



Funding Update: Large Federal Funding Opportunities

Lewis-Burke Associates, LLC – March 19, 2018

This document provides information on the status and timing of flagship funding opportunities across federal agencies. For agencies that do not have signature, cross-cutting opportunities, such as the National Institutes of Health (NIH), details are provided for large center and center-like awards. Please contact Lewis-Burke for additional information on the opportunities below and to discuss strategies to pursue these opportunities.

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National Science Foundation (NSF)

Type	Information on Future Solicitations	Additional Information
Engineering Research Centers (ERC) Last solicitation was released in July 2015 for awards made in September 2017.	The ERC solicitation was due to be released the summer of 2017. However, following the recommendations included in the National Academy of Engineering (NAE) report, “A New Vision for Center-Based Engineering Research,” in March 2018, NSF released a solicitation for ERC planning grants. Planning grants will run for up to one-year and proposals are due in June 2018. The full ERC proposal is expected to be released summer 2018, likely with a long lead time. Total	More information available at https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5502 .

	funding is around \$20 million for a five-year award.	
Science and Technology Centers (STC) Last solicitation was released in August 2014 for awards made in September 2016.	The next solicitation is due to be released early in fiscal year (FY) 2019 to make awards in FY 2020 or 2021. It is unclear if the recommendations of the NAE ERC report (mentioned above) will impact the STC solicitation. While it is not expected that the solicitation to be restricted to the NSF Big Ideas, they are expected to feature strongly in proposals. Total funding is around \$20 million for a five-year award.	More information available at https://www.nsf.gov/od/oia/programs/stc/ .
Materials Research Science & Engineering Centers (MRSEC) Last solicitation was released in February 2016 for awards made in October 2017.	MRSEC competitions are traditionally held every three years. The next competition is expected to be released early in 2019. Individual awards are \$2.2 million - \$4 million per year for up to six years.	More information available at https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5295 .
Expeditions in Computing (Expeditions) Latest solicitation was released in December 2017 with preliminary proposals due April 2018, and full proposals due January 2019.	Expeditions runs competitions approximately every two years. For the next competition, preliminary proposals will be due in April 2020, and full proposals due January 2021. Funding is around \$2 million per year for five years.	More information available at http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503169 .
Center for Chemical Innovation (CCI) Last solicitation was announced in June 2017 for Phase I Awards and Phase II Center Renewal.	An external review of the CCI is planned to take place in FY 2018 – FY 2019. The outcomes of that review will likely inform the next competition. Phase I awards are up to \$1.8 million per year for three years; phase II awards are up to \$4 million per year for five years.	More information available at https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13635 .
Convergence Accelerators The NSF budget request for FY 2019 highlights a new organizational structure titled, <i>Convergence Accelerators</i> to address the NSF Big Ideas in the Future of Work at the Human Technology Frontier (FW-HTF) and Harnessing the Data Revolution (HDR).	No information is available at this time on the format or timing of these potentially new <i>Convergence Accelerators</i> , which will be focused on facilitating public-private partnerships and translational activities such as prototyping and testbeds and access to new hardware and data tools. NSF plans to invest \$30 million in each of the two topic areas. However, the funding is expected to be awarded in the form of smaller “seedling” awards.	More information available at https://www.nsf.gov/about/budget/fy2019/pdf/31_fy2019.pdf .

Department of Energy (DOE)

Type	Information on Future Solicitations	Additional Information
Energy Frontier Research Centers (EFRCs) 32 EFRCs will be up for re-competition in FY 2018 with new and returning applicants welcome. The solicitation was announced in November 2017 with required pre-applications due January 2018.	The four EFRCs not subject to the current competition were awarded in FY 2016. They focus on DOE's environmental management and nuclear cleanup mission, and it is expected that they will be up for re-competition in FY 2020. Awards will range from \$2 million to \$4 million per year for four years.	More information available at http://science.energy.gov/bes/efrc/ .
Scientific Discovery through Advanced Computing (SciDAC) Last re-competition for SciDAC institutes was in July 2017.	There are no opportunities for new institute establishment publicly forecast or presently open. SciDAC partnerships are funded at \$250,000 - \$800,000 while a total of \$15.5 million is provided for four SciDAC Institutes. This averages out to \$3.9 million per award.	More information available at http://www.scidac.gov/ .
ARPA-E OPEN Last solicitation announced in December 2017 with concept papers due February 2018.	Contingent on final FY 2018 appropriations, ARPA-E may include an additional \$50 million (on top of the \$100 million) to the current OPEN FOA to fund additional proposals. In line with historical opportunities and the three-year term of the 2018 program, we expect the next OPEN solicitation will be issued in FY 2021. Projects are between \$500,000 to \$10 million for 18 to 36 months.	More information available at https://arpa-e.energy.gov/?q=site-page/open .
Clean Water Technology Centers Originally proposed as the low-energy desalination hub, the focus changed to clean water technology to have broader application beyond desalination. Funding concerns and broadened scope necessitated a shift from a central "hub" model to decentralized centers.	DOE plans to release a funding opportunity announcement by summer 2018. DOE hosted two workshops in 2017 to help define the scope of the solicitation. The centers will be managed by the Advanced Manufacturing Office (AMO) within DOE's Office of Energy Efficiency and Renewable Energy (EERE).	More information on the last workshop is available at https://www.energy.gov/eere/amo/events/workshop-clean-water-processing-technology-research-and-development-0 .
Bioenergy Research Centers (BRCs) DOE currently funds four BRCs, with the last competition being held in FY 2016. BRCs have	The funding period is five years, so another solicitation is expected in FY 2021. However, major discrepancies exist between the House and Senate FY 2018 appropriations marks and the President's	More information available at https://genomicscience.energy.gov/center/s/ .

been funded at roughly \$25 million per award annually.	FY 2018 budget request for current centers. The availability of funding for BRCs will not be resolved until Congress passes full FY 2018 appropriations.	
Nonproliferation University Consortia DOE currently funds three consortia and two are up for re-competition in 2018. The consortia have been funded at \$5 million each annually.	The National Nuclear Security Administration (NNSA) plans to release a funding solicitation in April 2018 to compete two university-led consortia—one for nuclear arms control verification technologies and the other for improved technological capabilities for detecting nuclear proliferation.	More information on the current consortia can be found at https://cvt.engin.umd.edu/ and https://www.cnec.ncsu.edu/ .
Predictive Science Academic Alliance Program NNSA will re-compete computing academic centers this summer.	NNSA plans to release a funding solicitation by Summer 2018 to fund predictive science academic centers. The three focus areas will be: • Development and demonstration of technologies and methodologies to support effective Exascale computing in the context of science/engineering applications; • “Predictive Science” based on verification and validation and uncertainty quantification for large-scale simulations; and • Discipline-focused research needed to further both predictive science and enable Exascale computing. Universities are selected either as a Multidisciplinary Simulation Center (MSC) or as a Single-Discipline Center (SDC). The MSCs will receive \$3.2 million and the SDCs will receive \$1.6 million each year for five years.	More information on the current centers can be found at https://nnsa.energy.gov/mediaroom/presreleases/psaap062713 .

Department of Defense (DOD)

Type	Information on Future Solicitations	Additional Information
Air Force Centers of Excellence (COEs) While not a regularly released solicitation, the Air Force utilizes COEs to pursue topics of significant benefit to their mission. The most recent COE competition, in 2017, concerned human-machine teaming and the winner has yet to be announced.	There are no publicly forecasted or open COE opportunities. Previous funding has been for around \$1 million per year for five years.	More information on Air Force Research Laboratory's University Relations is available at https://teamafrl.afciviliancareers.com/aboutus.php .
Multidisciplinary University Research Initiatives (MURI) Program While not an award for a large center, DOD's MURI program provides \$1.25 to \$1.5 million over a three-year award period to research topics of interest to the Services. Research topics vary by year and are submitted by the Services' research offices.	The MURI program utilizes annual broad agency announcements, with the FY 2019 solicitation expected in late spring of 2018. A list of the FY 2017 MURI selections is available at https://www.defense.gov/News/News-Releases/News-Release-View/Article/1151939/defense-department-awards-163-million-in-university-research-funding/ .	More information available at https://www.onr.navy.mil/Science-Technology/Directories/office-research-discovery-invention/Sponsored-Research/University-Research-Initiatives/MURI.aspx .
Vannevar Bush Faculty Fellowship (VBFF) program 5-year fellowship with up to \$3M for research with potentially extraordinary outcomes; will fund transformative, high-risk basic research in scientific areas of critical importance to DOD.	The next solicitation is expected to be released in spring of 2018. Maximum awards are \$3 million for five years.	More information available at http://basicresearch.defense.gov/vannevar-bush/ .
Defense Enterprise Science Initiative (DESI) Concept Focuses on use-inspired basic research with industry participants. Leverages industry IR&D, and other activities at DOD	DESI topics included in the FY 2018 pilot BAA include: Power Beaming; Highly-Maneuverable Autonomous UAV; Soft Active Composites with Intrinsic Sensing, Actuation, and Control; Metamaterial-based Antennas; and other. Proposals were due February 28,	More information available at http://basicresearch.defense.gov/ .

Laboratories; supports STEM efforts. DESI is the only basic research effort that requires a concurrent industry IR&D or DoD lab 6.2+ program.	2018. Total funding is \$1.5 million over 2 years.	
Army Research Laboratory (ARL) Collaborative Technology and Research Alliances (CTA/CRA) ARL releases these solicitations on an ad hoc basis to address specific technology needs.	There are no new alliance opportunities publicly forecasted or presently open in the CTA or CRA programs.	More information available at https://www.arl.army.mil/www/default.cfm?page=93 .

National Institutes of Health (NIH)

Unlike the other agencies included in this document, NIH does not have agency-wide flagship mechanisms. Rather, large center awards are driven through programmatic priorities within each institute or center. Examples of NIH center-type awards are presented below.

Type	Information on Future Solicitations	Additional Information
NHGRI and NIMH Centers of Excellence in Genomic Science (CEGS) (RM1) The CEGS program supports multi-investigator, interdisciplinary teams to develop genomic approaches to biomedical problems. The program aims to fund high-risk, high-reward research.	Current solicitation expires May 21, 2019. Letters of intent for FY 2019 submissions are due April 11, 2018, with applications due May 23. After applicant review in January, the funding would begin in April 2019. Applicants may request up to \$1.75 million in direct costs per year for up to five years, and the length of support for any center will not exceed ten years.	More information available at https://grants.nih.gov/grants/guide/pa-files/PA-16-436.html .
Clinical and Translational Science Award (CTSA) (U54) These large awards from the National Center for Advancing Translational Sciences (NCATS) support participation in the CTSA program, which supports translational and clinical research and fosters innovation in research methods, training, and career development.	Updated solicitation posted December 2017, with expiration date of September 2018. Standard NIH submission dates of January 25, May 25, and September 25. Awards budgets for the translational hub (UL1) and career development core (KL2) combined are limited to no more than \$7.5 billion in direct costs per year. Project period limited to five years.	More information available at https://grants.nih.gov/grants/guide/pa-files/PA-18-464.html .

NIBIB Quantum Program: Technological Innovation to Solve a Major Medical or Public Health Challenge (U01) The objective of this program is to support bioengineering research that catalyzes significant advances in the prevention, detection, diagnosis, or treatment of a major disease or public health problem.	The solicitation expired in May 2017, but NIBIB has stated it will issue another solicitation pending resolution of FY 2018 appropriations and the appointment of a new Director of NIBIB. Budgets are not limited, but it is strongly recommended that applicants not request a budget of more than \$1 million in direct costs per year. The maximum award period is four years.	More information available at https://grants.nih.gov/grants/guide/pa-files/PAR-15-031.html.
NCI and NIDCR Specialized Programs of Research Excellence (SPOREs) in Human Cancers These awards support state-of-the-art investigator-initiated translational research that will contribute to improved prevention, early detection, diagnosis, and treatment of an organ-specific cancer or a related group of cancers.	Posted in October 2017, the current SPORE FOA expires January 2021. This is the signature award of the NCI Translational Research Program, and an institution can have more than one SPORE in a specific cancer. Applicants may request a maximum of \$1.4 million in direct costs per year, and the max budget period is five years.	More information available at https://grants.nih.gov/grants/guide/pa-files/PAR-18-313.html.
Countermeasures Against Chemical Threats (CounterACT) Research Centers of Excellence (U54) These centers support research and development of new and improved therapeutics for accidental or intentional exposure to chemical threats with the objective of reducing mortality and morbidity.	This program, supported by NINDS, NEI, NIEHS, NIAMS, and NIDA, is a trans-NIH initiative in translational research that collaborates with other HHS programs focused on identifying new medical countermeasures. A new solicitation was issued February 2018 with LOIs due August and applications due September 2018, 2019, and 2020. Application budgets may not exceed \$2.5 million in direct costs per year, and the project period may not exceed five years.	More information available at https://grants.nih.gov/grants/guide/pa-files/PAR-18-657.html and https://www.ninds.nih.gov/Current-Research/Trans-Agency-Activities/CounterACT.

National Aeronautics and Space Administration (NASA)

Type	Information on Future Solicitations	Additional Information
Space Technology Research Institutes (STRI)	STMD plans to implement a second STRI competition in FY 2018. NASA currently funds	More information available at https://www.nasa.gov

Latest (and first) STRI solicitation posted October 2015, with LOIs due July 2016 and awardees selected February 2017. STRIs are managed by the NASA Space Technology Mission Directorate (STMD).	the two existing STRIs at \$15 million total for each over a five-year performance period.	ov/directorates/spa/cetech/strg/stri .
Heliophysics Grand Challenge Science Centers These centers are intended to address grand challenge research questions in solar and space physics through the cross-disciplinary application of theoretical and computational modeling and simulation tools.	The first solicitation is expected in FY 2018. NASA anticipates funding each center at \$2-\$3 million annually over 4-6 years.	More information available at https://smd-prod.s3.amazonaws.com/science-pink/s3fs-public/atoms/files/07_KOZYRA-Drive_Center_RFI_HPAC_v8.pdf .
Explorer Missions Cost-capped, competitively selected, PI-led missions managed by the Astrophysics Division and the Heliophysics Division within the NASA Science Mission Directorate. Explorers are accompanied by Missions of Opportunity (MOs), which offer researchers the opportunity to propose smaller instruments or studies that complement the larger Explorer mission. Announcements of Opportunity (AOs) for both were released in FY 2016.	NASA is implementing a two-year cadence of Explorer AOs. The Heliophysics Division plans to issue an AO for a Medium-Class Explorer (MIDEX) in FY 2018. The cost for this mission is \$250 million. The Astrophysics Division plans to issue an AO for a Small Explorer (SMEX) in FY 2019. Each of these AOs will be accompanied by an MO. SMEX funding is \$165 million.	More information on Astrophysics Explorers is available at https://science.nasa.gov/astrophysics/programs/astrophysics-explorers . More information on Heliophysics Explorers is available at https://ehpd.gsfc.nasa.gov/ .
Discovery Missions Discovery missions are PI-driven, competitively selected missions, though they are managed by the Planetary Science Division.	The next AO for Discovery is planned for FY 2019. Total funding is capped at \$490 million.	More information available at https://science.nasa.gov/solar-system/programs/discovery .
New Frontiers Also residing within the Planetary Science Division, New Frontiers missions are	The next New Frontiers AO is expected in FY 2022. Total funding is capped at \$1 billion.	More information available at https://science.nasa.gov/solar-

larger, competitively selected missions.		system/programs/new-frontiers.
Venture Class The Earth Science Division's Earth Venture (EV) missions are cost-capped, competitively selected, PI-led missions that offer researchers the opportunity to propose orbital or suborbital missions, and instrumentation.	The next Earth Venture Mission AO is expected in FY 2019. The next Earth Venture Suborbital AO is expected in FY 2021. The next Earth Venture Instrument AO is expected in April 2018. Award size varies depending on the mission category: • Earth Venture Missions (EVMs) are capped at \$166 million per award. • Earth Venture Instruments (EVIs) are capped at \$97 million per award. • Earth Venture Suborbital (EVS) missions are capped at \$30 million per award.	More information available at https://eosps0.gsfc.nasa.gov/mission-category/13 .

Department of Homeland Security (DHS)

Type	Information on Future Solicitations	Additional Information
University Centers of Excellence Center for Cross-Border Threat Screening and Supply Chain Defense solicitation was posted March 2017; applications were due August 2017	DHS may hold a Centers of Excellence competition in FY 2018, as the current center focused on terrorism studies is set to expire. However, DHS officials have not yet released final proposed topic areas for a new center. Funding is around \$20 - \$30 million for a five-year award.	More information available at http://www.dhs.gov/homeland-security-centers-excellence .

Department of Transportation (DOT)

Type	Information on Future Solicitations	Additional Information
University Transportation Centers Last solicitation was posted June 2017 and due August 2017	Future competitions would likely occur in FY 2020 or FY 2021, depending on reauthorization of the Fixing America's Surface Transportation (FAST) Act, which is due to expire on FY 2019. The award ceiling for these three awards is \$2.95 million.	More information available at https://www.transportation.gov/utc .
Federal Aviation Administration Centers of Excellence Last new Center opportunity, on Technical Training and Human Performance, was issued August 2016	FAA often recompetes centers that have seen their ten-year funding expire with new universities receiving awards. Recently expired COEs include centers in materials (2015), intermodal transport environment (2014), and aviation emissions (2014). COE Research Grants require matching funds mandated by Congress.	More information available at https://www.faa.gov/about/office_org/headquarters_offices/ang/offices/management/coe/ .

National Oceanic and Atmospheric Administration (NOAA)

Type	Information on Future Solicitations	Additional Information
Cooperative Institutes (CIs): The most recent competition closed in February 2018 and focused on Modeling the Earth System.	NOAA currently operates 16 CIs that are recompeted every five-year cycle, which corresponds to each center. NOAA also releases an annual BAA for CIs that is open year-round. CIs are for \$5 to \$15 million annually over five years.	More information available at https://ci.noaa.gov/ .

National Endowment for the Humanities (NEH)

Type	Information on Future Solicitations	Additional Information
Challenge Grants Supports infrastructure development and capacity building. Deadline for current solicitation was March 15, 2018	The Office of Challenge Grants was recently reinstated in calendar year (CY) 2018; following the President's Budget Request for FY 2018, the Office was disbanded, and staff were moved into the Division of Education Programs. This is the Challenge Grant Office's first grant solicitation of 2018. Awards are up to \$500,000 with matching funds required.	More information available at https://www.neh.gov/grants/preservation/infrastructure-and-capacity-building-challenge-grants .