NJIT Research Newsletter

Issue: ORN-2018-07

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NJIT Research Newsletter includes recent awards, and announcements of research related seminars, webinars, national and federal research news related to research funding, and ***Grant Opportunity Alerts***. The Newsletter is posted on the NJIT Research Website http://www.njit.edu/research/ .

Grant Opportunity Alerts

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: Critical Techniques, Technologies and Methodologies for Advancing Foundations and Applications of Big Data Sciences and Engineering (BIGDATA); Cyber-Physical Systems (CPS); Computer Science for All (CSforAll:RPP) Researcher Practitioner Partnerships; Formal Methods in the Field (FMitF); US-EU Internet Core & Edge Technologies (ICE-T); Integrative Strategies for Understanding Neural and Cognitive Systems; Cultivating Cultures for Ethical STEM; Cyberinfrastructure for Sustained Scientific Innovation (CSSI) - Data and Software

NIH: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship; Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship; Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research; NIH Support for Conferences and Scientific Meetings (Parent R13); Shared Instrumentation for Animal Research (SIFAR) Grant Program (S10); Shared Instrumentation Grant (SIG) Program (S10); High-End Instrumentation (HEI) Grant Program (S10); Cutting-Edge Basic Research Awards (CEBRA) (R21); Lab to Marketplace: Tools for Brain and Behavioral Research (R43/R44)

Department of Defense/US Army/DARPA/ONR: Nano-Bio Manufacturing Consortium (NBMC); Human-Centered Intelligence, Surveillance & Reconnaissance (ISR) Leveraged Science and Technology (S&T) Program; 2018 Office of Naval Research Basic Research Opportunity: "Advancing Artificial Intelligence for the Naval Domain"; 2018 ERDC Broad Agency Announcement ; Driven and Nonequilibrium Quantum Systems (DRINQS); FY 2018 Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Millimeter-Wave Digital Arrays (MIDAS); Education and Workforce Program; C4ISR, Information Operations and Information Technology System Research

Department of Energy: OPEN 2018

NASA: Astrophysics Data Analysis; Discovery Data Analysis; Advanced Information Systems Technology

National Endowment of Humanities: Fellowships; Fellowships for Advanced Social Science Research on Japan

Streamlyne Update: New How-to-do Videos

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Streamlyne Question of the Week

Question: How can I add another investigator or my college ambassador to my proposal in order to help on budget preparation and edit proposal details?

Answer: Once in Streamlyne, and after successfully clicking *"Create a Development Proposal"* from the pull down list under *"PreAward"* main menu, you will be brought to the main proposal screen, where on the left hand side is the proposal menu/task bar. Go to the "Permissions" menu option/task bar. There you will be able to search for the person you wish to add and grant them a specific level of permission (aggregator, budget creator, viewer) and click *"Add"*.

More FAQs on Streamlyne: Please visit http://www.njit.edu/research/streamlyne/

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Recent Research Grant and Contract Awards

Congratulations to faculty and staff on receiving research grant and contract awards!

PI: Wenda Cao (PI)
Department: Center for Solar Terrestrial Research
Grant/Contract Project Title: On-Site Technical Support of Global Oscillation Network Group (GONG)
Funding Agency: NSF
Duration: 07/01/17-06/30/18

PI: Wenda Cao (PI) and Philip Goode (Co-PI)
Department: Center for Solar Terrestrial Research
Grant/Contract Project Title: International Collaborations to Optimize Scientific Output of the New Solar Telescope in Big Bear
Funding Agency: The National Astronomical Observatory of China
Duration: 01/01/14-12/31/18

PI: Tara Alvarez (PI)
Department: Biomedical Engineering
Grant/Contract Project Title: Virtual Reality Vision Therapy
Funding Agency: Foundation Venture Capital Group
Duration: 12/22/17-06/21/18

PI: Farzan Nadim (PI) and Dirk Bucher (Co-PI)
Department: Biological Sciences
Grant/Contract Project Title: Neuromodulation of Neuronal Oscillations
Funding Agency: NIH
Duration: 03/01/18-01/31/19

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In the News…

(National and Federal News Related to Research Funding and Grant Opportunities)

Revisions on 2019 Budget for Research and Science: The original 2019 budget request was completed long before that deal with struck, however, forcing the White House to adhere to the existing spending caps. That triggered many of the same deep research cuts Trump called for in his 2018 request. After Congress lifted the caps, White House officials had 3 days to decide how they wanted to tweak their request to reflect the new budget reality. The result is a series of documents that can leave readers with whiplash. In one place, the numbers suggest a bloodbath for science, including a 21% cut to overall basic research, a 27% cut at the National Institutes of Health (NIH), a 29% cut to the National Science Foundation (NSF), and a 22% cut to the Department of Energy's (DOE's) Office of Science.

But the picture brightens when the last-minute addendum is factored in. For example, at NIH, NSF, and DOE, the requested cuts evaporate and are replaced with research budgets that are roughly flat at 2017 levels: $34.8 billion for NIH, $7.5 billion for NSF, and $5.4 billion for DOE's science programs. (Congress could still approve higher numbers for 2018, which would then leave the 2019 request as a cut.)

Many research-related programs don't get a reprieve, however. For example, the administration is repeating its 2018 call to eliminate DOE's Advanced Research Projects Agency-Energy, research programs at the Environmental Protection Agency, and research projects at the National Oceanic and Atmospheric Administration and the U.S. Geological Survey. The request also calls for canceling five NASA earth science missions, including an operating Earth-facing camera on the Deep Space Climate Observatory satellite and the planned Plankton, Aerosol, Cloud, ocean Ecosystem satellite, set for launch in 2022, which would assess the ocean's health and its interactions with the atmosphere. More information is posted on the website http://www.sciencemag.org/news/2018/02/first-take-trump-s-2019-budget-request-not-quite-disastrous-science-it-first-appears

FY19 Budget Request: Steeper Cuts Sought for NIST: President Trump's fiscal year 2019 budget request for the National Institute of Standards and Technology proposes to cut the agency's budget from its fiscal year 2017 enacted level of $954 million to $629 million, a 34 percent decrease. All the agency's main accounts would see significant reductions, ranging from a 15 percent cut to laboratory programs to a 63 percent cut to research facility construction and a 90 percent cut to industrial technology services. Last year, the administration proposed a 23 percent cut for NIST in its fiscal year 2018 budget request. Although a last-minute addendum to the latest budget request spared other science agencies from similarly deep cuts, it did not provide any extra resources for NIST. Two AIP Member Societies — the American Physical Society and the Optical Society — have raised concerns about the negative impacts of such cuts to NIST in their respective statements on the budget request. More information is posted on the website

NEW FRONTIERS: The National Science Foundation's Strategic Plan (2018-2022) points to seemingly limitless opportunities for the nation's research enterprise. Here are just a few: "CRISPR-Cas9 gene-editing techniques, coupled with greater understanding of molecular biological processes and design principles from engineering, open up a whole new realm of synthetic biology where both molecular machines and novel organisms can be constructed (and) make possible the development of a new bio-industry that ranges from novel sensors for environmental chemicals to new ways of manufacturing pharmaceuticals. . . .Today we are on the threshold of another quantum revolution . . . An example of a high-impact, potential research activity is the development of a state-of-the-art, Pan-Arctic observing system . . . [E]electromagnetic radiation, high-energy astrophysical particles, and gravitational waves . . . each provide a different view of the universe. . . Looking through these different windows, we will understand matter, energy, and the cosmos in fundamentally new ways. . . . Access to the next level of discovery relies on translating complex data from observations, experiments, and simulations into knowledge."
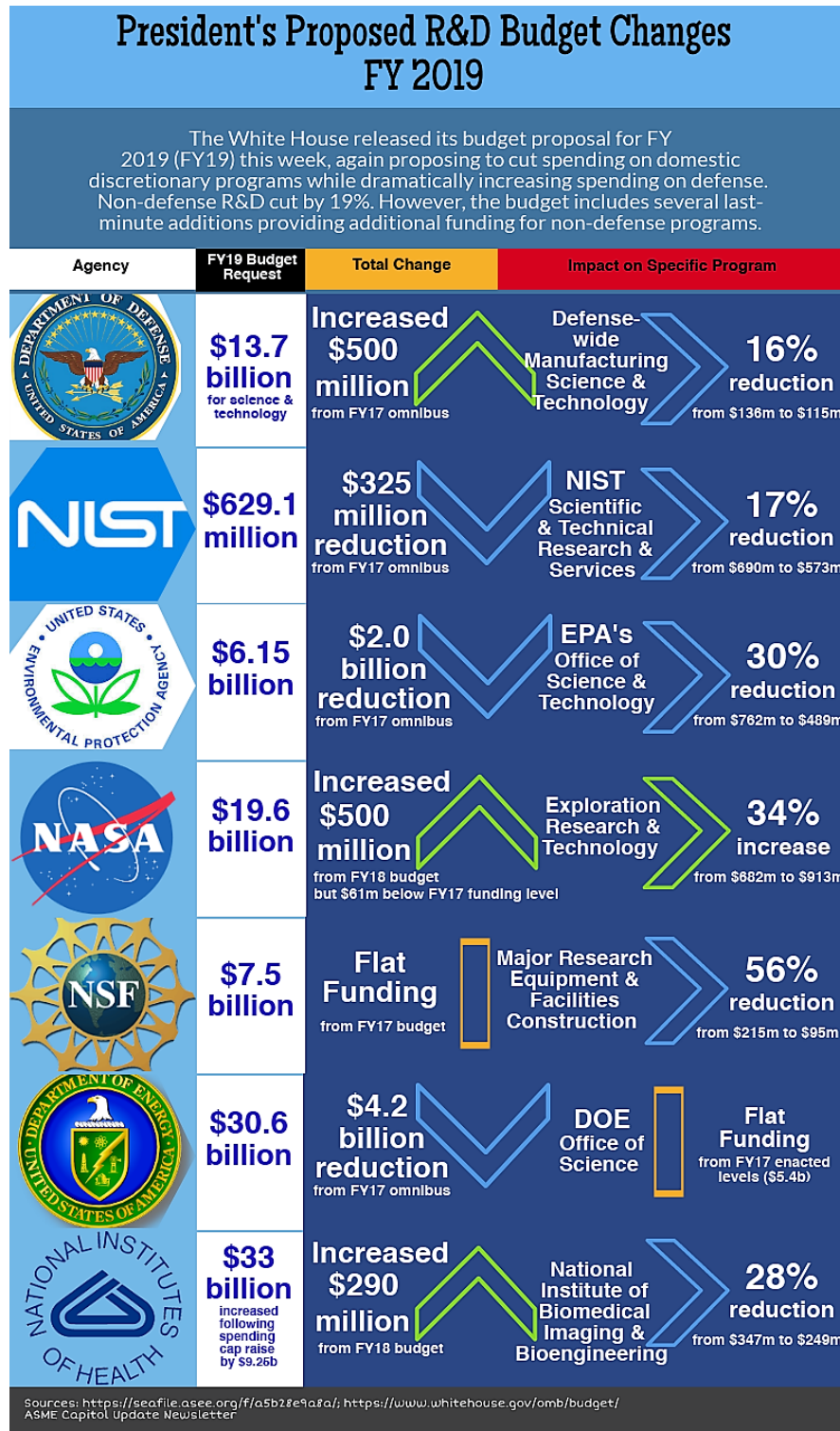
This plan also underscores where greater investments are needed; for example, in research infrastructure and broadening participation in the science, technology, engineering and mathematics (STEM) workforce. As highlighted in the 2018 Science and Engineering Indicators report, the number of non-STEM jobs requiring STEM skills is now on par with the number of STEM jobs in the U.S. As societies around the world transition to more knowledge-based economies, NSF is committed to preparing a 21st century workforce and ensuring that talented individuals from all sectors of our society have access to STEM learning.

Another priority is placed on Information Technology: *Making Information Technology Work for Us: New information technologies and systems are available to drive our science and engineering mission forward in a more nimble, efficient structure. Cloud resources and shared service providers offer the potential for new efficiencies. New developments in software offer potential improvements in our core processes such as merit review and financial management. To continue funding cutting-edge science, engineering, and education research, we will exploit leading-edge information technology solutions that can adapt easily and quickly to our needs.* NSF Strategic Plan is posted on the website https://www.nsf.gov/pubs/2018/nsf18045/nsf18045.pdf

Study: Moore's Law May Have Ended: According to a new study published in Nature Electronics, the oft-cited "Moore's Law" may have come to an end. The piece explains, "In 1965, Gordon Moore, co-founder of Intel, came up with a theory of technology progression that held true for more than 50 years" suggesting that "the speed of computer processors would double every two years. The transistors inside of computer chips would continue to decline in cost and size but increase in power." The new study "suggests that technology can no longer get any smaller and innovators will have to figure out a new way to make it better. What this new way is, no one yet knows. As outlined in the new study, the future of microprocessors, the tiny computer chips that help run our lives, is complicated." More information is on website https://techxplore.com/news/2018-02-law.html

Energy Innovation: Patents Increase: "The number of U.S. Patent and Trade Office patents granted in sustainable energy technologies doubled between 2009 and 2015. Six technologies—solar, hybrid and electric vehicles, smart grid, fuel cell, battery, capture and storage of carbon and other greenhouse gases—have led growth of these patents," the Indicators report. "U.S. inventors received the largest share of sustainable energy patents in 2016 (43%), followed by Japan (20%), and the EU (16%). Patenting by U.S. inventors has been led by four technologies—hybrid and

electric vehicles, solar, smart grid, and energy storage," "Patents granted to South Korea more than quadrupled between 2009 and 2016, led by growth in energy storage, solar, hybrid/electric, and battery technologies." "Overall, the United States is the largest producer of high-technology manufacturing output with China being the largest global producer in the ICT manufacturing industries."

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President's Proposed R&D Budget Changes FY 2019

The White House released its budget proposal for FY 2019 (FY19) this week, again proposing to cut spending on domestic discretionary programs while dramatically increasing spending on defense. Non-defense R&D cut by 19%. However, the budget includes several last-minute additions providing additional funding for non-defense programs.

Agency	FY19 Budget Request	Total Change	Impact on Specific Program	
Department of Defense	$13.7 billion for science & technology	Increased $500 million from FY17 omnibus	Defense-wide Manufacturing Science & Technology	16% reduction from $136m to $115m
NIST	$629.1 million	$325 million reduction from FY17 omnibus	NIST Scientific & Technical Research & Services	17% reduction from $690m to $573m
United States Environmental Protection Agency	$6.15 billion	$2.0 billion reduction from FY17 omnibus	EPA's Office of Science & Technology	30% reduction from $762m to $489m
NASA	$19.6 billion	Increased $500 million from FY18 budget but $61m below FY17 funding level	Exploration Research & Technology	34% increase from $682m to $913m
NSF	$7.5 billion	Flat Funding from FY17 budget	Major Research Equipment & Facilities Construction	56% reduction from $215m to $95m
Department of Energy	$30.6 billion	$4.2 billion reduction from FY17 omnibus	DOE Office of Science	Flat Funding from FY17 enacted levels ($5.4b)
National Institutes of Health	$33 billion increased following spending cap raise by $9.26b	Increased $290 million from FY18 budget	National Institute of Biomedical Imaging & Bioengineering	28% reduction from $347m to $249m

Sources: https://seafile.asee.org/f/a5b28e9a8a/; https://www.whitehouse.gov/omb/budget/
ASME Capitol Update Newsletter

Event: Mathematical Sciences Research Institutes
Sponsor: NSF
When: February 20, 2018 from 2.00 PM to 3.30 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=244064&org=NSF
Brief Description: This webinar will cover the program solicitation (NSF 17-553) and requirements for submission of proposals to the *Mathematical Sciences Research Institutes* program. There will be a question-and-answer session following the discussion.

Mathematical Sciences Research Institutes are national resources that aim to advance research in the mathematical sciences through programs supporting discovery and dissemination of knowledge in mathematics and statistics and enhancing connections to related fields in which the mathematical sciences can play important roles. Institute activities help focus the attention of some of the best mathematical minds on problems of particular importance and timeliness. Institutes are also community resources that involve a broad segment of U.S.-based mathematical sciences researchers in their activities. The goals of the Mathematical Sciences Research Institutes program include advancing research in the mathematical sciences, increasing the impact of the mathematical sciences in other disciplines, and expanding the talent base engaged in mathematical research in the United States.

The NSF Division of Mathematical Sciences invites proposals for projects that contribute to this important, influential activity.
*   Webinar: February 20, 2018
*   Letters of Intent due: December 14, 2018
*   Proposals due: March 14, 2019
 To join the webinar: Please register at
https://nsf.webex.com/nsf/j.php?RGID=rfc62542ea791967e36b6bcd7991d9318 by February 16, 2018.

Event: Cyberinfrastructure for Sustained Scientific Innovation (CSSI) Program Webinar
Sponsor: NSF
When: February 23, 2018 from 1.00 PM to 2.30 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=244064&org=NSF
Brief Description: This solicitation focuses upon the integration of the data and software elements of advanced cyberinfrastructure. By integrating two major and long-running NSF program solicitations, Data Infrastructure Building Blocks (DIBBs) and Software Infrastructure for Sustained Innovation (SI2), under a single umbrella called Cyberinfrastructure for Sustained Scientific Innovation (CSSI), NSF seeks to enable funding opportunities that are flexible and responsive to the evolving and emerging needs in integrated data and software cyberinfrastructure. The goal of the integrated CSSI program is to create a cyberinfrastructure (CI) ecosystem that spans all levels of the data and software stack and scales from individual or small groups of innovators to large community resources. The program addresses all aspects of cyberinfrastructure, from embedded sensor systems and instruments, to desktops and high-end data and computing systems, to major instruments and facilities. The program will continue to nurture the interdisciplinary processes required to support the entire data and software lifecycle, and will successfully integrate development and support with innovation and research. Furthermore, the program will result in the development of sustainable CI communities that transcend scientific and geographical boundaries. The program envisions vibrant partnerships

among academia, government laboratories and industry, including international entities, for the development and stewardship of a sustainable infrastructure that can enhance productivity and accelerate innovation in science and engineering. Furthermore, integrated education activities will play a key role in developing and sustaining the cyberinfrastructure over time and in creating a workforce capable of fully realizing its potential to transform science and engineering.

To join the webinar: Please register at https://nsf.webex.com/nsf/onstag/g.php?MTID=e279566f7eb3399c4952a0e83c3c22acb by 11:59pm EDT on Thursday February 22, 2018.

Event: Math Frontiers Monthly Webinar Series
Sponsor: National Academies
When: March 13, 2018 from 2.00 PM
Website: http://sites.nationalacademies.org/deps/bmsa/deps_183972
Brief Description: Join the National Academies of Sciences, Engineering, and Medicine for a webinar series on exciting and upcoming mathematics research across an array of topics. Webinars will take place on the **second Tuesday of each month from 2-3 p.m. ET,** with two speakers and live Q&A. See below for the list of dates and themes for each webinar.

This is the only registration page for all webinars in the series. ***When registering, please make sure you select all the webinars you would like to attend.*** You will only receive reminder emails and login instructions for webinars you have registered for.

As each webinar approaches, we will post more information about the speakers on the webinar series page at nas.edu/mathfrontiers.

March 13, 2018: *Probability for People and Places*
Professors Kenneth L. Lange and Gregory F. Lawler will discuss applications of probability theory, including how DNA results are used to calculate family ancestry. Application areas include investment analytics and game theory.

April 10, 2018: *Social and Biological Networks*
Professor Alessandro Vespignani and others will discuss the mathematics of social and biological networks and how the analysis of these networks can lead to new and exciting discoveries.

May 8, 2018: *Mathematics of Redistricting*
Professors Jonathan Mattingly and Karen Saxe will discuss the mathematics of political redistricting—the process of redrawing congressional and state legislative electoral districts.

June 12, 2018: *Number Theory: The Riemann Hypothesis*
Professors Ken Ono and Terence Tao will speak on the importance and recent advances on the Riemann Hypothesis, one of the most famous unsolved problems in algebra and number theory.

July 10, 2018: *Topology*
Professors Jeffrey F. Brock and John Morgan will discuss applications of topology—the mathematical study of how object properties are impacted by deformations—to fields such as data analytics, tumor identification, and robotics.

August 14, 2018: *Algorithms for Threat Detection*
Professor Andrea Bertozzi and others will discuss applications of mathematics to spatiotemporal data analytics as a way to discover and mitigate national security threats.

September 11, 2018: *Mathematical Analysis*
Professor Dimitri Shlyakhtenko and others will discuss mathematical analysis—the study of functions and their limits. Application areas include computational fluid dynamics and astronomy.

October 9, 2018: *Combinatorics*
Invited speakers will discuss the mathematical study of discrete structures and their properties focusing on some of the modern techniques in the area including the probabilistic method.

Application areas include information theory, statistical physics, molecular biology and computer science.

November 13, 2018: *Why Machine Learning Works*
Invited speakers will discuss the mathematics behind machine learning and how they enable predictive analyses.

December 11, 2018: *Mathematics of Epidemics*
Professors Calistus Ngonghala and Folashade B. Agusto will discuss mathematical approaches to studying biology, including ecology and infectious disease.

To join the webinar: Please register at
http://sites.nationalacademies.org/deps/bmsa/deps_183972

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Grant Opportunities

National Science Foundation

Grant Program: Critical Techniques, Technologies and Methodologies for Advancing Foundations and Applications of Big Data Sciences and Engineering (BIGDATA)
Agency: National Science Foundation NSF 18-539
RFP Website: https://www.nsf.gov/pubs/2018/nsf18539/nsf18539.htm
Brief Description: The *BIGDATA* program seeks novel approaches in computer science, statistics, computational science, and mathematics leading towards the further development of the interdisciplinary field of *data science.* The program also seeks innovative applications in domain science, including social and behavioral sciences, education, physical sciences, and engineering, where data science and the availability of big data are creating new opportunities for research and insights not previously possible*.*
The solicitation invites two categories of proposals:
- **Foundations (BIGDATA: F):** those developing or studying fundamental theories, techniques, methodologies, and technologies of broad applicability to big data problems, motivated by specific data challenges and requirements; and
- **Innovative Applications (BIGDATA: IA):** those engaged in *translational* activities that employ new big data techniques, methodologies, and technologies to address and solve problems in specific application domains. Projects in this category must be collaborative, involving researchers from domain disciplines and one or more methodological disciplines, e.g., computer science, statistics, mathematics, simulation and modeling, etc.

Proposals are expected to be well motivated by specific big data problems in one or more science and engineering research domains. All proposals are expected to clearly articulate the big data aspect(s) that motivate the research. *Innovative Applications* proposals must provide clear examples of the impacts of the big data techniques, technologies and methodologies on applications in one or more domains.
In FY 2018, the BIGDATA program continues the cloud option that was introduced in FY 2017, in partnership with Amazon Web Services (AWS), Google Cloud, and Microsoft Azure (see *Use of Cloud Resources*, at the end of Section II, Program Description).
Before preparing a proposal in response to this BIGDATA solicitation, applicants are strongly urged to review other related programs and solicitations and contact the respective NSF program officers to identify whether those solicitations are more appropriate. In particular:
- Proposals that focus exclusively on areas of biology supported by NSF's Directorate for Biological Sciences (BIO) should be submitted to programs such as Advances in Biological

Informatics that are managed by the BIO Division of Biological Infrastructure (DBI; https://www.nsf.gov/div/index.jsp?div=DBI

- Proposals specific to geosciences that respond to the community needs and requirements expressed by the geosciences community should consider the EarthCube program for *Developing a Community-Driven Data and Knowledge Environment for the Geosciences* (https://www.nsf.gov/geo/earthcube/);
- For the development of robust and shared data- or software-centric cyberinfrastructure capabilities, applicants should consider the *Cyberinfrastructure for Sustained Scientific Innovation - Data and Software* program(CSSI; https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505505);
- For computational and data science research not specifically addressing big data issues, applicants should consider the *Computational and Data Enabled Science and Engineering* program (CDS&E https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504813);
- For work that is focused more on scaling performance of software rather than data-related issues, applicants should consider the *Scalable Parallelism in the Extreme* program (SPX; https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505348);
- Proposals that focus on research in mathematics or statistics that is not tied to a specific big data problem should be submitted to the appropriate program within NSF's Directorate for Mathematical & Physical Sciences (MPS) Division of Mathematical Sciences (DMS); see a list of DMS programs at https://www.nsf.gov/funding/programs.jsp?org=DMS; and
- Proposals that focus on research relevant to NSF's Directorate for Computer and Information Science and Engineering (CISE) not tied to a specific big data problem should be submitted to the appropriate CISE program, including the core programs:
  - o Computer and Network Systems (CNS) Core Programs: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf17570;
  - o Computing and Communication Foundations (CCF) Core Programs: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf17571; and
  - o Information and Intelligent Systems (IIS) Core Programs: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf17572.

Awards: Standard grants; **Anticipated Funding Amount:** $24,000,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: May 07, 2018 - May 14, 2018
Contacts: Chaitanya Baru, Senior Advisor for Data Science, CISE/OAD, telephone: (703) 292-4541, email: cbaru@nsf.gov
- Sylvia Spengler, Lead Program Director for BIGDATA, CISE/IIS, telephone: (703) 292-8930, email: sspengle@nsf.gov
- John C. Cherniavsky, Program Director, EHR/DRL, telephone: (703) 292-5136, email: jchernia@nsf.gov

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Grant Program: Cyber-Physical Systems (CPS)
Agency: National Science Foundation NSF 18-538
RFP Website: https://www.nsf.gov/pubs/2018/nsf18538/nsf18538.htm
Brief Description: Cyber-physical systems (CPS) are engineered systems that are built from, and depend upon, the seamless integration of computation and physical components. Advances in CPS

will enable capability, adaptability, scalability, resiliency, safety, security, and usability that will expand the horizons of these critical systems. CPS technologies are transforming the way people interact with engineered systems, just as the Internet has transformed the way people interact with information. New, smart CPS drive innovation and competition in a range of application domains including agriculture, aeronautics, building design, civil infrastructure, energy, environmental quality, healthcare and personalized medicine, manufacturing, and transportation. Moreover, the integration of artificial intelligence with CPS creates new research opportunities with major societal implications.

While tremendous progress has been made in advancing CPS technologies, the demand for innovation across application domains is driving the need to accelerate fundamental research to keep pace. At the same time, the CPS program seeks to open new vistas for the research community to think beyond the usual cyber-physical paradigms and structures and propose creative ideas to address the myriad challenges of today's systems as well as those of the future that have not yet been designed or fielded.

The CPS program aims to develop the core research needed to engineer these complex CPS, some of which may also require dependable, high-confidence, or provable behaviors. Core research areas of the program include control, data analytics, autonomy, design, information management, internet of things (IoT), mixed initiatives including human-in- or on-the-loop, networking, privacy, real-time systems, safety, security, and verification. By abstracting from the particulars of specific systems and application domains, the CPS program seeks to reveal cross-cutting, fundamental scientific and engineering principles that underpin the integration of cyber and physical elements across all application domains. The program additionally supports the development of methods, tools, and hardware and software components based upon these cross-cutting principles, along with validation of the principles via prototypes and testbeds. This program also fosters a research community that is committed to advancing education and outreach in CPS and accelerating the transition of CPS research into the real world.

Awards: Standard grants; **Anticipated Funding Amount:** $29,500,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: May 09, 2018
Contacts: David Corman, Program Director, CISE/CNS, telephone: (703) 292-8754, email: dcorman@nsf.gov
- Radhakisan Baheti, Program Director, ENG/ECCS, telephone: (703) 292-8339, email: rbaheti@nsf.gov
- Anindya Banerjee, Program Director CISE /CCF, telephone: (703) 292-7885, email: abanerje@nsf.gov

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Grant Program: Computer Science for All (CSforAll:RPP) Researcher Practitioner Partnerships
Agency: National Science Foundation NSF 18-537
RFP Website: https://www.nsf.gov/pubs/2018/nsf18537/nsf18537.htm
Brief Description: This program aims to provide *all* U.S. students the opportunity to participate in computer science (CS) and computational thinking (CT) education in their schools at the preK-12 levels. With this solicitation, the National Science Foundation (NSF) focuses on researcher-practitioner partnerships (RPPs) that foster the research and development needed to bring CS and CT to all schools. Specifically, this solicitation aims to provide high school teachers with the preparation, professional development (PD) and ongoing support that they need to teach rigorous computer science courses; preK-8 teachers with the instructional materials and preparation they

need to integrate CS and CT into their teaching; and schools and districts the resources needed to define and evaluate multi-grade pathways in CS and CT.

Awards: Standard grants; **Anticipated Funding Amount:** $20,000,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: May 09, 2018
Contacts: Janice Cuny, Program Officer, CISE/CNS, telephone: (703) 292-8489, email: jcuny@nsf.g

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Grant Program: Formal Methods in the Field (FMitF)
Agency: National Science Foundation NSF 18-536
RFP Website: https://www.nsf.gov/pubs/2018/nsf18536/nsf18536.htm
Brief Description: The Formal Methods in the Field (FMitF) program aims to bring together researchers in formal methods with researchers in other areas of computer and information science and engineering to jointly develop rigorous and reproducible methodologies for designing and implementing correct-by-construction systems and applications with provable guarantees. FMitF encourages close collaboration between two groups of researchers. The first group consists of researchers in the area of formal methods, which, for the purposes of this solicitation, is broadly defined as principled approaches based on mathematics and logic, including modeling, specification, design, program analysis, verification, synthesis, and programming language-based approaches. The second group consists of researchers in the "field," which, for the purposes of this solicitation, is defined as a subset of areas within computer and information science and engineering that currently do not benefit from having established communities already developing and applying formal methods in their research. Initially the program will limit the field to these four areas that stand to directly benefit from a grounding in formal methods: computer networks, cyber-human systems, machine learning, and operating/distributed systems. However other field(s) may emerge as priority areas for the program in future years, subject to the availability of funds.

Each proposal must have at least one Principal Investigator (PI) or co-PI with expertise in formal methods and at least one with expertise in one or more of these fields: computer networks, cyber-human systems, machine learning, and operating/distributed systems. Proposals are expected to address the fundamental contributions to both formal methods and the respective field(s), and should include a proof of concept in the field along with a detailed evaluation plan that discusses intended scope of applicability, trade-offs and limitations. All proposals are expected to contain a detailed collaboration plan that clearly highlights and justifies the complementary expertise of the PIs in the designated areas, and describes the mechanisms for continuous bi-directional interaction.

Awards: Standard grants; **Anticipated Funding Amount:** $8,000,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: May 08, 2018
Contacts: Nina Amla, Program Director, telephone: (703) 292-7991, email: namla@nsf.gov
  • Anindya Banerjee, Program Director, telephone: (703) 292-7885, email: abanerje@nsf.gov
  • Dan R. Cosley, Program Director, telephone: (703) 292-8491, email: dcosley@nsf.gov

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Grant Program: US-EU Internet Core & Edge Technologies (ICE-T)
Agency: National Science Foundation NSF 18-535
RFP Website: https://www.nsf.gov/pubs/2018/nsf18535/nsf18535.htm

Brief Description: The Division of Computer and Network Systems (CNS) within the National Science Foundation's (NSF) Directorate for Computer and Information Science and Engineering (CISE) supports research and education activities that seek to develop a better understanding of the fundamental properties of computer and network systems. The Networking Technology and Systems (NeTS) program in the CNS division supports transformative research on fundamental scientific and technological advances leading to the development of Next Generation Internet (NGI) and Advanced Wireless Networking (AWN) systems and technologies.

NSF/CISE and the European Commission's (EC) Directorate General for Communication Networks, Content and Technology (DG CONNECT) seek to enable US and European Union (EU) researchers to collaborate to address compelling research challenges in NGI and AWN. Topics of interest include, but are not limited to, software-defined infrastructures; network function virtualization; resource management in support of content delivery; open data architectures for shared, federated research infrastructures; advanced wireless technologies; and research software tools to support advanced wireless and smart city/community testbeds.

This NSF solicitation is expected to align with a related effort in the EC's Horizon 2020's Work Programme for 2018-2020. For funding under this solicitation, US investigators must describe: 1) collaborative research, 2) research collaboration initiation activities, or 3) research fellowships with counterpart EU investigators who have received, or are requesting funding separately under the EC Horizon 2020 Programme area on Information and Communication Technologies (ICT).

Awards: Standard grants; **Anticipated Funding Amount:** $2,500,000

Each RC award may be up to $300,000 over three years, and will be made to US organizations, pending availability of funds. Each RI award may be up to $100,000 over up to 1 year, and will be made to US organizations, pending availability of funds. Each RF award may be up to $50,000 over up to 1 year, with a fellowship duration of 2-6 months, and will be made to US organizations, pending availability of funds.

Letter of Intent: Not Required

Full Proposal Submission Deadline: May 07, 2018

Contacts: John "Jack" Brassil, telephone: (703) 292-8950, email: jbrassil@nsf.gov
- Monisha Ghosh, telephone: 703-292-8746, email: mghosh@nsf.gov

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Grant Program: Integrative Strategies for Understanding Neural and Cognitive Systems
Agency: National Science Foundation NSF 18-533
RFP Website: https://www.nsf.gov/pubs/2018/nsf18533/nsf18533.htm
Brief Description: The complexities of brain and behavior pose fundamental questions in many areas of science and engineering, drawing intense interest across a broad spectrum of disciplinary perspectives while eluding explanation by any one of them. Rapid advances within and across disciplines are leading to an increasingly interwoven fabric of theories, models, empirical methods and findings, and educational approaches, opening new opportunities to understand complex aspects of neural and cognitive systems through integrative multidisciplinary approaches.

This program calls for innovative, convergent, boundary-crossing proposals that can best capture those opportunities and map out new research frontiers. NSF seeks proposals that are bold and risky, and transcend the perspectives and approaches typical of disciplinary research efforts. This cross-directorate program is one element of NSF's broader effort directed at Understanding the Brain, a multi-year activity that includes NSF's participation in the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative (https://www.nsf.gov/brain/). NSF

envisions a connected portfolio of transformative, integrative projects that create synergistic links across investigators and communities, yielding novel ways of tackling the challenges of understanding the brain in action and in context.

This solicitation extends the NCS program for three years, from FY2018 through FY2020, and offers the FRONTIERS proposal class, for larger projects, in FY2019. Integrative projects will be supported at scales reflecting increasing levels of collaboration and coordination toward strategic, potentially transformative research goals.

The program focuses on four aspects of neural and cognitive systems that are current targets of converging interdisciplinary interests. NCS projects must advance the foundations of one or more of these focus areas, as described further within the solicitation:

1. ***Neuroengineering and Brain-Inspired Concepts and Designs***
2. ***Individuality and Variation***
3. ***Cognitive and Neural Processes in Realistic, Complex Environments***
4. ***Data-Intensive Neuroscience and Cognitive Science***

Proposals must address both risk and reward: **high-risk, high-payoff approaches are expected.** Proposals must also be consistent with the missions of the participating directorates, while going beyond the scope of any NSF core program, or they will not be considered responsive to the solicitation.

Awards: Standard grants; **Anticipated Funding Amount:** $15,000,000

Letter of Intent Due Date(s) *(required)* (due by 5 p.m. submitter's local time):
    February 20, 2018
FOUNDATIONS, FY2018 competition
    December 07, 2018
FRONTIERS, FY2019 competition

Full Proposal Submission Deadline: April 17, 2018

Contacts: NCS Program Team, telephone: (703) 292-2485, email: ncs@nsf.gov

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Grant Program: Cultivating Cultures for Ethical STEM
Agency: National Science Foundation NSF 18-532
RFP Website: https://www.nsf.gov/pubs/2018/nsf18532/nsf18532.htm
Brief Description: Cultivating Cultures for Ethical STEM (CCE STEM) funds research projects that identify (1) factors that are effective in the formation of ethical STEM researchers and (2) approaches to developing those factors in all the fields of science and engineering that NSF supports. CCE STEM solicits proposals for research that explores the following: 'What constitutes responsible conduct for research (RCR), and which cultural and institutional contexts promote ethical STEM research and practice and why?' Factors one might consider include: honor codes, professional ethics codes and licensing requirements, an ethic of service and/or service learning, life-long learning requirements, curricula or memberships in organizations (e.g. Engineers without Borders) that stress responsible conduct for research, institutions that serve under-represented groups, institutions where academic and research integrity are cultivated at multiple levels, institutions that cultivate ethics across the curriculum, or programs that promote group work, or do not grade. Do certain labs have a 'culture of academic integrity'? What practices contribute to the establishment and maintenance of ethical cultures and how can these practices be transferred, extended to, and integrated into other research and learning settings?

Successful proposals typically have a comparative dimension, either between or within institutional settings that differ along these or among other factors, and they specify plans for developing interventions that promote the effectiveness of identified factors.

CCE STEM research projects will use basic research to produce knowledge about what constitutes or promotes responsible or irresponsible conduct of research, and how to best instill students with this knowledge. In some cases, projects will include the development of interventions to ensure responsible research conduct.

Awards: Standard grants; **Anticipated Funding Amount:** $3,150,000

Letter of Intent: Not Required;

Limit on Number of Proposals per Organization: 1

Only one proposal may be submitted by an eligible organization, as defined above, in which a member of their organization serves as the PI. Potential PIs are advised to contact their institutional office of research regarding processes used to select proposals for submission. Organizations submitting more than one proposal will be notified and given one week from notification to select one proposal for consideration. If one is not selected in that time period, all of those proposals will be returned without review. There is no limit on the number of proposals under which an organization may be included as a non-lead collaborator or sub-awardee.

Full Proposal Submission Deadline: April 17, 2018

Contacts: Frederick M. Kronz (SBE), telephone: (703) 292-7283, email: fkronz@nsf.gov
- Cassandra M. Dudka (OISE), telephone: (703) 292-7250, email: cdudka@nsf.gov
- Robert D. Fleischmann (BIO), telephone: (703) 292-7191, email: rfleisch@nsf.gov

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Grant Program: Cyberinfrastructure for Sustained Scientific Innovation (CSSI) - Data and Software

Agency: National Science Foundation NSF 18-531

RFP Website: https://www.nsf.gov/pubs/2018/nsf18531/nsf18531.htm

Brief Description: The Cyberinfrastructure for Sustained Scientific Innovation (CSSI) umbrella program encompasses the long-running Data Infrastructure Building Blocks (DIBBs) and Software Infrastructure for Sustained Innovation (SI2) programs, as NSF seeks to enable funding opportunities that are flexible and responsive to the evolving and emerging needs in data and software cyberinfrastructure.

The CSSI umbrella program anticipates four classes of awards:

1. **Elements** (either *Data Elements* or *Software Elements)*: These awards target small groups that will create and deploy robust capabilities for which there is a demonstrated need that will advance one or more significant areas of science and engineering.
2. **Framework Implementations** (either *Data Frameworks* or *Software Frameworks*): These awards target larger, interdisciplinary teams organized around the development and application of common infrastructure aimed at solving common research problems faced by NSF researchers in one or more areas of science and engineering, resulting in a sustainable community framework serving a diverse community or communities.
3. **Planning Grants for Community Cyberinfrastructure** (either *Community Data Cyberinfrastructure Planning Grants* or *Community Software Cyberinfrastructure Planning Grants*): Planning awards focus on the establishment of long-term capabilities in cyberinfrastructure, which would serve a research community of substantial size and disciplinary breadth.
4. **Community Cyberinfrastructure Implementations** (either *Community Data Cyberinfrastructure Implementations* or *Community Software Cyberinfrastructure Implementations*): These Community Software Cyberinfrastructure Implementations focus on the establishment of long-term hubs of excellence in cyberinfrastructure and

technologies, which will serve a research community of substantial size and disciplinary breadth.

Awards: Standard grants; **Anticipated Funding Amount:** $34,000,000
Letter of Intent: Not Required;
Full Proposal Submission Deadline: April 18, 2018
Contacts: Vipin Chaudhary, Program Director, CISE/OAC, telephone: (703) 292-2254, email: CSSIQueries@nsf.gov
- Amy Walton, Program Director, CISE/OAC, telephone: (703) 292-4538, email: CSSIQueries@nsf.gov
- Rajiv Ramnath, Program Director, CISE/OAC, telephone: (703) 292-4776, email: CSSIQueries@nsf.gov

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National Institutes of Health

Grant Program: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)
Agency: National Institutes of Health PA-18-671
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PA-18-671.html
Brief Description: The overall goal of the NIH Ruth L. Kirschstein National Research Service Award (NRSA) program is to help ensure that a diverse pool of highly trained scientists is available in appropriate scientific disciplines to address the Nation's biomedical, behavioral, and clinical research needs. NRSA fellowships support the training of pre-and postdoctoral scientists, dual-degree investigators, and senior researchers. More information about NRSA programs may be found at the Ruth L. Kirschstein National Research Service Award (NRSA) website.

The purpose of the Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31) is to enable promising predoctoral students to obtain individualized, mentored research training from outstanding faculty sponsors while conducting dissertation research. Applicants for this F31 program are expected to propose a dissertation research project and training plan in scientific health-related fields relevant to the mission of the participating Institutes and Centers. This training plan should reflect the applicant's dissertation research project, and facilitate and clearly enhance the individual's potential to develop into a productive, independent research scientist. The training plan should document the need for, and the anticipated value of, the proposed mentored research and training in relationship to the individual's research career goals. The training plan should also facilitate the fellow's transition to the next stage of his/her research career.

Awards: Award budgets are composed of stipends, tuition and fees, and institutional allowance. Individuals may receive up to 5 years of aggregate Kirschstein-NRSA support at the predoctoral level (up to 6 years for dual degree training, e.g., MD/PhD), and up to 3 years of aggregate Kirschstein-NRSA support at the postdoctoral level, including any combination of support from institutional training grants (e.g., T32) and an individual fellowship award. This F31 award program only supports dissertation research training.

Letter of Intent: Not Required
Deadline: Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32)
Agency: National Institutes of Health PA-18-670
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PA-18-670.html
Brief Description: The overall goal of the NIH Ruth L. Kirschstein National Research Service Award (NRSA) program is to help ensure that a diverse pool of highly trained scientists is available in appropriate scientific disciplines to address the Nation's biomedical, behavioral, and clinical research needs. NRSA fellowships support the training of pre-and postdoctoral scientists, dual-degree investigators, and senior researchers. More information about NRSA programs may be found at the Ruth L. Kirschstein National Research Service Award (NRSA) website.

The purpose of the Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32) is to support promising applicants during their mentored postdoctoral training under the guidance of outstanding faculty sponsors. The proposed research and training plan should enhance the individual's potential to develop into a productive, independent researcher by providing strong mentorship, appropriate training and career development opportunities, and strong institutional support and commitment. The training plan should be explicitly designed to facilitate the fellow's transition to the next career stage and should explain how, in combination with the candidate's prior training and experience, it will contribute to the individual's research career goals.

Awards: Award budgets are composed of stipends, tuition and fees, and institutional allowance. Individuals may receive up to 5 years of aggregate Kirschstein-NRSA support at the predoctoral level (up to 6 years for dual degree training, e.g., MD/PhD), and up to 3 years of aggregate Kirschstein-NRSA support at the postdoctoral level, including any combination of support from institutional training grants (e.g., T32) and an individual fellowship award.

Letter of Intent: Not Required
Deadline: Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31)
Agency: National Institutes of Health PA-18-666
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PA-18-666.html
Brief Description: The overall goal of the NIH Ruth L. Kirschstein National Research Service Award (NRSA) program is to help ensure that a diverse pool of highly trained scientists is available in appropriate scientific disciplines to address the Nation's biomedical, behavioral, and clinical research needs. NRSA fellowships support the training of pre-and postdoctoral scientists, dual-degree investigators, and senior researchers. More information about NRSA programs may be found at the Ruth L. Kirschstein National Research Service Award (NRSA) website.

The purpose of the Kirschstein-NRSA Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (F31) is to provide support for mentored research training leading to the PhD or equivalent research degree, the combined MD/PhD degree, or another formally combined health professional degree and research doctoral degree in the biomedical, behavioral, or clinical sciences for individuals from diverse population groups. This fellowship program will enhance the diversity of the biomedical, behavioral, and clinical research workforce

in the United States by providing opportunities for academic institutions to identify and recruit students from diverse population groups to seek graduate degrees in health-related research and apply for this fellowship. The goal of this program is to enhance the number of scientists from diverse population groups who are well prepared for research careers in the biomedical, behavioral, and clinical sciences.

Awards: Award budgets are composed of stipends, tuition and fees, and institutional allowance. Individuals may receive up to 5 years of aggregate Kirschstein-NRSA support at the predoctoral level (up to 6 years for dual degree training, e.g., MD/PhD), , including any combination of support from institutional training grants (e.g., T32) and an individual fellowship award.

Letter of Intent: Not Required

Deadline: Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: NIH Support for Conferences and Scientific Meetings (Parent R13 Clinical Trial Not Allowed)
Agency: National Institutes of Health PAR-18-648
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PA-18-648.html
Brief Description: The purpose of the NIH Research Conference Grant (R13) is to support high quality scientific conferences that are relevant to the NIH's mission and to the public health. A conference is defined as a symposium, seminar, workshop, or any other organized and formal meeting, whether conducted face-to-face or via the internet, where individuals assemble (or meet virtually) for the primary purpose to exchange technical information and views or explore or clarify a defined subject, problem, or area of knowledge, whether or not a published report results from such meeting. The NIH recognizes the value to members of the research community and all other interested parties in supporting such forums.

A critical part of the application for NIH conference support is the documentation of appropriate representation of individuals from nationally underrepresented groups in the planning and implementation of, and participation in, the proposed conference. This includes selection of organizing committee members, speakers, and other invited participants, such as session chairs and panel discussants as well as general attendance. Underrepresented groups include individuals from nationally underrepresented racial and ethnic groups, individuals with disabilities, individuals from disadvantaged backgrounds, and women. See NIH Notice of Interest in Diversity, NOT-OD-18-129. "Appropriate representation" can be determined by reviewing the availability of scientists from nationally underrepresented groups known to be working in a particular field of biomedical or behavioral research to the anticipated geographic conference area. If the application does not reflect appropriate representation, no award will be issued until program staff members are assured of concerted, effective recruitment and outreach efforts.

Awards: Application budgets are not limited but need to reflect the actual needs of the proposed project.

Letter of Intent: Not Required

Deadline: Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: Shared Instrumentation for Animal Research (SIFAR) Grant Program (S10 Clinical Trial Not Allowed)
Agency: National Institutes of Health PAR-18-599
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-599.html
Brief Description: The Shared Instrumentation for Animal Research (SIFAR) Grant Program invites groups of NIH-funded investigators engaged in biomedical research using animals, to seek support for high-cost, state-of-the-art, commercially available scientific instruments. All requested instruments must be used on a shared basis and enhance research that uses animals or related materials such as animal tissues, cells, or germplasm.

NIH-funded investigators use many different vertebrate and invertebrate animals in biomedical research, including worms, flies, fish, and rodents. This Funding Opportunity Announcement (FOA) supports instrumentation requests related to all animal species needed for NIH-supported biomedical research. NIH-funded investigators rely on a broad spectrum of technologies including nuclear magnetic resonance (NMR) and mass spectrometers, DNA and protein sequencers, biosensors, electron and confocal microscopes, cell-sorters, and biomedical imagers. This FOA supports requests for all available technologies to enhance research using animals or related biological materials such as tissue, cells, or germplasm, for the ultimate benefit of human health.

Applicants may request clusters of instruments configured as specialized integrated systems or as a series of instruments to support a specific thematic area of biomedical research using animals. An integrated instrumentation system is one in which components, when used in conjunction with one other, perform a function that no single component could provide. A series of instruments may support a specialized workflow or provide synergetic functionalities to advance a thematic area of research. Any instrument, requested as a part of a cluster or a series must be commercially available.

For example, applicants may request integrated systems to support animal research in any field of biomedical research, such as neurophysiology, cardiac physiology, immunology, developmental biology or neurobehavioral sciences. Similarly relevant are series of instruments for high-throughput experiments in research areas such as genomics, phenotyping, or metabolomics. Clusters of instruments may improve surgical approaches by incorporating robotics and real-time decision-making procedures based on imaging or molecular characterizations of tissue. A combination of microfluidics-related technologies with high-throughput and high-content screening may advance phenotyping procedures. Likewise, a combination of optical imaging, flow-cytometry, and mass spectrometry may improve and speed up molecular profiling. Also appropriate are integrated systems for cognitive-behavioral studies or advanced monitoring set-ups for comprehensive physiological and metabolic assessment.
Awards: Applications will be accepted for commercially available instruments only. At least one item of the requested instrumentation must cost at least $50,000, after all applicable discounts. No instrument in a cluster can cost less than $20,000, after all applicable discounts. There is no upper limit on the cost of each instrument, but the maximum award is $750,000. Since the cost of the various instruments will vary, it is anticipated that the amount of the award will also vary.
Letter of Intent: Not Required
Deadline: May 31, 2018, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: Cutting- Shared Instrumentation Grant (SIG) Program (S10 Clinical Trial Not Allowed)

Agency: National Institutes of Health PAR-18-600

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-600.html

Brief Description: The purpose of this funding opportunity is to continue the Shared Instrumentation Grant (SIG) Program administered by ORIP. The objective of the Program is to make available to institutions expensive research instruments that can only be justified on a shared-use basis and that are needed for NIH-supported projects in basic, translational or clinical areas of biomedical and bio-behavioral research. The SIG Program provides funds to purchase or upgrade a single item of expensive, state-of-the-art, specialized, commercially available instrument or an integrated instrumentation system. An integrated instrumentation system is one in which the components, when used in conjunction with one another, perform a function that no single component could provide. The components must be dedicated to the system and not used independently.

Types of supported instruments include, but are not limited to: X-ray diffractometers, mass and nuclear magnetic resonance (NMR) spectrometers, DNA and protein sequencers, biosensors, electron and light microscopes, cell sorters, and biomedical imagers. Applications for "stand alone" computer systems (supercomputers, computer clusters and data storage systems) will only be considered if the instrument is solely dedicated to biomedical research.

Instruments must be for research purposes only.

Awards: Applications will be accepted that request a single, commercially available instrument or an integrated system. The minimum award is $50,000. There is no upper limit on the cost of the instrument, but the maximum award is $600,000. Since the cost of the various instruments will vary, it is anticipated that the amount of the award will also vary.

It is expected that applicants will employ the best economical approaches, including securing academic discounts, to formulate the cost-effective budget while meeting users' scientific needs.

Letter of Intent: Not Required

Deadline: May 31, 2018, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: High-End Instrumentation (HEI) Grant Program (S10 Clinical Trial Not Allowed)

Agency: National Institutes of Health PAR-18-598

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-598.html

Brief Description: The purpose of this funding opportunity is to continue the High-End Instrumentation (HEI) Grant Program administered by ORIP. The objective of the Program is to make available to institutions expensive research instruments that can only be justified on a shared-use basis and that are needed for NIH-supported projects in basic, translational or clinical areas of biomedical/behavioral research. The HEI Program provides funds to purchase or upgrade a single item of expensive, specialized, commercially available instrument or an integrated instrumentation system. An integrated instrumentation system is one in which the components, when used in conjunction with one another, perform a function that no single component could provide. The components must be dedicated to the system and not used independently.

Types of supported instruments include, but are not limited to: X-ray diffractometers, mass and nuclear magnetic resonance (NMR) spectrometers, DNA and protein sequencers, biosensors, electron and light microscopes, cell sorters, and biomedical imagers. Applications for "stand alone" computer systems (supercomputers, computer clusters and data storage systems) will only be considered if the instrument is solely dedicated to the research needs of NIH-supported investigators.

To facilitate the introduction of advanced cutting-edge instrumentation technologies to biomedical fields a risk-return trade-off is allowed when certain classes of instruments are requested. Accordingly, the HEI program supports the acquisition of unique instruments developed by reliable commercial vendors, provided the instruments are guaranteed by the manufacturer's one-year warranty. Due to the novelty of the technologies and the uniqueness of their implementation, specialized and technologically savvy groups of investigators will be qualified to lead the adoption of such instruments for biomedical research and the development of innovative biomedical applications. Therefore, if such novel instrument is requested, the applicant should demonstrate special technical expertise, merging physical and biological sciences. Also, the applicant must provide a detailed training for the investigators listed in the application about the use of the novel technology to advance their research. Instruments must be for research purposes only.

Awards: Applications will be accepted that request a single, commercially available instrument or integrated system. The minimum award is $600,001. There is no upper limit on the cost of the instrument, but the maximum award is $2,000,000. Since the cost of the various instruments will vary, it is anticipated that the size of the award also will vary.

Letter of Intent: Not Required

Deadline: May 31, 2018, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: Cutting-Edge Basic Research Awards (CEBRA) (R21-Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-437
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-437.html
Brief Description: Pharmacological, neurobiological, behavioral, cell biological and genetic research has provided insight into how addictive drugs exert their actions on the brain and other organs. Neurobiological, behavioral and cognitive studies have shown how addictive drugs affect behavior and information processing in the brain, and have helped to elucidate the normal behavioral and neurobiological processes that are "hijacked" by addictive substances. They have also helped us understand motivational aspects of SUDs and other relevant behaviors, emotional regulation, and decision-making processes.

Basic science discoveries have consistently been the basis for many major advances in both clinical and applied SUD research and have contributed to the development and implementation of successful treatment strategies for SUDs and pain. Basic research has also led to the discovery of new targets for medications, non-addictive treatments for pain, the development of new technologies that enhance prevention and treatment programs for SUDs, and new approaches for statistical analysis of epidemiological and clinical trials data. Basic research to establish new animal models and new methods to synthesize small molecules and immunotherapies has supported the development of new medications to treat SUDs. Basic research has also addressed how addictive substances interact with viral infections such as HIV, HBV, and HCV. In addition,

new technologies and approaches, such as nanobiology, bioengineering, epigenomics, computational science, imaging methods and optogenetics have had a significant impact on cutting-edge research. However, there is still a need to increase our understanding of SUDs and related disorders through basic research in all these areas in order to develop effective diagnostic, treatment and prevention interventions to alleviate the pain and devastation of addiction.

Awards: The combined budget for direct costs for the two year project period may not exceed $275,000. No more than $150,000 in direct costs may be requested in any single year.

Letter of Intent: 30 days prior to the application due date

Deadline: August 20, 2018; December 20, 2018; August 20, 2019; December 20, 2019; August 20, 2020; and December 18, 2020, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates. Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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Grant Program: Lab to Marketplace: Tools for Brain and Behavioral Research (R43/R44 - Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-565
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-565.html
Brief Description: The NIH and other research sponsors invest a significant amount of funds in the development of new technologies to study the brain and behavior, from basic and clinical perspectives, through a variety of mechanisms, including, from NIH, the R01, R21, R33, P01, P41, and P50 grants. This investment has produced a large number of technologies that include hardware (e.g., instruments, devices, etc.), software (e.g., computational models, informatics tools, data analytic methods, etc.) and wetware (e.g., cell-free assays, bioactive agents, imaging probes, etc.). While these technologies are put to good use by their developers, such non-commercial developers devote little attention to making their tools robust and easy to use by the broad research community. Consequently, the promise of these advanced technologies is often realized only by the tools' developers and their close associates. Moreover, ongoing support to maintain and update technologies in non-commercial settings is difficult to obtain.

In contrast, tools that are commercially available need to be sturdy and easy to use, and commercial success often provides the means for continued maintenance and improvements of the underlying technology. This funding opportunity announcement (FOA) is intended to help move useful technologies from non-commercial laboratories into the commercial marketplace by encouraging SBIR grant applications from small businesses for further development of such technologies that are relevant to the missions of the sponsoring NIH Institutes and Centers. The supported research and development will likely include making the tools more robust and easy to use, and will likely require close collaboration between the original developers of these technologies and SBCs. These partnerships may be accomplished in any of a number of ways, including the use of multiple program directors/principle investigators.

Awards: Budgets of up to total $450,000 per year total cost for Phase I awards and $750,000 per year total cost for Phase II awards, and $1,000,000 per year total cost for Phase IIB may be requested

Letter of Intent: 30 days prior to the application due date

Deadline: Standard dates apply, by 5:00 PM local time of applicant organization.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date

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Department of Defense/US Army/DARPA/ONR

Grant Program: Nano-Bio Manufacturing Consortium (NBMC)
Agency: Department of Defense FA8650-18-S-5005
Website: https://govtribe.com/project/nano-bio-manufacturing-consortium-nbmc-1
Brief Description: The Nano-Bio Manufacturing Consortium is expected to grow the US-centric innovation ecosystem that will risk reduce material supply (including nanomaterials & biomaterials), processing techniques, and flexible/stretchable device concepts by demonstrating component- and system-level functionality relevant to human-integrated technologies, such as airman-performance monitoring (APM) and augmentation (APA) systems. This public-private partnership should build upon the foundation of research & development excellence that has been established within NBMC since its 2013 inception.

It is envisioned that technology development will require teaming between academia and industry in partnership with government researchers as well as with appropriate members of the regulatory and operational DoD communities. A balance between enabling component- and systems-level prototype development is expected to be realized through end-technologies between TRL 3 and TRL 6. It is expected that during the completion of certain NBMC projects, lab and/or field demonstrations will be conducted in partnership with relevant DoD partners to ensure that members of military human performance and/or aeromedical communities can assess the utility of developments and provide iterative feedback with respect to critical path issues.
Awards: Various; Estimated Total Program Funding: $35,000,000
Proposal Deadline: March 14, 2018
Contact Information: Whitney Foxbower Grants Officer Phone 937-713-9877
whitney.foxbower@us.af.mil

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Grant Program: Human-Centered Intelligence, Surveillance & Reconnaissance (ISR) Leveraged Science and Technology (S&T) Program
Agency: Department of Defense FA8650-18-S-6001
Website:
https://www.fbo.gov/index?s=opportunity&mode=form&id=0562835b5cc550bd70f013acb64cd39c&tab=core&_cview=0
Brief Description: This effort is an open 2 Step BAA soliciting innovative research concepts for the overall mission of the Human-Centered Intelligence, Surveillance, & Reconnaissance (ISR) Division (711 HPW/RHX). The overall RHX research objective is to develop human-centered S&T that enables the Air Force to more effectively execute the ISR mission. This research objective is dual natured: (1) improve the capability to identify, track and locate human targets in the ISR environment and (2) improve the performance of humans who process, exploit, analyze, produce, and disseminate the ISR data and information.

Human-centered ISR research encompasses three major research areas: (1) human signatures, (2) human trust and interaction and (3) human analyst augmentation. The human signatures research develops technologies to sense and exploit human bio-signatures at both the molecular level and macro (anthropometric) level. The human trust and interaction research develops technologies to improve human-to-human interactions as well as human-to- machine interactions. The human analyst augmentation research develops technologies to enhance analyst

performance and to test the efficacy of newly developed technologies within a simulated operational environment.

Awards: Various Estimated Total Program Funding: $24,000,000

Proposal Deadline: February 10, 2023

Contact Information: Elizabeth Fink Email: elizabeth.fink.1@us.af.mil Phone: 937-713-9832

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Grant Program: Special Program Announcement for 2018 Office of Naval Research Basic Research Opportunity: "Advancing Artificial Intelligence for the Naval Domain"
Agency: Department of Defense N00014-18-R-SN05
Website:https://www.fbo.gov/index?s=opportunity&mode=form&id=e82dda458211deb4dc7c9d76cbd90b39&tab=core&_cview=0

Brief Description: ONR is interested in receiving white papers and proposals in support of advancing artificial intelligence for future naval applications. Work under this program will consist of basic research, and it will be funded under Budget Activity 1 (as defined in DoD Financial Management Regulation Vol. 2B, Ch. 5). The overall S&T effort is envisioned to be conducted at the Technology Readiness Level (TRL) 1-3 stage.

Topic 1: Title: Integration of Domain Knowledge and Machine Learning

The main objective is to develop a principled computational framework for integrating domain knowledge and machine learning for fast and robust learning of diverse, complex concepts and tasks with light supervision. A complementary objective is to gain insights into how humans incorporate prior knowledge and learning from scant data to improve their skills and learn new concepts and tasks, and use these insights to inform the computational framework.

Topic 2 Title: Artificial Intelligence in support of Collaborative Complex Decision-Making

The objectives for this topic are: (i) to advance the scientific understanding of collaborative complex decision-making and (ii) to develop AI technologies that actively inform and assist either in individual tasks or in the overall decision-making process. Key features of the desired technologies are that they possess the ability to assess the relative meaning and task/context-sensitive importance of new or changing information, and convey or explain the basis of their recommendations in human-understandable terms.

Topic 3 Title: Decentralized Perception and Planning in Dynamic Environments

Advances in surveillance technology have led to large volumes of increasingly complex data streams. The challenge of deriving intelligence from such massive, distributed, and diverse data sources--often providing observations without bound--is a challenging issue for the Navy. To exploit the full potential of the data, the intricate dependencies within and among the data streams must be captured. This includes development of computational methods that model various dependencies that cope with noisy and incomplete data sources, integrate information from multiple sensing modalities, and coherently propagate and output measures of uncertainty. The goal of this topic is to develop the underlying science and tractable computational methods that enable flexible and resilient approaches to learning, sharing, reasoning, and exploiting representations of the mission intent for situational awareness by a team of agents within a more rigorous closed-loop framework.

Awards: Various

White Papers Deadline: March 22, 2018

Full Proposal Deadline: May 11, 2018

Contact Information: Dr. Marc Steinberg, ONR 35, 703-696-5115, marc.steinberg@navy.mil
 Dr. Behzad Kamgar-Parsi, ONR 31, 703-696-5754, behzad.kamgarparsi@navy.mil

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Grant Program: 2018 ERDC Broad Agency Announcement
Agency: Department of Defense W912HZ-18-BAA-01
Website:
https://www.fbo.gov/index?s=opportunity&mode=form&id=26ed7ee8e4a65aa2487a81ebdf0ca239&tab=core&_cview=0

Brief Description: The U.S. Army Engineer Research and Development Center (ERDC) has issued a Broad Agency Announcement (BAA) for various research and development topic areas. The ERDC consists of the Coastal and Hydraulics Lab (CHL), the Geotechnical and Structures Lab (GSL), the Reachback Operations Center (UROC), the Environmental Lab (EL) and the Information Technology Lab (ITL) in Vicksburg, Mississippi, the Cold Regions Research and Engineering Lab (CRREL) in Hanover, New Hampshire, the Construction Engineering Research Lab (CERL) in Champaign, Illinois, and the Geospatial Research Laboratory (GRL) in Alexandria, Virginia. The ERDC is responsible for conducting research in the broad fields of hydraulics, dredging, coastal engineering, instrumentation, oceanography, remote sensing, geotechnical engineering, earthquake engineering, soil effects, vehicle mobility, self-contained munitions, military engineering, geophysics, pavements, protective structures, aquatic plants, water quality, dredged material, treatment of hazardous waste, wetlands, physical/mechanical/ chemical properties of snow and other frozen precipitation, infrastructure and environmental issues for installations, computer science, telecommunications management, energy, facilities maintenance, materials and structures, engineering processes, environmental processes, land and heritage conservation, and ecological processes. The BAA is available as an attachment to this posting and is also available at http://erdc.usace.army.mil. The BAA is open until superseded. Proposals may be accepted at any time.

Awards: Various
Proposal Deadline: January 31, 2019
Contact Information: For questions regarding proposals to CHL, GSL, EL, ITL, CRREL, and UROC submit your question to the following e-mail address: ERDC-BAA@usace.army.mil. You may also contact Frank Spears at 601-634-3908 or via email at Frank.Spears@usace.army.mil.

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Grant Program: FY 2018 Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program
Agency: Department of Defense N00014-18-S-F003
Website: https://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements

Brief Description: As the capacity of the DoN Science and Technology (S&T) workforce is interconnected with the basic research enterprise and STEM education system, ONR recognizes the need to support efforts that can jointly improve STEM student outcomes and align educational efforts with Naval S&T current and future workforce needs. This announcement explicitly encourages projects that improve the capacity of education systems and communities to create impactful STEM educational experiences for students and workers. Submissions are encouraged to consider including active learning approaches and incorporating 21st century skill development. Projects must aim to increase student and worker engagement in STEM and enhance people with needed Naval STEM capabilities. ONR encourages applications to utilize current STEM educational research for informing project design and advancing our understanding of how and why people choose STEM careers and opportunities of naval relevance. While this announcement is relevant for any stage of the STEM educational system, funding

efforts will be targeted primarily toward projects addressing the below communities or any combination of these communities: • Secondary education communities; • Post-Secondary communities; • Informal science communities; • Current naval STEM workforce communities.
Awards: Various
Proposal Deadline:
White Papers must be received between 2 April 2018 (Monday) with a deadline of 31 July 2018 (Tuesday) at 5:00 PM Eastern Time
Applications must be received no later than 28 September 2018 (Friday) at 11:59 PM ET
Contact Information: Dr. Michael Simpson Director of Education and Workforce Office of Naval Research 875 North Randolph Street Arlington VA 22203-1995 Email: onr_stem@navy.mil

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Grant Program: Millimeter-Wave Digital Arrays (MIDAS)
Agency: Department of Defense DARPA HR001118S0020
Website:
https://www.fbo.gov/index?s=opportunity&mode=form&id=d8c414aaf7c707bc4f7ac896a7b68b29&tab=core&_cview=0
Brief Description: DARPA seeks innovative proposals for the development of element-level digital beamforming array technology at millimeter wave frequencies. The primary goal of the program is to develop and demonstrate a tile building block sub-array (>16 elements) that supports scaling to large arrays (100â€™s-10,000+) in the 18-50 GHz band. It is expected that this will be enabling hardware for multi-function, multi-beam phased array applications and emerging massive multiple-input-multiple-output (MIMO) techniques in communication and sensing.
Awards: Various
Proposal Deadline: Mar 26, 2018 The full proposal must be submitted via the DARPA BAA website on or before 1:00 p.m., EST 26 March 2018 in order to be considered during the initial round of selections; however, proposals received after this deadline may be received and evaluated up to five months (150 days) from date of posting on FedBizOpps.
Contact Information: HR001118S0020@darpa.mil

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Grant Program: C4ISR, Information Operations and Information Technology System Research
Agency: Department of Defense N66001-17-S-3601
Website: https://www.grants.gov/web/grants/search-grants.html
Brief Description: The Space and Naval Warfare Systems Center, Pacific (SSC Pacific) is soliciting white papers and proposals in accordance with Federal Acquisition Regulation (FAR) 6.102(d)(2), FAR 35.016 and Department of Defense Grant and Agreement Regulations (DoDGARS) 22.315(a) which provides for competitive selection of basic research, applied research, advanced technology development, and advanced component development and prototype (hereinafter referred to as research). Submissions in response to this announcement shall be for areas relating to the advancement of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities, enabling technologies for Information Operations and Cyber Operations, and Information Technology systems. Accordingly, proposals selected for award are considered to be the result of full and open competition and fully compliant with PL 98-369, "The Competition in Contracting Act of 1984." This BAA is for procurement contracts (hereinafter referred to as contracts), grants, cooperative agreements, and other transactions.

Proposed research should investigate unique and innovative approaches for defining and developing next generation integratable C4ISR capabilities and command suites.
Awards: Various
Proposal Deadline: May 14, 2018
Contact Information: David Roden Administrative Specialist Phone 619-553-2087

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Department of Energy

Grant Program: OPEN 2018
Agency: Department of Energy   DE-FOA-0001858
Website: https://arpa-e-foa.energy.gov/#FoaIded06b7da-00fc-49eb-9ac0-22e052e62640
Brief Description: This FOA marks the fourth OPEN solicitation in the history of ARPA-E. The previous OPEN solicitations were conducted at the inception of the agency in 2009 and again in 2012 and 2015. OPEN 2018 therefore continues the three-year periodic cycle for ARPA-E OPEN solicitations. An OPEN solicitation provides a vitally important mechanism for the support of innovative energy R&D that complements the other primary mechanism, which is through the solicitation of research projects in focused technology programs. ARPA-E's focused programs target specific areas of technology that the agency has identified, through extensive interaction with the appropriate external stakeholders, as having significant potential impact on one or more of the Mission Areas described in Section I.A of the FOA. Awards made in response to the solicitation for focused programs support the aggressive technical targets established in that solicitation. Taken in total, ARPA-E's focused technology programs cover a significant portion of the spectrum of energy technologies and applications.

ARPA-E's OPEN FOAs ensure that the agency does not miss opportunities to support innovative energy R&D that falls outside of the topics of the focused technology programs or that develop after focused solicitations have closed. OPEN FOAs provide the agency with a remarkable sampling of new and emerging opportunities across the complete spectrum of energy applications and allow the agency to "take the pulse" of the energy R&D community. OPEN FOAs have been and will continue to be the perfect complement to the agency's focused technology programs – a unique combination of approaches for supporting the most innovative and current energy technology R&D. Indeed, one third of the sixty projects featured in the first two volumes describing ARPA-E impacts stem from OPEN solicitations (https://arpa-e.energy.gov/?q=site-page/arpa-e-impact). Potential applicants to this FOA are strongly encouraged to examine the OPEN projects in these two volumes and all of the projects supported in the previous three OPEN solicitations (https://arpa-e.energy.gov/?q=site-page/open) for examples of the creative and innovative R&D ARPA-E seeks in its OPEN solicitations.
Awards; Up to $10,000,000; Available Funding: $100,000,000
Submission Deadline: Applicants are strongly encouraged to submit their applications at least 48 hours in advance of the submission deadline.
- Concept Paper Submission Deadline: 02/02/2018 5:00 PM ET
- Full Application Submission Deadline: 3/16/2018 5:00 PM ET
Contact Information:
- ExchangeHelp@hq.doe.gov
Please contact the email address above for questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE.
- ARPA-E-CO@hq.doe.gov

Please contact the email address above for questions regarding Funding Opportunity Announcements. ARPA-E will post responses on a weekly basis to any questions that are received. ARPA-E may re-phrase questions or consolidate similar questions for administrative purposes.

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NASA

Grant Program: Astrophysics Data Analysis
Agency: NASA NNH18ZDA001N-ADAP
Website:
https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B3E84A8DB-8B71-2451-EB02-2111D9EEA891%7D&path=open&method=init
Brief Description: The Astrophysics Data Analysis Program (ADAP; program element D.2) supports research with a primary emphasis on the analysis of archival data from current and past NASA space astrophysics missions. The magnitude and scope of the archival data from those missions enables science that transcends traditional wavelength regimes and allows researchers to answer questions that would be difficult, if not impossible, to address through an individual observing program. The program now also supports the analysis of publicly available data from the Neutron star Interior Composition Explorer (NICER) and some approved Guest Observer (GO) programs using Spitzer, even if those observations have yet to be executed, or the data are still within their proprietary period.
Awards: Standard Grants, Available Funds: $7,000,000
Notice of Intent: Not Required
Proposal Deadline: May 17, 2018
Contact: Douglas M. Hudgins Astrophysics Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: (202) 358-0988 Email: Douglas.M.Hudgins@nasa.gov

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Grant Program: Discovery Data Analysis
Agency: NASA NNH18ZDA001N-DDAP
Website:
https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BE17AD920-C9F2-600D-5913-6951AB56F31F%7D&path=open&method=init
Brief Description: The objective of the Discovery Data Analysis Program (DDAP) is to enhance the scientific return of Discovery Program missions and broaden the scientific participation in the analysis of data, both recent and archived, collected by Discovery missions. Spacecraft data used in DDAP investigations must be available in the Planetary Data System (PDS; https://pds.nasa.gov/), or equivalent publicly accessible archive(s), at least 30 days prior to the Step-2 submission deadline for DDAP proposals. Spacecraft data that have not been placed in such archives are not eligible for use in DDAP investigations. In all cases, it is the responsibility of the DDAP investigator to acquire any necessary data. Investigators are encouraged to contact the archive for assistance in identifying specifics of available datasets. Datasets to be used in the proposed work must be clearly and specifically identified in the proposal. NASA puts no other restriction on the status or condition of the data. However, regardless of the archive(s) used, if the data to be analyzed have known issues that might represent an obstacle to analysis, the proposers must demonstrate clearly and satisfactorily how such potential difficulties will be overcome. In

other words, it is the proposer's responsibility to demonstrate clearly that the public data are of sufficient quantity and quality to achieve the project's science goals.

Awards: Standard Grants

Step-1 Proposal: August 30, 2018

Step-2 Proposal Deadline: November 01, 2018

Contact: Thomas S. Statler Planetary Science Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Email: thomas.s.statler@nasa.gov Telephone: 202-358-0272

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Grant Program: Advanced Information Systems Technology
Agency: NASA NNH18ZDA001N-AIST
Website:
https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BC0D379E0-B4A8-6B97-7B0C-7F5409CD2442%7D&path=open&method=init

Brief Description: Advanced information systems play a critical role in the collection, handling, and management of the vast amounts of Earth science data, both in space and on the ground. Advanced computational systems and technology concepts that enable the capture, transmission, and dissemination of terabytes of data are essential to NASA's vision of a distributed observational network. ESTO's Advanced Information Systems Technology (AIST) program employs an end-to-end approach to develop these critical technologies—from the space segment, where the information pipeline begins, to the end user, where knowledge is advanced. Two major AIST thrusts are in progress: (1) support to a new observing strategy involving the integration of observations from orbital, airborne and in situ instruments along with models into a sensor web to advance the state of the art understanding of physical processes and natural phenomena, and (2) Analytic Centers focusing on a scientific investigation, where data from many sources, computational resources and tools are harmonized to improve the ability of the investigator to discover new knowledge.

Awards: Standard Grants

Notice of Intent: TBD

Proposal Deadline: TBD

Contact: Michael M. Little Earth Science Technology Office Telephone: (301) 286-7404 Email: Michael.M.Little@nasa.gov

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National Endowment of Humanities

Grant Program: Fellowships
Agency: National Endowment of Humanities
Website: https://www.neh.gov/grants/research/fellowships

Brief Description: Fellowships support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Recipients usually produce articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources in the humanities.

Applicants interested in research projects that require digital expression and digital publication are encouraged to apply for NEH-Mellon Fellowships for Digital Publication.

Awards: NEH has increased the Fellowships monthly stipend from $4,200 to $5,000. As a result, the minimum award is now $30,000 (for six months of full-time work). The maximum award is now $60,000 (for twelve months of full-time work).
Proposal Deadline: April 11, 2018
Contact: Contact NEH's Division of Research Programs at 202-606-8200 or fellowships@neh.gov.

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Grant Program: Fellowships for Advanced Social Science Research on Japan
Agency: National Endowment of Humanities
 Website: https://www.neh.gov/grants/research/fellowships-advanced-social-science-research-japan
Brief Description: The Fellowships for Advanced Social Science Research on Japan program is a joint activity of the Japan-U.S. Friendship Commission (JUSFC) and the National Endowment for the Humanities. Awards support research on modern Japanese society and political economy, Japan's international relations, and U.S.-Japan relations. The program encourages innovative research that puts these subjects in wider regional and global contexts and is comparative and contemporary in nature. Research should contribute to scholarly knowledge or to the general public's understanding of issues of concern to Japan and the United States. Appropriate disciplines for the research include anthropology, economics, geography, history, international relations, linguistics, political science, psychology, public administration, and sociology. Awards usually result in articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources.
      The fellowships are designed for researchers with advanced Japanese language skills whose research will require use of data, sources, and documents, onsite interviews, or other direct contact in Japanese. Fellows may undertake their projects in Japan, the United States, or both, and may include work in other countries for comparative purposes. Projects may be at any stage of development.
Awards: The minimum award is $30,000 (for six months of full-time work). The maximum award is now $60,000 (for twelve months of full-time work).
Proposal Deadline: March 13, 2018
Contact: Contact NEH's Division of Research Programs at 202-606-8200 or fellowships@neh.gov.

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Streamlyne Contacts

It has been very exciting to introduce Streamlyne as the new tool for Grant Management. Streamlyne is simplifying the pre-award proposal submission processes promoting shared information technology (IT), and improving the timeliness of grant close out. Currently Streamlyne system has been customized in the following areas:
- Download the package with all forms – there are still some exceptions to this as the federal government continues to change some of the standard forms.
- Validation error prior to submission – this allows to review the package for errors
- Work Flow approval transparent to all users
- Budget forms customized to NSF and/or S2S
- Sub-award budgets easily download – this will allow better management of the award

How-to-do-Videos

New "How to Do" videos have been posted on the research website http://www5.njit.edu/research/streamlyne/. These videos show step-by-step process on the following tasks:

♦ How to Begin Proposal Submission in Streamlyne
♦ How to Input Proposal Budget
♦ How to Process Approvals
♦ How to Upload Proposal Attachments
♦ How to Search for a Proposal that is in Route
♦ Difference Between "Prime Sponsor Code" and "Sponsor Code"
♦ How to Select an RR Budget, RR Sub-award or Modular Budget
♦ How to Add a Student/Summary
♦ Participant Support Categories
♦ Supplies Specific Category Materials
♦ How to Create a Modular Budget

Also, the following links may be helpful**:**
♦ Streamlyne Benefits for Proposal Submission and Grant Management
♦ Grants.gov Presentation on Online Proposal Submission Systems
♦ Streamlyne Newsletter V2017.1
♦ Streamlyne FAQs

Faculty and staff having any questions on proposal submission, may contact their college representatives, and also follow up with **Justin Samolewicz, Associate Director (Pre Award)** 973-596-3145; justin.m.samolewicz@njit.edu; and **Eric Hetherington,** Director, Sponsored Research Programs Administration 973-596-3631; eric.d.hetherington@njit.edu. The college representatives to help PIs on proposal submissions are

    John McCarthy, NCE Director of Research; (973) 596-3247; john.p.mccarthy@njit.edu
    Cristo Leon, CSLA Director of Research; (973) 596-6426; cristo.e.yanezleon@njit.edu
    Sean Andrews, YWCC Director of Research; (973) 596-5352; sean.t.andrews@njit.edu
    Iris Pantoja, CoAD and MTSM Project Manager; 973-596-4483; irp3@njit.edu
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