NJIT Research Newsletter

Issue: ORN-2018-14

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: STEM + Computing K-12 Education (STEM+C); Accelerating Discovery: Educating the Future STEM Workforce (AD); Dear Colleague Letter: Advancing Long-term Reuse of Scientific Data; Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII); Small Business Technology Transfer Program Phase I (STTR); Small Business Innovation Research Program Phase I (SBIR); Planning Grants for Engineering Research Centers (ERC)
NIH: NIH Director's Early Independence Award (DP5); International Bioethics Research Training Program (D43); BRAIN Initiative: New Technologies and Novel Approaches for Large-Scale Recording and Modulation in the Nervous System (R01); NEI Translational Research Program (TRP) to Develop Novel Therapies and Devices for the Treatment of Visual System Disorders (R24); New Concepts and Early - Stage Research for Large - Scale Recording and Modulation in the Nervous System (R21)
Department of Defense/US Army/DARPA/ONR: SIGMA+ Sensors; Notice of Intent for the Funding Opportunity for Bilateral Academic Research Initiative (BARI) Pilot Program; Proof of Concept Commercialization Pilot Program Innovation Corps @ Department of Defense (I-Corps @ DoD); 2019 Department of Defense Multidisciplinary Research Program of the University Research Initiative (MURI); 2019 DEFENSE UNIVERSITY RESEARCH INSTRUMENTATION PROGRAM (DURIP); Next-Generation Non-Surgical Neurotechnology; Army Rapid Capability Office (RCO) Broad Agency Announcement; Air Force Fiscal Year 2019 Young Investigator Research Program (YIP)
Department of Energy: Critical Water Issues Prize Competition RFI; Solid Oxide Fuel Cells Core Technology Research
EPA (Environmental Protection Agency): FY 2019 Pollution Prevention Grant Program
NASA: Transformational Tools and Technologies (TTT); Astrophysics Data Analysis; Discovery Data Analysis; Advanced Information Systems Technology

National Endowment of Humanities: Fellowships; Fellowships for Advanced Social Science Research on Japan
Brain Research Foundation: 2019 Scientific Innovation Award
Bill & Melinda Gates Foundation: Grand Challenges Exploration (GCE)

Special Announcement

President's Forum and Inauguration of The Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society
April 30, 2018: 10.00 AM to 2.00 PM, Ballroom A/B and MTSM

The Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society, funded by $1.5 million grant from The Leir Charitable Foundations will have an integrated dual mission to conduct business and management research and direct targeted outreach, both through partnerships with the academic and business communities, regional economic leaders and government agencies. Its primary research initiatives will center on predictive and proactive data analytics for disruptive events, business vulnerabilities and risk mitigation; metrics for corporate resiliency, sustainability, risk exposure and business ethics; and real-time supply and demand risk assessment across the value chain using social media sources. Other areas to be explored as well include advanced machine learning and autonomous intelligence with knowledge management constructs; enterprise tools to provide data visibility and security in heterogeneous legacy systems; and management-focused data insights and knowledge visualization with interactive enterprise simulation. Of special interest is the advancement of novel Internet of Things technologies.

President's Forum and Inauguration of The Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society

Agenda

Ballroom A/B

10.00 AM - 10.30 AM:	Welcome Remarks Joel Bloom, President Margot Gibis, President of the Leir Charitable Foundations Vince DeCaprio, Vice Chair, BOT Fadi Deek, Provost and Senior Executive VP Atam Dhawan, Senior Vice Provost for Research
10.30 AM - 10.45 AM:	Institute Mission and Introduction to Panelists Reggie Caudill, Dean and Director, The Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society
10.45 AM - 11.45 AM:	President's Forum: Panel on Cognitive Techniques and Innovative Management Strategies to Enhance Corporate Sustainability, Resiliency, and Agility Reggie Caudill, Dean and Panel Moderator Kumar Bhaskaran, Program Director in Industry Research, IBM

	Research John Schwall, Chief Operating Office, IEX Groups, Inc. Shravanthi Budhi, MTSM Student/Avanade Scholar/Salesforce Wiz Yi Chen, Associate Professor and Henry J. Leir Chair of Healthcare Bill Rapp, Professor and Henry J. Leir Chair of International Trade and Business
11.45 AM – 12.30 PM:	Lunch and Networking Session

MTSM Building

12.45 PM – 1.00 PM:	Inauguration Ceremony at the Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society
1.00 PM – 2.00 PM:	Institute and Laboratory Tour Coffee and Desserts

This President's forum is a featured event in the Albert Dorman Honors College Colloquium Series and is made possible in part by the generous support of the DeCaprio Family.

NSF - RESEARCH.GOV System Changes

1. **Organization/User Registration & Account Management**

On March 26, 2018, the National Science Foundation (NSF) is introducing a new centralized and streamlined account registration process in Research.gov for the research community that will provide each new user with a single profile and unique identifier (i.e., NSF ID) for signing in to FastLane and Research.gov for proposal and award activities.
The new account management functionality will:

- Allow users to create and self-manage accounts, including personal information and role requests;
- Eliminate the need for organizational Administrators to create accounts and maintain profile information for their users, allowing Administrators to focus on managing roles for their organizations through a dashboard with functions to approve, disapprove, assign, and remove roles; and
- Replace the existing FastLane and Research.gov account management functions.

Existing NSF account holders, including Grants.gov and Application Submission Web Service (ASWS) users, will be migrated to the new account management system through a simple, one-time operation when initially signing in to FastLane or Research.gov after the new functionality is released. Account holders will be required to verify information to transfer it to the new system. Each user will have one NSF ID per the Proposal & Award Policies & Procedures Guide (NSF 18-1), Chapter I.G.4. (https://nsf.gov/pubs/policydocs/pappg18_1/pappg_1.jsp#IG4)

- Users with existing NSF accounts can access the NSF ID Lookup page for their NSF ID. Forgotten passwords for established NSF accounts may be retrieved here.

- New users will be able to register directly with NSF through Research.gov on or after March 26, 2018, via this link: https://www.research.gov/accountmgmt/#/registration. Note that this link will not work until March 26, 2018.

Please be advised that NSF will discontinue the Research.gov Visitor Login effective March 26, 2018. Visitors must register for an NSF ID on Research.gov via the new account management system to continue to have access to NSF external systems on or after March 26, 2018. You can register directly for an NSF ID on or after March 26, 2018, via this link: https://www.research.gov/accountmgmt/#/registration. Note that this link will not work until March 26, 2018.

2. Proposal Preparation/Award Management Interface (Fastlane and Research.gov)

The National Science Foundation (NSF) has announced that beginning on April 30, 2018, proposers will be able to prepare and submit full, research non-collaborative proposals in Research.gov. The initial release of this new Research.gov capability will run in parallel with existing FastLane proposal preparation and submission capabilities, so proposers can choose to prepare and submit full, research non-collaborative proposals in Research.gov or in FastLane starting on April 30, 2018.

Starting on February 26, 2018, NSF is previewing the new Research.gov proposal preparation functionality to the research community to collect preliminary feedback and to provide the community an opportunity to acclimate to the new technology. The preview can be accessed by selecting the "Prepare & Submit Proposals" tab on the top navigation bar after signing in to Research.gov and then choosing "Prepare Proposal." This preview will continue until 8:00PM EDT on April 27, 2018, and will allow any research community user with a FastLane or Research.gov account to sample the following proposal preparation features prior to the initial release on April 30, 2018:

- Initiate full, research non-collaborative proposals (other proposal types are planned for future releases);
- Add Principal Investigators (PIs), Co-PIs, Senior Personnel, and Other Authorized Users;
- Upload required proposal documents;
- Create budgets;
- Check compliance; and
- Enable Sponsored Project Officer (SPO)/Authorized Organizational Representative (AOR) access for review.

NSF's goals for the new Research.gov proposal preparation and submission functionality are to:

- Modernize the applications supporting the proposal submission and merit review processes and improve the user experience via the development of a new application;
- Reduce the administrative burden to the research community and NSF staff associated with preparation, submission, and management of proposals;
- Increase efficiencies in proposal preparation, submission, and management;
- Improve data quality and capture proposal content in a way that supports data analytics;
- Improve availability, security, and flexibility of proposal preparation and submission IT systems.

Recent Research Grant and Contract Awards

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

PI: Gelu Nita (PI), Vincent Oria (Co-PI) and Alexander Kosovichev (Co-PI)
Department: Center for Solar Terrestrial Research
Grant/Contract Project Title: Earthcube RCN: Towards Integration of Heliophysics Data, Modeling, and Analysis Tools
Funding Agency: NSF
Duration: 04/01/18-03/31/20

PI: Iulian Neamtiu (PI)
Department: Cybersecurity Center
Grant/Contract Project Title: ARL CRA: MACRO: Models for Enabling Continuous Reconfigurability of Secure Missions
Funding Agency: US Army
Duration: 09/20/16-09/19/18

PI: Bryan Pfister (PI) and Martina Decker (Co-PI)
Department: Biomedical Engineering and CoAD
Grant/Contract Project Title: Surrogate Prototyping and Experiments for Traumatic Brain Injury (TBI)
Funding Agency: Advanced Technology International (on behalf of DoD U.S. Army - ACC)
Duration: 10/31/17-01/31/19

PI: Yun Yong (PI)
Department: Chemistry and Environmental Sciences
Grant/Contract Project Title: Hybrid Halide Perovskite Materials for Photocatalytic Carbon-Carbon Bond Formation
Funding Agency: NSF
Duration: 07/01/18-06/30/21

PI: Eric Fortune (PI)
Department: Biological Sciences
Grant/Contract Project Title: Neural Mechanisms of Active Sensing
Funding Agency: NSF
Duration: 04/15/16-03/31/20

Streamlyne Question of the Week

Question: I need to change my budget - Do I need to change it in Streamlyne?
Answer: You can change your budget at any point before submitting the proposal into workflow approval. For more information, please contact your college ambassador, or see New User Manual posted on the Research website http://www.njit.edu/research/sites/research/files/StreamlyneNewUserManualCommonElements.pdf). More FAQs on Streamlyne: Please visit http://www.njit.edu/research/streamlyne/

In the News…

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

Exascale and Quantum Computing: While Congress will massage the numbers, Energy Secretary Rick Perry's budget testimony this week sheds light on administration priorities for FY 2019. These include an "unprecedented investment" to deliver an exascale computer for the Office of Science in 2021 "and a second machine with a different architecture by 2022." The budget reflects "the emerging urgency of building our competency and competitiveness in the developing area of quantum information science," advancing application of "quantum computing techniques and quantum sensing to grand challenge science questions." More information on the website http://docs.house.gov/meetings/IF/IF03/20180412/108114/HHRG-115-IF03-Wstate-PerryR-20180412.pdf

NSF Office of Advanced Cyberinfrastructure: The National Science Foundation's Office of Advanced Cyberinfrastructure seeks "solutions (that) accelerate the dissemination and use of fundamental research results in the form of data that will advance the frontiers of knowledge and help sustain the Nation's prosperity." It encourages "proposals for conferences" and for Early-Concept Grants for Exploratory Research (EAGER) for high-risk/high-reward innovative concepts and pilot projects that yield new fundamental research discoveries from existing NSF-funded data or that ultimately result in deployment of ambitious, sustainable socio-technical infrastructure resources and capabilities that enhance and accelerate new discoveries from existing NSF-funded data." The Deal Colleague Letter (DCL) is posted on the website https://www.nsf.gov/pubs/2018/nsf18060/nsf18060.jsp?WT.mc_id=USNSF_179 This DCL encourages funding requests aligned with one of the following three tracks:

1. Community Track
2. Data Reuse Track
3. Socio-Technical Infrastructure

SEVEN NEXT BIG THINGS: To the five historical technology-powered waves that drove productivity growth -- the steam engine; iron; steel and electricity; electromechanical and chemical technologies; and information and communication technology -- will be added a sixth wave, says the Information Technology and Innovation Foundation. Seven technologies that look likely to form this wave are artificial intelligence; the Internet of Things; blockchain; autonomous devices; robotics; new materials; and convergence. "While these technologies are already in the marketplace, they are generally both too expensive and not powerful enough to drive economy-wide productivity." Full report is posted on the website http://www2.itif.org/2018-emerging-technology-future-labor.pdf

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Webinar and Events

Event: Data Science for the 99%: helping everyone with decision-making
Sponsor: NSF
When: April 16, 2018 from 2.00 PM to 3.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=244552&org=NSF

Brief Description: Andrew Moore (http://www.cs.cmu.edu/~awm/biography.html) and Nikki Kittur (http://kittur.org/) from Carnegie Mellon will speak about the vision of converting the majority of regular people into data scientists.

Aniket Kittur is an Associate Professor and holds the Cooper-Siegel Chair in the Human-Computer Interaction Institute at Carnegie Mellon University. His research on crowd-augmented cognition looks at how we can augment the human intellect using crowds and computation. He has authored and co-authored more than 70 peer-reviewed papers, 14 of which have received best paper awards or honorable mentions. Dr. Kittur is a Kavli fellow, has received an NSF CAREER award, the Allen Newell Award for Research Excellence, major research grants from NSF, NIH, Google, and Microsoft, and his work has been reported in venues including Nature News, The Economist, The Wall Street Journal, NPR, Slashdot, and the Chronicle of Higher Education. He received a BA in Psychology and Computer Science at Princeton, and a PhD in Cognitive Psychology from UCLA.

Andrew W. Moore, a distinguished computer scientist with expertise in machine learning and robotics, became dean of the Carnegie Mellon University School of Computer Science in August 2014. He had previously served as a professor of computer science and robotics before taking a leave of absence to become founding director of Google's Pittsburgh engineering office in 2006. Moore's research interests broadly encompass the field of "big data"—applying statistical methods and mathematical formulas to massive quantities of information, ranging from Web searches to astronomy to medical records, in order to identify patterns and extract meaning from that information. His past research has also included improving the ability of robots and other automated systems to sense the world around them and respond appropriately. At Google Pittsburgh, Moore led the office as it grew to hundreds of employees. In 2011, he became vice president of engineering for Google Commerce. Moore led essential engineering contributions to Google's services, including AdWords, Shopping and Search, as well as core Google engineering infrastructure and tools. Moore received a doctorate from the University of Cambridge in 1991 and joined the CMU faculty in 1993 following two years of post-doctoral research. In 2005, he was elected a fellow of the American Association for Artificial Intelligence. Andrew lives in Pittsburgh with his wife, Mary, and two children, William and Lucy.

To join the webinar: please register at: http://www.tvworldwide.com/events/nsf/180416/

Event: Engineering Research Center Planning Grants Webinar
Sponsor: NSF
When: April 16, 2018 from 1.00 PM to 3.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=244916&org=NSF
Brief Description: n conjunction with the release of the Planning Grants for Engineering Research Centers (ERC) solicitation (NSF 18-549), and to keep interested parties informed about new developments in the ERC program, program directors in the NSF Division of Engineering Education and Centers will conduct a live Q&A webinar focused on topics specific to this solicitation.

To register for the online event:

1. Go to https://nsf.webex.com/nsf/onstage/g.php?MTID=e6be95025d47230ef93174084cf8d05d9
2. Click "Register"
3. On the registration form, enter your information and then click "Submit"

Once the host approves your registration, you will receive a confirmation email message with instructions on how to join the event.

Event: NSF Funding for Quantum Technologies
Sponsor: NSF
When: April 18, 2018 from 2.00 PM to 3.30 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=245025&org=NSF
Brief Description: The National Science Foundation unveiled a set of "Big Ideas" — 10 bold, long-term research and process ideas that identify areas for future investment at the frontiers of science and engineering. One of the Big Ideas is the Quantum Leap: Leading the Next Quantum Revolution. Quantum Leap will exploit quantum mechanics to observe, manipulate, and control the behavior of particles and energy at atomic and subatomic scales, resulting in next-generation technologies for sensing, computing, modeling, and communicating. Join this webinar to learn more about funding opportunities through the NSF's Division of Industrial Innovation and Partnerships for quantum technologies.

Program Director Peter Atherton will discuss America's Seed Fund powered by NSF (the Small Business Innovation Research/Small Business Technology Transfer programs — SBIR/STTR), the Partnerships for Innovation program (PFI) and other opportunities to translate quantum research into new technology.
To attend the webinar, please register at the above URL.

Event: Math Frontiers Monthly Webinar Series
Sponsor: National Academies
When: May 8, 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. ***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.
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

Grant Opportunities

National Science Foundation

Grant Program: STEM + Computing K-12 Education (STEM+C)
Agency: National Science Foundation NSF PD 18-005Y
RFP Website:
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505006&org=NSF&sel_org=NSF&from=fund

Brief Description: An innovative science, technology, engineering, mathematics and computing (STEM+C) workforce and well-educated citizenry are crucial to the Nation's prosperity, security and competitiveness. Preparation for the future workforce must begin in the earliest grades from preK-12, where students need to learn not only the science and mathematics central to these areas, but also how computational thinking is integral to STEM disciplines. Because of the powerful innovation and application of computing in STEM disciplines there is an urgent need for real-world, interdisciplinary, and computational preparation of students from the early grades through high school (preK-12) that will provide a strong foundation for mid-level technical careers and for continuing education in higher education. This is particularly important in the key science areas described in the National Science Foundation's Big Ideas for Future NSF Investment. The STEM+C program supports research and development proposals related to new approaches to pre-K-12 STEM teaching and learning related to Harnessing the Data Revolution, Convergence Research and the Future of Work at the Human-Technology Frontier.

The STEM+C Program focuses on research and development of interdisciplinary and transdisciplinary approaches to the integration of computing within STEM teaching and learning for preK-12 students in both formal and informal settings. The STEM+C program supports research on how students learn to think computationally to solve interdisciplinary problems in science and mathematics. The program supports research and development that builds on evidence-based teacher preparation or professional development activities that enable teachers to provide excellent instruction on the integration of computation and STEM disciplines. Proposals should describe projects that are grounded in prior evidence and theory, are innovative or potentially transformative, and that will generate and build knowledge about the integration of computing and one or more STEM disciplines at the preK-12 level.

A proposal submitted to this program description should describe the integration of computing with one or more STEM disciplines. A proposal may focus on studies on the effects of

integrating computational thinking with STEM disciplines or the challenges of implementing these potentially disruptive educational interventions. Proposed projects may develop models, assessments, and technological tools to support teaching and learning in this area as well as conduct research on these models, assessments, and tools.

Outcomes of projects should enable the Nation to have a future workforce with knowledge of computational thinking integrated with STEM disciplines, and students prepared and interested in careers in the skilled technical work force or further education and science careers.

Awards: Standard grants
Letter of Intent: Not Required
Full Proposal Submission Deadline: July 2, 2018
Contacts: Arlene M. de Strulle adestrul@nsf.gov (703) 292-8620
Chia Shen cshen@nsf.gov (703) 292-8447

Grant Program: Accelerating Discovery: Educating the Future STEM Workforce (AD)
Agency: National Science Foundation NSF PD 18-1998
RFP Website:
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505552&org=NSF&sel_org=NSF&from=fund

Brief Description: A well-prepared, innovative science, technology, engineering, and mathematics (STEM) workforce is crucial to the Nation's prosperity and security. Future generations of STEM professionals are a key sector of this workforce, especially in the critical scientific areas described in the Big Ideas for Future NSF Investments. To accelerate progress in these areas, the next generation of STEM professionals will need to master new knowledge and skills, collaborate across disciplines, and shape the future of the human-technology interface in the workplace. As a result, NSF recognizes the need to support development of and research on effective educational approaches that can position the future STEM workforce to make bold advances in these Big Ideas.

In response to this need, the NSF's Education and Human Resources Directorate seeks to invest in projects that can educate the STEM workforce to advance discovery in the six research Big Ideas: Harnessing the Data Revolution; The Future of Work; Navigating the New Arctic; Multi-messenger Astrophysics; The Quantum Leap; and Understanding the Rules of Life. In addition to developing and implementing novel educational and/or training programs, these projects should simultaneously generate new knowledge about effective STEM education, by studying such programs and exploring related issues.

Specifically, NSF accepts proposals to support education research and development projects focused on re- or up-skilling the existing workforce; developing the skilled technical workforce; and/or preparing those at the undergraduate, graduate, or postdoctoral fellow/early career levels. We encourage projects to partner with industry, public, and private sectors to define the needs of tomorrow's workforce and develop educational and learning strategies to meet those needs. Proposals should address near-, mid-, and long-term challenges and opportunities facing the development of STEM professionals or anticipate new structures and functions of the STEM learning and teaching enterprise. Proposers are encouraged to include approaches that have the potential to increase and diversify participation in STEM. All proposals should contribute to one or more of the six research Big Ideas.

EHR is particularly interested in supporting innovative education research and development in two Big Ideas: The Future of Work at the Human-Technology Frontier (FW-HTF) and Harnessing the Data Revolution for 21st Century Science and Engineering(HDR). Projects of

interest include: innovative uses of technology and big data to understand learning; educational approaches that prepare tomorrow's innovators to use technology and big data to understand the natural world; effects of advances in intelligent agents on STEM teaching and learning; and evaluation of disruptive educational interventions on long-term student outcomes.

Outcomes of these projects can enable the Nation to: better prepare its scientific and technical workforce for the future; use technological innovations effectively for education; and advance the frontiers of science. Proposals should describe projects that build on available evidence and theory, and that will generate evidence and build knowledge, while contributing to the education of the future STEM professionals.

Awards: Standard grants
Letter of Intent: Not Required
Full Proposal Submission Deadline: July 2, 2018; Window: April 2, 2018 - January 16, 2019
Contacts: Ellen Carpenter elcarpen@nsf.gov (703) 292-5104
Laura B. Regassa lregassa@nsf.gov (703) 292-2343
Clytrice L. Watson clwatson@nsf.gov (703) 292-4775

Grant Program: Dear Colleague Letter: Advancing Long-term Reuse of Scientific Data
Agency: National Science Foundation NSF 18-060
RFP Website: https://www.nsf.gov/pubs/2018/nsf18060/nsf18060.jsp?WT.mc_id=USNSF_179
Brief Description: NSF supports fundamental research grants that result in publications, primary data, samples, physical collections and other supporting materials created or gathered in the course of work performed under these grants.
Specifically, this DCL encourages two types of funding requests: (1) proposals for Conferences (i.e., community workshops and other events) that are designed to bring together stakeholders to explore opportunities to converge on innovative solutions to advancing public access; and (2) proposals for Early-Concept Grants for Exploratory Research (EAGER) for high-risk/high-reward innovative concepts and pilot projects that yield new fundamental research discoveries from existing NSF-funded data or that ultimately result in deployment of ambitious, sustainable socio-technical infrastructure resources and capabilities that enhance and accelerate new discoveries from existing NSF-funded data. Research ideas that do not advance public access as narrowly defined in this DCL may be suitable for other solicitations such as Cyberinfrastructure for Sustained Scientific Innovation (CSSI) - Data and Software (see https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf18531).
SPECIFIC GUIDANCE TO PROPOSERS RESPONDING PURSUANT TO THIS DCL
This DCL encourages funding requests aligned with one of the following three tracks:

I. **Community track**: This track funds proposals for Conferences (i.e., community workshops and other events) that enable better data stewardship by the NSF research community, in particular of data produced and used by the community in the conduct of research and education. Topics include community activities to organize stakeholders (e.g., discipline experts, data repository managers, and data appraisal experts) to explore:
    - Community-specific agreements that identify the data of importance to the community; knowing what to keep helps determine what to throw away;
    - Common data types (e.g., volumetric, image, etc.) across multiple disciplines to harness tools and best practices in data stewardship and use;
    - Data repository findability, accessibility, interoperability, and reuse;
    - The minimal descriptive information for findability and accessibility of data; and
    - Best practices associated with data management plans.

II. **Data reuse track.** This track encourages reuse of data created as a product of NSF-funded research. Research ideas are sought in two areas as described below.
    - EAGER proposals for high-risk/high-reward innovative studies that address development and testing of important science and engineering ideas and theories through use of existing data. Proposals that are responsive to this track may not involve collection of new data or field research; may not involve data created by an NSF Large Facility (see the list of NSF Large Facilities at https://www.nsf.gov/bfa/lfo/docs/large-facilities-list.pdf); and may not come from an investigator who is listed as a principal investigator (PI) or co-PI on an award that created the data set of use. Rather, proposals must:
        - Involve, for data proposed for use, publicly-available data generated through NSF funding; and
        - Agree to make public the details about their experiences reusing the data, including especially challenges associated with that reuse.
    - Proposals for Conferences (community workshops) that creatively employ data challenges, meetups, hackathons, or related activities. These activities enable education and workforce development, along with novel use of existing data created through NSF funding. The majority of the data (but not all) must be publicly available and the result of NSF-funded activities.

III. **Socio-Technical Infrastructure.** This track encourages EAGER proposals for high-risk/high-reward innovative concepts and pilot projects that address one or more social and/or technical barriers that limit the findability, accessibility, and interoperability of research data in the US and internationally. Suggested topics include, but are not limited to, exploration of:
    - Utility of persistent identifiers early in the data lifecycle that facilitate discovery, filtering, indexing, and routing of the data objects;
    - Costs to repositories of legacy data objects made findable, accessible, interoperable, and reusable;
    - Metrics for assessing findability and accessibility of data;
    - Community-driven studies of data appraisal;
    - Actions to reduce adverse use factors that fit the norms of a community; and
    - Principles for generation of data that are consciously designed for reuse.

Awards: Standard grants
Full Proposal Submission Deadline: The deadline for submission of Conference and EAGER proposals proposal submission date is May 23, 2018. Guidance on proposal preparation is given in Chapter II.E of the NSF PAPPG: for EAGER proposals see part 2 at https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIE2 and for Conference proposals see part 7 at https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIE7. Proposals may be submitted via Fastlane or Grants.gov. NSF anticipates that all awards will be made by September 2018.
Contacts: PIs are urged to discuss the suitability of their ideas with Beth Plale at bplale@nsf.gov prior to submission.

Grant Program: Computer and Information Science and Engineering (CISE) Research Initiation Initiative (CRII)
Agency: National Science Foundation NSF 18-554
RFP Website: https://www.nsf.gov/pubs/2018/nsf18554/nsf18554.htm

Brief Description: With the goal of encouraging research independence immediately upon obtaining one's first academic position after receipt of the PhD, the Directorate for Computer and Information Science and Engineering (CISE) will award grants to initiate the course of one's independent research. Understanding the critical role of establishing that independence early in one's career, it is expected that funds will be used to support untenured faculty or research scientists (or equivalent) in their first three years in a primary academic position after the PhD, but not more than a total of five years after completion of their PhD. One may not yet have received any other grants or contracts in the Principal Investigator (PI) role from any department, agency, or institution of the federal government, including from the CAREER program or any other program, post-PhD, regardless of the size of the grant or contract, with certain exceptions noted below. Serving as co-PI, Senior Personnel, Postdoctoral Fellow, or other Fellow does not count against this eligibility rule. Grants, contracts, or gifts from private companies or foundations; state, local, or tribal governments; or universities do not count against this eligibility rule.

It is expected that these funds will allow the new CISE Research Initiation Initiative PI to support one or more graduate students for up to two years. Faculty at undergraduate and two-year institutions may use funds to support undergraduate students, and may use the additional RUI designation (which requires inclusion of a RUI Impact Statement) -- see https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518 for additional information. In addition, submissions from all institutions may use funds for postdoctoral scholars, travel, and/or research equipment.

Awards: Standard grants; **Anticipated Funding Amount:** $10,000,000

Letter of Intent: Not Required

Full Proposal Submission Deadline: August 4, 2018

Contacts: Almadena Y. Chtchelkanova, Program Director, CCF, 1115, telephone: (703) 292-8910, email: achtchel@nsf.gov

- Mimi McClure, Associate Program Director, CNS, 1175, telephone: (703) 292-8950, email: mmcclure@nsf.gov
- Ephraim P. Glinert, Program Director, IIS, 1125, telephone: (703) 292-8930, email: eglinert@nsf.gov

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Grant Program: Small Business Technology Transfer Program Phase I (STTR)

Agency: National Science Foundation NSF 18-551

RFP Website: https://www.nsf.gov/pubs/2018/nsf18551/nsf18551.htm

Brief Description: The NSF STTR program focuses on transforming scientific discovery into products and services with commercial potential and/or societal benefit. Unlike fundamental research, the NSF STTR program supports startups and small businesses in the creation of innovative, disruptive technologies, getting discoveries out of the lab and into the market.

The NSF STTR Program funds early or "seed" stage research and development. The program is designed to provide equity-free funding and entrepreneurial support at the earliest stages of company and technology development.

The STTR program is Congressionally mandated and intended to support scientific excellence and technological innovation through the investment of federal research funds to build a strong national economy by stimulating technological innovation in the private sector; strengthening the role of small business in meeting federal research and development needs; increasing the commercial application of federally supported research results; and fostering and encouraging participation by socially and economically disadvantaged and women-owned small

businesses. The STTR program at NSF solicits proposals from the small business sector consistent with NSF's mission to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.
Awards: Fixed award grants; **Anticipated Funding Amount:** $9,000,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: June 14, 2018
Contacts: Henry Ahn, Biomedical (BM) Technologies, telephone: (703) 292-7069, email: hahn@nsf.gov

- Peter Atherton, Information Technologies (IT), telephone: (703) 292-8772, email: patherto@nsf.gov
- Anna Brady-Estevez, Chemical and Environmental Technologies (CT), telephone: (703) 292-7077, email: abrady@nsf.gov

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Grant Program: Small Business Innovation Research Program Phase I (SBIR)
Agency: National Science Foundation NSF 18-550
RFP Website: https://www.nsf.gov/pubs/2018/nsf18550/nsf18550.htm
Brief Description: The NSF SBIR program focuses on transforming scientific discovery into products and services with commercial potential and/or societal benefit. Unlike fundamental research, the NSF SBIR program supports startups and small businesses in the creation of innovative, disruptive technologies, getting discoveries out of the lab and into the market.
The NSF SBIR Program funds early or "seed" stage research and development. The program is designed to provide equity-free funding and entrepreneurial support at the earliest stages of company and technology development.

The SBIR program is Congressionally mandated and intended to support scientific excellence and technological innovation through the investment of federal research funds to build a strong national economy by stimulating technological innovation in the private sector; strengthening the role of small business in meeting federal research and development needs; increasing the commercial application of federally supported research results; and fostering and encouraging participation by socially and economically disadvantaged and women-owned small businesses. The SBIR program at NSF solicits proposals from the small business sector consistent with NSF's mission to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.
Awards: Fixed award grants; **Anticipated Funding Amount:** $33,750,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: June 14, 2018
Contacts: Henry Ahn, Biomedical (BM) Technologies, telephone: (703) 292-7069, email: hahn@nsf.gov

- Peter Atherton, Information Technologies (IT), telephone: (703) 292-8772, email: patherto@nsf.gov
- Anna Brady-Estevez, Chemical and Environmental Technologies (CT), telephone: (703) 292-7077, email: abrady@nsf.gov

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Grant Program: Planning Grants for Engineering Research Centers (ERC)
Agency: National Science Foundation NSF 18-549
RFP Website: https://www.nsf.gov/pubs/2018/nsf18549/nsf18549.htm

Brief Description: The ERC program is placing greater emphasis on research that leads to societal impact, including convergent approaches, engaging stakeholder communities, and strengthening team formation, in response to the NASEM study recommendations. The ERC program intends to support planning activities leading to convergent research team formation and capacity-building within the engineering community. This planning grant pilot initiative is designed to foster and facilitate the engineering community's thinking about how to form convergent research collaborations. To participate in the upcoming ERC competition, one is not required to submit a planning grant proposal nor to receive a planning grant.
Awards: Standard grants; **Anticipated Funding Amount:** $4,000,000
Letter of Intent: Not Required
Full Proposal Submission Deadline: June 06, 2018
Contacts: Junhong Chen, telephone: (703) 292-4623, email: junchen@nsf.gov

- Dana L. Denick, telephone: (703) 292-8866, email: ddenick@nsf.gov
- Deborah J. Jackson, telephone: (703) 292-7499, email: djackson@nsf.gov

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National Institutes of Health

Grant Program: NIH Director's Early Independence Award (DP5 - Clinical Trial Optional)
Agency: National Institutes of Health RFA-RM-18-010
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-RM-18-010.html
Brief Description: The NIH Director's Early Independence Award provides an opportunity for exceptional junior scientists to accelerate their entry into an independent research career by forgoing the traditional post-doctoral training period. Though most newly graduated doctoral-level researchers would benefit from post-doctoral training, a small number of outstanding junior investigators would benefit from skipping such training and launching essentially directly into an independent research career. For those select junior investigators who already have established a record of scientific innovation and research productivity and who have demonstrated unusual scientific vision and maturity, typical post-doctoral training would unnecessarily delay their entry into independent research. Also, importantly, the NIH Director's Early Independence Award provides an opportunity for institutions to invigorate their research programs by bringing in the fresh scientific perspectives of the awardees that they host.

To be eligible, the investigator, at the time of application, must have received the most recent doctoral degree or completed clinical training within the previous fifteen months or expect to do so within the following twelve months. **To be consistent with the updated NIH definition of Early Stage Investigators, eligible clinical training includes clinical residency and clinical fellowship**. For full eligibility requirements, see Section III. Eligibility Information. By the end of the award period, the Early Independence Award investigator is expected to be competitive for continued funding of his/her research program through other NIH funding activities and for a permanent research-oriented position.

The NIH recognizes a compelling need to promote diversity in the biomedical, behavioral, clinical and social sciences research workforce. The NIH expects its efforts towards diversifying the workforce to lead to the recruitment of the most talented researchers from all groups; to improve the quality of the educational and training environment; to balance and broaden the perspective in setting research priorities; to improve the ability to recruit subjects from diverse backgrounds into clinical research protocols; and to improve the Nation's capacity to address and eliminate health disparities. Applicant institutions are always encouraged to consider talented researchers from diverse backgrounds underrepresented in biomedical research, including

underrepresented racial and ethnic groups, persons with disabilities, and women for participation in all NIH-funded research opportunities.
Awards: Awards will be for up to $250,000 in direct costs per year, plus applicable Facilities and Administrative (F&A) costs.
Letter of Intent: August 27, 2018
Deadline: September 27, 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.

Grant Program: International Bioethics Research Training Program (D43 Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-716
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-716.html
Brief Description: he primary objective of proposed International Bioethics Research Training programs should be to support individuals with ethics expertise from a LMIC research intensive institution to develop the capabilities to conduct original empirical or conceptual research on critical ethical issues in health research in their countries. The proposed doctoral and/or long term postdoctoral training program should provide:

- A strong foundation in research design, methods, and analytic techniques appropriate for the proposed bioethics research area;
- The enhancement of the trainees' ability to conceptualize, analyze and solve bioethics research problems with increasing independence;
- Experience conducting bioethics research using state-of-the-art methods as well as presenting and publishing their research findings;
- The opportunity to interact with members of the international bioethics academic community at appropriate conferences and workshops; and
- The enhancement of the trainees' understanding of the bioethics theory and ethical practice related to global health research.

A secondary objective of proposed programs should be to provide training in the competencies necessary to sustain scholarly careers in leadership positions at institutions in the LMIC as well as teaching bioethics, leading ethical review of research and providing research ethics consultation.
The overall goal of this initiative is to contribute to the development of a sustainable critical mass of bioethics leaders at the LMIC research intensive institution to meet the needs for research ethics capacity in this country. Applicants should describe the specific needs for research ethics capacity, scholarship and leadership in the LMIC and how the results of the proposed doctoral and postdoctoral training will meet these needs at the end of the proposed award period. Applicants are encouraged to develop plans for post-training interaction and activities among the doctoral and postdoctoral trainees specifically to create a sustainable critical mass for bioethics leadership at LMIC institutions.
Awards: Applicants may request up to $230,000 direct costs per year
Letter of Intent: 30 days prior to the application due date
Deadline: May 17, 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 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.

Grant Program: BRAIN Initiative: New Technologies and Novel Approaches for Large-Scale Recording and Modulation in the Nervous System (R01 Clinical Trial Not Allowed)
Agency: National Institutes of Health RFA-NS-18-020
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-020.html
Brief Description: This FOA is related to the recommendations in section III of the BRAIN 2025 Report, with the goal to 'produce a dynamic picture of the functioning brain by developing and applying improved methods for large-scale monitoring of neural activity'. Towards this end, the report calls for accelerated development of new and improved electrodes for large-scale recording, new and improved electrical and chemical optical sensors of neural activity, and new and improved instruments for optical monitoring of neural activity. These new technologies and approaches will provide unprecedented opportunities for exploring how the nervous system encodes, processes, utilizes, stores, and retrieves vast quantities of information. A better understanding of this dynamic neural activity will enable researchers to seek new ways to diagnose, treat, and prevent brain disorders. Moreover, this FOA is intended to support the core principles of technology validation and dissemination highlighted in the BRAIN 2025 Report.
This FOA seeks applications to conduct proof-of-concept development and testing of new technologies and novel approaches for large-scale recording and manipulation of neural activity, to enable transformative understanding of dynamic signaling in the nervous system.
An additional BRAIN FOA (RFA-NS-18-019) solicits applications for iterative refinement and validation of existing and emerging technologies for large-scale recording and manipulation of neural activity.
Applications are expected to address any or all of the following three general goals for the FOA:
1. Develop New Large-Scale Network Recording Capabilities
Recording dynamic neural activity from complete neural networks, over long periods, in any area of the brain is a challenging but essential goal. Advances in the exploration and development of new technologies for neural cell recording, including methods based on electrodes, microelectronics/microchips, imaging, molecular genetics, and nanoscience are encouraged. It is expected that progress will initially be tractable in non-human animals (invertebrate or vertebrate), but extrapolation to human circuits is an ultimate goal.
2. Develop Tools for Circuit Manipulation
The ability to activate and inhibit specific populations of neurons is key to understanding functional circuits, which will advance the scope of our knowledge from observation of neural phenomena to a mechanistic understanding of neural causation. A new generation of tools for optogenetics, pharmacogenetics, biochemical, electromagnetic and/or acoustic modulation needs to be developed for use in animals, and eventually in humans, to enable the immense potential of circuit manipulation.
3. Link Neural Activity to Behavior
The goal of this FOA is to produce technologies with potential to elucidate nervous system function, in health and disease, in the context of complex behaviors. Proposed technologies should be compatible with experiments in behaving animals and should be validated under in vivo experimental conditions. In addition, novel approaches for enabling large-scale neural recording or manipulation during complex behaviors are encouraged along with the computational and statistical tools necessary to link neural activity to behavior. In combination with concurrent measurement and manipulation of neuronal activity, applications may propose methods to enhance the ability to quantify and interpret animal behavior, at high temporal and spatial resolution, reliably and objectively, over long periods of time and under a broad set of conditions.

Awards: Application budgets are not limited but need to reflect the actual needs of the proposed project.
Letter of Intent: 30 days prior to the application due date
Deadline: May 15, 2018, October 29, 2018, May 1, 2019, October 29, 2019, May 1, 2020, and October 29, 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.

Grant Program: NEI Translational Research Program (TRP) to Develop Novel Therapies and Devices for the Treatment of Visual System Disorders (R24 Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-707
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-707.html
Brief Description: The objective of this FOA is to encourage collaborative research that facilitates the translation of focused laboratory and animal studies into novel resources for the treatment of ocular diseases. Translational research may target new or previously identified genes, molecules, and/or pathways that are appropriate for therapeutic intervention. The broad scope of this program intended to cover all visual system diseases and disorders that are relevant to the mission of the NEI. The concept is to bring teams of experts together to create a pipeline for therapy and/or medical device development. The scope of the proposed research should be beyond the capabilities and resources of one research laboratory. For example, development of gene therapy may require research teams with expertise in the pathophysiology of the disease, clinical experience in the manifestations and treatments currently available, cell biologists able to contribute resources such as therapeutic genes and vectors capable of appropriate tissue targeting and gene expression, and with animal models appropriate for toxicology and efficacy testing. Rational drug design may require different scientific disciplines to identify and validate appropriate therapeutic targets, devise suitable delivery systems, and test the efficacy and safety of such agents in animal models.
Examples
The following are presented as general examples and are not intended to be exclusive nor to limit creativity and innovation.

- Gene Therapy: Including vector design and therapeutic strategies where the replacement of one mutated gene may be curative or in pathological conditions where temporary expression of a transferred gene could result a beneficial clinical effect.
- Cell-based therapies: transplantation of cells expressing various angiostatic or neurotrophic factors might represent another approach. Autologous grafts of such cells alone or after transfection to express a desirable gene product. Expression of trophic factors might achieve generic rescue effects on selected cell populations, possibly circumventing the need to target specific gene defects.
- Stem cell therapy: human adult bone-marrow-derived stem cells and Induced Pluripotent Stem (iPS) cells aimed at rescuing or replacing degenerating cells.
- Rational drug design: characterization of pathways leading to cell degeneration and death in order to identify novel targets for therapeutic intervention in retinal diseases or the identification of neuroprotection strategies that might halt or slow the degenerative process.

- Small molecules: development of compounds that show promise for treating visual disorders, but are not yet suitable for clinical testing for ocular diseases.
- Prosthesis and other devices: Medical Devices may include sensory substitution, disease treatment, and assistive technologies. For example, retinal prosthetics that transform light to electrical signals that stimulate the remaining retinal neurons to produce visual percepts. Devices to deliver therapeutic agents to eye tissue as well as assistive technologies that aid people with low-vision or blindness with their everyday activities of life.

Awards: Applicants may request up to $1.5 million per year direct costs
Letter of Intent: Not Required
Deadline: April 10, 2018; April 10, 2019; April 10, 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.

Grant Program: BRAIN Initiative: New Concepts and Early - Stage Research for Large - Scale Recording and Modulation in the Nervous System (R21 Clinical Trial Not Allowed)
Agency: National Institutes of Health RFA-EY-18-001
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-EY-18-001.html
Brief Description: This FOA is related to the recommendations in sections II.2, II.3, and II.4 from the BRAIN 2025 Report. These three recommendations call for accelerated development of new large-scale recording technologies and tools for neural circuit manipulation. These new technologies and approaches will provide unprecedented opportunities for exploring how the nervous system encodes, processes, utilizes, stores, and retrieves vast quantities of information. A better understanding of this dynamic neural activity will enable researchers to seek new ways to diagnose, treat, and prevent brain disorders.

Achieving these goals requires the ability to record simultaneously from thousands or tens-of- thousands of neurons contributing to the dynamic activity in a neural circuit. The relevant activity may be in clusters of cells packed closely together or may be in widely distributed circuits. Current microelectrode and imaging technologies are limited in the number of cells from which activity can be isolated and sampled simultaneously, by the size or location of the area to be sampled, by the depth of penetration, and by the invasiveness of the technique that might prohibit their use in human experimentation. Non-invasive technologies suitable for use in humans are currently limited in spatial resolution and temporal dynamics, as well as in their reflection of on-going electrical activity in circuit elements. This FOA seeks entirely new ideas, concepts and/or approaches from physics and engineering, and biology, for how these limitations might be overcome to enable increased recording capabilities on the scale of one or more orders of magnitude beyond that of current technology.

This FOA also seeks novel ideas for technology capable of manipulating activity in circuits that overcome the limitations of current invasive and non-invasive approaches. Dissecting the function of neural circuits requires the ability to manipulate neural activity in order to investigate underlying mechanisms and demonstrate causality. Current technologies such as microstimulation and optogenetic approaches are limited in specificity, temporal dynamics, and by the invasiveness of the technique.

Applications are expected to propose the development of ideas in the earliest stages for entirely new approaches for large-scale neural recording and/or manipulation of neural activity.

Such ideas could encompass unique and innovative combinations of existing technology that create a synergistic result. An important goal is to stimulate new thinking and concepts for accelerating development of novel technologies that break current barriers to neural recording and/or manipulation. In addition to experimental approaches, this FOA may support early-stage testing using calculations, simulations, computational models, or other mathematical techniques for demonstrating that the signal sources and/or measurement technologies are theoretically capable of meeting the demands of large-scale recording or manipulation of circuit activity in humans or animal models. The support might also be used for building and testing phantoms, prototypes, in-vitro or other bench-top models in order to validate underlying theoretical assumptions in preparation for future FOAs aimed at proof-of concept testing in animal models.
Awards: The combined direct cost budget for the two-year project period may not exceed $300,000. No more than $200,000 may be requested in any single year.
Letter of Intent: Not Required
Deadline: May 1, 2018, October 29, 2018, May 1, 2019 October 29, 2019, May 1, 2020 October 29, 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.

Department of Defense/US Army/DARPA/ONR

Grant Program: SIGMA+ Sensors
Agency: Department of Defense DARPA HR001118S0035
Website: https://www.darpa.mil/work-with-us/opportunities
Brief Description: SIGMA+ will advance, integrate, and scale emerging sensor and data analytics technologies to demonstrate and transition a detection system that fundamentally changes how we detect, interdict, and deter clandestine WMD. The SIGMA+ initiative will leverage and build on sensor capabilities to enable fully-networked scalable, high-capability detectors in the chemical, biological, and explosive (CBE) threat space, similar to what was accomplished in the RN threat space under the SIGMA program. (Although the SIGMA+ system will address RN threats, new RN sensor capabilities are not solicited in this BAA.) Beyond incorporating these additional sensor modalities, SIGMA+ will fuse CBRNE sensor data with new automated intelligence analysis and other contextual data. Furthermore, advanced social science techniques will be leveraged for adversary modeling and integrated into SIGMA+ to maximize detection and interdiction effectiveness. This holistic development and integration of physical sensing, automated intelligence and contextual data analysis, and advanced adversary modeling will result in a transformative and practical early detection system for the full spectrum of CBRNE WMD threats. Proposers to this BAA should focus only on the CBE sensor network domain; other areas mentioned will be incorporated into the complete system through subsequent SIGMA+ solicitations and integration efforts. For chemical and explosives threats, the existing SIGMA network will be extended to include scalable chemical detection technologies that enable identification of a broad range of species and precursors at the 10 parts-per-billion (ppb) (or better) level to identify illicit production of harmful threats in complex urban environments. The focus on detecting threat production will help enable interdiction prior to an attack. For biological threats, SIGMA+ will develop novel methods, either environmental or humansensing based, for improved real-time detection of attacks. This effort aims to provide days earlier attack detection and geolocation of a much wider range of attacks, enabling more effective countermeasures and

mitigation strategies. For radiological and nuclear threats, the incorporation of large-scale automated intelligence analytics into SIGMA+ will allow prioritization of detections near statistical limits to enable interdiction of heavily shielded threats, increasing effective system sensitivity by up to an order of magnitude.
Awards: The level of funding for individual awards made under this BAA will depend on the quality of the proposals received and the availability of funds. Awards will be made to proposers1 whose proposals are determined to be the most advantageous to the Government, all evaluation factors considered.
Proposal Deadline:
Abstract Due Date: April 18, 2018, 4:00 p.m.
FAQ Submission Deadline: May 24, 2018, 4:00 p.m. See Section VIII.A.
Full Proposal Due Date: May 31, 2018, 4:00 p.m.
Contact Information: Dr. Vincent Tang, Program Manager, DARPA/DSO – SIGMA+ program lead Dr. Anne Fischer, Program Manager, DARPA/DSO – chemical/explosive sensors lead Col. Matt Hepburn, M.D., Program Manager, DARPA/BTO – biological sensors lead
BAA Email: SigmaPlus@darpa.mil

Grant Program: Notice of Intent for the Funding Opportunity for Bilateral Academic Research Initiative (BARI) Pilot Program
Agency: Department of Defense Dept of the Army -- Materiel Command W911NF-18-S-0007
Website: https://www.arl.army.mil/www/default.cfm?page=8
Brief Description: This notice is provided to allow potential applicants sufficient time to develop meaningful collaborations and responsive applications. The BARI program supports basic research in science and engineering stemming from interactive collaborative efforts between U.S. institutions of higher education and U.K. institutions of higher education that is of potential interests to U.S. Department of Defense (DoD) and U.K Ministry of Defense (MOD). The program is focused on international collaborative research efforts where teams from the United States and the United Kingdom combine unique skillsets and approaches to provide rapid advances in scientific areas of mutual interests to the U.S. DoD and UK MOD. The area of interest is artificial intelligence (AI) and collaborative decision making. The research goal is to progress beyond collaborative human-machine sense making to develop approaches that might also enable collaborative decision making. The end goal is for humans and technology to be effective parts of the same team, with a machine behaving as an equal team member that can reason as well as its human team mates. These teaming capabilities are an essential step toward a more general AI that is capable of true human-machine teaming.
Awards: TBA
Proposal Deadline: TBA
Contact Information: William Creech Contracting Officer
9195494387 william.a.creech3.civ@mail.mil

Grant Program: Proof of Concept Commercialization Pilot Program Innovation Corps @ Department of Defense (I-Corps @ DoD)
Agency: Department of Defense Dept of the Army -- Materiel Command W911NF-18-S-0004
Website: https://www.arl.army.mil/www/default.cfm?page=8
Brief Description: The Department of Defense (DoD) is soliciting applications from current/recent DoD awardees on basic research topics to receive mentoring and funding to

accelerate the transition and commercialization of the funded research. The I-Corps @ DoD program is designed to support the acceleration of basic research innovations from qualifying institutions by providing Principal Investigators (PIs) and students with training and mentorship in customer discovery and the commercialization process. The goals of this program are to spur the transition of fundamental research with potential defense relevance to the marketplace, to encourage collaboration between academia and industry, and to train students, faculty, and other researchers to understand innovation and entrepreneurship. There will be three outcomes of the I-Corps @ DoD program: 1) a clear go/no go decision regarding viability of products and services, 2) should the decision be to move the effort forward, a transition plan to do so, and 3) an understanding of what kind of minimum viable product demonstration would be required by key partners and customer segments.

The I-Corps @ DoD program is a pilot program modeled after the National Science Foundation (NSF) I-Corps™ program (Note: Trademark hereafter asserted and referred to as I-Corps). The key component of the I-Corps @ DoD program is the I-Corps Team. The I-Corps Team is comprised of the Technical Lead, the Entrepreneurial Lead and the Mentor. The Entrepreneurial Lead is typically a postdoctoral researcher, graduate student, or other student, possesses relevant technical knowledge and a deep commitment to investigate the commercial landscape surrounding the innovation. The Mentor brings entrepreneurial experience and serves as the principal guide in determining the technology disposition – Technical Leads/PIs ideally locate their own mentor, but can also contact the I-Corps @ DoD Program Manager for assistance with locating a mentor.

Awards: The Innovation Corps at the Department of Defense (I-Corps @ DoD) program is an opportunity for Principal Investigators (PIs) to learn how to commercialize their discoveries / innovations. Successful applicants will receive a grant of up to $70,000 to attend a program that provides extensive training in product commercialization from industry experts and 'serial entrepreneurs' who have helped train over 1000 I-Corps™ Teams in how to bring their innovations to market.

White Paper Submission: 8 June 2018

Proposal Deadline: 6 July 2018

Contact Information: Kevin Bassler Grants Officer

Grants Officer Contact information

Grant Program: 2019 Department of Defense Multidisciplinary Research Program of the University Research Initiative (MURI) - ARMY SUBMISSION

Agency: Department of Defense ONR, ARO, Air Force Office of Scientific Research

ONR # N00014-18-S-F006

ARO # W911NF18S0003

AFOSR # FOA-AFRL-AFOSR-2018-0001

Website: https://www.arl.army.mil/www/default.cfm?page=8

Brief Description: The MURI program supports basic research in science and engineering at U.S. institutions of higher education (hereafter referred to as "universities") that is of potential interest to DoD. The program is focused on multidisciplinary research efforts where more than one traditional discipline interacts to provide rapid advances in scientific areas of interest to the DoD. As defined in the DoD Financial Management Regulation: Basic research is systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental

knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress (DoD 7000.14-R, vol. 2B, chap. 5, para. 050201.B). DoD's basic research program invests broadly in many fields to ensure that it has early cognizance of new scientific knowledge.
White papers and proposals addressing the following topics should be submitted to the Office of Naval Research (ONR):
Topic 1: Fundamental Limits on Information Latency
Topic 2: Molecularly Programmable Graphene Architecture (MPGA)
Topic 3: Identifying invariances for improved modeling and prediction of oceanographic phenomena
Awards: Various
White Paper Submission: White papers may be submitted via e-mail directly to a Research Topic Chief, via the United States Postal Service (USPS), or via a commercial carrier to the agency specified for the topic. For hard copy submissions, use the addresses provided in Section II. D. 2. a, entitled, "Address for Submission of Hard Copy White Papers." The due date and time for receipt of white papers is no later than 29 June 2018 (Friday) at 11:59 PM Eastern Time.
Proposal Deadline: Proposals must be submitted and received electronically through Grants.gov not later than 16 October 2018 (Tuesday) at 11:59 PM Eastern Time to be considered for selection. This is the final due date.
Contact Information: Kia McCormick Procurement Analyst Phone (919)549-4281
Dr. Ellen Livingston MURI Program Manager Office of Naval Research Email: ellen.s.livingston@navy.mil

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Grant Program: 2019 DEFENSE UNIVERSITY RESEARCH INSTRUMENTATION PROGRAM (DURIP)
Agency: Department of Defense Office of Naval Research AFOSR ARO
AFOSR: FOA-AFRL-AFOSR-2018-0002
ARO: W911NF18S0002
ONR: N00014-18-S-F007
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.

Project scope may range in size and complexity. Projects that are already established with prior funding sources or have established stakeholders are especially encouraged to consider the following scope areas: • Develop and implement exploratory pilot projects that seek to create new educational experiences within educational and training communities. • Develop larger cohesive STEM education and training activities that strengthen the capacity of regional communities and stakeholders to improve STEM education and training. • Establish meetings of stakeholders that must seek to connect relevant people and organizations to explicitly develop broader projects for impacting entire communities.
Awards: Various
Submission of White Papers: As mentioned prior, white papers are a MANDATORY component of a two-part submission process. White papers must NOT be submitted through the Grants.gov application process. Instead, white papers are to be submitted via email to the attention of Dr. Michael Simpson at onr_stem@navy.mil as either a PDF or Microsoft Word 2010 compatible file. The subject line of the email shall read "N00014-18-S-F003 White Paper Submission." The due date and time for receipt of white papers begins on 2 April 2018 and ends on 31 July 2018 (Tuesday) at 5:00 PM Eastern Time.
Proposal Deadline: Applications may only be submitted by invitation and received electronically through https://www.grants.gov/ no later than 28 September 2018 (Friday) at 11:59 PM Eastern Time.
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: Next-Generation Non-Surgical Neurotechnology
Agency: Department of Defense DARPA HR001118S0029
Website:
https://www.fbo.gov/index?s=opportunity&mode=form&id=767054e365fc2ac4cd05a338a6d35a1d&tab=core&_cview=0
Brief Description: DARPA seeks proposals to design, build, demonstrate, and validate a nonsurgical neural interface system to broaden the applicability of neural interfaces to the able-bodied warfighter. The final technology aims to enable neural recording and stimulation with sub-millimeter spatial resolution.
Awards: Various
Proposal Deadline: June 5, 2018
Contact Information: BAA Coordinator N3@darpa.mil

Grant Program: Army Rapid Capability Office (RCO) Broad Agency Announcement
Agency: Department of Defense W56JSR-18-S-0001
Website: https://www.grants.gov/web/grants/search-grants.html
Brief Description: This Broad Agency Announcement (BAA), W56JSR-18-S-0001, is sponsored by the Army Rapid Capabilities Office (RCO). The RCO serves to expedite critical capabilities to the field to meet Combatant Commanders' needs. The Office enables the Army to experiment, evolve, and deliver technologies in real time to address both urgent and emerging threats while supporting acquisition reform efforts. The RCO executes rapid prototyping and initial equipping of capabilities, particularly in the areas of cyber, electronic warfare, survivability and positioning, navigation and timing (PNT), as well as other priority projects that will enable Soldiers to operate

and win in contested environments decisively. This BAA is an expression of interest only and does not commit the Government to make an award or pay proposal preparation costs generated in response to this announcement.
Technical questions will be sent to the appropriate Technical Points of Contact (TPOC), topic authors, and/or Subject Matter Experts (SMEs) to request clarification of their areas of interest. No discussions are to be held with offerors by the technical staff after proposal submission without permission of the Army Contracting Command-Aberdeen Proving Ground (ACC-APG) Contracting Officer.
Awards: Various
Proposal Deadline: March 23, 2023
Contact Information: Megan Grigas, Contracting Officer
megan.c.grigas.civ@mail.mil
Phone: (443)395-1606

Grant Program: Air Force Fiscal Year 2019 Young Investigator Research Program (YIP)
Agency: Department of Defense Air Force Office of Scientific Research FA9550-18-S-0002
Website: https://www.grants.gov/web/grants/search-grants.html
Brief Description: The Fiscal Year 2019 Air Force Young Investigator Research Program (YIP) intends support young in career scientists and engineers who have received Ph.D. or equivalent degrees by 1 April 2012 or later showing exceptional ability and promise for conducting basic research. The program objective is to foster creative basic research in science and engineering; enhance early career development of outstanding young investigators; and increase opportunities for the young investigator to recognize the Air Force mission and related challenges in science and engineering. Individual awards are made to U.S. institutions of higher education, industrial laboratories, or non-profit research organizations where the principal investigator (PI) is employed on a full-time basis and holds a regular position. YIP PIs must be a U.S. citizen, national, or permanent resident. Researchers working at a Federally Funded Research and Development Center or DoD Laboratory are not eligible for this competition. Most YIP awards are funded up to $150,000 per year for three years, for a total of $450,000. Exceptional proposals will be considered individually for higher funding levels and/or longer duration. Please review the remainder of this announcement for additional information. We anticipate approximately thirty-six (36) awards under this competition if funds are available.
Please see the eligibility requirements in the solicitation: Doctorate no earlier than 01 Apr 2012
Awards: Most YIP awards are three (3) years in duration, funded up to $150,000 per year for a total of approximately $450,000. Proposals should be submitted in adherence to these guidelines.
Proposal Deadline: Proposals must be received electronically through Grants.gov by Friday, 01 Jun 2018 at 11:59 PM Eastern time to be considered. Technical or general pre-proposal inquiries and questions must be received in writing by electronic mail not later than Friday, 27 April 2018 to be considered.
Contact Information: MS. ELLEN M. ROBINSON, AFOSR/RTB Program Coordinator Telephone: (703) 588-8527 Email: afosryip@us.af.mil
General Inquires: MS. BRITTANY TURNER, AFOSR/PKC Procurement Analyst Email: brittany.turner.5@us.af.mil

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Department of Energy

Grant Program: Critical Water Issues Prize Competition RFI
Agency: Department of Energy DE-FOA-0001899
Website: https://eere-exchange.energy.gov/#FoaId45c72943-674f-484c-8592-1b95b0906387
Brief Description: The U.S. Department of Energy seeks to understand the key technical and other barriers that may prevent long-term access to low-cost water supplies that could be best addressed through challenges and prize competitions. For the purposes of this Request for Information (RFI), challenges and prize competitions are tools and approaches the Federal government and others can use to engage a broad range of stakeholders, including the general public, in developing solutions to difficult problems. Challenges and prize competitions rely on competitive structures to drive innovation among participants and usually offer rewards (financial and/or other) to winners and/or finalists. DOE may use the information provided through this RFI to develop challenges and prize competitions to address key water issues. This RFI is not designed to solicit input on DOE's broader R&D efforts on affordable water.
Submission Deadline: Responses to this RFI must be submitted electronically to WaterPrizeRFI@ee.doe.gov no later than 5:00pm (ET) on May 14, 2018. Responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) attachment to the email, and no more than 5 pages in length per category of questions, 12 point font, 1 inch margins. Only electronic responses will be accepted.
Contact Information: EERE-ExchangeSupport@hq.doe.gov
This email address is for EERE Exchange Technical Support.

- waterprizerfi@ee.doe.gov

This email address is for submission of RFI responses.

Grant Program: Solid Oxide Fuel Cells Core Technology Research
Agency: Department of Energy DE-FOA-0001853
Website: https://www.netl.doe.gov/business/solicitations/details?title=4bff5699-c11b-4230-b25e-ba5c79c4ad89
Brief Description: The goal of this Funding Opportunity Announcement (FOA) is to seek innovative research and development projects to support fuel cells system manufacturers in addressing issues related to cost and reliability of fuel cells systems. Applications are sought in two areas of interest (AOI) that include AOI 1 – Solid Oxide Fuel Cells (SOFC) Core Technology Research and AOI 2 – Core Technology Research and Development (R&D) in Support of Near-Term SOFC Power Systems Prototype Tests. visit FedConnect for more.
Awards; Up to $2,000,000; Available Funding: $9,500,000
Submission Deadline: April 30, 2018
Contact Information: Charles C. Tomasiak Charles.Tomasiak@NETL.DOE.GOV

EPA (Environmental Protection Agency)

Grant Program: FY 2019 Pollution Prevention Grant Program
Agency: EPA EPA-HQ-OPPT-2018-001
Website: https://www.epa.gov/sites/production/files/2018-03/documents/2018rfpp2grant.pdf

Brief Description: EPA is announcing a grant competition to fund two-year Pollution Prevention assistance agreements for projects expected to be performed in each EPA region that provide technical assistance and/or training to businesses/facilities to help them adopt source reduction approaches (also known as "pollution prevention" or "P2"). P2 means reducing or eliminating pollutants from entering any waste stream or otherwise released into the environment prior to recycling, treatment, or disposal. In keeping with the Pollution Prevention Act of 1990, EPA is encouraging P2 because implementing these approaches can result in reductions in toxic pollutants, the use of water, energy and other raw materials, while also lowering business costs. For this current round of grants, EPA is putting additional emphasis on documenting and sharing the P2 best practices and innovations identified and developed through these grants so that others can replicate these approaches and outcomes. Therefore, in general, grant recipients must document and report on the P2 recommendations where they are provided to businesses/facilities as part of the technical assistance, and at a later date, report on P2 actions adopted by the businesses/facilities that received the technical assistance and training (alternative reporting provisions are available if technical assistance is broadly provided to businesses/facilities – see Section VI.C.3.b.). If necessary, awardee budgets and workplans may allot time and/or set-aside funds from the potential two years of federal funding provided for an optional third-year to collect and report on the P2 approaches adopted. States, state entities and federally-recognized tribes and intertribal consortia are eligible to apply.

If Congress appropriates Fiscal Year (FY) 2018 and 2019 funds for the P2 Program at levels comparable to FY 2017 funding levels, the EPA may award a total of approximately $9.38 million in federal P2 grant funding for these two-year assistance agreements (approximately $4.69 million in FY 2018 funds and approximately $4.69 million in FY 2019 funds). P2 awards are expected to be performed in each EPA region and will be funded in the form of grants or cooperative agreements. Please note that notwithstanding the potential amounts stated above, these amounts are estimates only and the amount of grant funding awarded will be dependent on Congressional appropriations, funding availability, the quality of proposals received, satisfactory performance and other applicable considerations.

Awards: NY, NJ: Region 2 – Federal awards may be in the range of $40,000 – $300,000, issued over a two-year funding period (between $20,000 - $150,000 incrementally funded per year).

Estimated Total Program Funding: $9,380,000

Notice of Intent: Not Required

Proposal Deadline: April 26, 2018

Contact: EPA Region 2 NJ, NY, PR, VI Alex Peck U.S. EPA Region 2 290 Broadway, 25th Floor (PSPMMB) New York, NY 10007-1866 Phone: 212-637-3758 Email address: peck.alex@epa.gov

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NASA

Grant Program: Transformational Tools and Technologies (TTT)

Agency: NASA NNH18ZEA001N-TTT

Website:

https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B4770A320-3997-5B8F-4A4B-B0D67C98ADD9%7D&path=open&method=init

Brief Description: The Transformational Tools and Technologies (TTT) Project advances state-of-the-art computational and experimental tools and technologies that are vital to aviation applications in the six strategic thrusts. The project develops new computer-based tools, computational fluid dynamics models, and associated scientific knowledge that will provide first-

of-a-kind capabilities to analyze, understand, and predict aviation concept performance. These revolutionary tools will be applied to accelerate NASA's research and the community's design and introduction of advanced concepts. The Project also explores technologies that are broadly critical to advancing ARMD strategic outcomes. Such technologies include the understanding of new types of strong and lightweight materials, innovative controls techniques, and experimental methods. TTT also develops improved Multi-Disciplinary Design, Analysis, & Optimization (MDAO) and systems analysis tools to enable multi-disciplinary integration. All of these technologies will support and enable concept development and benefits assessment across multiple ARMD programs and disciplines. The TTT Project is organized into three sub-projects. The Revolutionary Tools and Methods (RTM) Sub-project is responsible for the development of revolutionary comprehensive physics-based aeronautics analysis and design capability. It includes work in computational aerosciences, MDAO and systems analysis, and tools for modeling both combustion and aircraft structures and materials. The Critical Aeronautics Technologies (CAT) Sub-project is responsible for the development of critical aeronautics technologies that can enable revolutionary improvement in aircraft system design. Innovative ideas developed in CAT often lead to patentable results. Currently, technologies are under development in the areas of aircraft structures and materials, innovative measurement techniques, propulsion controls, flight controls, and combustion. The Autonomous Systems (AS) Sub-Project advances fundamental research in autonomous systems. The tools and technologies of interest span many disciplines. The Fluid Mechanics Discipline encompasses advanced turbulence modeling, boundary layer transition prediction and modeling, numerical methods, and flow control development and prediction for a wide range of airframe and propulsion system flow problems of interest. Canonical data is developed and used to validate the modeling improvements developed in this discipline. Development of more accurate physics-based methods such as large eddy simulation (LES) is emphasized.
Awards: Between $1.1M and $1.4M will be invested annually in these NRAs over the next 3 years.
Notice of Intent: April 16, 2018
Proposal Deadline: May 14, 2018
Contact: NRA Manager: Tracey M. Frisby
tracey.m.frisby@nasa.gov

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

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: Common Heritage
Agency: National Endowment of Humanities
Website: https://www.neh.gov/grants/preservation/common-heritage
Brief Description: America's cultural heritage is preserved not only in libraries, museums, archives, and other community organizations, but also in all of our homes, family histories, and life stories. The Common Heritage program aims to capture this vitally important part of our country's heritage and preserve it for future generations. Common Heritage will support both the digitization of cultural heritage materials and the organization of outreach through community events that explore and interpret these materials as a window on the community's history and culture.

The Common Heritage program considers a community to be a city or town (or a part of a city or town) that has been strongly shaped by geographical and historical forces. Members of the public in that community may have diverse family histories and heritage, or they may share a historical, cultural, or linguistic heritage. The program recognizes that members of the public—in partnership with libraries, museums, archives, and historical organizations—have much to contribute to the understanding of our cultural mosaic. Together, such institutions and the public can be effective partners in the appreciation and stewardship of our common heritage.
The program supports events organized by community cultural institutions, which members of the public will be invited to attend. At these events experienced staff will digitize the community historical materials brought in by the public. Project staff will also record descriptive information—provided by community attendees—about the historical materials. Contributors will be given a free digital copy of their items to take home, along with the original materials. With the owner's permission, digital copies of these materials would be included in the institutions' collections. Historical photographs, artifacts, documents, family letters, art works, and audiovisual recordings are among the many items eligible for digitization and public commemoration.
Awards: $12,000 each
Proposal Deadline: May 31, 2018
Contact: Common Heritage National Endowment for the Humanities 400 Seventh Street, SW Washington, DC 20506 202-606-8570 or preservation@neh.gov preservation@neh.gov

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Brain Research Foundation

Grant Program: 2019 Scientific Innovation Award
Agency: Brain Research Foundation

Website: https://www.thebrf.org/

Brief Description: **Brain Research Foundation** is inviting your institution to nominate **one senior faculty member** to submit a Letter of Intent for the 2019 *Scientific Innovations Award* (SIA). The objective of the program is to support projects that may be too innovative and speculative for traditional funding sources but still have a high likelihood of producing important findings. It is expected that investigations supported by these grants will yield high impact findings and result in major grant applications and funding as well as significant publications in high impact journals.

To be eligible, the nominee must be a **full-time associate professor/full professor** working in the area of neuroscience and brain function in health and disease. **Current major NIH or other peer-reviewed funding is preferred but evidence of such funding in the past three years is essential.**

For more information and a complete list of requirements, please download the SIA Guidelines.

Awards: The grant period is for two years totaling $150,000. The support focus is for new research projects of the highest scientific merit.

Proposal Deadline: The deadline to submit an LOI is Friday, June 22, 2018 at 4:00 p.m. CST.

Bill & Melinda Gates Foundation

Grant Program: Grand Challenges Exploration (GCE)
Agency: Bill & Melinda Gates Foundation
Website: https://gcgh.grandchallenges.org/about

Brief Description: The Bill & Melinda Gates Foundation is inviting proposals for the next round of Grand Challenges Explorations (GCE) for the following three challenges

- Innovations in Immunization Data Management, Use, and Improved Process Efficiency;
- Affordable, Accessible, and Appealing: The Next Generation of Nutrition;
- Tools and Technologies for Broad-Scale Disease Surveillance of Crop Plants in Low-Income Countries

Awards: Phase 1 grants are $100,000 for 18 months.
Proposal Deadline: May 2, 2018
Contact: FAQ: https://gcgh.grandchallenges.org/grant-opportunities/faq/gce#t17n37099 .

Streamlyne Contacts

Two user manuals on Streamlyne have been added on the Streamlyne website http://www.njit.edu/research/streamlyne/

Steamlyne_NewUserManual_CommonElements.docx : This manual provides a reference to all the common elements of Streamlyne Research. This user manual is a good document to review each module's functionality.

Steamlyne_NewUserManual_PD&PDBudget.docx: This is a user manual on proposal and budget development in Streamlyne. The content herein explain the use and functionality of this module. This is the most useful Streamlyne document for PIs and users new to Streamlyne.

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, NCE, CoAD and MTSM Project Manager; 973-596-4483; irp3@njit.edu

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