Research Development & Grant Writing News

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About the co-publishers & editor

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

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

About the Editor
KATHERINE E. KELLY, Ph.D., is a retired English professor from Texas A&M University. She is the author of several books and numerous articles supported by research grants and served as a contributing editor for an academic journal for five years. She provides **editorial services** to *RD&GW News* and to ARFS clients on proposals, journal articles, and manuscripts. She also presents seminars on grant writing in the humanities.

Topics of Interest URLs

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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 or titles, as below, will typically take you to a working link.

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Research Development & Grant Writing News

Finding the Best Fit between a Funder and a Humanities/Social Science Project

by Katherine E. Kelly, PhD

Katherine E. Kelly is a retired English professor from Texas A&M University. She is the author of several books and numerous articles supported by research grants and served as a contributing editor for an academic journal for five years. She provides editorial services to ARFS clients on proposals, journal articles, and manuscripts and presents seminars on grant writing and funding in the humanities and humanistic social sciences .

Locating the best fit between a scholar's interests and a funder's mission is both challenging and critical to funding success. Applicants can discover each funder's preferences in several ways, but the most reliable is to visit an agency's website and look at their mission statement along with a few titles of recently supported projects. Applicants can also infer a funder's preferences from the credits or endnotes to recently published articles and books; from a casual elevator conversation at a conference; and so on. Given the intense state of competition for funding, it's a good idea for HSS researchers to use all of these sources to identify funders whose interests most closely match your own.

Funding possibilities can be sorted by public or private agency, amount of funding, length of funding, regularity of funding, preferred research topics, research methods, residency requirements, and deadlines, among other items. Some funders, such as the National Endowment for the Humanities and the American Council of Learned Societies, have defined their missions broadly to encompass virtually all of the humanities and humanities-related social sciences. Other funders, such as the Borchard Foundation Center on Law and Aging, support specific scholarship about "new or improved public policies, laws, and/or programs that . . . enhance the quality of life for the elderly." The Getty Foundation supports worldwide projects that "strengthen the understanding and preservation of visual art," while others focus on particular regions within a single country, such as the John Randolph Haynes and Dora Haynes Foundation. The Haynes Foundation offers fellowships to faculty in the social sciences to conduct "original social science research into policy issues of the Los Angeles region, research into the history of Southern California, archival and cataloging projects important to Los Angeles, and dissertation fellowships at research universities in the five-county Southern California region."

One often overlooked funding qualification is faculty rank. For example, The American Association of University Women funds a wide range of academic research by women but only pre-tenured faculty may apply. The Woodrow Wilson National Fellowships are designated for junior faculty. The Smithsonian Institution Fellowship Program "offers 3 to 12-month fellowships to both postdoctoral scholars (holding a doctoral degree for fewer than seven years) and senior scholars (holding a doctoral degree for more than seven years)." The John Templeton Foundation sponsors "Academic Cross-Training" to prepare recently tenured (post-2009) philosophers and theologians with the skills and knowledge to study Big Questions requiring a high-level engagement with empirical science." The list of awards below, adapted

(with permission) from Barbara Walker and Holly Unruh's book, *Funding Your Research in the Humanities and Social Sciences* (2019), includes the career stage for which they are designated.
<u>New Investigator, Early Career Award</u> **Pre-tenure**. Eligibility varies by agency. NSF Faculty Early Career Development (CAREER) Grant; Sloan Foundation Research Fellowship; William T. Grant Scholars Program; American Academy of Arts and Sciences Visiting Scholars Program.
<u>Seed Grants</u> **Pre- and Post-tenure** The National Institutes of Health (NIH R21) Exploratory/Developmental Research Grant Award; NEH Summer Stipends; NIH Research Grant (R01) or Small Grant (R02); NEH Fellowship and other grants; National Endowment for the Arts (NEA) Literature Fellowship; Robert Wood Johnson Foundation Investigator Awards in Health Policy Research.

<u>Residential, visiting fellowships</u> **Pre-tenure** Stanford Center for Advanced Study in the Behavioral Sciences Residential Fellowship; Radcliffe Institute Fellowship Program; Huntington Library Fellowships.

<u>Publication Subvention Grants</u>: **Pre- and Post-Tenure** Association for Asian Studies First Book Subvention Program; American Musicological Society Subventions for Publications Grant; Newberry Library Weiss/Brown Publication Subvention Award

<u>Residential, visiting fellowship</u> **Junior** Stanford Center for Advanced Study in the Behavioral Sciences Residential Fellowship; Radcliffe Institute Fellowship Program; Huntington Library Fellowships. **Mid-career/Senior** Russell Sage Foundation Visiting Scholar Program; ACLS Frederick Burkhardt Residential Fellowships for Recently Tenured Scholars; Rockefeller Bellagio Creative Arts Fellowships; Fulbright U.S. Scholar Program; National Humanities Center.

<u>Training Grants</u>: **Pre- and Post-Tenure** Mellon New Directions Fellowship; NSF Cultural Anthropology Methodological Training Scholars Awards; **Pre-tenure** only: American Association of University Women (AAUW) Career Development Grants.

<u>Collaborative Research</u>: **Mid-career/Senior** NSF Collaborative Research Grants; NEH Collaborative Grants; ACLS Collaborative Grants.

<u>Conference and Seminar Grants</u>: **Post-tenure** Mellon Sawyer Seminar Grant; NIH Support for Conferences and Scientific Meetings (R13); Wenner-Gren Foundation Conference and Workshop Grants.
Publication.

<u>Community-based Research, Public Scholarship</u>: **Mid-career/Senior** Local Foundations and community nonprofits; National Oceanic and Atmospheric Administration (NOAA); The Sociological Initiatives Foundation; National Institute of Food and Agriculture (USDA)

Post-tenure and Senior Guggenheim Fellowship; The Templeton Prize; John Templeton Foundation Academic Cross-Training Fellowship.

Research Development & Grant Writing News

Humanities and Arts Funding Opportunities and News

by Katherine E. Kelly, PhD

Humanities, Social Sciences, and Arts Funding Opportunities and News*
*Potential applicants should visit agency websites to confirm deadlines, requirements, etc. Listings of funding opportunities by due date are also included in the 15 December 2019 and 15 January 2020 issues of Research and Development & Grant Writing News. Opportunities are listed by application due date.

Due Date   Award Name
4/21/20   South Arts Invites Applications for Jazz Road Tours Grants
Grants ranging from $5,000 to $15,000 will be awarded in support of small, three- to six-site tours at a range of venue types, often in rural communities and other areas traditionally underserved by the genre. For more information, go to:
http://philanthropynewsdigest.org/rfps/rfp11030-south-arts-invites-applications-for-jazz-road-tours-grants?utm_medium=email&utm_source=PND%20Arts%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=afw20200401_email

4/24/20   Northern New York Community Foundation Invites Applications for Orchestral Performances in Watertown Area
Grants of up to $20,000 will be awarded to organizations with at least twenty performers and an instrumental component in support of Watertown-area performances. For more information, go to:
http://philanthropynewsdigest.org/rfps/rfp11014-northern-new-york-community-foundation

4/29/20   Robert Wood Johnson Foundation /Policies for Action: Research on Housing Policies that Promote Equity
The Policies for Action research program is releasing Policies for Action: Research on Housing Policies That Promote Equity call for proposals (CFP) to investigate the effectiveness of state, county, and city public policies aimed at increasing housing affordability and stability; addressing racial segregation and isolation from opportunity; and increasing access to opportunity-rich neighborhoods and place-based resources. Applications including researchers from underrepresented groups are encouraged. Funding mount: Up to $250K.
Guidelines: https://www.rwjf.org/en/library/funding-opportunities/2020/policies-for-action-research-on-housing-policies-that-promote-equity.html

4/30/2020   Bank of America Invites Proposals for Art Conservation Project Grants
Grants will be awarded to museums and cultural institutions in support of efforts to conserve works of art in danger of deterioration, including works that have been designated as national treasures.
http://philanthropynewsdigest.org/rfps/rfp11036-bank-of-america-invites-proposals-for-art-conservation-

projectgrants?utm_medium=email&utm_source=PND%20Arts%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=afw20200401_email

4/30/20   Bank of America Art Conservation Project
Museums and cultural institutions are invited to submit a proposal to conserve works of art that meet the following criteria:
• Significant to the cultural heritage of the country or region, or important to the history of art
• On view to the public (and/or will be on view once conservation is complete)
• Paintings, works on paper, photographs, sculpture, architectural or archeological pieces, important books or manuscripts, tapestries or works of decorative or applied art that are in danger of degeneration. Funding Amount: Varies
Guidelines: https://about.bankofamerica.com/assets/pdf/acp-2020-proposal-information.pdf

4/30/20; 10/31/20   The Lawrence Foundation: Funding for Environmental, Education, Human Services Projects
The Lawrence Foundation awards grants to organizations working in the areas of the environment, education, human services, and disaster relief. The foundation awards both program and operating grants with no geographic restrictions to nonprofit organizations that qualify for tax-exempt status under section 501(c)(3) of the Internal Revenue Code, as well as public schools and libraries.
Guidelines: https://thelawrencefoundation.org/application-process/

5/1/20   John Templeton Foundation: Academic Cross-Training (ACT) Fellowship program
The John Templeton Foundation invites applications for its Academic Cross-Training (ACT) Fellowship program beginning December 1, 2019, with fellowships to begin Fall 2021. The ACT Fellowship program is intended to equip recently tenured (after September 2009) philosophers and theologians with the skills and knowledge needed to study Big Questions that require substantive and high-level engagement with empirical science. Up to $220,000 (US dollars) provided for up to 33 months of contiguous support for a systematic and sustained course of study in an empirical science such as physics, psychology, biology, genetics, cognitive science, neuroscience, or sociology.
Guidelines: https://www.templeton.org/internal-competiton-fund/academic-cross-training-fellowship-2020

5/1/20   Driehaus Foundation Accepting Applications from Chicago Arts and Cultural Organizations
General operating support grants will be awarded to Chicago-based arts and cultural organizations with budgets of no more than $500,000.
http://philanthropynewsdigest.org/rfps/rfp11051-driehaus-foundation-accepting-applications-from-chicago-arts-and-cultural-organizations?utm_medium=email&utm_source=PND%20Arts%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=afw20200401_email

5/15/20   Ray C. Anderson Foundation Next-Gen Grant: Call for Proposals

The Foundation's NextGen Committee requests proposals that would measurably reduce existing or avoid future emissions of greenhouse gases in the atmosphere. Building upon the success of the past two years of similar grantmaking, and with the desire to increase the breadth of quality proposals, the Committee is issuing a new call for proposals for one $100,000 grant that can help to reverse global warming. Proposals will be judged on the potential to help reverse global warming. The Committee will also give strong consideration to meaningful social and environmental benefits associated with the carbon reduction potential of the project. Guidelines: https://www.raycandersonfoundation.org/nextgengrant2020

6/10/20   Vilcek Foundation 2021 Vilcek Prizes for Creative Promise in Filmmaking
The Vilcek Foundation will award three Creative Promise Prizes of $50,000 each to young foreign-born filmmakers who demonstrate outstanding early achievement. Eligible genres include narrative, animation, documentary, and experimental filmmaking. For description of applicant qualifications and criteria, go to: Guidelines: https://vilcek.org/prizes/vilcek-prizes-for-creative-promise/creative-promise-prizes-arts/

2/1/20; 8/1/20   American Honda Foundation Youth Education Programs
The American Honda Foundation, the philanthropic arm of the American Honda Motor Company, is accepting applications from nonprofit organizations and schools for youth education programs with a focus on science, technology, engineering, and mathematics. Environmental projects, job training, and literacy programs also will be considered. Funding Amount: $20K-$75K.
Guidelines: https://www.honda.com/community/applying-for-a-grant

Rolling Deadline   Dance/NYC Accepting Applications for Coronavirus Dance Relief Fund
Grants ranging between $25,000 and $500,000 for dance making organizations in the New York City metro area and of $500 (up to a maximum of $1,500) for freelance dance workers will be awarded to mitigate the growing impact of COVID-19.
http://philanthropynewsdigest.org/rfps/rfp11041-dance-nyc-accepting-applications-for-coronavirus-dance-relief-fund?utm_medium=email&utm_source=PND%20Arts%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=afw20200401_email

Rolling Deadline   NYFA, Rauschenberg Foundation Announces Rauschenberg Emergency Grants Program
Through the program, one-time grants of up to $5,000 will be awarded to individual artists for costs associated with unexpected medical emergencies.
http://philanthropynewsdigest.org/rfps/rfp11006-nyfa-rauschenberg-foundation-announces-rauschenberg-emergency-grants-program?utm_medium=email&utm_source=PND%20Arts%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=afw20200401_email

Rolling Deadline   Robert Wood Johnson Foundation: Evidence for Action: Investigator-Initiated Research to Build a Culture of Health

The Robert Wood Johnson Foundation is accepting Letters of Intent for its Evidence for Action: Investigator-Initiated Research to Build a Culture of Health, a national program that supports the foundation's commitment to building a Culture of Health in the United States. The program aims to provide individuals, organizations, communities, policymakers, and researchers with the empirical evidence needed to address the key determinants of health encompassed in the Culture of Health Action Framework, as well as efforts to assess outcomes and set priorities for action. Investigators from a variety of areas and disciplines.
Guidelines: http://www.rwjf.org/en/library/funding-opportunities/2015/evidence-for-action-investigator-initiated-research-to-build-a-culture-of-health.html

Rolling Deadline   John S. and James L. Knight Foundation: Governance, Norms and Values – Research on the Future of the Internet. Funding at various amounts.
The John S. and James L. Knight Foundation seeks to support fundamental research that addresses issues of rules, norms and governance of the internet and digital platforms. Recent research, policy debates and public controversies have highlighted the absence of uniform consensus on the norms, rights and responsibilities that should govern digital services, in particular social media. We wish to fund scholarly inquiry and novel approaches that will strengthen our democracy as the digital age progresses. We will consider proposals to support: Research and Pedagogy, Faculty, and Fellowships.
Guidelines: https://www.knightfoundation.org/funding-opp-research-norms-rules-governance-internet-digital-platforms

Letter of Inquiry Accepted Anytime   James S. McDonnell Foundation: 21st Century Collaborative Activity Awards. No funding amount stated.
The James S. McDonnell Foundation offers Collaborative Activity Awards to initiate interdisciplinary discussions on problems or issues, to help launch interdisciplinary research networks, or to fund communities of researchers/practitioners dedicated to developing new methods, tools, and applications of basic research to applied problems. In each case the focus of the collaborative activity must meet the program guidelines for one of the following program areas: Studying Complex Systems, Understanding Human Cognition, or Mathematical & Complex Systems Approaches for Brain Cancer. Strong preference will be given to applications involving multi-institutional collaboration. There are no geographic restrictions on these awards and the foundation encourages international applications.
Guidelines: https://www.jsmf.org/apply/

Concept Papers Accepted at Any Time   Smith Richardson Foundation: Domestic Public Policy Program
Funding amount varies. The mission of the Smith Richardson Foundation is to contribute to important public debates and to address serious public policy challenges facing the United States. The foundation seeks to help ensure the vitality of our social, economic, and governmental institutions. It also seeks to assist with the development of effective policies to compete internationally and to advance U.S. interests and values abroad. The Domestic Public Policy Program supports projects that will help the public and policy makers understand and address critical challenges facing the United States. To that end, the foundation supports

research on and the evaluation of existing public policies and programs, as well as projects that inject new ideas into public debates.
Guidelines: https://www.srf.org/programs/domestic-public-policy/

Rolling deadline   John S. and James L. Knight Knight Foundation: Governance, Norms and Values – Research on the Future of the Internet
Varying funding amount. The John S. and James L. Knight Foundation seeks to support fundamental research that addresses issues of rules, norms and governance of the internet and digital platforms. Recent research, policy debates and public controversies have highlighted the absence of uniform consensus on the norms, rights and responsibilities that should govern digital services, in particular social media. We wish to fund scholarly inquiry and novel approaches that will strengthen our democracy as the digital age progresses. We will consider proposals to support: Research and Pedagogy, Faculty, and Fellowships.
Guidelines: https://www.knightfoundation.org/funding-opp-research-norms-rules-governance-internet-digital-platforms

News
--Coronavirus NEH Supplemental Humanities Funding: As recently announced, NEH will receive $75 million in supplemental funding to assist cultural institutions and humanists affected by the coronavirus pandemic as part of the $2.2 trillion CARES Act economic stabilization plan. NEH Chairman Peede has confirmed that 100 percent of this supplemental funding will be distributed to grantees. These emergency relief grants will be awarded on a rolling basis and will be announced separately.
Approximately 40 percent of the appropriation, or $30 million, will go directly to the 56 state and jurisdictional humanities councils. The remaining 60 percent, or $45 million, will support at-risk humanities positions and projects at museums, libraries and archives, historic sites, colleges and universities, and other cultural nonprofits that have been financially impacted by the coronavirus. All NEH supplemental funds must be obligated to projects by September 30, 2021.
For more information, go to: https://www.neh.gov/COVID19_FAQs

Netflix Launches $100 Million Creative Industry COVID-19 Relief Fund
--Netflix has announced the launch of a $100 million fund to assist individuals in the film and television industry impacted by the global COVID-19 pandemic. The largest portion of the funds will support workers on Netflix's productions around the world, including $15 million to assist third parties and nonprofits that are providing emergency relief to out-of-work crew and cast in the countries where Netflix has a large production base. In the United States and Canada, commitments include $1 million to the SAG-AFTRA Foundation Covid-19 Disaster Fund, $1 million to the Motion Picture and Television Fund, $1 million to the Actors Fund Emergency Assistance, and $1 million between the AFC and Fondation des Artistes. For more information, go to:
http://philanthropynewsdigest.org/news/netflix-launches-100-million-creative-industry-covid-19-relief-fund?utm_medium=email&utm_source=PND%20Arts%20Funding%20Watch%20-%20All%20Subscribers&utm_campaign=afw20200401_email

ERC Engineering Workforce Development and K-12 Engineering Education

By Mike Cronan, PE, co-publisher
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In a fortuitous coincidence for research offices, the National Academy Press last month posted free for download the 260-page report, Building Capacity for Teaching Engineering in K-12 Education, within days of NSF posting the new solicitation for Gen-4 Engineering Research Centers (ERC): *Convergent Research and Innovation through Inclusive Partnerships and Workforce Development*. However, it is likely not so coincidental that last September the National Science Board published the 58-page report, The Skilled Technical Workforce: Crafting America's Science & Engineering Enterprise.

Why is this important? Well, there are several reasons, first and foremost among them that the ERC competitions, starting back in 1984 (for ERC history see Chief Architect of the ERC Program, Lynn Preston Retires), typically result in many hundreds of universities participating in partnerships with each other and industry, along with community colleges, K-12 schools, and numerous other STEM stakeholders, in competing for one of the largest and most prestigious center-level NSF awards, now worth roughly $26 million each over five years.

The key to understanding, and many would say decoding, what it takes to plan, develop and write a funded ERC can be gleaned from paying attention to an often overlooked part of the solicitation title, "*Convergent Research and Innovation through Inclusive Partnerships and Workforce Development*." Admittedly, NSF is addicted to using specialized language in its programmatic descriptions, ***resulting in a continuously evolving lexicon of NSF terms with new meanings***. In this context, one of the tenets of successful grant writing is to understand the importance of the mission, culture, ***and language*** of the funding agency. This is especially true of NSF, particularly as it relates to understanding the evolving language that frames the agency's vision, goals and objectives, which, in turn, motivate funding solicitations.

For example, anyone working on an ERC needs to have a clear understanding of what the agency means by "**convergence**," "**innovation**," "**inclusive partnerships**," and "**workforce**." Moreover, the meaning for these terms will not come from a dictionary but from reading NSF solicitations, reports, workshops, etc. to determine their contextual meaning. As Inigo Montoya said to Vizzini in the *Princess Bride,* "*Inconceivable!" "You keep using that word. I do not think it means what you think it means*." That is good advice for NSF's lexicon--***many words in an NSF solicitation may not mean what you think they mean***. They are like an onion with layers of meaning built up over time through agency use and programmatic evolution as projects are funded and evaluated over time.

A case in point. A major section of a full ERC proposal in the new solicitation is specific to Engineering Workforce Development (EWD). Here is where things can get a bit slippery, as NSF notes in the solicitation (emphasis added) "***Rather*** than a ***comprehensive set of training opportunities*** (general public, faculty, professional, vocational, graduate, undergraduate, and K-12), EWD programs should include ***a strategic selection of targeted activities that will enable the long-term vision*** of the Center."

It is important to understand that the above *is not a distinction without a difference;* rather, it indicates the linguistic nuance of an NSF solicitation that may not be fully appreciated by those proposing to lead an ERC. This is an area, i.e., *informed interpretation of the language and terms used by NSF in funding solicitations*, where *research offices can provide faculty with invaluable assistance*.. And why is this? Well, for starters, using the above example on EWD, NSF makes clear that the agency **does not want** an ERC to propose a "*comprehensive set of training activities*" but does want a "*strategic selection of targeted activities that will enable the long-term vision of the Center*." It is not an exaggeration to state that, over time, *research offices "develop an ear" for NSF language and terms* that typically infuse funding solicitations. This language carries a more complex meaning than is apparent in a first read by someone unfamiliar with the NSF lexicon. That *unfamiliarity amounts to a competitive disadvantage to those without the benefit of a good ear.*

In this case, those research office professionals who have watched NSF webinars, read NSF reports, reviewed abstracts of funded NSF projects, read multiple NSF solicitations, followed NSF Dear Colleague Letters, etc., will know that NSF is asking that the EWD section of the ERC proposal *avoid a siloed description (i.e., walled off from each other and from the core research focus) of programmatic activities* to be undertaken by the general public, faculty, professional, vocational, graduate, undergraduate, and K-12 students. They do want to see a *strategic EWD plan for selecting specific activities characterized as components of a thoughtfully integrated framework whereby the EWD activities make sense in the context of the overall research vision for the proposed ERC and clearly enable that vision*.

As another example, many may recall that, a decade or so ago, NSF grew increasingly frustrated with proposals that **completely misinterpreted** NSF examples of Broader Impacts as a prescriptive listing of multiple activities, all of which needed to be included in a Broader Impacts section of the proposal. Research offices can contribute importantly to faculty success at NSF by *translating the NSF language and terms used in solicitations into guidance* for responding to a funding solicitation in a way that is clearly informed by NSF expectations for what a successful proposal to that agency should look like. **Bottom line here**: if those leading an ERC or similar NSF proposal do not fully grasp the meaning of NSF language, then their proposals *will not respond fully to the NSF vision that motivates the funding opportunity*.

So coming back full circle to the first paragraph, when writing the required EWD section of the ERC proposal, research offices and faculty will find Building Capacity for Teaching Engineering in K-12 Education an invaluable source of information and guidance for developing K-12 engineering activities for a major engineering research center. Importantly, this guidance will be offered in the context of preparing the future workforce (also see Developing a National STEM Workforce Strategy, A Workshop Summary (2016). Anyone planning an ERC or anyone participating in an ERC as an educational partner will want some familiarity with this report to ensure that your proposed *EWD activities make sense in the context of the overall research vision for the proposed ERC and clearly enable that vision*.

New Coronavirus-related Funding Opportunities

By Lucy Deckard, co-publisher
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It's widely recognized that the solution to the coronavirus pandemic will ultimately depend on new science and technology. As a result, federal agencies that fund scientific research are stepping up to fund research that could help address this global crisis. Since it takes time to develop new solicitations and allocate funds, many funders are encouraging researchers to apply to existing opportunities (often investigator-initiated mechanisms) on COVID-related topics. Note that most (but not all) of NIH's current opportunities are only available to current **awardees** as supplements or renewals – another way to get funding out the door quickly. Below is a list of current and new funding opportunities for research related to COVID-19. More opportunities are expected, so if you're doing research that could help address or understand the pandemic, be sure to keep an eye out for new funding opportunities from agencies that fund your research.

National Science Foundation (NSF)

- **Dear Colleague Letter NSF 20-052** RAPID.

  NSF is accepting proposal to their **existing funding opportunities** (e.g., disciplinary or core programs) using the **RAPID mechanism**. Projects should propose to conduct non-medical, non-clinical-care research that can be used immediately to explore how to model and understand the spread of COVID-19, to inform and educate about the science of virus transmission and prevention, and to encourage the development of processes and actions to address this global challenge. (RAPIDs are internally reviewed. Directions for RAPID proposals can be found in the PAPPG.) Note that before you submit a RAPID, **you must talk to an NSF program officer** and receive an email encouraging you to submit a RAPID proposal.

- **Dear Colleague Letter NSF 20-065. Request for SBIR/STTR Phase I Proposals Addressing COVID-19.**
  Invitation to US-based small businesses to submit Phase I proposals focused on the development and deployment of new technologies, products, processes, and services with the potential to positively impact the nation's and world's ability to respond to the COVID-19 crisis.

National Institutes of Health (NIH)

- **NOT-OD-20-097 - Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements and Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus and the Behavioral and Social Sciences.**
  Encourages urgent competitive supplements and administrative **supplements to existing longitudinal studies** that address key **social and behavioral questions** related to the COVID-19 pandemic, including adherence to and transmission mitigation from various containment and mitigation efforts; social, behavioral, and economic impacts from these

containment and mitigation efforts; and downstream health impacts resulting from these social, behavioral, and economic impacts, including differences in risk and resiliency based on gender, race and ethnicity, socioeconomic status, and other social determinants of health.

- **NOT-ES-20-020 - Notice of Special Interest (NOSI): NIEHS Support for Understanding the Impact of Environmental Exposures on Coronavirus Disease 2019 (COVID-19).**

    The National Institute of Environmental Health Sciences (NIEHS) encourages applications for mission-relevant research to understand the impact of environmental exposures on Coronavirus Disease 2019 (COVID-19) and its causative agent, the severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2). NIEHS is particularly interested in applications that will provide insight into *the role of environmental exposures* in pathogenicity, transmission, individual susceptibility, or prevention and intervention strategies. To apply, you can use *several mechanisms:*

    o   For a supplement to a *current funded NIEHS grant* within your scope of work, apply to PA-18-591 (Administrative Supplement)

    o   For a work related to a *current funded NIEHS grant*, but outside the original scope of work, apply to PA-18-935 (Urgent Competitive Revision)

    o   For a *new R21 grant* that doesn't build off an existing NIEHS grant, apply to RFA-ES-19-011 (Time-Sensitive Research Opportunities in Environmental Sciences) providing the time-sensitive criteria are met. (The entire cycle from submission to award is expected to be 3 – 4 months.)

- **NOT-EB-20-028 - Notice of Special Interest (NOSI): Availability of Emergency Competitive Revision and Administrative Supplements on Biomedical Technologies for Coronavirus Disease 2019 (COVID-19).**

    The National Institute of Biomedical Imaging and Bioengineering (*NIBIB*) is seeking applications from *current grantees* to *develop life-saving technologies* that can be ready for commercialization within one to two years. Follow the instructions in PA-20-135 (Emergency Competitive Revision to Existing NIH Awards (Emergency Supplement - Clinical Trial Optional) or PA-18-591 (Administrative Supplements to Existing NIH Grants and Cooperative Agreements (Parent Admin Supp Clinical Trial Optional), with additions stated in the NOSI.

- **NOT-EB-20-007 - Notice of Special Interest (NOSI): Development of Biomedical Technologies for Coronavirus Disease 2019 (COVID-19).**

    The National Institute of Biomedical Imaging and Bioengineering (*NIBIB*) is seeking *new applications* to develop *life-saving technologies* that can be ready for commercialization within one to two years. Applications may be submitted to the following opportunities:

    o   R01: PA-19-056 (no clinical trial) or PA-18-418 (clinical trial)

    o   R01 Academic-Industrial Partnerships for Translation of Technologies for Diagnosis and Treatment: PAR-18-530

- o R01 Academic-Industrial Partnerships (AIP) to Translate and Validate In Vivo Imaging Systems: PAR-20-155

- o R21 NIBIB Trailblazer Award for New and Early Stage Investigators: PAR-18-433

- o R03 Parent Solicitation (no clinical trial): PA-19-052

- **NOT-EB-20-006** - **Notice of Special Interest (NOSI): Small Business Research and Development of Biomedical Technologies for Coronavirus Disease 2019 (COVID-19).**

  The **NIBIB** is seeking applications from small businesses to develop life-saving technologies that can be ready for commercialization within one to two years. Apply through the following opportunities:
  - o PA-19-270 (Parent STTR no clinical trial)
  - o PA-19-272 (Parent SBIR no clinical trial)
  - o PA-18-631 (NIBIB Exploratory Clinical Trials for Small Businesses)

- **NOT-GM-20-027** - **Notice of Special Interest (NOSI): Urgent Competitive Revisions to Accelerate Research on the Development of Predictive Models of the Spread of SARS-CoV-2 and Outcomes of Potential Public Health Interventions on COVID-19.**

  National Institute for General Medical Sciences (**NIGMS**) will accept applications for Competitive Revisions to **active U24** awards for eligible organizations to rapidly provide pilot or supplementary funds to researchers **studying the development of predictive models for the spread of SARS-CoV-2 and outcomes of possible COVID-19 public health intervention measures** in order to accelerate such research. Eligible organizations are those with an active NIGMS U24 award responsible for storing, managing, and promoting the shared efforts of a network of researchers studying the modeling of infectious diseases. Submit through PA-18-935.

- **NOT-AT-20-011** - **Notice of Special Interest (NOSI): Availability of Administrative Supplements and Urgent Competitive Revisions for Research on Stress Management in Relation to Coronavirus Disease 2019 (COVID-19).**

  National Center for Complementary and Integrative Health (**NCCIH**), National Institute on Aging (**NIA**), National Institute on Alcohol Abuse and Alcoholism (**NIAAA**) will support research on **stress management strategies, including mind and body approaches, that individuals may engage in remotely to address stressors related to social distancing, as well as to address recovery and recurrence of symptoms during and after COVID-19 infections**. Eligibility is limited to currently funded NIH grantees under:
  - o PA-18-935 (for grantees applying to **expand the scope** of their active grant)
  - o PA-18-591 (for grantees applying for supplements to conduct work **within the scope** of their active grant)

- **NOT-CA-20-042** - **Notice of Special Interest (NOSI): National Cancer Institute Announcement Regarding Availability of Urgent Competitive Revision and Administrative Supplements on Coronavirus Disease 2019 (COVID-19).**

  The National Cancer Institute (**NCI**) seeks to fund **current grantees** for research on Coronavirus Disease 2019 (COVID-19) and the effects of its causative agent, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), on cancer, and vice versa. Topics of

specific interest to NCI include ***understanding the basic mechanisms of interaction between SARS-CoV-2 and cancer cells, co-morbidities of cancer and SARS-CoV-2 infection*** (especially in disparately affected patient populations), and the ***impacts on treatment and clinical outcomes*** of SARS-CoV-2 infected persons ***in the context of cancer***.

- ○ [PA-18-935](#) (for grantees applying to ***expand the scope*** of their active grant)
- ○ [PA-18-591](#) (for grantees applying for supplements to conduct work ***within the scope*** of their active grant)

- **[NOT-DK-20-020](#) - Notice of Special Interest (NOSI): Availability of Urgent Competitive Revision Supplements on Coronavirus Disease 2019 (COVID-19) Related to HIV Comorbidities, Coinfections, and Complications within NIDDK's Mission.**

   National Institute of Diabetes and Digestive and Kidney Diseases ***(NIDDK)*** is interested in studies to elucidate ***if COVID-19 might provoke or exacerbate noncommunicable gastrointestinal, liver, kidney/urological and metabolic/endocrine disease***s in people with HIV (PWH) or worsen the consequences of viral hepatitis coinfection. Conversely, it is also important to ***elucidate whether people with HIV (PWH) with CCCs within the mission of NIDDK have different COVID-19 outcomes***. Apply through [PA-18-935](#).

- **[NOT-MD-20-019](#) - Notice of Special Interest (NOSI): Competitive and Administrative Supplements for the Impact of COVID-19 Outbreak on Minority Health and Health Disparities.**

   NIMHD, NIA and ***NIMH*** seek to fund <u>***current grantees***</u> to conduct research on the impact of the novel Coronavirus (SARS-CoV-2) pandemic causing COVID-19 disease outbreaks and the resulting disruptions on **individual and social wellbeing, health services use, and health outcomes for NIH-designated health disparity populations.**

- ○ [PA-18-935](#) (for grantees applying to ***expand the scope*** of their active grant)
- ○ [PA-18-591](#) (for grantees applying for supplements to conduct work ***within the scope*** of their active grant)

- **[NOT-TR-20-017](#) - Notice of Special Interest (NOSI) regarding the Availability of Emergency Competitive Revisions to Existing NIH Grants and Cooperative Agreements for Tissue Chips Research on the 2019 Novel Coronavirus.**

   The National Center for Advancing Translational Sciences (**NCATS**) announces the availability of competitive revisions for investigators and institutions funded through: the NIH Microphysiological Systems (MPS) Program; or the SBIR/STTR-supported investigators, provided the award ***involves tissue chips***; or microphysiological systems programs from across NIH. NCATS will accept the submission of applications for ***Competitive Revisions to*** <u>***active grants***</u> to address only the following research areas of interest: 1) Incorporation of new and emerging data related to SARS-CoV-2 into ongoing research efforts to develop microphysiological systems/tissue chips models for COVID-19; 2) Use of microphysiological systems/tissue chips or evaluating, repurposing or modification of diagnostic tools to enable rapid detection of COVID-19 infection; 3) Use of microphysiological systems/tissue chips for the rapid development and assessment of potential therapeutic agents for COVID-19. Apply to [PA-20-135](#) (Emergency Competitive Revision to Existing NIH Awards – Emergency Supplement), but follow NOSI directions.

- **NOT-TR-20-016 – Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements for Tissue Chips Research on the 2019 Novel Coronavirus.** NCATS is especially interested in research in the use of microphysiological systems or tissue chips in collecting and examining data on the risks and outcomes for COVID-19 infection, and advance the translation of research findings into diagnostics, therapeutics, and vaccines. Apply to PA-18-591 Administrative Supplements to Existing NIH Grants and Cooperative Agreements (Parent Admin Supp. Clinical Trial Optional)

- **NOT-MH-20-047 - Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements and Urgent Competitive Revisions for Mental Health Research on the 2019 Novel Coronavirus.**

  NIMH is especially interested in funding **_current awardees_** to conduct research to provide an evidence base for how a disrupted workforce may adequately respond/adapt to and maintain services or provide additional care for new or increasing mental health needs, as well as to learn about the effects of the virus and public health measures to prevent spread of COVID-19 that may have an impact on mental health. Research addressing the intersection of COVID-19, mental health, and HIV treatment and prevention are also of interest to NIMH.
  - PA-18-935 (for grantees applying to *expand the scope* of their active grant)
  - PA-18-591 (for grantees applying for supplements to conduct work *within the scope* of their active grant)

- **NOT-CA-20-043 - Notice of Special Interest (NOSI): National Cancer Institute Announcement regarding Availability of Competitive Revision SBIR/STTR Supplements on Coronavirus Disease 2019 (COVID-19).**

  To accelerate the development of promising technologies, the NCI encourages applications from **_small businesses_** with ***NCI-funded active SBIR/STTR awards*** for technologies that have a strong potential to be adapted/repurposed for use as a ***prophylactic, therapeutic or diagnostic tool for SARS-CoV-2*** (COVID-19). Apply to PA-18-935 (Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements).

- **NOT-ES-20-015 - Notice of Special Interest (NOSI): NIEHS Support for Understanding the Impact of Environmental Exposures on Coronavirus Disease 2019 (COVID-19).**

  The National Institute of Environmental Health Sciences (***NIEHS***) understand the ***impact of environmental exposures on Coronavirus Disease 2019*** (COVID-19) and its causative agent, the severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2). NIEHS is particularly interested in applications that will provide insight into the role of environmental exposures in pathogenicity, transmission, individual susceptibility, or prevention and intervention strategies. Apply to apply to RFA-ES-19-011 (Time-Sensitive Research Opportunities in Environmental Sciences) for ***new grants*** or to PA-20-135 (emergency supplement) ***for existing grants***.

- **NOT-DK-20-018 - Notice of Special Interest (NOSI): Availability of Urgent Competitive Revision Supplements on Coronavirus Disease 2019 (COVID-19) within the Mission of NIDDK.**

The National Institute of Diabetes and Digestive and Kidney Diseases (**NIDDK**) seeks to fund supplements to **existing grants** to improve our understanding and available control measures for COVID-19, related to **kidney injury and digestive system disorders**, in specific areas of interest, including collection of biosamples and a number of other topics detailed in the NOSI. **Note that this NOSI expires June 2, 2020.** Apply to PA-18-935 (Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements).

- **NOT-DC-20-004 - Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions and Administrative Supplements for Research on Coronavirus Disease 2019 (COVID-19).**

  The National Institute on Deafness and Other Communication Disorders (**NIDCD**) seeks to fund research related to COVID-19 in relation to NIDCD's scientific mission areas of **hearing, balance, taste, smell, voice, speech and language**. **Note that this NOSI expires June 2, 2020.** To be eligible, you must be **currently funded**. Apply to PA-18-935 (Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements) or PA-18-591 Administrative Supplements to Existing NIH Grants and Cooperative Agreements. Applications will be accepted on a rolling basis.

- **NOT-HL-20-757 - Notice of Special Interest (NOSI): Availability of Administrative Supplements and Revision Supplements on Coronavirus Disease 2019 (COVID-19).**

  National Heart, Lung, and Blood Institute (**NHLBI**) seeks to fund research on COVID-19 related to host response, associations with heart, lung, and blood (HLB) diseases, potential impacts on transfusion safety, and clinical outcomes of infected individuals. To be eligible, you must be **currently funded**. Apply to PA-18-935 (Urgent Competitive Revision to Existing NIH Grants and Cooperative Agreements) or PA-18-591 Administrative Supplements to Existing NIH Grants and Cooperative Agreements. Applications will be accepted on a rolling basis.

- **NOT-AG-20-022 - Notice of Special Interest (NOSI): NIA Availability of Administrative Supplements and Revision Supplements on Coronavirus Disease 2019 (COVID-19).**

  The National Institute on Aging (**NIA**) is encouraging the submission of applications for either Administrative Supplements (PA-18-591) or Competitive Revisions (PA-18-935) **to active grants** to address the areas of interest in aging biology, neuroscience, geriatrics and clinical gerontology, and behavioral and social research. The National Institute of Mental Health (**NIMH**) will also consider support of supplements and revisions that fall within its scope.

- **NOT-HG-20-030 - Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus.**

  The National Human Genome Research Institute (**NHGRI**) is encouraging the submission of applications for either Administrative Supplements (PA-18-591) or Competitive Revisions (PA-18-935) **to active grants** to address areas of interest including genomic studies utilizing generalized approaches that take advantage of human research or model systems to study the consequences of SARS-CoV-2 infection. Supported research is expected to guide and inform future efforts to diagnose, prevent, mitigate, or treat this viral infection. (This NOT expires May 16, 2020.)

- **NOT-TR-20-012** - **Notice of Special Interest (NOSI): Repurposing Existing Therapeutics to Address the 2019 Novel Coronavirus Disease (COVID-19).**

    National Center for Advancing Translational Sciences (***NCATS***) seeks to fund new projects that repurpose existing drugs or biologics (existing therapeutics) that have already begun or completed a Phase I clinical trial. The hypothesis for proposed studies must be developed using innovative processes to identify the therapeutic/indication pair. Apply to PAR-17-465 (UG3/UH3), PA-18-462 (U34), or PAR-18-332 (U01).

- **NOT-AI-20-034** - **Notice of Special Interest (NOSI) regarding the Availability of Emergency Competitive Revisions for Research on Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease 2019 (COVID-19).**

    The National Institute of Allergy and Infectious Diseases (***NIAID***) seeks to fund competitive revisions to ***active NIAID grants*** focusing on viral natural history, pathogenicity, transmission, as well as projects developing medical countermeasures and suitable animal models for pre-clinical testing of vaccines and therapeutics against SARS-CoV-2/COVID-19. Apply to PA-20-135.

- **NOT-GM-20-025** - **Notice of Special Interest (NOSI) regarding the Availability of Urgent Competitive Revisions for Research on Coronavirus Disease 2019 (COVID-19) and the Causative Virus SARS-CoV-2.**

    National Institute of General Medical Sciences (***NIGMS***) seeks to fund competitive revisions to ***active NIGMS grants*** focusing on: 1) Incorporation of data related to SARS-CoV-2 into ongoing research efforts to develop predictive models for the spread of SARS-CoV-2 and other related infectious agents (all relevant grants); 2) Repurposing or modification of diagnostic tools currently under development to enable rapid detection of SARS-CoV-2 infection (SBIR/STTR grants only); or 3) Rapid development of potential therapeutic agents for COVID-19 (SBIR/STTR only). Apply to PA-18-935.

- **NOT-TR-20-011** - **Notice of Special Interest (NOSI): Clinical and Translational Science Award (CTSA) Program Applications to Address 2019 Novel Coronavirus (COVID-19) Public Heath Need.**

    National Center for Advancing Translational Sciences (***NCATS***) seeks to fund administrative supplements to ***existing grants*** and applications to ***limited competitions*** (from current CTSA hub institutions) focusing on the use of informatics solutions to diagnose cases and the use of CTSA-supported core resources (e.g., advanced scientific instruments, highly-specialized facilities, and regulatory expertise) to facilitate research on COVID-19 and advance the translation of research findings into diagnostics, therapeutics, and vaccines. Apply to PA-18-591, PAR-19-099, PAR-19-100, or PAR-19-337.

- **NOT-DA-20-047** - **Notice of Special Interest (NOSI) regarding the Availability of Administrative Supplements and Urgent Competitive Revisions for Research on the 2019 Novel Coronavirus.**

    National Institute on Drug Abuse (***NIDA***) seeks to fund competitive revisions and administrative supplements to ***existing grants*** for research to rapidly improve our understanding of the risks, prevalence, and available control measures for 2019-nCoV in substance using or HIV-affected population. Apply to PA-18-935 (Urgent Competitive

Revision to Existing NIH Grants and Cooperative Agreements) or [PA-18-591](#) Administrative Supplements to Existing NIH Grants and Cooperative Agreements. Applications accepted on a rolling basis.

DoD Congressional Directed Medical Research Program (CDMRP)

- **CDMRP PRMRP Investigator-Initiated Research Award for Emerging Viral Diseases and Respiratory Health -** Supports studies that will make an important contribution toward research and/or patient care in one or more Focus Areas published in this Funding Opportunity for the FY20 PRMRP Topic Areas of Emerging Viral Diseases and/or Respiratory Health.

- **CDMRP PRMRP Technology/Therapeutic Development Award for Emerging Viral Diseases and Respiratory Health** - product-driven award mechanism intended to provide support for the translation of promising preclinical findings into products for clinical applications in one or more Focus Areas published in this funding opportunity for the FY20 PRMRP Topic Areas of Emerging Viral Diseases and/or Respiratory Health. Products in development should be responsive to the healthcare needs of military Service members, Veterans, and/or beneficiaries.

- **CDMRP PRMRP Clinical Trial Award for Emerging Viral Diseases and Respiratory Health** - supports the rapid implementation of clinical trials with the potential to have a significant impact in one or more of the Focus Areas published in this funding opportunity for the FY20 PRMRP Congressionally specified Topic Areas of Emerging Viral Diseases and Respiratory Health. Clinical trials may be designed to evaluate promising new products, pharmacologic agents (drugs or biologics), devices, clinical guidance, and/or emerging approaches and technologies.

National Institute of Standards and Technology (NIST)

- **2020-NIST-MFGUSA-NEAP-01: NIST Manufacturing USA National Emergency Assistance Program –** Funds high-impact projects designed to respond to the COVID-19 pandemic. *Only current Manufacturing USA institutes are eligible.*

Agency for Health Care Research and Quality (AHRQ)

- **(Forecasted) [PA-20-071](#): Announcement to Support Novel, High-Impact Studies Evaluating Health System and Healthcare Professional Responsiveness to COVID-19 -** The health systems research community should prepare to submit applications to AHRQ to fund critical research focused on evaluating topics such as innovations and challenges encountered in the rapid expansion of telemedicine in response to COVID-19, effects on quality, safety, and value of health system response to COVID-19, and the role of primary care practices and professionals during the COVID-19 epidemic. AHRQ is particularly interested in understanding how digital health innovations contributed to health system and healthcare professional innovation and challenges and solutions to meeting the needs of vulnerable populations including older adults, people living with multiple chronic conditions, rural communities, and uninsured and underinsured populations.

Department of Defense (DoD)

- **BRO-20-NEWTON: Newton Award for Transformative Ideas during the COVID-19 Pandemic** - This award will be presented to a single investigator or team of up to two investigators that develops a "transformative idea" to resolve challenges, advance frontiers, and set new paradigms in areas of immense potential benefit to DoD and the nation at large. Proposals should aim to produce novel conceptual frameworks or theory-based approaches that present disruptive ways of thinking about fundamental scientific problems that have evaded resolution, propose new, paradigm-shifting scientific directions, and/or address fundamental and important questions that are argued to be undervalued by the scientific community. Approaches can include analytical reasoning, calculations, simulations, and thought experiments. While the use and production of datasets is allowed, any new supporting data should be generated without the use of any experimentation or instrumentation, as the nation-wide closure of laboratories limits the ability of investigators to follow normal safety procedures set by their institutions, in accordance with federal and state regulations.

Additional Resources:
- Watch for more NIH COVID-19-related funding announcements here.
- Open Mike Blog on COVID-19 funding opportunities.
- NSF Coronavirus information page (see the bottom subsection, "Research on Coronavirus")

One Common Mistake Made in Writing NSF ERC Proposals

By Mike Cronan, PE, co-publisher

I reviewed and edited my first ERC proposal in 1987, an ERC Gen-1 proposal funded in one disciplinary domain that was predominately a 25-page, highly focused technical description of the proposed research by a few PIs from one engineering discipline. That proposal would have **zero chance of funding today** and would be unrecognizable in the Gen-4 ERC context, where funding success requires "*Convergent Research and Innovation through Inclusive Partnerships and Workforce Development,*" or, as Dorothy might describe the evolution from Gen-1 to Gen-4 ERCs: "*Toto, I've a feeling we're not in Kansas anymore.*"

Since that time, I have reviewed, edited, (and occasionally re-written **non-technical** narrative sections), and commented on ERC preliminary and full proposals for nearly every competition since 1990. While the program evolved from Gen-1 ERCs to Gen-4 ERCs, *so too have the underlying mistakes common to a declined preliminary or full proposal*, or failed site visit (Gen-4 Engineering Research Centers (ERC): Convergent Research and Innovation through Inclusive Partnerships and Workforce Development).

It shouldn't be this way, and it is unfathomable why it is so commonly the case, but **a common mistake infects the ERC process: the proposal team has an insufficient and often siloed, as opposed to integrated team, understanding of the funding agency's expectations**. Several reasons account for this including (1) reading the proposers' expectations into a solicitation in lieu of the agency's expectations, (2) giving a perfunctory or careless reading of the solicitation that fails to grasp the agency's intent, and (3) team members failing to *read and review the solicitation as a team* and consequently establishing a **common understanding** of agency expectations. Nothing wastes an ERC team's time, energy and resources more than drafting ideas and proposing activities **uninformed by a close reading of the solicitation shared by the entire team**. Every decision made at the very early stages of an ERC will have an outsized impact on proposal competitiveness in the following months. Good decisions cannot be made if the ERC team does not share a common understanding of the solicitation.

For example, the core NSF expectation in this ERC competition is that the (emphasis added) ERC proposal will "exhibit **synergy** or **value-adding features** that **justify** center- or **institute-type support**, rather than an equivalent level of support for individual or small groups of investigators. The ERC must describe a **convergent approach** that will allow the ERC to have a **major societal impact**. The ERC must demonstrate a **management plan** that will support these efforts, and a commitment to the four foundational components (**convergent research, engineering workforce development, diversity and a culture of inclusion, and an innovation ecosystem**)."

While COVID-19 may initially prevent assembling the entire proposal team in a conference room, virtual team meetings will be critical at the early stages to put everyone on the same page. This is especially important for those who will be given writing and/or editing assignments on the project description. The PI needs to lead a discussion that goes stepwise

through the solicitation in a way that assures a common **team understanding** of NSF terms and definitions and how the proposed actions respond fully to the ERC vision addressed in the solicitation as encapsulated in the above quote. ***To do less is to invite a proposal that will falter at an early gate***, mostly likely the preliminary proposal gate.

Moreover, it has been observed that "History may not repeat itself. But it rhymes." This is good advice for the current ERC. The ERC Webinar of November 7, 2018 still remains relevant to understanding the current solicitation, at least until a more current webinar is scheduled specific to the 2020 solicitation. The resources listed below will also help ERC teams develop a more nuanced understanding of NSF expectations. Learn more about Gen-4 Engineering Research Centers (ERCs) through two new sources:

- Materials from the November 7, 2018, NSF webinar about the Gen-4 ERC solicitation
- Frequently Asked Questions (FAQs) (NSF 19-023) for NSF 19-503, Gen-4 ERCs
- Gen-4 ERC Solicitation Webinar - Webinar Slides now available
- ERC PD Consultation Office Hours - follow directions to schedule a single opportunity 30-minute consultation
- 2018 ERC Planning Grant Workshop - Program and Resources available
- What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)
- Map of Recent Awards Made Through This Program

Moreover, keep in mind that a 1.5 hour ERC Gen-4 webinar similar to the **one above from 2018** can't possibly cover all the information in the solicitation and referenced documents; therefore, in choosing what to present, ***program officers create an implied hierarchy of information***. This hierarchy points prospective applicants to the most critical sections of the solicitation.

For example, several good questions during the Q&A in 2018 prompted the program officers to elaborate on the importance of having a **robust strategy for ERC team formation.** The webinar materials make clear that successful applicants must understand **convergent research** and how it applies to their own proposed ERC inside out and six ways for Sunday. Moreover, applicants must both understand convergent research and develop a ***convincing strategic plan for achieving*** convergent research. These must be spelled out in the project description along with ***strategic plans for workforce development, diversity and inclusion, and an innovation ecosystem***. Of course, when asked to characterize convergence research, NSF program officers refer you to such documents as the March 23 Dear Colleague Letter: Growing Convergence Research, Characteristics of Convergence Projects, and Convergence Research at NSF. As one NSF program officer commented when asked to define convergence research, likely channeling Supreme Court Justice Potter Stewart's description of his threshold test for obscenity, "**I know it when I see it**." This throws the ball back into the court of the proposing team and accentuates the need to have a team understanding of the ERC solicitation from the get go.

As NSF noted in the 2018 webinar (using language close to that of the 2020 solicitation), successful proposals must demonstrate "strong synergies and a value-added rationale to justify the center approach." ***The strategy for team formation and the team process was repeatedly stressed during the webinar***. Centers must create social value and address possible

unintended consequences of the proposed research. The proposal must clearly identify the stakeholders, i.e., those who will be impacted by the project.

The webinar stressed another important theme: "***Do what makes sense in the context of the proposed research***." This cannot be overstressed. Structure the proposed team in a way that makes sense for the project. Show a ***thoughtfully structured center to achieve the vision being proposed***.

Finally, as noted in the solicitation, "NSF has continually refined the goals and purposes of the ERC program to meet shifting needs. The NSF-requested 2017 study from the National Academies of Sciences, Engineering, and Medicine (NASEM) A New Vision for Center-Based Engineering Research recommends that NSF place a greater emphasis on forming research centers focused on convergent research and education approaches that address challenges with significant societal impact. Complex societal problems require a convergent approach with a deep integration of knowledge, tools, and ways of thinking across disciplinary boundaries. A detailed explanation of the convergence concept can be found in a 2014 National Academies report, Convergence: Facilitating Transdisciplinary Integration of Life Sciences, Physical Sciences, Engineering and Beyond.

This current iteration of the ERC program reflects the recommendations from the NASEM study as well as other sources. The program continues to focus on advancing an engineered system through inclusive cross-disciplinary and cross-sector partnerships, while placing greater emphasis on research with high-risk/high-payoff ideas that lead to societal impact through convergent approaches, engaging stakeholder communities, and using team science concepts for their team formation.

But the bottom line remains: A **team** **<u>understanding</u>** of the ERC solicitation and related referenced documents in the solicitation is the foundation for success and will prove invaluable in guiding you towards a funded ERC.

NSF ERC Proposal Production and Task Assignments Schedule (PPTAS)

By Mike Cronan, PE, co-publisher

Planning, developing, and writing a proposal in response to the Gen-4 Engineering Research Centers (ERC): Convergent Research and Innovation through Inclusive Partnerships and Workforce Development is a major task involving several critical "go/no go" gates. These include a Letter of Intent due September 2, preliminary proposal due October 2, full proposal due May 7 (2021), and a site visit (or reverse site visit) prior to making final awards, all over an 18-month period, making it all seem more like a proposal gauntlet that will test the mettle of the entire team.

Developing an ERC proposal is nothing if not an enormous logistical challenge for ***coordinating and integrating*** timelines, internal due dates, production of narrative sections, budgetary allocations, biosketches, references cited, supplemental documents, letters of commitment, descriptions of collaborators and affiliations, description of facilities and equipment, draft membership agreements, data management plan, postdoc mentoring plan, cost-sharing tables and justification, and on and on. **So who is going to do all this?!**

Well, obviously, a team, since a PI cannot possibly tend to all this and lead the development of the core proposed research as well. While members of the team will vary, as well as the size of the team and the role of team members, one core team member almost certainly will consist of representatives from research offices, particularly in planning and assisting with proposal production deadlines over a roughly 18-month period from LOI to Site Visit. One key role of research offices is to offer faculty assistance that ensures the following observation does not apply to the proposed ERC: "*If you don't know where you are going, any road will take you there*" as the Cheshire Cat in Lewis Carroll's *Alice in Wonderland* points out to Alice. There are an enormous number of moving parts in the production of an ERC proposal and a ***Proposal Production and Task Assignments Schedule (PPTAS)*** is critical to success. When, you might ask, should we start our PPTAS for the ERC solicitation, and the answer is right now!

For an ERC proposal, for instance, many members of the proposal production team will need to be ***assigned roles and responsibilities by*** <u>***name***</u>, <u>***task,***</u> **and** <u>***timeline***</u> ***in the PPTAS***, and many questions will need to be asked and answered regarding the team's composition. But most importantly, for example, the ***PPTAS for the ERC preliminary proposal must serve as a guide/narrative template to produce a preliminary proposal that addresses the following (subsequent?) required narrative sections.*** In particular, team members must be assigned to draft narrative sections by a deadline; reviewers for the drafts must be identified; etc. In short, the following section of the solicitation for the preliminary proposal ***serves a dual purpose as a template for the narrative outline and as a template for developing a Proposal Production and Task Assignments Schedule (PPTAS)***, as below:

I. ***Proposing Team:*** The description must start with a table that includes all committed ERC personnel.

II. **Vision:** The proposed vision for the ERC must be explained, with a discussion of the convergent engineering research theme and the anticipated societal impact. Explain the proposed transformative engineered system and the potential for impact on society, the engineering community, and the greater scientific community.

III. **Strategic Plan:** The plan must define the engineered system and describe how the features of the ERC will be integrated to achieve the vision, in particular, the cohesive plan for involving participants at all levels in the four foundational components:
- o Convergent Research (CR)
- o Engineering Workforce Development (EWD)
- o Diversity and Culture of Inclusion (DCI)
- o Innovation Ecosystem (IE)

IV. **Infrastructure (Organization and Management):** Describe the proposed management, including the functions of key personnel and the role of any advisory committee (including the required Student Leadership Council and the Council of Deans), executive committee, program committee, or their equivalent.

V. **Convergent Research:** The role of convergence and team formation in the proposed research must be described. Integration of research activities must be graphically depicted on a clearly legible version of the ERC Program's 3-Plane Strategic Planning Chart that is tailored to the proposed ERC. The chart should be at least half a page, but a full page is recommended for legibility. This section should clearly state what new knowledge is expected that would advance the state of the art in key research areas.

VI. **Engineering Workforce Development:** A proposed evidence-based program for human capacity development for the future engineering and technical workforce must be described. The program goals and expected outcomes must be described. Proposed activities should logically lead to targeted outcomes and support participants' diverse pathways and experiences.

VII. **Diversity and Culture of Inclusion:** Preliminary ideas to create and nurture a culture of inclusion to foster the engagement of all ERC participants, including those from a diverse range of scientific backgrounds and training and those from groups that are underrepresented in engineering, must be outlined.

VIII. **Innovation Ecosystem:** An innovation ecosystem development effort must be proposed. However, do not list potential or committed industrial or other supporters.

Based on the above, for instance, a finely-grained PPTAS can be developed as a scheduling document likely including below and other tasks. For example:
- When does the team meet as a team to develop the proposal and discuss the proposed activities, or are virtual meetings preferred, and who schedules, who drafts an agenda, leads the discussion, etc.
- Who is responsible for the first and subsequent narrative drafts of the *integrative sections* of the project description section, e.g., project summary, vision statement, rationale for the center, goals, and objectives, research focus areas integration plan, benefits of the center, expected research synergies, etc.? (**This is not a trivial task** and lies at the heart of the competitive research proposal and PPTAS planning.)
- Are lead authors, perhaps coPIs, assigned for each of the research focus areas?

- Who will write the management plan?
- Who will write the five-year strategic plan?
- Who is best able to produce professional-quality milestone charts, graphics, illustrations, tables, and other visuals that complement the text and strengthen the overall positive impact the proposal must make on project managers and reviewers?
- Who will be responsible for reading or quickly reviewing **all the documents cited by the sponsor in the solicitation**, typically by URL, as having relevance to the program?
- **Who can write knowledgeably and produce first draft narrative sections** on convergent research, workforce development, diversity and culture of inclusion, innovation ecosystems, educational activities, evaluation and assessment, integrated management, etc.

Keeper/Monitor of the Schedule and Task Assignment Table

A PPTAS is of little use if it is not used, monitored, and updated daily so that it can provide a current **_real time snapshot of the proposal production status_**. The responsibility for internal performance expectations related to assigned tasks and assigned schedules ultimately falls to the principal investigator, but it is wise to offload as much as possible of process and production tracking from the PI to an experienced assistant. **_It encourages efficiency and coordination to assign one person the task of tracking all PPTAS-specific activities_**, due dates, and status reports, along with informing the PI and the research team of the group's progress, particularly if any difficulties arise that could potentially alter the proposal production schedule.

Identify the Keeper of the Proposal Master File

It is of enormous value to identify one person responsible for (a) continuously updating the **_evolving proposal draft of the project description,_** (b) keeping the most current version of the proposal file organized and identifiable by version number in the file name, and (3) inserting the date/time of each update as the first line on page one, so that an orderly process of continuous revisions can be achieved. This person assists the PI and supports the coPIs to ensure that narrative contributions, graphs, tables, illustrations, and other documentation in the proposal undergoing continuous revisions and improvements by contributing team members get inserted into the master file. **_This is not a simple task, but it is important to identify a person who can offload this task from the PI or coPIs so that they spend their time and energy on developing the research narrative critical to success_**.

This person needs to be highly skilled in manipulating large text files containing graphics (particularly graphic contributions in various formats), tables, and other visuals that may be embedded in the narrative. **_It is absolutely essential that this person be a skilled user of track-edit and all its features, including document comparisons._** Many disruptive formatting "gremlins" can sneak into a master file when multiple team members contribute to the proposal using different platforms (e.g., Windows, Macs, or even Linux or LaTeX) or various versions of Microsoft Office. On large proposals, these cross-platform format perturbations can amplify the stress level of the person responsible for keeping one master document and reflecting that status in the PPTAS.

Establish Document Contribution Protocols

It encourages coordination and efficiency when the PI, coPIs and the person responsible for keeping the most current master document establish a few simple protocols that every contributor to the proposal narrative will be asked to follow. ***One important protocol involves agreeing on a process whereby track-edit contributions to the master document use an agreed-upon mechanism for accepting or rejecting changes.***   For example, it may be the PI who reviews, accepts, and/or rejects track-edit contributions before they are merged with the master document. In other cases, it may be the coPI leading a research focus area that serves as the gate to changes made to the master document. The specific process is not as important as a general agreement on establishing some process to bring order to what can quickly become a very chaotic procedure if left to happenstance. There is nothing as dispiriting as realizing at some point that two "master" documents may have evolved because of miscommunications or lack of a clearly understood ***protocol for reviewing and integrating narrative contributions into the master file***.

An important part of the document contribution protocol is that everyone must understand and follow the sponsor's formatting guidelines. The sponsor may specify margins and font size, but not font type. Define internal formatting standards early on in the process to make it easier on the person keeping the master file. ***Resist the urge to think a better proposal could be written if the font size were reduced and all white space expunged from the document.***

The format and tasks tracked in a ERC PPTAS will vary widely by proposing group, but the core point here is that, like Amtrak or the Falcon 9 rocket, an ERC proposal needs to be guided by a PPTAS that ensures the "trains run on time" and the desired outcome (i.e., a funded ERC) is enhanced rather than compromised by a flawless planning and production schedule.

After all, a poorly planned proposal has little likelihood of success. Walt Kelly's Pogo once famously observed, "*We have met the enemy and he is us*!" ***That observation perfectly fits a poorly planned proposal development effort***. But preparation can save you from becoming your proposal's enemy. A well-planned proposal development effort cannot turn ideas of modest importance into ideas of compelling significance, but it can give your ideas a chance to be realized through a well-crafted proposal rather than disguised by a poorly crafted one. Or, as Winston Churchill said when he was developing his PPTAS for the Battle of Britain: "***He who fails to plan is planning to fail***."

Understanding Your Proposal Writing Tendency

Reprinted from November, 2017
By Lucy Deckard, co-publisher

I recently read Gretchen Rubin's book, The Four Tendencies, and it occurred to me that her framework lends itself beautifully to understanding how different people approach proposal development. Below, I discuss The Four Tendencies framework in terms of how it can help you understand your own, and collaborators', proposal development tendencies, and how that understanding can help you deal productively with proposal development challenges.

The Four Tendencies Framework

Rubin's framework is not a personality framework like Myers Briggs; instead, it deals specifically with how different people respond to outer and inner expectations—that is, how we approach getting things done. **Outer expectations** are things that others expect you to do (e.g., submitting the final draft of your proposal to the Sponsored Projects Office at least 5 days before the agency's due date). **Inner expectations** are the expectations you place on yourself (e.g., working on your proposal draft at least 4 hours per week starting 3 months before the proposal due date). Rubin noticed that people fall into four main categories:

- **UPHOLDERS** respond easily to both outer and inner expectations. They have no trouble meeting deadlines. In fact, they often get things done well before the deadline. They also easily meet their own expectations. Upholders are the kind of people who decide to give up sugar and do it without any problem. They tend to be driven and have trouble understanding why others procrastinate or struggle with meeting their own inner expectations. They can have trouble empathizing with others and can therefore be tough task masters. It probably won't surprise you that a minority of people are upholders. However, I suspect they are probably overrepresented in academia.

- **OBLIGERS** respond to outer expectations but not as well to inner expectations. That means they will work hard to meet an external deadline but struggle to keep commitments they've made to themselves, such as, for example, a New Year's resolution to get up and go running every morning. Obligers will typically put others' needs before their own. Based on Rubin's surveys, the largest group is the Obligers.

- **QUESTIONERS** meet their own inner expectations but will often reject outer expectations if they feel those expectations aren't reasonable or justified. For that reason, if asked to do something, they will often question the rationale behind the request and will not agree to meet an external expectation unless convinced that it is justified. I suspect that a lot of researchers are natural Questioners.

- **REBELS** reject both outer and inner expectations. They don't like to be told what to do, and they highly value their freedom to do what they <u>want</u> to do. Rebels can achieve a lot, and they are often very creative, but they chafe against rules and expectations, even their own.

After reading the descriptions above, many people instantly know which category they fall into. If you're not sure, you can take a short quiz here to identify your tendency. Rubin argues in her book that tendencies are hardwired, and there is no one "best" tendency. Instead, it's

important to recognize and use strategies to work with these tendencies in ourselves and others rather than seeing them as indicators of character or recalcitrance.

Applying the Four Tendencies in the Context of Proposal Development

As I read about these tendencies, it made me think about all the PIs and proposal teams I've worked with throughout the years, as well as my own struggles and strengths when working to a deadline (or without one). Here are some of the strategies that Rubin suggests for each tendency, interpreted through the lens of proposal development.

Upholders: Some of the <u>strengths</u> of Upholders are that they are self-directed and self-disciplined. They stay on-schedule and on-task without external prodding. They are natural rule-followers. Clearly, this can be a recipe for success when conducting research and developing research proposals. Some of the <u>weaknesses</u> of Upholders are that they can be brusque and inflexible. They may not respond well when things don't go as planned. And they may find it difficult to understand why others are not as disciplined as they are. Upholders also have no trouble saying "no" to requests they don't feel they can reasonably meet. They can sometimes overburden Obligers with tasks since they expect them to say "no" if they feel the request is too much for them to take on, as they would.

Upholders as PIs: Upholder PIs often produce strong proposals since they start early and have plenty of time for lots of drafts. They are methodical and follow proposal guidelines. They can also be effective leaders of team proposals because they tend to be organized, set clear expectations, and keep everyone on track. However, Upholders can be uncomfortable with the ambiguity that often accompanies brainstorming and the generation of new ideas among a team. This can result in their shutting the conversation down too early, hampering the synergy needed to develop an innovative team vision. If Upholders are aware of this tendency, they can work to hold themselves back to allow creative energy among the team early in the development process, and then allow their Upholder tendencies to flourish when it's time to define the project and start writing the proposal. Upholders also may need to work especially hard to evaluate their proposal drafts from the perspective of reviewers with different backgrounds from their own. Upholders should be aware that they can be overly demanding and dictatorial and should check in with team members to make sure they are hearing their concerns. They should also build "slip" into their schedules to allow for the fact that others on their team may not be as conscientious as they are in meeting deadlines. Obligers who feel overburdened by Upholder team leaders should recognize that they can speak up and just say that that they have more on their plate than they can handle; Upholders readily accept this expectation since that's what they would do.

Obligers: Some of the <u>strengths</u> of Obligers are that they will bend over backwards to meet commitment they have made to others, so they are very dependable. However, a <u>weakness</u> is that they often have trouble delegating or saying "no" to requests and therefore frequently find themselves over-committed. They struggle to meet their internal goals, so important tasks may not be accomplished without an external deadline. They may also start feeling resentful if they feel overburdened.

Obligers as PIs: Because Obligers often have trouble meeting their own internal deadlines, and the life of a faculty member is a story of endless external requests, they may have trouble finding time to work on their proposals until the due date looms. This can result in all-nighters and last-minute "due date" panics. To avoid this, they do better when they commit to intermediate deadlines that keep them on track. Obligers are valuable team members, volunteering to take on tasks and following through reliably since they made a commitment to someone else. Obligers can be strong and effective team leaders, but they need to be careful to delegate tasks among team members and not take on too much themselves. As with other proposals, developing a proposal development plan with explicit intermediate deadlines will help the Obliger and the team stay on track.

Questioners: One of the main strengths of Questioners is that they are independent thinkers. They are also self-disciplined and reliable when they agree to take on a task. A weakness is that they can suffer from "analysis paralysis," constantly seeking more information before making a decision. Questioners may also refuse to follow rules or directions they consider silly.

Questioners as PIs: The Questioner tendency is probably the tendency that most naturally aligns with a career as a researcher. However, PIs can suffer from a hesitance to make a decision until they have "perfect information." The result may be proposals that are vague or diffuse in an effort to preserve the PI's prerogative to change his/her mind. Questioner PIs may also delay submitting proposals until they can get more and more preliminary data. Questioners can be extremely valuable as team members and leaders because they usually refuse to participate in "group think" and bring up issues or questions that others may not have thought of. However, they can also exhaust their team members by continually asking questions when the rest of the team is ready to move on. Early-career Questioner PIs also may rebel against solicitation or agency rules that seem arbitrary or nonsensical. To deal with the issue of analysis paralysis, it's helpful for the Questioner to set a deadline for making a decision. They may also benefit from delegating decisions on some issues to an "expert" they trust. Resistance to following arbitrary rules can usually be addressed by simply explaining the potential penalties for not following agency or solicitation rules.

Rebels: I suspect that Rebels are relatively rare in academia, but most of us have probably encountered several idiosyncratic "genius" faculty who have been able to excel in research even though they resist rules and expectations. The strengths of Rebels are that they do only the things they *want* to do. As a result, they often bring an infectious passion and sense of fun and creativity to their work. They are able to think outside the box and aren't easily swayed by conventional wisdom. Their weaknesses include difficulty working with others, resistance to external deadlines, and difficulty making themselves do even things they ostensibly want to do.

Rebels as PIs: Rebel PIs can be frustrating to work with because they have trouble sticking to a schedule. However, they can do well when working with Program Officers who are excited by their ideas, applying for funding through unsolicited proposals (which often have no deadlines). They can also be valuable team members, providing key creative ideas and input. However, it's best not to depend on a Rebel to coordinate a team proposal or place them on a critical path for developing proposal text.

Developing proposals in an environment where everyone has ten other things they should be doing is always challenging. Obviously, all people are individuals, and no one can be reduced to a label. However, viewing our diverse approaches to getting things done through the Four Tendency framework could be useful in helping us to understand the differences among us, leveraging our strengths, and employing effective strategies to compensate for our weaknesses.

Research Grant Writing Web Resources
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Institutional and Agency Responses to COVID-19 and Additional Resources by COGR

EERE Program Information Center Launches Application Submissions Pilot
The U.S. Department of Energy's Office of Renewable Energy and Energy Efficiency (EERE) will launch a new website to replace eXCHANGE for funding opportunity announcements and application submissions. We are looking for volunteers to pilot the new process. Beginning in Fiscal Year 2021, organizations interested in responding to EERE opportunities will use the EERE Program Information Center (EPIC) to view open opportunities and submit applications. The EPIC Application Submissions Pilot will take place in May—June 2020. Interested organizations will have a chance to register early and get a firsthand look at EPIC and how the process is changing. The biggest change to the registration process is that your organization must register before individual applicant accounts can be created. During the pilot, participants will be asked to register in EPIC and submit a test application. Participants will have access to training videos and will be asked to provide feedback on the new process. The pilot is open to any organization. The following roles are needed to register for the pilot: (1) Your organization's Government Business Point of Contact (from Sam.gov) and (2) Technical Points of Contact (e.g., Principal Investigators) or any other person who prepares, reviews or submits applications for funding opportunities. Organizations interested in participating in the pilot should email eere-epichelpdesk@ee.doe.gov by **May 1, 2020**. Please include "EPIC Application Submissions Pilot" in the subject line and include the following information:
- Full Name
- Email Address
- Organization Name

Pilot space is limited. Participants will be selected on a first-come-first-serve basis.

Dear Colleagues:
We are pleased to announce the availability of both NSF-approved formats for the Biographical Sketch and Current and Pending Support sections of National Science Foundation (NSF) proposals that fall under the revised *Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 20-1) (see the February 6, 2020 webinar for complete details on all revisions to the PAPPG).

Although use of an NSF-approved format for submission of these proposal sections is not required until implementation of the revised PAPPG (NSF 20-1) on June 1, 2020, NSF is encouraging proposers to begin using the NSF-approved formats now. NSF values the feedback from the research community, and we would like to hear about your experience with the new NSF-approved formats. Information about how to provide feedback is included below.

Use of an NSF-approved format aims to reduce administrative burden and improve efficiencies by providing proposers with a compliant and reusable way to maintain this information for subsequent proposal submissions to NSF, while also ensuring that the information is submitted in a standard and searchable composition.

NSF-approved Formats

- **SciENcv**: NSF has partnered with the National Institutes of Health (NIH) to use [SciENcv: Science Experts Network Curriculum Vitae](#) as an NSF-approved format for use in preparation of both the Biographical Sketch and Current and Pending Support sections of an NSF proposal. SciENcv will produce an NSF-compliant PDF version of the documents which proposers can save and submit as part of their proposals via FastLane, Research.gov or Grants.gov. Additional information about the NSF-approved SciENcv formats is available on the NSF [biographical sketch](#) and [current and pending support](#) websites.

  The SciENcv tool integrates with ORCID, enabling proposers to populate their Biographical Sketches by importing data directly from their ORCID records rather than having to manually enter all the required information. Additionally, Biographical Sketch data maintained in SciENcv can be quickly and easily updated on an ongoing basis for subsequent proposal submissions.

- **NSF Fillable PDF**: NSF is also providing a fillable PDF as an NSF-approved format for use to prepare both the Biographical Sketch and Current and Pending Support sections of an NSF proposal. Proposers can download the respective fillable PDF form from the NSF [biographical sketch](#) and [current and pending support](#) websites and then submit the completed forms as part of their proposals via FastLane, Research.gov or Grants.gov. Note that the NSF fillable PDF for the Biographical Sketch does not integrate with ORCID.

  It is important to note that **beginning June 1, 2020**, proposers will be required to use one of the NSF-approved formats for both the Biographical Sketch and Current and Pending Support sections of NSF proposals. Proposals submitted via FastLane, Research.gov and Grants.gov will be compliance checked to ensure that the documents were prepared in accordance with this new policy.

We Want Your Feedback

Although not required for proposal submission until June 1, 2020, we hope that you will start using the NSF-approved formats for Biographical Sketch and Current and Pending Support as soon as possible. If you have any feedback that would help us make improvements to the two formats in the future, please let us know. Feedback may be submitted by email to policy@nsf.gov or via the [Research.gov Feedback](#) page (select "Biographical Sketch" or "Current & Pending Support" under the Site Area dropdown menu).

Upcoming Webinars

To assist the community about these new requirements and to start using SciENcv now, NSF and NIH are planning to conduct a joint webinar that will include a walk-through of how to prepare the Biographical Sketch and Current and Pending Support documents in SciENcv. Information will be provided as soon as it is available, and we encourage you to [sign up for notifications.](#)

We also invite you to participate in the next [NSF Electronic Research Administration (ERA) Forum](#) on **May 14, 2020 at 1:00PM – 2:30PM EDT** where we will discuss the NSF-approved format requirements, as well as the new capability to prepare and submit separately submitted collaborative proposals in Research.gov. To sign up for ERA Forum notifications including registration availability for the May 14 event, please send a blank email to NSF-ERA-FORUM-subscribe-request@listserv.nsf.gov and you will be automatically enrolled.

Training Resources
The following training resources are now available, and NSF will continue to keep the community informed as additional resources are released.
Biographical Sketch Resources
- [NSF-Approved Formats for the Biographical Sketch](#) website
- [SciENcv Guidance on Creating an NSF Biographical Sketch](#), including step-by-step instructions and screenshots for each of the four required sections (This is a subsection of the guidance at [SciENcv Help.](#))
- [YouTube Video - SciENcv for NSF Users: Biographical Sketches](#) (This is a **new** video targeted to the NSF research community.)
- [NSF PAPPG (NSF 20-1) webinar](#) (recorded February 6, 2020)
- [YouTube Video - SciENcv Tutorial](#)
- [YouTube Video - Integrating with ORCID](#)
- [FAQs on using NSF Fillable PDF](#)

Current and Pending Support Resources
- [NSF-Approved Formats for Current and Pending Support](#) website
- [SciENcv Guidance on Creating an NSF Current and Pending Support document](#), including step-by-step instructions and screenshots for the two required sections (This is a subsection of the guidance at [SciENcv Help.](#))
- [NSF PAPPG (NSF 20-1) webinar](#) (recorded February 6, 2020)
- [FAQs](#) addressing policy questions related to the PAPPG (NSF 20-1) clarifications to the current and pending support coverage, as well as questions regarding use of an NSF-approved format for current and pending support
- [FAQs on using NSF Fillable PDF](#)

Questions? Policy-related questions should be directed to policy@nsf.gov. If you have technical or IT system-related questions, please contact the NSF Help Desk at 1-800-673-6188 (7:00 AM - 9:00 PM ET; Monday - Friday except federal holidays) or via fastlane@nsf.gov.
Regards,
National Science Foundation

[Responding to Frequent Questions on Flexibilities Related to NIH Funding and COVID-19](#)
The public health emergency due to COVID-19 is causing difficulties in many aspects of our lives. My colleagues and I here at NIH are well aware of the challenges being felt in the research community as institutions are closing, people are being asked to practice social distancing, and

resources and attention are justifiably focused on public health needs. We are listening to your concerns and are working quickly to develop answers to your many questions.

We recently updated our Coronavirus Disease 2019 (COVID-19): Information for NIH Applicants and Recipients website with a slew of additional FAQs, new funding opportunities, as well as the video message from me, below, where I address some of the most common questions.

Since yesterday's recording of this video, in response to community concerns about their ability to submit applications in a timely manner, we have published a notice announcing that grant applications submitted late for due dates between March 9, 2020, and May 1, 2020, will be accepted through May 1, 2020. This notice applies to all relevant funding opportunity announcements, including those that indicate no late applications will be accepted. A cover letter providing a justification is not required. NIH will be extending the expiration date of most FOAs expiring between now and May 1. Be sure to read the notice carefully for details. Things are moving quickly. Please continue to communicate with us. We are listening.

I encourage you to monitor our website frequently. To help you identify updated content, the page now includes a link to page update history so you can easily see what's new.

Educational Grant Writing Web Resources
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Department of Defense (DoD) – Science, Technology, Engineering, and Mathematics (STEM) Educational Outreach Programs
The objective of this FOA, which is being issued in accordance with 10 USC §2192, is to seek application packages from Applicants capable of engaging and improving Grades K-12 Plus (to include colleges, universities, and vocational schools) STEM skills through outreach programs and support services on a national level. The requirement for increased STEM professional development is necessary to meet the long term national defense needs of the United States for personnel proficient in such skills. **Due May 18.**

New Topic Page IES: COVID-19 Response
The U.S. Department of Education's Institute of Education Sciences funds a network of 10 Regional Educational Laboratories (RELs). Each REL serves a designated region of the country and works with educators and policymakers to support a more evidence-based education system. In response to COVID-19, the RELs have collaborated to produce this series of evidence-based resources and guidance about teaching and learning in a remote environment, as well as other considerations brought by the pandemic.

Hispanic-Serving Institutions in the South-Central United States: A Research Report for Los Barrios de Amarillo

Role Models and Mentoring Relationships: Preferences Expressed by Hispanic Students Attending Hispanic-Serving Institutions

Join **REL Mid-Atlantic** for a webinar that will discuss the Evidence to Insights Coach, a free tool that districts and schools can use to test and identify—in real time—which online learning approaches work best for their own students. Schools and districts are currently facing the challenge of transitioning their students to distance learning due to the COVID-19 pandemic. This approach to learning is new for many, and it is important to figure out quickly and efficiently what works in this evolving landscape.
This webinar will:

- Discuss key questions to consider when it comes to achieving the best outcomes with distance learning

- Walk through how the Evidence to Insights Coach can help answer some of these questions

- Offer insights into what kinds of data you can use to answer these questions

- Describe other conditions needed to conduct rapid cycle evaluations of distance learning strategies

Brian Gill, Director of REL Mid-Atlantic, and Mikia Manley, a researcher with REL Mid-Atlantic, will lead this webinar. The webinar is open to the public. This webinar is for administrators from state education agencies, districts, and schools; teachers; school board members; and others interested in effective distance learning. **Submit your questions for the presenters in advance by emailing RELmidatlantic@mathematica-mpr.com.** You can also ask questions during the webinar.

Refining Your Distance Learning Strategies Using a Data-Driven Approach: The Evidence to Insights Coach
April 24, 2020
1:00–2:00 p.m. ET
Register here

Agency Research News
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Dear Colleague Letter: Mid-scale Research Infrastructure - Engineering Conferences

Frequently Asked Questions (FAQs) for Signals in the Soil (SitS)

Dear Colleague Letter: International Collaboration Supplements in Quantum Information Science and Engineering Research

Dear Colleague Letter: Cybersecurity Education in the Age of Artificial Intelligence

Disruptions Arising from the National Response to COVID-19
Federal research agencies provide guidance for grant applicants, awardees, and review panelists in response to coronavirus due to the disruptions arising from the national response to COVID-19, multiple federal agencies are making adjustments to their procedures, including extending deadlines for grant solicitations. USDA NIFA has extended deadlines for several solicitations. The NSF has released FAQ documents on grant deadlines, travel, and review panelists. The DOE-Office of Science has issued an extension for grant applications and further instructions on progress reports and travel. The DOE also launched a task force that will coordinate the resources to study coronavirus and other public health issues. We encourage all Society members to check federal agency websites regularly for updates.

A record number of members of the U.S. House of Representatives signed on to a "Dear Colleague" letter in support of the USDA competitive grants program, the Agriculture and Food Research Initiative (AFRI). Representatives Rodney Davis, (R, IL-3), Jimmy Panetta (D, CA-20) and Suzan DelBene (D, WA-3) sent out a letter asking their fellow House members to show strong support for AFRI in the FY2021 appropriations process. 143 House members signed on to the bipartisan letter. This year for the first time, a letter circulated in support of the Agriculture Advanced Research and Development Authority (AgARDA) the new high-risk, high-reward research program within USDA. Letters also circulated in support of NSF and the DOE-Office of Science.

Dear Colleague Letter: Open Science for Research Data
Open science fuels scientific discovery and economic gain by making the products of Federally funded research more easily accessible and usable. Open science can also improve scientific rigor by directly linking the products of research (data and software) to their associated publications, making it easier for others to confirm the validity of a scientific result reported in a journal or juried conference proceeding.

In alignment with the benefits of open science, NSF is under taking an expansion of its Public Access Repository (NSF PAR) to include metadata records about the research data[1] that

supports the journal and juried conference proceeding manuscripts resulting from NSF-funded research. The metadata records about the research data will contain sufficient information to allow for data discovery and an access determination to be made (but not all the metadata necessary for reuse of the research data). Research data will have a Digital Object Identifier (DOI)[2] that was assigned to it prior to it being reported to NSF. The research data will not reside in the NSF PAR but will instead reside in a repository, data center, or data portal managed by an organization that is committed to ensuring the availability of the data over time. The anticipated location of research data associated with a publication, if known, can be identified in the Data Management Plan and budgeted in the proposal.

Research data in support of a publication are i) the data necessary to confirm the validity of the scientific result reported in the publication, ii) the data described by the publication, or iii) as specified by the journal or conference proceeding. Complementing the publication, the metadata record about research data in support of a publication will, as does the publication, become part of the public record on the NSF web site of the scientific contributions of an award. This extension to NSF PAR does not change the timing of reporting. Reporting is still done on an annual and final report basis, and at this time researchers will report on the products of their research that include both publications and supporting data. Data reporting will initially be voluntary.

Through this Dear Colleague Letter (DCL), the National Science Foundation (NSF) announces its intention to support conference proposals and EAGER proposals that explore and grow community readiness across all disciplinary areas served by the Foundation for this important advancement in open science as follows:

- Proposals for Conferences: These are community workshops and other events that bring together stakeholders to explore and advance scientific community readiness in response to this advancement in open science.
- Proposals for Early-Concept Grants for Exploratory Research (EAGER): These are for high-risk/high-reward innovative concepts and pilot project proposals that contribute to community readiness in response to this advancement in open science.

Dear Colleague Letter: Developing Long-term Strategies to Transform Manufacturing

The National Science Foundation (NSF) wishes to notify the community of its intention to support workshops for future manufacturing (FM) science and technology in support of the goals and vision of the report "Strategy for American Leadership in Advanced Manufacturing" by the National Science and Technology Council (NSTC). Such workshops are typically identified as conferences in the NSF Proposal & Award Policies & Procedures Guide (PAPPG) and will hereafter be referred to as conferences. The conferences should identify areas and thrusts for fundamental research that will enable future manufacturing: *manufacturing that is either entirely new or that can be done today but not at a sufficient scale to make it viable*. Conferences should explore new, potentially transformative, manufacturing capabilities rather than aiming to improve current manufacturing or make incremental improvements over existing Advanced Manufacturing technologies.

Recent developments in artificial intelligence/machine learning, robotics, the Internet of Things, critical materials, and biomanufacturing, among other areas, have opened significant opportunities for fundamental research to enable new manufacturing which can address

societal challenges in agriculture, bioengineering, climate, energy, health, security, space, and civil infrastructures.

NSF invites conference proposals on future manufacturing areas that have the potential to profoundly transform manufacturing, create new manufacturing capabilities, and significantly benefit society. A conference should take a convergent approach and explore long-term science and technology strategies for a future manufacturing ecosystem. A conference should also explore relevant education and workforce development, as well as ways of broadening participation in future manufacturing. A conference should build a community of US and international multidisciplinary researchers, educators and stakeholders who will collectively promote future manufacturing research and education. It should also identify and develop directions for fundamental research to enable new manufacturing, so that work in those areas might be encouraged in upcoming NSF program solicitations.

Dear Colleague Letter: Research Collaboration Opportunity in Europe for NSF Awardees

This letter invites current NSF grantees to submit supplemental funding requests for research visits to any identified, appropriate ERC-funded European research group. NSF particularly encourages requests from NSF grantees who are early on in their careers or who are still actively building their careers. Further, the letter gives instructions on how to submit supplemental funding requests and other relevant policies and requirements. ERCEA has provided a list of ERC-funded principal investigators (PIs) and research teams interested in hosting NSF grantees. NSF grantees should request this list via email from Roxanne Nikolaus, Program Director, Office of International Science and Engineering, at rnikolau@nsf.gov, and then communicate directly with ERC PIs to ascertain areas of mutual interest and research goals for a visit. NSF grantees then must discuss plans for the visit(s) with the NSF Program Officer managing their award prior to submitting a supplemental funding request. If approved by NSF, the request is forwarded by NSF to ERCEA for review and confirmation with the ERC-funded project.

Dear Colleague Letter: United States-Ireland-Northern Ireland R&D Partnership

The United States (U.S.), Northern Ireland (NI), and the Republic of Ireland (RoI) have come together to form a unique partnership as a way of increasing the level of collaborative R&D among researchers across the three jurisdictions that will generate innovation and lead to improvements in society. The objective of U.S.-Ireland R&D Partnership is to encourage trilateral, collaborative research projects that address significant research challenges, particularly in the areas of nanoscale science and engineering, sensors and sensor networks, telecommunications, energy and sustainability, and cybersecurity. These thematic areas have been identified as representing a unique opportunity for collaborative research and are internationally recognized as potentially pivotal fields in the 21st century.

Agency Reports, Workshops & Research Roadmaps

Safeguarding the Bioeconomy

Research and innovation in the life sciences is driving rapid growth in agriculture, biomedical science, information science and computing, energy, and other sectors of the U.S. economy. This economic activity, conceptually referred to as the bioeconomy, presents many opportunities to create jobs, improve the quality of life, and continue to drive economic growth. While the United States has been a leader in advancements in the biological sciences, other countries are also actively investing in and expanding their capabilities in this area. Maintaining competitiveness in the bioeconomy is key to maintaining the economic health and security of the United States and other nations.

Safeguarding the Bioeconomy evaluates preexisting and potential approaches for assessing the value of the bioeconomy and identifies intangible assets not sufficiently captured or that are missing from U.S. assessments. This study considers strategies for safeguarding and sustaining the economic activity driven by research and innovation in the life sciences. It also presents ideas for horizon scanning mechanisms to identify new technologies, markets, and data sources that have the potential to drive future development of the bioeconomy.

New Funding Opportunities

Content Order
New Funding Posted Since March 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 work as well.]

New Funding Solicitations Posted Since March 15 Newsletter

W911NF-20-S-0008 UNITED STATES MILITARY ACADEMY Broad Agency Announcement
The USMA BAA seeks proposals from institutions of higher education, nonprofit organizations, state and local governments, foreign organizations, foreign public entities, and for-profit organizations (i.e., large and small businesses) for research based on the following campaigns: Socio-Cultural; Information Technology; Ballistics, Weapons, and Protections; Energy and Sustainability; Materials, Measurements, and Facilities; Unmanned Systems and Space; Human Support Systems; and Artificial Intelligence, Machine Learning, and Quantum Technologies. Proposals are sought for cutting-edge innovative research that could produce discoveries with a significant impact to enable new and improved Army technologies and related operational capabilities and related technologies. The specific research areas and topics of interest described in this document should be viewed as suggestive, rather than limiting. **BAA open until superseded.**

DE-FOA-0002236 Offshore Wind Energy Atmospheric Science and Project Development
The Office of Energy Efficiency and Renewable Energy (EERE) is issuing, on behalf of the Wind Energy Technologies Office (WETO), Funding Opportunity Announcement (FOA) DE-FOA-0002236 entitled "Offshore Wind Atmospheric Science and Project Development." This FOA has Two Topic Areas: **Topic Area 1**: The overall goal of this Topic Area is to provide funding for a project that will improve wind resource modeling and predictions in offshore wind energy development areas. Using lessons-learned and information gained during the previous program work in complex-terrain wind resource modeling and prediction, this Topic Area will focus on improving wind resource model physics for foundational wind forecasts and other applications in offshore wind energy development areas. **Topic Area 2:** The overall goal of this Topic Area is to provide funding for a project(s) that will enable demonstration of a novel technology and/or methodology that will advance the state-of-the-art of offshore wind energy in the United States. The proposed project must either implement an innovative technology at

engineering/pilot or full-scale, and/or employ a novel methodology that has yet to be utilized commercially in the United States for offshore wind. **Concept paper due April 30; full July 9.**

EREF Proposals for Solid Waste Management Practices

The Environmental Research & Education Foundation (EREF) provides funding in support of scientific research and educational initiatives focused on waste management practices benefiting industry participants and the communities they serve. To that end, EREF welcomes applications for projects and research addressing any area of integrated solid waste management, with priority given to research aimed at increasing sustainable solid waste management practices. The following topic areas will be considered: waste minimization; recycling; waste conversion to energy, biofuels, chemicals or other useful products (including waste-to-energy, anaerobic digestion, composting, and other thermal or biological conversion technologies); strategies to promote diversion to higher and better uses (e.g., organics diversion, market analysis, optimized material management, logistics, etc.); and landfilling. **Deadline, May 1.**

Emergency Citrus Disease Research and Extension Program

NIFA requests pre-applications for the ECDRE program for fiscal year 2020 to address priorities identified by the Citrus Disease Sub-committee (CDS) of the National Agricultural Research, Education, Extension and Economics (NAREEE) Advisory Board through projects that integrate research and extension activities and use systems-based, trans-disciplinary approaches to provide solutions to U.S. citrus growers. The overarching goals and desired outcomes for the ECDRE program are: 1) To combat Huanglongbing (HLB) and its disease complex in order to continue to be able to farm citrus in a financially sustainable way through collaborative approaches and knowledge; 2) Transition from component-focused research to deploying research outcomes and conclusions on farms; and 3) Encourage research teams to bring knowledge together to find grower solutions to combat and prevent HLB infection. **Pre-application deadline, May 4.**

USDA-FAS-10777-0700-10--20-0006 Scientific Exchanges Initiative

The Scientific Exchanges Initiative advances USDA's agricultural research goals to promote collaborative programs among agricultural professionals of eligible countries, the United States, the international agricultural research system, and United States entities conducting research in the agricultural sciences by providing fellowships to individuals from eligible countries who specialize or have experience in agricultural education, research, extension, or other related fields. Fellowships promote food security and economic growth in eligible countries by educating a new generation of agricultural scientists, increasing scientific knowledge and collaborative research to improve agricultural productivity, and extending that knowledge to users and intermediaries in the marketplace. The collaborative nature of the training and research programs benefits the fellow, his or her home institution, and partner country; the U.S. host institution, its professors, researchers, and students; and the global agricultural sector by improving agricultural productivity, systems, and processes in partnering nations through the transfer of new science and agricultural technologies. **Due May 29.**

W81EWF-20-SOI-0012 Monitoring and Control of Invasive Reptiles and Amphibians Department of Defense

Florida has more nonnative reptiles and amphibians than anywhere else in the world with 180 introduced species and more than 60 that are established (i.e., actively reproducing) (Krysko et al. 2016). South Florida is particularly predisposed to non-native invasions as a result of its subtropical climate, peninsular geography, thriving exotic pet trade, and sporadic destructive hurricanes that increase risk of escapes. Burmese pythons (*Python bivittatus)* and tegu lizards (*Salvator spp.*) are already established in many CERP project areas and spectacled caiman (*Caiman crocodilus*) have been found in isolated canals in Biscayne Bay project area. Impacts from these species are preventing the Corps from efficiently reaching the restoration goals of CERP. Currently the Corps has no consistent or systematic way to collect, visualize or analyze invasive reptile data, and methods to intercept, monitor and control them have not kept pace with increasing risk. Green iguana (*Iguana iguana*) and red agama (*Agama agama*) control has begun on certain Corps managed lands, but no efforts to control some of the most threatening invaders have been undertaken as of yet, nor is there a strategy in place for the Corps to react quickly to new species of invaders before they become established. Preventing introduction and establishment of invasive species is the first line of defense against new invasions and is a must for ensuring survival of native species in Florida. Early detection and rapid response (EDRR) efforts increase the likelihood that invasions will be successfully contained or eradicated while populations are still localized (ECISMA 2009).

Responses to **THIS REQUEST FOR STATEMENTS OF INTEREST** will be used to identify potential investigators for a project to be funded by the U.S. Army Corps of Engineers (USACE) to implement an EDRR, removal and monitoring program for invasive wildlife and their impacts within USACE-authorized areas of the Comprehensive Everglades Restoration Plan (CERP) to include the Central Everglades Planning Project (CEPP).

Successful applicants should have extensive knowledge of Southern Florida ecosystems, reptile trapping methods, safe handling procedures for large reptiles, and maintain all relevant permits to do so. Candidates should have prior experience with invasive species management concepts, to include: early detection, monitoring and alert systems. The candidates will be required to monitor, track, and control the spread of invasive reptiles across applicable CERP lands. The candidates will need to coordinate closely with USACE staff and provide biannual progress updates. **Due May 31.**

Air Force Fiscal Year 2021 Young Investigator Research Program (YIP)
The Fiscal Year 2021 Air Force Young Investigator Research Program (YIP) intends to support young in career scientists and engineers who have received Ph.D. or equivalent degrees by 1 April 2012 or later showing exceptional ability and promise for conducting basic research. The program objective is to foster creative basic research in science and engineering; enhance early career development of outstanding young investigators; and increase opportunities for the young investigator to recognize the Air Force mission and related challenges in science and engineering. **Due July 14**.

Institute of Education Sciences (IES): Statistical and Research Methodology in Education CFDA Number 84.305D; Notice Inviting Applications for New Awards for Fiscal Year (FY) 2021

Through the National Center for Education Research (NCER), the Institute of Education Sciences (Institute) provides support for programs of research in areas of demonstrated national need. The Institute's research grant programs are designed 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 learners. Through the Statistical and Research Methodology in Education grant program, NCER intends to support the development of a wide range of methodological and statistical tools to better enable applied education scientists to conduct rigorous education research. **Due July 30.**

[Institute of Education Sciences (IES):Using Longitudinal Data To Support State Education Policymaking Grant Programs CFDA Number 84.305S; Notice Inviting Applications for New Awards for Fiscal Year (FY) 2021](#)

Through the National Center for Education Research (NCER), the Institute of Education Sciences (Institute) provides support for programs of research in areas of demonstrated national need. The Institute's research grant programs are designed 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 learners. Through the Using Longitudinal Data to Support State Education Policymaking grant program, NCER intends to expand the research use of State Longitudinal Data Systems to examine long-term learner outcomes and pathways in order to provide evidence for State education policymaking. **Due July 30.**

[Opportunities for Promoting Understanding through Synthesis (OPUS)](#)

OPUS provides an opportunity for an investigator or a group of investigators at any career stage to revisit and synthesize a significant body of their prior research or to harmonize distinct data sets that they have produced to enable new understanding. This program targets investigators who have, over time, produced significant work and data from a series of research projects, and who are planning to integrate that work in a single synthesis. Proposals requesting support mainly for the production of new data are not appropriate. Likewise, efforts simply to summarize previous results will not be supported. We expect OPUS awards to generate novel understanding, new questions, or emergent insights that are more than the sum of their individual parts. OPUS projects generally result in one or more products resulting from synthetic activities. Products from past awards have been diverse and include, but are not limited to, any combination of scientific papers, monographs, software, websites, books, films, synthesized datasets, or databases. Individuals contemplating submission of an OPUS proposal are encouraged to look at the [abstracts of previously funded research](#) to see what kinds of synthetic products have been supported. **Due August 3**.

Solicitations Remaining Open Since Last Newsletter

[DE-FOA-0002243 Solar Energy Technologies Office Fiscal Year 2020 Funding Program](#)

This funding opportunity announcement (FOA) is being issued by the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy

Technologies Office (SETO). SETO supports solar energy research and development (R&D) in three technology areas—photovoltaics (PV), concentrating solar-thermal power (CSP), and systems integration—with the goal of improving the affordability, reliability, and performance of solar technologies on the grid. This section describes the overall goals of the Solar Energy Technologies Office Fiscal Year 2020 (SETO 2020) funding program and the types of projects being solicited for funding support through this FOA.   The SETO 2020 funding program seeks to advance R&D of solar technologies that reduce the cost of solar, increase the competitiveness of American manufacturing and businesses, and improve the reliability of the grid. These projects will advance R&D in PV, CSP, and energy management technologies, while also working to improve cybersecurity, expand solar to new applications like agricultural solar, integrate solar and storage, and utilize artificial intelligence to address research challenges. **Due May 21.**

Genomic Community Resources (U24 Clinical Trial Not Allowed)
To facilitate genomic research and the dissemination of its products, NHGRI supports genomic resources that are crucial for basic research, disease studies, model organism studies, and other biomedical research. Awards under this FOA will support the development and distribution of genomic resources that use cost-effective approaches and will be valuable for the broad research community. Such resources include (but are not limited to) databases and informatics resources (such as human and model organism databases, ontologies, and analysis toolsets), comprehensive identification and collections of genomic features (such as functional genomic elements), and standard data types produced using central sets of samples (such as structural variants in 1000 Genomes or GTEx samples). **Due May 25.**

Special Research Grants Program Aquaculture Research
The purpose of 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; and (4) economic research for increasing aquaculture profitability. **Due May 28**.

Engineering Research Visioning Alliance (ERVA): Future Research Directions for the Engineering Research Community
The National Science Foundation Directorate for Engineering (NSF/ENG) invites the engineering research community to establish an organization that will serve to identify and develop bold and societally impactful new engineering research directions and thereby catalyze the engineering research community's pursuit of innovative, high-impact research. Specifically, NSF/ENG calls on the engineering research community to establish an Engineering Research

Visioning Alliance (ERVA) that ENG will support to facilitate the articulation of compelling research visions that align with national and global challenges. This organization will be charged with obtaining and integrating input from all stakeholders with interest in engineering research, including academia, industry, societies, government agencies and the public. A reciprocal goal of the organization will be to communicate coordinated information on nascent opportunities and priorities in engineering research to these stakeholders. It is anticipated that through its activities the ERVA will strengthen connectivity across these diverse stakeholders, and increase coordination among engineering disciplinary communities. The ERVA should have membership/representation of academic, industrial and other stakeholders, and should be inclusive of all engineering disciplines. Through its proposed activities, the ERVA should provide the engineering community with a process for identifying future research challenges and enable the engineering research community to speak with a unified voice. **July 8 LOI; full August 12.**

[Seeding Critical Advances For Leading Energy Technologies With Untapped Potential 2019](#)
Seeding Critical Advances for Leading Energy technologies with Untapped Potential (SCALEUP) solicitation provides a vital mechanism for the support of innovative energy R&D that complements ARPA-E's primary R&D focus on early-stage transformational energy technologies that still require proof-of-concept.

ARPA-E's mission is to develop transformational energy technologies in support of U.S. national security and economic competitiveness. ARPA-E funds the R&D of technologies to build and maintain U.S. technological leadership in highly competitive global energy markets, thus supporting American jobs and economic growth. ARPA-E's authorizing statute directs the Agency to develop linkages between its sponsored applied research and the marketplace. These linkages are central to realizing the public's return on technology investments.

An enduring challenge to ARPA-E's mission is that even technologies that achieve substantial technical advancement under ARPA-E support are at risk of being stranded in their development path once ARPA-E funding ends (averaging $2.5M over three years). ARPA-E-funded technologies typically face significant remaining technical risks upon completion of an award's funding period. Experience across ARPA-E's diverse energy portfolios, and with a wide range of investors, indicates that pre-commercial "scaling" projects are critical to establishing that performance and cost parameters can be met in practice for these very early stage technologies. These pre-commercial scaling projects aim to translate the performance achieved at bench scale to commercially scalable versions of the technology, integrate the technology with broader systems, provide extended performance data, and validate the manufacturability and reliability of new energy technologies. (These projects are often termed "pre-pilot" development in different industries.) Success in these scaling projects would enable industry, investors, and partners to justify substantial commitments of financial resources, personnel, production facilities, and materials to develop promising ARPA-E technologies into early commercial products.

The SCALEUP FOA builds upon ARPA-E-funded technologies by scaling the most promising. Stranding promising ARPA-E-funded technologies in their development pathways leaves substantial intellectual property developed with American taxpayer dollars vulnerable to adoption by foreign competitors, who can and do capture it for continued development – and economic benefit – overseas. This harms national competitiveness, as U.S. industries often lose

the lead on the development, scaling, and manufacturing of technologies necessary to compete in rapidly evolving global energy markets. These scaling energy technology projects will meet ARPA-E's statutory direction to achieve the above goals by " accelerating transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty" **Due July 20**.

Human-Environment and Geographical Sciences Program (HEGS)

The objective of the Human-Environment and Geographical Sciences (HEGS) Program is to support basic scientific research about the nature, causes, and/or consequences of the spatial distribution of human activity and/or environmental processes across a range of scales. Projects about a broad range of topics may be appropriate for support if they enhance fundamental geographical knowledge, concepts, theories, methods, and their application to societal problems and concerns. Recognizing the breadth of the field's contributions to science, the HEGS Program welcomes proposals for empirically grounded, theoretically engaged, and methodologically sophisticated geographical research. National Science Foundation's mandate is to support basic scientific research. Support is provided for projects that are most effective in grounding research in relevant theoretical frameworks relevant to HEGS, that focus on questions that emanate from the theoretical discussions, and that use scientific methods to answer those questions. HEGS supported projects are expected to yield results that will enhance, expand, and transform fundamental geographical theory and methods, and that will have positive broader impacts that benefit society. **Due August 18.**

N00173-19-S-BA01 NRL Long Range Broad Agency Announcement (BAA) for Basic and Applied Research

The NRL's Broad Agency Announcement (BAA) issued under the provisions of paragraphs 35.016 and 6.102(d)(2) of the Federal Acquisition Regulations (FAR). Proposals may range from theoretical studies to proof-of-concept to include fabrication and delivery of a prototype. However, this is limited to research procurements for which it would be impossible to draft an adequate RFP in sufficient detail without restraining the technical response and thus hindering competition rather than expanding it. BAA topics include all NRL sites located in the Washington, DC area, the Stennis Space Center, MS, and Monterey, CA. Proposals submitted in response to a BAA announcement that are selected for award are considered to be the result of full and open competition and are in full compliance with the provisions of Public Law 98-369, "The Competition in Contracting Act of 1984."

        NRL is interested in receiving proposals for the research efforts described under this BAA. This announcement is an expression of interest only and does not commit the Government to make any award or to pay for any proposal preparation costs. The cost of proposal preparation for response to a BAA is not considered an allowable direct charge to any resultant contract or any other contract; however, it may be an allowable expense to the normal bid and proposal indirect cost specified in FAR 31.205-18. **Open to Sept. 10, 2020.**

Agriculture and Food Research Initiative - Education and Workforce Development

The Agriculture and Food Research Initiative - Education and Workforce Development (EWD) focuses on developing the next generation of research, education, and extension professionals

in the food and agricultural sciences. In FY 2020, EWD invites applications in five areas: professional development for agricultural literacy; training of undergraduate students in research and extension; fellowships for predoctoral candidates; fellowships for postdoctoral scholars, and a brand new program for agricultural workforce training. See EWD Request for Applications for specific details. **Due September 24.**

[Gen-4 Engineering Research Centers (ERC) Convergent Research and Innovation through Inclusive Partnerships and Workforce Development](#)
The ERC program supports convergent research that will lead to strong societal impact. Each ERC has interacting foundational components that go beyond the research project, including engineering workforce development at all participant stages, a culture of diversity and inclusion where all participants gain mutual benefit, and value creation within an innovation ecosystem that will outlast the lifetime of the ERC. The logical reasoning that links the proposed activities to the identified goals for each ERC should be clear. **LOI September 2; prelim October 2; full May 7, 2021.**

Open Solicitations and BAAs

[BAA's remain open for one or more years. During the open period, agency research priorities may change or other <mark>modifications are made to a published BAA</mark>. If you are submitting a proposal in response to an open solicitation, as below, check for modifications to the BAA at Grants.gov or by utilizing [Modified Opportunities by Agency](#) to receive a Grants.gov notification of recently modified opportunities by agency name.]

[HR001119S0071, DSO Office-wide Broad Agency Announcement, Department of Defense DARPA - Defense Sciences Office 2020 BAA](#)
The mission of the Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is to identify and create the next generation of scientific discovery by pursuing high-risk, high-payoff research initiatives across a broad spectrum of science and engineering disciplines and transforming these initiatives into disruptive technologies for U.S. national security. In support of this mission, the DSO Office-wide BAA invites proposers to submit innovative basic or applied research concepts that address one or more of the following technical domains: (1) Frontiers in Math, Computation and Design, (2) Limits of Sensing and Sensors, (3) Complex Social Systems, and (4) Anticipating Surprise. Each of these domains is described below and includes a list of example research topics that highlight several (but not all) potential areas of interest. Proposals must investigate innovative approaches that enable revolutionary advances. DSO is explicitly not interested in approaches or technologies that primarily result in evolutionary improvements to the existing state of practice. **Open to June 12, 2020.**

[Access to Historical Records: Major Initiatives FY 2021](#)
The National Historical Publications and Records Commission seeks projects that will significantly improve public discovery and use of major historical records collections. The Commission is especially interested in collections of America's early legal records, such as the records of colonial, territorial, county, and early statehood and tribal proceedings that

document the evolution of the nation's legal history. For more information about how to become an invited applicant, please see the [Preliminary Proposal announcement](). (**https://www.archives.gov/nhprc/announcement/preliminary-proposal/prelim.html**) All types of historical records are eligible, including documents, photographs, born-digital records, and analog audio and moving images. Projects may:

- Digitize historical records collections, or related collections, held by a single institution and make them freely available online
- Provide access to born-digital records
- Create new freely-available virtual collections drawn from historical records held by multiple institutions
- Create new tools and methods for users to access records

The NHPRC welcomes collaborative projects, particularly for bringing together related records from multiple institutions. Projects that address significant needs in the field and result in replicable and scalable approaches will be more competitive. We also encourage organizations to actively engage the public in the work of the project. Applicants should also consult [Access to Historical Records: Archival Projects]() program, which has different requirements and award amounts. For a comprehensive list of Commission limitations on funding, please see: "What we do and do not fund" [(http://www.archives.gov/nhprc/apply/eligibility.html)](). Applications that consist entirely of ineligible activities will not be considered. **Due July 9, 2020**.

[**BAA-AFRL-RQKMA-2016-0007 Air Force Research Laboratory, Materials & Manufacturing Directorate, Functional Materials and Applications (AFRL/RXA) Two-Step Open BAA**]()
Air Force Research Laboratory, Materials & Manufacturing Directorate is soliciting White Papers and potentially technical and cost proposals under this two-step Broad Agency Announcement (BAA) that is open for a period of five (5) years. Functional Materials technologies that are of interest to the Air Force range from materials and scientific discovery through technology development and transition, and support the needs of the Functional Materials and Applications mission. Descriptors of Materials and Manufacturing Directorate technology interests are presented in the context of functional materials core technical competencies and applications. Applicable NAICS codes are 541711 and 541712. **Open to April 20, 2021.**

[**Army Research Office Broad Agency Announcement for Basic and Applied Scientific Research**]()
This BAA sets forth research areas of interest to the ARO. This BAA is issued under FAR 6.102(d)(2), which provides for the competitive selection of basic and applied research proposals, and 10 U.S.C. 2358, 10 U.S.C. 2371, and 10 U.S.C. 2371b, which provide the authorities for issuing awards under this announcement for basic and applied research. The definitions of basic and applied research may be found at 32 CFR 22.105.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 to April 30, 2022**.

[**FA9453-17-S-0005 Research Options for Space Enterprise Technologies (ROSET)**]()
The Air Force Research Laboratory (AFRL) Space Vehicle Directorate (RV) is interested in receiving proposals from all offerors to advance state of the art technology and scientific

knowledge supporting all aspects of space systems including payload adapters, on-orbit systems, communications links, ground systems, and user equipment. Efforts will include basic and advanced research, advanced component and technology development, prototyping, and system development and demonstration and will span the range from concept and laboratory experimentation to testing/demonstration in a relevant environment. Specific tasks include design, development, analysis, fabrication, integration, characterization, testing/experimentation, and demonstration of hardware and software products. **Open to September 22, 2022.**

Broad Agency Announcement for the Army Rapid Capabilities Office
This Broad Agency Announcement (BAA), W56JSR-18-S-0001, is sponsored by the Army Rapid Capabilities Office (RCO). The RCO serves to expedite critical capabilities to the field to meet Combatant Commanders' needs. The Office enables the Army to experiment, evolve, and deliver technologies in real time to address both urgent and emerging threats while supporting acquisition reform efforts. The RCO executes rapid prototyping and initial equipping of capabilities, particularly in the areas of cyber, electronic warfare, survivability and positioning, navigation and timing (PNT), as well as other priority projects that will enable Soldiers to operate and win in contested environments decisively. This BAA is an expression of interest only and does not commit the Government to make an award or pay proposal preparation costs generated in response to this announcement.
Questions concerning the receipt of your submission should be directed:
http://rapidcapabilitiesoffice.army.mil/eto/
        Technical questions will be sent to the appropriate Technical Points of Contact (TPOC), topic authors, and/or Subject Matter Experts (SMEs) to request clarification of their areas of interest. No discussions are to be held with offerors by the technical staff after proposal submission without permission of the Army Contracting Command-Aberdeen Proving Ground (ACC-APG) Contracting Officer. **Open to March 23, 2023.**

W911NF-18-S-0005 U.S. Army Research Institute for the Behavioral and Social Sciences Broad Agency Announcement for Basic, Applied, and Advanced Research (Fiscal Years 2018-2023)
The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) announces the ARI FY18-23 Broad Agency Announcement for Basic, Applied, and Advanced Scientific Research. This Broad Agency Announcement, 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 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.

Those contemplating submission of a proposal are encouraged to contact the ARI Technical Point of Contact (TPOC) for the respective topic area cited in the BAA. If the R&D warrants further inquiry and funding is available, submission of a proposal will be entertained. The recommended three-step sequence is (1) telephone call to the ARI TPOC or responsible ARI Manager, (2) white paper submission, (3) full proposal submission. Awards may be made in the form of contracts, grants, or cooperative agreements. Proposals are sought from educational institutions, non-profit/not-for-profit organizations, and commercial organizations, domestic or foreign, for research and development (R&D) in those areas specified in the BAA. The U.S. Army Research Institute for the Behavioral and Social Sciences encourages Historically Black Colleges and Universities/Minority Serving Institutions (HBCU/MSI) and small businesses to submit proposals for consideration. Foreign owned, controlled, or influenced organizations are advised that security restrictions may apply that could preclude their participation in these efforts. Government laboratories, Federal Funded Research and Development Centers (FFRDCs), and US Service Academies are not eligible to participate as prime contractors or recipients. However, they may be able to participate as subcontractors or Subrecipients (eligibility will be determined on a case by case basis). **Open to April 29, 2023.**

[FA8650-17-S-6001 Science and Technology for Autonomous Teammates (STAT)](#)
The objective of Science and Technology for Autonomous Teammates (STAT) program is to develop and demonstrate autonomy technologies that will enable various AF mission sets. This research will be part of Experimentation Campaigns in: 1 -Multi-domain Command and Control; 2-Intelligence, Surveillance, Recognizance (ISR) Processing Exploitation and Dissemination (PED); and 3- Manned-Unmanned combat Teaming to demonstrate autonomy capabilities to develop and demonstrate autonomy technologies that will improve Air Force operations through human-machine teaming and autonomous decision-making. The technology demonstrations that result from this BAA will substantially improve the Air Force's capability to conduct missions in a variety of environments while minimizing the risks to Airmen. The overall impact of integration of autonomous systems into the mission space will enable the Air Force to operate inside of the enemy's decision loop.

STAT will develop and apply autonomy technologies to enhance the full mission cycle, including mission planning, mission execution, and post-mission analysis. Particular areas of interest include multi-domain command and control, manned-unmanned teaming, and information analytics. The technology demonstrations that result from this BAA will substantially improve the Air Force's capability to conduct missions in a variety of environments while minimizing the risks to Airmen. The overall impact of integration of autonomous systems into the mission space will enable the Air Force to operate inside of the enemy's decision loop. This effort plans to demonstrate modular, transferable, open system architectures, and deliver autonomy technologies applicable to a spectrum of multi-domain applications. Development efforts will mature a set of technologies that enable airmen to plan, command, control, and execute missions with manageable workloads. The software algorithms and supporting architectures shall:• Ingest and understand mission taskings and commander's intent• Respond appropriately to human direction and orders• Respond intelligently to dynamic threats and

unplanned events Chosen technologies will be open, reusable, adaptable, platform agnostic, secure, credible, affordable, enduring, and able to be integrated into autonomous systems. The program will be comprised of various technologies developed by AFRL and Industry, integrated into technology demonstrations and deliverables with all the necessary software, hardware, and documentation to support AFRL-owned modeling and simulation environments for future capability developments. Thus, all technology development efforts must adhere to interface designs and standards. **Open to July 23, 2023**.

Academic Research Funding Strategies, LLC (Page 1)

http://academicresearchgrants.com/home

ph: 979-201-5520

LDeckard@academicresearchgrants.com

mjcronan@gmail.com

What We Do--

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

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

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

- **Assistance on your project narrative: in-depth reviews, rewrites, and edits**

- **Editing and proof reading of journal articles, book manuscripts, proposals, etc.**

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

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