnerships*
Thursday, May 14th, 2015 2:00 PM – 3:30 PM ET
During this webinar, IES Staff will provide an overview of the Research Practitioner Partnerships competition (84.305H). Topics will include the general requirements for submission, eligible applicants, and the application process.
To register for the webinar, please click [HERE](#).
- *Application Process*
Wednesday, May 27th, 2015 3:00 PM – 4:30 PM ET
During this Application Process webinar, IES staff will provide information regarding the grant submission process. Topics focus on the application instructions, including: content and formatting requirements, registration and submission through Grants.gov,

Research Development & Grant Writing News

and application forms.

To register for the webinar, please click [HERE](#).

- *IES Basic Overview*

Thursday, May 28th, 2015 3:00 PM – 4:30 PM ET

During the IES Basic Overview Webinar, IES staff will provide general information about the funding opportunities in NCER and NCSER, the IES goal structure, and the peer review process.

To register for the webinar, please click [HERE](#).

- *IES Grant Writing Workshop*

Wednesday, June 3rd 1:30 PM – 3:00 PM ET

During this Grant Writing Workshop, IES staff will provide more in-depth information about requests for applications and the IES goal structure.

To register for the webinar, please click [HERE](#).

- *Funding Opportunities for Minority Serving Institutions*

Tuesday, June 9th, 2015 1:00 PM – 2:30 PM ET

During this workshop, IES staff will provide in-depth information about the new [Pathways to the Education Sciences Research Training program](#) (84.305B), which will establish up to 4 research training programs at Minority Serving Institutions (or their partners) that prepare upper-level undergraduate, post-baccalaureate, and/or masters students to pursue doctoral study in the education sciences. IES staff will also provide general information about the other funding opportunities in NCER and NCSER and the peer review process.

To register for the webinar, please click [HERE](#).

- *NCSER Training Grant Webinar*

Tuesday, June 9th, 2015 3:00 PM - 4:30 PM ET

During this Training Grant Webinar, NCSER staff will review the three topics within CFDA 84.324B: postdoctoral training, early career, and single-case design.

To register for the webinar, please click [HERE](#).

- *Overview of the Research Networks Competition*

Thursday, June 11th, 2015 2:00 PM – 3:30 PM ET

During this webinar, IES Staff will provide an overview of NCER's new grant program, Research Networks Focused on Critical Problems of Policy and Practice (84.305N).

Topics will include program objectives, eligible applicants, and application requirements.

To register for the webinar, please click [HERE](#).

- *Application Process*

Monday, July 1st, 2015 2:00 PM – 3:30 PM ET

During this Application Process webinar, IES staff will provide information regarding the grant submission process. Topics focus on the application instructions, including:

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content and formatting requirements, registration and submission through Grants.gov, and application forms.

To register for the webinar, please click [HERE](#).

[NSF EAR to the Ground Newsletter - Spring 2015](#)

Broader Impacts – Examples from the Ground by Dr. Justin Lawrence

In collaboration with EAR Program Directors, we have compiled a list of examples of quality broader impacts that we continue to share with you in coming issues of EAR to the Ground. One striking pattern we observed through text-mining proposals in the NSF is that terms related to broadening participation occur less frequently in Geoscience awards than in awards in all the other domains of science. Because of this troubling pattern, we are focusing several examples in EAR to the Ground on this important type of broader impact. However, our intent is not to have all the broader impacts in EAR look alike, and not all broader impacts are broadening participation. We are seeking a balanced broader impacts portfolio in EAR with the broader impacts being as focused, well planned, and implemented as intellectual merit.

GEOLOGY FIELD TRIP FOR STUDENTS AT A NAVAJO COLLEGE

Award Number: 1250447 Reconciling Different Deformation Mechanisms in Adjacent Sedimentary Lithologies at Raplee and Comb Folds, Monument Upwarp, UT; PI: David Pollard (Stanford University)

- **Research:** Focusing on deformation mechanisms in sedimentary strata, the PIs investigate mechanisms operating during kilometer-scale folding when elastic bending leads to inelastic buildup of large curvature and finite strain.
- **Broader Impacts Activity:** This project supported Soloman Seyum, an African American Ph.D. Student in Geological and Environmental Sciences. Soloman and the PI work with Professor Margaret Mayer at Diné College to organize field trips to geologic folds in the project study area, which extends into the Navajo Nation. These field trips provide an opportunity for Navajo students to learn about the geology of their land, geology as a profession, and opportunities for higher education at Stanford University.
- **Implementation:** Soloman Seyum and the PI organized and led a Raplee Anticline Field trip on April 12, 2014. A fold in the earth's surface, the Raplee Anticline reveals 300 million years of geology. The students on the field trip were taking the Historical Geology course taught at the Navajo college.
- **Impact:** Students from underrepresented groups learned about the geology of an area of high cultural significance to them, they gained hands on experience with scientific reasoning and methods for characterizing stratigraphy and structures, they recorded observations of attributes in sedimentary rock, and they discussed interpretations of the formation mechanisms of the geologic structures observed in the field. Soloman Seyum served as a role model for other students from underrepresented groups.

Scientific progress comes in all shapes and sizes. Disparate fields, researchers and methods united by one thing: potential. Every NSF grant has the potential to advance knowledge and benefit society--what we call broader impacts. Find more in our new [broader impacts section](#) of NSF's webpage.

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NSF EAR to the Ground Newsletter - Spring 2015

EAR Program (The Division of Earth Science (EAR) is part of the Directorate for Geosciences (GEO) at the National Science Foundation (NSF)) staff check proposals for compliance and a Program Officer may return a proposal without review if it is deemed not compliant with either the GPG or the relevant program solicitation. **The main areas that we have found proposals to deviate from compliance are:**

- **Results from Prior Support:** The summary of results must be separately described under two headings, Intellectual Merit and Broader Impacts.
- **Broader Impacts:** The Project Description must contain a separate section (with the title “Broader Impacts of the Proposed Work”) that contains an explanation of the broader impacts of the proposed research as described in GPG.
- **Biographical Sketches:** These should comply with the specific format listed in the GPG, and fit within two pages. The use of “et al.” is not allowed.
- **Budget Justification:** The 3 pages allotted to the budget justification should be carefully constructed to conform to the significant changes in the guidance for several areas of the budget, such as those for travel. For proposals that contain subawards, each subaward must include a separate budget justification of no more than 3 pages.
- **Unfunded Collaborations:** Any substantial collaboration with individuals not included in the budget should be described in the Facilities, Equipment and Other Resources section and documented in a letter of collaboration from each collaborator.
- **Facilities, Equipment and Other Resources:** This section should describe only those resources that are directly applicable and should include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators would provide to the project.
- **Letters of collaboration:** Letters of collaboration should be limited to stating the intent to collaborate and should not contain endorsements or evaluation of the proposed project.

Educational Grant Writing Web Resources

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[A Scientist's Guide to Achieving Broader Impacts through K–12 STEM Collaboration](#)

"The National Science Foundation and other funding agencies are increasingly requiring broader impacts in grant applications to encourage US scientists to contribute to science education and society. Concurrently, national science education standards are using more inquiry-based learning (IBL) to increase students' capacity for abstract, conceptual thinking applicable to real-world problems. Scientists are particularly well suited to engage in broader impacts via science inquiry outreach, because scientific research is inherently an inquiry-based process. We provide a practical guide to help scientists overcome obstacles that inhibit their engagement in K–12 IBL outreach and to attain the accrued benefits. Strategies to overcome these challenges include scaling outreach projects to the time available, building collaborations in which scientists' research overlaps with curriculum, employing backward planning to target specific learning objectives, encouraging scientists to share their passion, as well as their expertise with students, and transforming institutional incentives to support scientists engaging in educational outreach."

[James L. Olds: Scaling Success](#)

James L. Olds, a molecular neuroscientist at George Mason University (GMU), was last fall appointed by National Science Foundation (NSF) director France Córdova to be head of the foundation's Directorate for Biological Sciences (BIO). Olds has been director of GMU's Krasnow Institute for Advanced Study since 1998. In January, *BioScience* editor in chief Timothy M. Beardsley interviewed Olds in his office at NSF headquarters in Arlington, Virginia.

[Logic Models for Program Design, Implementation, and Evaluation: Workshop Toolkit](#)

The Logic Model Workshop Toolkit is designed to help practitioners learn the purpose of logic models, the different elements of a logic model, and the appropriate steps for developing and using a logic model for program evaluation. Topics covered in the sessions include an overview of logic models, the elements of a logic model, an introduction to evaluation, uses of a logic model to develop evaluation questions and identify indicators of success, and strategies to determine the right evaluation design for your program or policy. The toolkit, which includes an agenda, slide deck, participant workbook and facilitator's manual, was delivered to three [REL-NEI research alliances](#): the Northeast Educator Effectiveness Research Alliance, the Urban School Improvement Alliance, and the Puerto Rico Research Alliance for Dropout Prevention.

[Toolkit for a Workshop on Building a Culture Of Data Use](#)

A second **REL Northeast & Islands** toolkit introduces a framework and set of tools to help administrators and teachers foster a culture of data use in their education settings. Five essential elements found in districts and schools with successful data-use practices are woven into a workshop to help leaders establish data use not only as an obligation, but also as a working culture that improves practice and learning. Workshop participants will develop an

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understanding of the five elements, analyze examples of school and district data-use practices aligned to the five elements, apply key findings to their own practice, and outline next steps to enhance the culture of data use in their schools. The toolkit includes a brief introduction to the workshop, a step-by-step facilitator guide, participant handouts, and a slide deck that organizers can customize to fit specific learning goals.

Getting Ideas into Action: Building Networked Improvement Communities in Education

We detail in this essay how the social organization for such work might actually be carried out. Toward this end, we introduce the idea of a networked improvement community. We focus primarily on how research and practice communities might join in initiating such an enterprise. Our inspiration for the discussion below draws on insights from successful R&D activities occurring in diverse fields outside of education including the semiconductor industry, the Linux development community, and efforts at broad-scale quality improvements in health services. In each instance large networks have organized around complex problems and brought about remarkable change. Understanding these developments better, extracting core ideas, and translating them into more productive institutional arrangements for educational R&D pose important questions for learning scientists, organizational sociologists and political scientists interested in how expertise networks advance social improvement.

New Technology-based Models for Postsecondary Learning: Conceptual Frameworks and Research Agendas

Report of a National Science Foundation-Sponsored Computing Research Association Workshop held at MIT on January 9-11, 2013.

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[HHMI Announces \\$60 Million Science Education Initiative](#)

HHMI's new science education initiative is challenging colleges and universities to increase their capacity to engage all students in science. In a significant departure from past initiatives, this competition is ***open to more than 1,500 U.S. institutions that offer baccalaureate degrees in the natural sciences*** – these include liberal arts colleges, master's-granting universities, and research universities. Previous HHMI science education grants competitions for undergraduate schools were by invitation only and restricted to approximately 200 schools.

"We are taking a new approach because the pathways to and through higher education have changed and are not as 'traditional' or as linear as they once were," said HHMI President Robert Tjian. "These days, a large number of students are arriving at college through remarkably diverse pathways. The scientific leader of tomorrow may be in a community college today or she may be a first-generation college student. Higher education should acknowledge these differences among students and create programs that offer diverse entry points and pathways to STEM degrees."

HHMI plans to award approximately 60 grants in two open competitions, each of which will follow the same format. The first competition will result in approximately 30 awards that will begin in September 2017. The plan is for the second competition to be announced in 2016 with awards to begin in September 2018. All awards will be for five years and total \$1 million.

[New Blog Focusing on IES Research](#)

We are launching the blog to open up a less formal means of communication with the education researcher, policymaker, and practitioner communities. All NCER and NCSEER employees will contribute to the blog, and we will have new postings every week. Our goals are to share new research findings, explain our programs and services, and offer researcher perspectives on issues of importance to the education sciences. Among the topics we will address in the near future are the following:

- What we are learning from some of our major research investments on [supporting youth with autism](#), and on [improving reading comprehension](#) among students in elementary, middle, and high school.
- Profiles of early career researchers supported by [NCER](#) and [NCSEER](#), and the contributions they are making to the education sciences.
- How the [application review process](#) works and how funding decisions are made.
- What we learned from surveys of NCER and NCSEER applicants and grantees, and how we are using this information to make improvements.

We are introducing the blog at a time of peak activity for NCER and NCSEER. We are in the final stages of making grant awards from the FY 2015 research and training grants competitions – roughly 150 grants in total – and recently announced [our FY 2016 competitions](#). Future blogs will spotlight some of these new awards and highlight current funding opportunities.

We invite you to check in regularly, and to send your comments to IESResearch@ed.gov.

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DE-FOA-0001332 RFI: Cities Leading through Energy Analysis and Planning (Cities-LEAP)

The U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) seeks to understand how local governments obtain and use information about energy consumption in their communities and within their government operations. Consistent with existing DOE and Administration initiatives to work with local governments such as the Better Buildings Challenge, Clean Cities Coalition, and Climate Action Champions, EERE seeks to continue to help cities make important progress in meeting their climate and energy goals. The Cities Leading through Energy Analysis and Planning (Cities-LEAP) project is investigating complementary ways to support cities (or other local governments) in their efforts to include energy analysis and data into their strategic decision-making. The purpose of this Request for Information (RFI) is to gather feedback from stakeholders prior to DOE potentially issuing a Funding Opportunity Announcement (FOA). This RFI is not a FOA; therefore, DOE is not accepting applications at this time. All responses to this RFI must be provided as an attachment (in Microsoft Word format) to an e-mail message addressed to Cities.LEAP@ee.doe.gov. Responses must be received no later than 5:00 PM EDT on May 29, 2015. The full content of the announcement can be found on the EERE Exchange website at <https://eere-exchange.energy.gov>.

Note from AAAS on Trellis

“AAAS is in the development phases of launching an online platform for scientific communication called [Trellis](#). The AAAS Center for Public Engagement with Science is using the platform to foster an online community for public engagement professionals – scientists, those researching public engagement, and the practitioners who translate public engagement research to practice. The group, much like the platform as a whole, is in its beta phase; as the technical team at AAAS works out the kinks of the platform, we are experimenting with ways to foster community across the many fields and interests that work on public engagement with science.

I invite you to **join the public engagement group on Trellis** to join the conversation and share your ideas, thoughts, questions, and suggestions for the field of public engagement. Please reply to this email to express your interest; you will then be sent an invitation to Trellis from an @trelliscience.com address. Please set up your Trellis login, then go to the “groups” tab, then “pending groups” to accept your invite to the group. Then start commenting with all the great ideas you have generated at the summit!

Thank you very much! As we build the Public Engagement with Science group library on Trellis, we hope this will create a resource that you find valuable. Please feel free to reach out with any questions or suggestions.”

Jeanne Braha, Public Engagement Manager, AAAS - American Association for the Advancement of Science, 1200 New York Avenue, NW Washington, DC 20005, (202) 326-6506, jbaha@aaas.org, www.aaas.org

Recompetition of Operations and Management of NSF-supported Facilities to Succeed the GAGE and SAGE Facilities

The Division of Earth Sciences (EAR) in the Directorate for Geosciences (GEO) at the National Science Foundation (NSF) currently supports two large multi-user facilities -- the Geodesy

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Advancing Geosciences and EarthScope (GAGE) Facility and the Seismological Facilities for the Advancement of Geosciences and EarthScope (SAGE) -- that provide geodetic, seismic, and related geophysical instrumentation, data, and educational capabilities to a wide range of EAR-supported communities. NSF is preparing for a competition for future Cooperative Agreement(s) to support management and operations of one or more facilities to provide geodetic, seismic, and/or related geophysical capabilities following expiration of the current GAGE and SAGE cooperative agreements. The planned competition is the second stage in a two-stage integration and recompetition process that NSF developed, presented to the National Science Board (NSB), and described to the community in 2009 (Dear Colleague Letter NSF 10-021).

The planned competition will be held via an open, merit-based, external peer-review process consistent with the NSF Grant Proposal Guide and the NSB Resolution on Competition and Recompensation of NSF Awards (NSB-08-12). EAR is currently preparing the program solicitation for this competition, which is expected to lead to one or more cooperative agreement(s) for one or more facilities following the end of the current GAGE and SAGE cooperative agreements on 30 September 2018.

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Agency Reports, Workshops & Research Roadmaps

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Digest of Education Statistics, 2013

The 49th in a series of publications initiated in 1962, the Digest's purpose is to provide a compilation of statistical information covering the broad field of education from prekindergarten through graduate school. The Digest contains data on a variety of topics, including the number of schools and colleges, teachers, enrollments, and graduates, in addition to educational attainment, finances, and federal funds for education, libraries, and international comparisons.

- [Browse this document.](#)
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- [Download, view and print Chapter 4 and Chapter 5 as a pdf file.](#) (1.1MB)
- [Download, view and print Chapter 6 and Chapter 7 as a pdf file.](#) (712KB)
- [Download, view and print Appendix A-C as a pdf file.](#) (1.2MB)

Logic models for program design, implementation, and evaluation: Workshop toolkit

The Logic Model Workshop Toolkit is designed to help practitioners learn the purpose of logic models, the different elements of a logic model, and the appropriate steps for developing and using a logic model for program evaluation. Topics covered in the sessions include an overview of logic models, the elements of a logic model, an introduction to evaluation, uses of a logic model to develop evaluation questions and identify indicators of success, and strategies to determine the right evaluation design for your program or policy. The toolkit, which includes an agenda, slide deck, participant workbook and facilitator's manual, was delivered to three REL-NEI research alliances: the Northeast Educator Effectiveness Research Alliance, the Urban School Improvement Alliance, and the Puerto Rico Research Alliance for Dropout Prevention.

Enhancing the Effectiveness of Team Science

The past half-century has witnessed a dramatic increase in the scale and complexity of scientific research. The growing scale of science has been accompanied by a shift toward collaborative research, referred to as "team science." Scientific research is increasingly conducted by small teams and larger groups rather than individual investigators, but the challenges of collaboration can slow these teams' progress in achieving their scientific goals. How does a team-based approach work, and how can universities and research institutions support teams?

Enhancing the Effectiveness of Team Science synthesizes and integrates the available research to provide guidance on assembling the science team; leadership, education and professional development for science teams and groups. It also examines institutional and organizational structures and policies to support science teams and identifies areas where

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further research is needed to help science teams and groups achieve their scientific and translational goals. This report offers major public policy recommendations for science research agencies and policymakers, as well as recommendations for individual scientists, disciplinary associations, and research universities. Enhancing the Effectiveness of Team Science will be of interest to university research administrators, team science leaders, science faculty, and graduate and postdoctoral students.

Science of Team Science 2015 Conference: Building the knowledge base for effective team science

The Past Half Century of Engineering---And a Look Forward: Summary of a Forum

Engineering is poised to make an even greater contribution to society in the next half century than it has made in the past half century. At its annual meeting on September 28-29, 2014, the National Academy of Engineering celebrated the 50th anniversary of its founding. A highlight of the meeting was a forum of distinguished speakers who considered the achievements of the last 50 years and looked toward the potential achievements of the next 50. The Past Half Century of Engineering - and a Look Forward summarizes their presentations.

Preparing the Workforce for Digital Curation

The massive increase in digital information in the last decade has created new requirements for institutional and technological structures and workforce skills. Preparing the Workforce for Digital Curation focuses on education and training needs to meet the demands for access to and meaningful use of digital information, now and in the future. This study identifies the various practices and spectrum of skill sets that comprise digital curation, looking in particular at human versus automated tasks. Additionally, the report examines the possible career path demands and options for professionals working in digital curation activities, and analyzes the economic benefits and societal importance of digital curation for competitiveness, innovation, and scientific advancement. Preparing the Workforce for Digital Curation considers the evolving roles and models of digital curation functions in research organizations, and their effects on employment opportunities and requirements. The recommendations of this report will help to advance digital curation and meet the demand for a trained workforce.

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New Funding Opportunities

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Content Order

New Funding Posted Since April 15 Newsletter
URL Links to New & Open Funding Solicitations
Solicitations Remaining Open from Prior Issues of the Newsletter
Open Solicitations and BAAs

[User Note: URL links are active on date of publication, but if a URL link breaks or changes a **Google search** on the key words will typically take you to a working link. Also, entering a grant title and/or solicitation number in the **Grants.gov search box** will typically work as well.]

New Funding Solicitations Posted Since April 15 Newsletter

[USDA-NIFA-WAMS-005116 Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program](#)

This program supports research and extension projects that have robust collaborations to increase the participation of women and underrepresented minorities from rural areas in science, technology, engineering, and mathematics fields that are relevant to USDA priorities identified by the Secretary: (i) Promotion of a safe, sufficient, and nutritious food supply for all Americans and for people around the world; (ii) Sustainable agricultural policies that foster economic viability for small and mid-sized farms and rural businesses, protect natural resources, and promote value-added agriculture; (iii) national leadership in climate change mitigation and adaptation; (iv) Building a modern workplace with a modern workforce; and (v) Support for 21st century rural communities. **Due May 29.**

[USDA-NIFA-SRGP-005095 Special Research Grants Program - Aquaculture Research](#)

The Aquaculture Research program is to support the development of an environmentally and economically sustainable aquaculture industry in the U.S. and generate new science-based information and innovation to address industry constraints. Over the long term, results of projects supported by this program may help improve the profitability of the U.S. aquaculture industry, reduce the U.S. trade deficit, increase domestic food security, provide markets for U.S.-produced grain products, increase domestic aquaculture business investment opportunities, and provide more jobs for rural and coastal America. The Aquaculture Research program will fund projects that directly address major constraints to the U.S. aquaculture industry and focus on one or more of the following program priorities: (1) Genetics of commercial aquaculture species. (2) Critical disease issues impacting aquaculture species. (3) Design of environmentally and economically sustainable aquaculture production systems. (4) Economic research for increasing aquaculture profitability. **Due June 3.**

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ED-GRANTS-042315-001 Office of Postsecondary Education: Strengthening Institutions

The Strengthening Institutions Program (SIP) provides grants to eligible institutions of higher education (IHEs) to help them become self-sufficient and expand their capacity to serve low-income students by providing funds to improve and strengthen the institution's academic quality, institutional management, and fiscal stability. Catalog of Federal Domestic Assistance (CFDA) Number: 84.031A. Applications for grants under the Strengthening Institutions Program, CFDA number 84.031A, must be submitted electronically using the Governmentwide Grants.gov Apply site at www.Grants.gov. Through this site, you will be able to download a copy of the application package, complete it offline, and then upload and submit your application. You may not email an electronic copy of a grant application to us. You may access the electronic grant application for this competition at www.Grants.gov. You must search for the downloadable application package for this program by the CFDA number. Do not include the CFDA number's alpha suffix in your search (e.g., search for 84.031, not 84.031A). **Due June 8.**

ED-GRANTS-042415-001 Office of Postsecondary Education (OPE): Centers of Excellence for Veteran Student Success

The purpose of this program is to encourage institutions of higher education (IHEs) to develop model programs to support veteran student success in postsecondary education by coordinating services to address the academic, financial, physical, and social needs of veteran students. Background: We encourage applicants to read carefully the Selection Criteria section of this notice. Consistent with the Department's increasing emphasis in recent years on promoting evidence-based practices through our grant competitions, the Secretary will evaluate applications on the extent to which the proposed project is supported by a logic model that meets the evidence standard of "strong theory" (as defined in this notice). Resources to assist applicants in creating a logic model can be found here:

http://ies.ed.gov/ncee/edlabs/regions/pacific/pdf/REL_2014007.pdf. Catalog of Federal Domestic Assistance (CFDA) Number: 84.116G Applications for grants under the Centers of Excellence for Veteran Student Success, CFDA number 84.116G, must be submitted electronically using the Governmentwide Grants.gov Apply site at www.Grants.gov. Through this site, you will be able to download a copy of the application package, complete it offline, and then upload and submit your application. You may not email an electronic copy of a grant application to us. **Due June 23.**

20150624-LD Humanities in the Public Square National Endowment for the Humanities

Designed to demonstrate the vital role that humanities ideas can play in our civic life, the Humanities in the Public Square program invites projects that draw on humanities scholarship to engage the public in understanding some of today's most challenging issues and pressing concerns. As NEH launches a year-long celebration of its fiftieth anniversary in September 2015, the Common Good initiative seeks to demonstrate the vital role that the humanities can play in our public life. NEH's enabling legislation speaks eloquently of the need to attend to "the relevance of the humanities to the current conditions of national life." Today, as our country grapples with both remarkable opportunities and extraordinary challenges, the "conditions of our national life" suggest that this need is greater than ever. The Common Good initiative envisions humanities scholars and organizations turning their attention and expertise to topics

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that have widespread resonance with the American people and that lend themselves to humanistic methods and concerns. Organizations are encouraged to think creatively about what discussion topics would be meaningful to their community. **Due June 24.**

DE-FOA-0001310: Next Generation Marine Energy Systems - Durability and Survivability

Next Generation Marine Energy Systems - Durability and Survivability focuses on the robustness of innovative MHK design systems with high performance potential and attempts to address questions regarding the costs, reliability, and survivability of innovative and novel system designs. This FOA will address these questions early in the development cycle and avoid costly failures and design iterations with prototypes at a larger scale. Projects awarded from the Next Generation Marine Energy Systems - Durability and Survivability FOA will improve system cost characteristics (i.e., Initial capital costs (ICC), Operational Expenditures (OPEX), Availability, and System Life) by reducing the risk and uncertainty that drives conservatism in design and premature failures in operations. Projects awarded under Topic Area 1 will reduce ICC or extend system life by developing system designs and defining the conditions for survival. Projects will establish and validate survival conditions by testing model scale prototypes in a controlled laboratory environment. Under Topic Area 2, more mature systems that are ready for testing as a fully integrated system will reduce ICC, reduce OPEX, or increase availability by developing new approaches to installation, operations, and maintenance. Prototypes will be instrumented and monitored to identify sources as well as progression of failures that drive the cost of operations. The full Funding Opportunity Announcement (FOA) is posted on the EERE Exchange website at <https://eere-exchange.energy.gov> . Applications must be submitted through the EERE Exchange website to be considered for award. The applicant must first register and create an account on the EERE Exchange website. A User Guide for the EERE Exchange website can be found on the website <https://eere-exchange.energy.gov/Manuals.aspx> . Information on where to submit questions regarding the content of the announcement and where to submit questions regarding submission of applications is found in the full FOA posted on the EERE Exchange website. **Due July 1.**

ED-GRANTS-041515-003 Institute of Education Sciences (IES): Education Research and Development Center Program CFDA Number 84.305C

The Acting Director of the Institute of Education Sciences (Institute) announces the Institute's FY 2016 competitions for grants to support education research and special education research. The Acting Director takes this action under the Education Sciences Reform Act of 2002. The Institute's purpose in awarding these grants is to provide national leadership in expanding fundamental knowledge and understanding of (1) developmental and school readiness outcomes for infants and toddlers with or at risk for disability, and (2) education outcomes for all students from early childhood education through postsecondary and adult education. Purpose of Program: The central purpose of the Institute's research grant programs is to provide interested individuals and the general public with reliable and valid information about education practices that support learning and improve academic achievement and access to education opportunities for all students. These interested individuals include parents, educators, students, researchers, and policymakers. In carrying out its grant programs, the Institute provides support for programs of research in areas of demonstrated national need.

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Competitions in This Notice: **The Institute will conduct eight research competitions in FY 2016 through two of its centers:** The Institute's National Center for Education Research (NCER) will hold six competitions: one competition for education research, one competition for education research training, one competition for education research and development centers, one competition for statistical and research methodology in education, one competition for partnerships and collaborations focused on problems of practice or policy, and one competition for research networks. The Institute's National Center for Special Education Research (NCSER) will hold two competitions: one competition for special education research and one competition for special education research training. Catalog of Federal Domestic Assistance (CFDA) Numbers: 84.305A, 84.305B, 84.305C, 84.305D, 84.305H, 84.305N, 84.324A, and 84.324B. Applications for grants under the Education Research, Research Training Programs in the Education Sciences, Education Research and Development Centers, Statistical and Research Methodology in Education, the Partnerships and Collaborations Focused on Problems of Practice or Policy, Research Networks Focused on Critical Problems of Education Policy and Practice, Special Education Research, and Research Training Programs in Special Education competitions, CFDA numbers 84.305A, 84.305B, 84.305C, 84.305D, 84.305H, 84.305N, 84.324A, and 84.324B, must be submitted electronically using the Governmentwide Grants.gov Apply site at www.Grants.gov. Through this site, you will be able to download a copy of the application package, complete it offline, and then upload and submit your application. You may not email an electronic copy of a grant application to us. You may access the electronic grant applications for the Education Research, Special Education Research, Research Training Programs in the Education Sciences, Research Training Programs in Special Education, Education Research and Development Centers, Statistical and Research Methodology in Education, Partnerships and Collaborations Focused on Problems of Practice or Policy, and Research Networks Focused on Critical Problems of Education Policy and Practice competitions at www.Grants.gov. You must search for the downloadable application package for each competition by the CFDA number. Do not include the CFDA number's alpha suffix in your search (e.g., search for 84.305, not 84.305A). **Due August 20.**

DARPA-BAA-15-27 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. Refer to the URL stated below for complete details of the BAA. **Open to April 29, 2016.**

Army Research Institute for the Behavioral and Social Sciences Broad Agency Announcement for Basic, Applied, and Advanced Scientific Research (2013-2018)

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) announces the ARI FY13-18 Broad Agency 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

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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 U.S. 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) Soldier/Personnel Issues. **Open to February 5, 2018.**

URL Links to New & Open Funding Solicitations

Links verified: Saturday, October 04, 2014

- [HHS Grants Forecast](#)
- [American Cancer Society Index of Grants](#)
- [SAMHSA FY 2014 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 2014 Science To Achieve Results \(STAR\) Research Grants](#)
- [NASA Open Solicitations](#)
- [Defense Sciences Office Solicitations](#)
- [The Mathematics Education Trust](#)
- [EPA Open Funding Opportunities](#)

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- [CDMRP FY 2014 Funding Announcements](#)
- [Office of Minority Health](#)
- [Department of Justice Open Solicitations](#)
- [DOE/EERE Funding Opportunity Exchange](#)
- [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

2015 EPA Science to Achieve Results (STAR) Fellowships for Graduate Environmental Study

The U.S. Environmental Protection Agency (EPA), as part of its Science to Achieve Results (STAR) program, is offering Graduate Fellowships for master's and doctoral level students in environmental fields of study. The deadline for submission of applications is May 26, 2015 at 11:59:59 PM. Subject to availability of funding and other applicable considerations, the Agency plans to award approximately 55 new fellowships in the Fall of 2015. The Fellowship Program provides up to \$44,000 per year of support per fellowship. Master's level students may receive a maximum of two years of support (\$88,000). Doctoral students may be supported for a maximum of three years (\$132,000), usable over a period of five years. **Due May 26.**

USDA-NIFA-SCRI-005035 Specialty Crop Research Initiative/Citrus Disease Research and Extension

The Specialty Crop Research Initiative (SCRI) Citrus Disease Research and Extension Program (CDRE) is authorized in the Agricultural Act of 2014 (H.R. 2642) to award grants to eligible entities to conduct research and extension activities, technical assistance and development activities to: (a) combat citrus diseases and pests, both domestic and invasive and including huanglongbing and the Asian citrus psyllid, which pose imminent harm to United States citrus production and threaten the future viability of the citrus industry; and (b) provide support for the dissemination and commercialization of relevant information, techniques, and technologies discovered pursuant to research and extension activities funded through SCRI/CDRE and other

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research and extension projects targeting problems caused by citrus production diseases and invasive pests. Pre-applications (Stakeholder Relevance Statement): **Due June 1. Full application August 14.**

Next Generation Electric Machines: Megawatt Class Motors

This specific Funding Opportunity Announcement (FOA) is focused on developing MV integrated drive systems that leverage the benefits of state of the art power electronics (i.e., wide band gap devices) with energy efficient, high speed, direct drive, megawatt (MW) class electric motors for efficiency and power density improvements in three primary areas:

1. Chemical and petroleum refining industries
2. Natural gas infrastructure
3. General industrial applications. **Due June 3.**

Digital Projects for the Public National Endowment for the Humanities

Digital Projects for the Public grants support projects that significantly contribute to the public's engagement with the humanities. Digital platforms—such as websites, mobile applications and tours, interactive touch screens and kiosks, games, and virtual environments—can reach diverse audiences and bring the humanities to life for the American people. The program offers three levels of support for digital projects: grants for Discovery projects (early-stage planning work), Prototyping projects (proof-of-concept development work), and Production projects (end-stage production and distribution work). While projects can take many forms, shapes, and sizes, your request should be for an exclusively digital project or for a digital component of a larger project. **Due June 10.**

20150610-HZ Humanities Open Book Program

NEH and Mellon are soliciting proposals from academic presses, scholarly societies, museums, and other institutions that publish books in the humanities to participate in the Humanities Open Book Program. Applicants will provide a list of previously published humanities books along with brief descriptions of the books and their intellectual significance. Depending on the length and topics of the books, the number to be digitized may vary. However, NEH and Mellon anticipate that applicants may propose to digitize a total that ranges from less than fifty to more than one hundred books. Awards will be given to digitize these books and make them available as Creative Commons-licensed “ebooks” that can be read by the public at no charge on computers, mobile devices, and ebook readers. **Due June 10.**

DE-FOA-0001286 Research and Development Of Innovative Technologies for Low Impact Hydropower Development

The HydroNEXT effort continues in 2015, through this FOA, aimed at the development of suitable technologies to overcome environmental, social, and LCOE challenges. DOE will solicit innovative ideas to harness hydropower that can be rapidly built, removed, and replaced when necessary. Applicants will be encouraged to provide new concepts for alternative hydropower systems that will lower costs of civil infrastructure development, can be deployed in a maximum of 2 years with relatively low environmental impacts, and can be removed or replaced after their intended life is completed. These concepts and systems will be able to

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operate at a cost that is competitive with traditional sources of generation. The three topic areas covered by this FOA are outlined below: Topic Area 1: Design and laboratory testing of new rapidly deployable hydropower technologies that can be easily removed or replaced at the end of their useful life, including, but not limited to, water impounding structures, water conveying systems, and innovative pre-fabricated structures. Topic Area 2: Research on innovative methods and/or materials for construction of conventional hydropower facilities including, but not limited to, concrete alternatives, in-water construction, and innovative advanced tunneling methods. Topic Area 3: Design and laboratory testing of new and innovative conventional hydropower powertrain components such as composite and replaceable blade technologies for turbine runners, new generator technologies, and/or materials and coatings for powertrain components. The full Funding Opportunity Announcement (FOA) is posted on the EERE Exchange website at <https://eere-exchange.energy.gov> . Applications must be submitted through the EERE Exchange website to be considered for award. The applicant must first register and create an account on the EERE Exchange website. A User Guide for the EERE Exchange website can be found on the website <https://eere-exchange.energy.gov/Manuals.aspx> . Information on where to submit questions regarding the content of the announcement and where to submit questions regarding submission of applications is found in the full FOA posted on the EERE Exchange website. **Due June 15.**

Big Data Regional Innovation Hubs (BD Hubs): Accelerating the Big Data Innovation Ecosystem

To augment ongoing activities and to ignite new Big Data public-private partnerships across the Nation, NSF's Directorate for Computer and Information Science and Engineering (CISE) is seeking to establish a National Network of *Big Data Regional Innovation Hubs* (BD Hubs). Each BD Hub would be a consortium of members from academia, industry, and/or government. This solicitation aims to establish four Hubs across distinct geographic regions of the United States, including the Northeast, Midwest, South, and West, as defined later in the Program Description section. Each BD Hub should focus on key Big Data challenges and opportunities for its region of service. The BD Hubs should aim to support the breadth of interested local stakeholders within their respective regions, while members of a BD Hub should strive to achieve common Big Data goals that would not be possible for the independent members to achieve alone. To foster collaboration among prospective partners within a region, NSF is sponsoring a series of regional, intensive, one-day workshops (called "charrettes"). One charrette will be held in each geographic region to convene stakeholders, explore Big Data challenges, and aid in the establishment of that consortium. For more information on these charrettes, see the following webpage: <http://www.usenix.org/BDHubs15>. To facilitate discussion among interested parties, a HUBzero community portal has been established at <http://bdhub.info>. Interested parties may leverage this portal to communicate with members within their region or other stakeholders nationwide. **Due June 24.**

Humanities Initiatives National Endowment for the Humanities

NEH Humanities Initiatives at Hispanic-Serving Institutions, Historically Black Colleges and Universities, and Tribal Colleges and Universities are intended to strengthen the teaching and

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study of the humanities in subjects such as history, philosophy, and literature. These grants may be used to enhance existing humanities programs, resources, or courses, or to develop new ones. NEH Humanities Initiatives may 1) create opportunities for faculty members to study together, in order to improve their capacity to teach the humanities; 2) support new humanities programs (which may include but are not limited to new humanities minors, first-year seminars, and capstone courses), and enhance existing ones; 3) support humanities contributions to professional training (in such fields as business, law, economics, technology, and nursing and medicine; 4) develop bridge programs for at-risk and nontraditional students; 5) help institutions take advantage of humanities resources, especially in the digital humanities; and; 6) support collaborative projects in the humanities between the applicant institution and another institution, such as a college or university, a school or school system, a museum or library, or a historical or cultural society. **Due June 25.**

NSF Building Community and Capacity in Data Intensive Research in Education

As part of NSF's Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21) activity, the Directorate for Education and Human Resources (EHR) seeks to enable research communities to develop visions, teams, and capabilities dedicated to creating new, large-scale, next-generation data resources and relevant analytic techniques to advance fundamental research for EHR areas of research. Successful proposals will outline activities that will have significant impacts across multiple fields by enabling new types of data-intensive research. Investigators should think broadly and create a vision that extends intellectually across multiple disciplines and that includes--but is not necessarily limited to--EHR areas of research. **Due September 1.**

NOAA-NOS-IOOS-2016-2004378 FY 2016 Implementation of the U.S. Integrated Ocean Observing System (IOOS®)

The U.S. Integrated Ocean Observing System (IOOS®) is a national and regional partnership working to provide observations, data, and new tools and forecasts to improve safety, enhance the economy, and protect our environment. NOAA is requesting proposals for coordinated regional efforts that further the IOOS in two topic areas, 1) sustaining and enhancing comprehensive regional observing systems and 2) verification and validation of observing technologies for studying and monitoring coastal and ocean environments. NOAA invites applicants to submit proposals for one or both of these topic areas, described in detail below, and requests applicants submit separate applications for each topic area. For single topic proposals, clearly identify the topic area and present all required information such that merit reviewers can associate proposal elements (project description, partners, budgets) with the specific topic area. NOAA anticipates making multiple awards, subject to the availability of funds, in amounts ranging from \$1,000,000 to \$4,000,000 per year, for up to five years. **Due August 31.**

USDA-NIFA-AFRI-004915 Agriculture and Food Research Initiative - Foundational Program

The AFRI Foundational Program is offered to support research grants in the six AFRI priority areas to continue building a foundation of knowledge critical for solving current and future societal challenges. The six priority areas are: Plant Health and Production and Plant Products;

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Animal Health and Production and Animal Products; Food Safety, Nutrition, and Health; Renewable Energy, Natural Resources, and Environment; Agriculture Systems and Technology; and Agriculture Economics and Rural Communities. Single-function Research Projects, multi-function Integrated Projects and Food and Agricultural Science Enhancement (FASE) Grants are expected to address one of the Program Area Priorities (see Foundational Program RFA for details). **See application for various LOI dates. Proposals due September 30**

GCC-GRANT-SEP-15-001 Spill Impact Component Planning Grants Gulf Coast Ecosystem Restoration Council

This announcement provides guidance to the Gulf Coast States – defined as any of the States of Alabama, Florida, Louisiana, Mississippi, and Texas – or the Gulf Coast States’ administrative agents and the Gulf Consortium of Florida counties to apply for grants to fund planning activities to develop individual State Expenditure Plans (SEP) under the Spill Impact Component of the Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act). The eligible entities may apply to the Council for a grant to use the minimum allocation available under the Spill Impact Component of the RESTORE Act for planning purposes. The submission process for this announcement is organized into two phases: (1) the submission of a planning SEP by a Gulf Coast State; and (2) the administrative application process, which includes the submission of all administrative grant application materials by the eligible entities. All planning activities proposed under this announcement are limited to the development of a comprehensive SEP, including conceptual design and feasibility studies related to specific projects. This announcement does not include engineering and environmental studies related to specific projects. It also does not include any pre-award costs incurred prior to August 22, 2014. **December 31, 2015**

Open Solicitations and BAAs

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.**

DARPA-BAA-14-54 Biological Technologies EZ

The Defense Advanced Research Projects Agency (DARPA) is soliciting innovative research proposals of interest to the Biological Technologies Office (BTO). Of particular interest are those proposals from entities (both small and large business) that have never received Government funding, or who do not normally propose to Government solicitations. Proposed research

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should investigate leading edge approaches that enable revolutionary advances in science, technologies, or systems at the intersection of biology with engineering and the physical and computer sciences. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of the art. BTO seeks unconventional approaches that are outside the mainstream, challenge assumptions, and have the potential to radically change established practice, lead to extraordinary outcomes, and create entirely new fields. **Open to July 23, 2015.**

Broad Agency Announcement for Research Initiatives at Naval Postgraduate School

The Naval Postgraduate School (NPS) is interested in receiving proposals for research initiatives that offer potential for advancement and improvement in the NPS core mission of graduate education and research. Readers should note that this is an announcement to declare NPS's solicitation in competitive funding of meritorious research initiatives across a spectrum of science and engineering, business, politics and public/foreign policy, operational and information sciences, and interdisciplinary disciplines that are in line with the NPS' graduate education and research mission. Additional information on the Naval Postgraduate School's graduate education and research mission is available at: General Information:

<http://www.nps.edu/About/index.html> ; NPS Strategic Plan:

<http://www.nps.edu/About/NPSStratPlan.html> ; Academic Programs:

<http://www.nps.edu/Academics/index.html> ; Research Programs:

<http://www.nps.edu/Research/index.html> ; Prior to preparing proposals, potential Offerors are strongly encouraged to contact an NPS point of contact (POC) whose program and research efforts best match the Offeror's field of interest. The academic and research programs links above can be used to locate an appropriate POC by exploring the information provided about the faculty members in NPS' schools, research institutes, and interdisciplinary centers and research groups. **Open to July 31, 2015.**

Small University Grants Open 5-Year Broad Agency Announcement

Open to August 26, 2015

DARPA-BAA-14-48 Strategic Technologies

DARPA is seeking innovative ideas and disruptive technologies that offer the potential for significant capability improvement across the Strategic Technology Office focus areas. This includes technology development related to Battle Management, Command and Control (BMC2), Communications and Networks, Electronic Warfare, Intelligence, Surveillance, and Reconnaissance (ISR), Position, Navigation, and Timing (PNT), Maritime, and Foundational Strategic Technologies and Systems. **BAA Closing Date: September 17, 2015**

ONRBAA15-001 Long Range BAA for Navy and Marine Corps Science and Technology

The Office of Naval Research (ONR) is interested in receiving proposals for Long-Range Science and Technology (S&T) Projects which offer potential for advancement and improvement of Navy and Marine Corps operations. Readers should note that this is an announcement to declare ONR's broad role in competitive funding of meritorious research across a spectrum of science and engineering disciplines. A brief description of the ONR Program Codes and the

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science and technology thrusts that ONR is pursuing is provided below. Additional information can be found at the ONR website at <http://www.onr.navy.mil/Science-Technology/Departments.aspx> . Potential Offerors are urged to check the program areas that they are interested in throughout the year for updates to thrust areas and research priorities on the ONR website at <http://www.onr.navy.mil>. Prior to preparing proposals, potential offerors are strongly encouraged to contact the ONR point of contact (POC). To identify the POC, follow the link for the appropriate code or division listed below and then click on the link to the thrust or topic area. Each thrust or topic area will provide a POC or e-mail address. **BAA Closing Date: September 30, 2015**

DHS-2014-OHA-BIOWATCH BioWatch Program: 2014-2015

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. The BioWatch Evaluation Program (BWEP) will be conducted under the BioWatch Quality Assurance Program effective April 1, 2013. This program will consist of independent external audits (Quality Assurance) by Signature Science and internal audits (Quality Control) by BioWatch Systems Program Office field personnel. This approach will initially be conducted with a focus on adherence to the BioWatch Field Operations Standard Operating Procedure (SOP), Version 1.3 and will eventually evolve to encompass the Field Operations Quality Assurance Program Plan (QAPP). In order to ensure a robust QA / QC program the jurisdictions may be subject to a QA external audit and a QC internal audit during the same cooperative agreement cycle (year). **Closes September 30, 2015.**

DE-FOA-0001204 FY 2015 Continuation of Solicitation for the Office of Science

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, and Nuclear Physics. On September 3, 1992, DOE published in the Federal Register the Office of Energy Research Financial Assistance Program (now called the Office of Science Financial Assistance Program), 10 CFR 605, as a Final Rule, which contained a solicitation for this program. Information about submission of applications, eligibility, limitations, evaluation and selection processes and other policies and procedures are specified in 10 CFR 605. This Funding Opportunity Announcement (FOA), DE-FOA-0001204, is our annual, broad, open solicitation that covers all of the research areas in the Office of Science

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and is open throughout the Fiscal Year. This FOA will remain open until September 30, 2015, 11:59 PM Eastern Time, or until it is succeeded by another issuance, whichever occurs first. This annual FOA DE-FOA-0001204 succeeds FOA DE-FOA-0000995, which was published October 1, 2013. **Open to September 30, 2015.**

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.**

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.**

W911NF-12-R-0012 Army Research Office Broad Agency Announcement for Basic and Applied Scientific Research

The purpose of this Broad Agency Announcement (BAA) is to solicit research proposals in the engineering, physical, life, and information sciences for submission to the Army Research Office (ARO) for consideration for possible funding. For ease of reference, this BAA is an extraction of the ARO sections of the Army Research Laboratory BAA.

(www.arl.army.mil/www/default.cfm?page=8). **Open to May 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

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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.**

HM0210-14-BAA-0001 National Geospatial-Intelligence Agency Academic Research Program

NGA welcomes all innovative ideas for path-breaking research that may advance the GEOINT mission. The NGA mission is to provide timely, relevant, and accurate geospatial intelligence (GEOINT) in support of national security objectives. GEOINT is the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the Earth. GEOINT consists of imagery, imagery intelligence, and geospatial information. NGA offers a variety of critical GEOINT products in support of U.S. national security objectives and Federal disaster relief, including aeronautical, geodesy, hydrographic, imagery, geospatial and topographical information. The NGA Academic Research Program (NARP) is focused on innovative, far-reaching basic and applied research in science, technology, engineering and mathematics having the potential to advance the GEOINT mission. The objective of the NARP is to support innovative, high-payoff research that provides the basis for revolutionary progress in areas of science and technology affecting the needs and mission of NGA. This research also supports the National System for Geospatial Intelligence (NSG), which is the combination of technology, systems and organizations that gather, produce, distribute and consume geospatial data and information. This research is aimed at advancing GEOINT capabilities by improving analytical methods, enhancing and expanding systems capabilities, and leveraging resources for common NSG goals. The NARP also seeks to improve education in scientific, mathematics, and engineering skills necessary to advance GEOINT capabilities. It is NGA's intent to solicit fundamental research under this BAA. Fundamental research means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from Industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reason. (National Security Decision Directive (NSDD) 189, National Policy on the Transfer of Scientific, Technical, and Engineering Information). NGA seeks proposals from eligible U.S. institutions for path-breaking GEOINT research in areas of potential interest to NGA, the DoD, and the Intelligence Community (IC). **Open to September 30, 2017.**

AFRL Research Collaboration Program

The objective of the AFRL Research Collaboration program is to enable collaborative research partnerships between AFRL and Academia and Industry in areas including but not limited to Materials and Manufacturing and Aerospace Sensors that engage a diverse pool of domestic businesses that employ scientists and engineers in technical areas required to develop critical war-fighting technologies for the nation's air, space and cyberspace forces through specific AFRL Core Technical Competencies (CTCs). **Open until December 20, 2017.**

Research Development & Grant Writing News

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) Soldier/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.**

BAA-HPW-RHX-2014-0001 Human-Centered Intelligence, Surveillance Air Force Research Lab

This effort is an open-ended BAA soliciting innovative research concepts for the overall mission of the Human-Centered Intelligence, Surveillance, & Reconnaissance (ISR) Division (711 HPW/RHX). It is intended to generate research concepts not already defined and planned by RHX as part of its core S&T portfolio. The core RHX mission is to develop human-centered S&T that (1) enables the Air Force to better identify, locate and track humans within the ISR environment and (2) enhance the performance of ISR analysts. To accomplish this mission, the RHX core S&T portfolio is structured into three major research areas: (1) Human Signatures - develop technologies to sense and exploit human bio-signatures at the molecular and macro (anthropometric) level, (2) Human Trust and Interaction – develop technologies to improve human-to-human interactions as well as human-to-machine interactions, and (3) Human Analyst Augmentation – develop technologies to enhance ISR analyst performance and to test the efficacy of newly developed ISR technologies within a simulated operational environment. The RHX mission also includes research carried over from the Airman Biosciences and Performance Program. While not directly linked to the core S&T strategic plan, there exists a unique capability resident within RHX to address critical Air Force operational and sustainment needs resulting from chemical and biological hazards. Research areas include contamination detection, hazard assessment and management, individual and collective protection, and restoration and reconstitution of operational capability. **Open to Feb. 12, 2018.**

Research Interests of the Air Force Office of Scientific Research

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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.**

Air Force BAA - Innovative Techniques and Tools for the Automated Processing and Exploitation (APEX) Center

The AFRL/RIEA branch performs Research and Development (R&D) across a broad area of Air Force Command, Control, Communications, Computers/Cyber, and Intelligence (C4I). All applicable "INTs" are investigated with emphasis on Ground Moving Target Indication (GMTI), Electronic Intelligence (ELINT), Signals Intelligence (SIGINT), Image Intelligence (IMINT), Non Traditional Intelligence, Surveillance and Reconnaissance (NTISR), and Measurement and Signature Intelligence (MASINT). The APEX Center is used to perform analysis for seedling efforts, provide baseline tool development for major programs, and to provide realistic operational systems/networks/databases for integration efforts. The APEX Center resources will be used by the Government to perform the necessary research, development, experimentation, demonstration, and conduct objective evaluations in support of emerging capabilities within the Processing and Exploitation (PEX) area. Software tools, data sets, metrics (Measures of Performance/Measures of Effectiveness), and analysis are needed for the Government to perform the vetting, maturing, and analysis of efforts related to PEX, e.g. Automatic Tracking, Activity Based Intelligence, Entity, Event & Relationship (EER) Extraction, Association & Resolution (A&R), Analysis & Visualization (A&V), Social Network Analysis, Network Analytics, Pattern Discovery, Scalable Algorithms, and Novelty Detection. The AFRL APEX Center is the AFRL/RI gateway into the cross-directorate PCPAD-X (Planning & Direction, Collection, Processing & Exploitation, Analysis & Production, and Dissemination eXperimentation) initiative. **Open to FY 2018.**

BAA-RQKD-2014-0001 Open Innovation and Collaboration Department of Defense Air Force -- Research Lab

Open innovation is a methodology to capitalize on diverse, often non-traditional talents and insights, wherever they reside, to solve problems. Commercial industry has proven open innovation to be an effective and efficient mechanism to overcome seemingly impossible technology and/or new product barriers. AFRL has actively and successfully participated in

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collaborative open innovation efforts. While these experiences have demonstrated the power of open innovation in the research world, existing mechanisms do not allow AFRL to rapidly enter into contractual relationships to further refine or develop solutions that were identified. This BAA will capitalize on commercial industry experience in open innovation and the benefits already achieved by AFRL using this approach. This BAA will provide AFRL an acquisition tool with the flexibility to rapidly solicit proposals through Calls for Proposals and make awards to deliver innovative technical solutions to meet present and future compelling Air Force needs as ever-changing operational issues become known. The requirements, terms and specific deliverables of each Call for Proposals will vary depending on the nature of the challenge being addressed. It is anticipated that Call(s) for Proposals will address challenges in (or the intersection between) such as the following technology areas: Materials: - Exploiting material properties to meet unique needs - Material analysis, concept / prototype development, and scale up Manufacturing Processes that enable affordable design, production and sustainment operations Aerospace systems: - Vehicle design, control, and coordinated autonomous and/or manned operations - Power and propulsion to enable next generation systems Human Effectiveness: - Methods and techniques to enhance human performance and resiliency in challenging environments - Man – Machine teaming and coordinated activities Sensors and Sensing Systems: - Sensor and sensing system concept development, design, integration and prototyping - Data integration and exploitation. **Open to July 12, 2019.**

HDTRA1-14-24-FRCWMD-BAA Fundamental Research to Counter Weapons of Mass Destruction

** Fundamental Research BAA posted on 20 March 2015.** Potential applicants are strongly encouraged to review the BAA in its entirety. **Please note that ALL general correspondence for this BAA must be sent to HDTRA1-FRCWMD-A@dtra.mil. Thrust Area-specific correspondence must be sent to the applicable Thrust Area e-mail address listed in Section 7: Agency Contacts.** **Open to Sept. 30, 2019.**

BAA-RQKH-2015-0001 Methods and Technologies for Personalized Learning, Modeling and Assessment Air Force -- Research Lab

The Air Force Research Laboratories and 711th Human Performance Wing are soliciting white papers (and later technical and cost proposals) on the following research effort. This is an open ended BAA. The closing date for submission of White Papers is 17 Nov 2019. This program deals with science and technology development, experimentation, and demonstration in the areas of improving and personalizing individual, team, and larger group instructional training methods for airmen. The approaches relate to competency definition and requirements analysis, training and rehearsal strategies, and models and environments that support learning and proficiency achievement and sustainment during non-practice of under novel contexts. This effort focuses on measuring, diagnosing, and modeling airman expertise and performance, rapid development of models of airman cognition and specifying and validating, both empirically and practically, new classes of synthetic, computer-generated agents and teammates. An Industry Day was held in November 2014. Presentation materials from the Industry Day and Q&A's are attached. If you would like a list of Industry Day attendees, send an email request to helen.williams@us.af.mil **Open until November 17, 2019.**

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