NJIT Research Newsletter

Issue: ORN-2017-42

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: Re-entry to Active Research Program (RARE); Critical Resilient Interdependent Infrastructure Systems and Processes 2.0 (CRISP 2.0); Smart and Connected Communities (S&CC); National Robotics Initiative 2.0: Ubiquitous Collaborative Robots (NRI-2.0); Resource Implementations for Data Intensive Research in the Social, Behavioral and Economic Sciences (RIDIR)
NIH: BRAIN Initiative: Biology and Biophysics of Neural Stimulation (R01); Sleep disorders and circadian clock disruption in Alzheimer's disease and other dementias of aging (R01); NIBIB Exploratory/Developmental Research Grant Program (R21); Synthetic Biology for Engineering Applications (R01); BRAIN Initiative: Development Optimization, and Validation of Novel Tools and Technologies for Neuroscience Research (SBIR)(R43/R44); Promoting Research in Basic Neuroscience (R01); NIH Research Project Grant (R01); Clinical and Translational Science Award (U54); NINDS Advanced Postdoctoral Career Transition Award to Promote Diversity in Neuroscience Research (K22)
Department of Defense/US Army/DARPA/ONR: Defense Enterprise Science Initiative (DESI); FY18 FOA for the Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program; Research Interests at AFOSR
Department of Energy: OPEN 2018; State Energy Program 2017 Competitive Awards
NASA: ROSES 2017: Advancing Collaborative Connections for Earth System Science
National Endowment of Humanities: Digital Humanities Advancement Grants
Elsa U. Pardee Foundation: Theoretical and Computational Astrophysics Networks
Klingenstein-Simons Neuroscience Fellowships: Fellowship Awards in the Neurosciences
Boston Globe Life Sciences Media: Innovative Research Development in Health/Medicine Prize
JDRF and the Helmsley Charitable Trust: Diabetes Innovation Challenge
Streamlyne Update: New How-to-do Videos

Special Announcements

NSF Announcement NSF-18-035: RAISE on Enabling Quantum Leap: Transformational Advances in Quantum Systems

In 2016, the National Science Foundation (NSF) identified 10 Big Ideas for Future Investment. The opportunity described in this Dear Colleague Letter (DCL) overlaps with two of those Big Ideas: Quantum Leap, which is a multi-pronged effort to advance fundamental understanding of quantum phenomena, materials, communications, and systems, and Convergent Research, which fosters the merging of ideas and approaches from widely diverse fields.

This DCL aims to encourage researchers to submit interdisciplinary research projects that must include at least three complementary components represented by researchers with expertise in the areas of physics, chemistry, mathematics, materials science, engineering, and computer/computational science, which are more broadly represented by the NSF Directorates for Mathematical and Physical Sciences (MPS), Engineering (ENG), and Computer and Information Science and Engineering (CISE). The innovative proposals must focus on quantum functionality by assessing aspects relevant to both fundamental and application concepts, and must result in experimental demonstrations of transformative advances towards quantum systems and/or proofof-concept validations. Quantum information science (QIS) is rapidly advancing as applications that use fundamental physical principles such as coherence, superposition, and entanglement are pioneered with ions, molecules, atoms, and atom-like systems such as vacancy centers in diamond. New quantum materials featuring unique quantum effects such as coherence, entanglement, superconductivity are emerging. These materials not only possess extraordinary properties, but they also allow manipulation of their electronic or magnetic status through external stimuli with unprecedented efficiency and dramatically low energy loss, thus offering a pathway to ultra-fast, ultra-energy-efficient quantum sensing, quantum communication, quantum computing, and quantum simulation.

Computer and computational science and engineering will be needed when systems-level designs for networks including quantum components are made with higher levels of abstraction. In this context, this DCL encourages various aspects of quantum communication and quantum computing, such as the computational science of developing and designing quantum algorithms, studying quantum programming languages and approaches to compiling programs, developing an application of quantum computing using quantum programming languages, quantum architectures, quantum circuit synthesis and optimization, layout and scheduling, practical fault tolerance, as well as work on integrating devices into systems. Communication challenges include but are not limited to aspects of on-chip communication, networking, establishing secure and/or efficient communication protocols, quantum information theory, and topics in communication complexity.

Development of mathematical concepts relating to quantum computing and communication as well as rigorous analyses are welcome. Work on integrating various aspects of quantum sensing, quantum communication, and quantum computation into systems is also of interest. Proposals may also include aspects that align with the goals of the Directorate for Education and 2 Human Resources (EHR), particularly the goals of the NSF Research Traineeship (NRT) program to educate science, technology, engineering, and mathematics (STEM) graduate students in highpriority interdisciplinary research areas using innovative, evidence-based approaches that are aligned with changing workforce and research needs.

Principal investigators (PIs) are encouraged to respond to this DCL through the submission of a Research Advanced by Interdisciplinary Science and Engineering (RAISE) proposal. PIs must follow the guidance for RAISE proposals specified in the NSF Proposal and Award Policies and Procedures Guide (PAPPG; see Chapter II.E.3). Prior to submission of a RAISE proposal, one page white paper must be prepared and submitted, by February 16, 2018, to cognizant Program Directors from at least three of the following divisions/office: DMR, PHY, CHE, DMS, ECCS, CCF, and OAC. Upon receipt of an invitation from the cognizant Program Directors, a full proposal may be submitted. The proposal title must begin with "RAISE: TAQS:". Award size and duration are limited to no more than $1,000,000 over a maximum of five years.

Cognizant NSF Program Directors are:
DMR: Tania Paskova, Tel: (703) 292-2264, Email: tpaskova@nsf.gov;
ECCS: Dominique Dagenais, Tel: (703) 292-2980, Email: ddagenai@nsf.gov;
PHY: Alexander Cronin, Tel: (703) 292-5302, Email: acronin@nsf.gov;
CHE: Evelyn Goldfield, Tel: (703) 292-2173, Email: egoldfie@nsf.gov;
DMS: Justin Holmer, Tel: (703) 292-8213, Email: jholmer@nsf.gov;
CCF: Dmitri Maslov, Tel: (703) 292-8910, Email: dmaslov@nsf.gov;
OAC: Vipin Chaudhary, Tel: (703) 292-2254, Email: vipchaud@nsf.gov;

DCL is posted on the website
https://www.nsf.gov/pubs/2018/nsf18035/nsf18035.pdf?WT.mc_id=USNSF_25&WT.mc_ev=click

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Change of Grants.gov Software for Proposal Submission to NIH

Beginning January 1, 2018, all grant applicants must use Workspace to submit applications through Grants.gov. Office of Research and IST staff members have updated the Streamlyne system to align with Grants.gov Workspace system for submission of proposals to NIH. Since the response from Workspace system would be a learning experience for everyone, it is critical that timeline for proposal submission policy is completely followed to allow enough time for addressing any error or system delays. Faculty and staff submitting proposals as Principal Investigators are requested to work with Office of Research ambassadors and staff to following the following timeline:

- 2 weeks before due date the budget should be finalized and the approval proposal process should be initiated. This includes the Department approval and conflict of interest forms with the PI's and Department Chair's signature, the detailed budget and justification, proposal title, and preliminary specific aims (NIH), proposal summary (NSF), or contract scope of work (SOW).
- 1 week before the due date, all approvals should be entered in the Streamlyne system
- 72 hours prior to submission the SRA will initiate a proposal review and check for submission errors. For this to occur, all portions of the proposal should be completed and ready for submission with the exception of the proposal narrative. Only a draft of the proposal is needed at this point as a place holder for error checking.
- 48 hours prior to the deadline, the PI should release the final version of the proposal to the SRA office for final system validation and on-time submission.

Any questions should be directed to ambassadors or Office of Research staff as listed at the end of this newsletter.

Recent Research Grant and Contract Awards

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

PI: Louis Lanzerotti (PI) and Andrew Gerrard (Co-PI)
Department: Center for Solar Terrestrial Research
Grant/Contract Project Title: Van Allen Probes - Phase E Extended Mission I - RBSPICE Subcontract Additional Scope Increase
Funding Agency: NASA
Duration: 07/15/16-12/15/17

PI: Costas Gogos (PI)
Department: Chemical, Pharmaceutical and Biological Engineering
Grant/Contract Project Title: Technology Advancement and Retention Center (TARC) Modeling & Simulation Validation and Technology Development
Funding Agency: U.S. Department of the Army (Picatinny Arsenal)
Duration: 12/12/17-12/11/18

PI: Andrei Sirenko (PI)
Department: Physics
Grant/Contract Project Title: Material Synthesis and Spectroscopy Diffraction Studies of Multiferroics
Funding Agency: USDOE
Duration: 06/01/16-05/13/18

PI: Ji Meng Loh (PI)
Department: Mathematical Sciences
Grant/Contract Project Title: Collaborative Agreement with Meadowlands Environmental Research Institute - Benthic Project
Funding Agency: Rutgers University
Duration: 00/01/18-09/30/18

PI: Michel Boufadel (PI)
Department: Center for Natural Resources Development and Protection
Grant/Contract Project Title: Bench Scale Treatability (Various POs)
Funding Agency: Langan Engineering and Environmental Services Inc.
Duration: 11/27/18-03/31/18

PI: Cong Wang (PI)
Department: Electrical and Computer Engineering
Grant/Contract Project Title: Intelligent Control of Permanent Magnet Synchronized Motors for Electric Vehicles
Funding Agency: Hetony, Inc.
Duration: 01/01/18-01/01/19

In the News…

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

Grad Students Spared Tax Hike: Tuition waivers received by graduate students will remain tax-free under the tax overhaul likely to win congressional approval next week, the Washington Post reports. Following protests, lawmakers of both parties had objected to a provision of the House version that would treat tuition waivers as income and send students' taxes soaring. The final GOP bill will also let students deduct loan interest payments. The deduction lets people repaying student loans reduce their tax burden by as much as $2,500. In addition, bonds that colleges use for construction will stay interest-free. However, the final bill retains a 1.4 percent excise tax on income earned by endowments of wealthy colleges.

Next Steps in Solar Research: These are "higher performance through new and improved materials, larger panels leading to reduced cost of manufacturing and installation, reduced capital equipment costs for factories, and improved reliability for longer lifetimes." So says electrical engineer Steve Eglash (left), who directs strategic research initiatives in Stanford's Computer Science Department. He was among witnesses at a hearing to examine solar advances and the Department of Energy's reported shift to early-stage research that can't be performed by the private sector. House Science chair Lamar Smith (R-Tex.) supports that approach. He maintained that the Obama administration "often played favorites and invested heavily in the deployment of photovoltaic (PV) technology into electricity markets." More information is posted on https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-115-SY20-WState-SEglash-20171213.pdf

Administration Frees Up ARPA-E $91M Withholding: The Trump administration has backed down from withholding $91 million in FY 2017 funding for the Advanced Research Projects Agency-Energy (ARPA-E), ASME's Capitol Update reports, citing a December 12 letter to Congress from the Government Accountability Office (GAO). The letter says: "Until the Department of Energy's Office of the General Counsel intervened, ARPA-E improperly withheld the obligation of budget authority in connection with the president's proposed elimination of ARPA-E and a so-called 'cancellation proposal' in the President's budget request." More information is posted on the website http://basicresearch.defense.gov/events/STIx/

USE-INSPIRED RESEARCH: The Pentagon's Defense Enterprise Science Initiative (DESI) "incentivizes use-inspired basic research projects, defined as a scientific study or experiment directed toward increasing fundamental knowledge and understanding in the context of end-use applications." Projects bring together industry and university teams with the aim of discovering completely new solutions to challenging defense and national security problems, and using that knowledge to influence existing or new acquisition programs. DESI-funded projects also aim to accelerate the impact of basic research results on defense capabilities. Teams will be awarded up to $1.5 million over two years. This year's research topics include power beaming, highly maneuverable autonomous UAV, soft active composites, metamaterial-based antennas, and an alternate topic submitted by the teams. More information is posted on the website https://www.grants.gov/web/grants/view-opportunity.html?oppId=299112

$250 Million Raised by I-Corps Programs: $250 Million of seed capital is raised by 450 start-ups developed from Innovation Corps (I-Corps) teams. Launched by former National Science Foundation director Subra Suresh and continued by his successor, France Córdova, the program is expanding, NSF Director for Engineering Dawn Tilbury (left) told a House Science panel hearing this week. The I-Corps for Phase 0 pilot supports "non-academic teams of very early startups or pre-startups that are developing game-changing technologies. These Phase 0 Teams will receive national I-Corps training as well as participate in a follow-on curriculum called "I-Corps Go" that addresses some of the more common issues in startup formation, including incorporation, licensing and negotiation of intellectual property, and fundraising." Hearing chair Barbara Comstock (R-Va.) signaled strong support for I-Corps, saying such programs "boost our economy, enhance our national security, strengthen our cybersecurity infrastructure and create a STEM-job ready workforce."

Research Data Sharing: The Association of American Universities and Association of Public and Land-grant Universities have jointly issued a report that "details steps federal agencies can take to facilitate public access to research data in a viable and sustainable manner that advances science in the public interest while minimizing the administrative burden on agencies, universities, and researchers." In this era of open scholarship, greater access to research findings and data, especially when grounded in the FAIR principles (findable, accessible, interoperable, reusable), has proven to be an important way to accelerate scientific progress and advance innovation to better serve the public good. Although there is general agreement about the value of increased public access to data, ensuring such expanded access will require a significant culture shift at universities and among their faculty, thoughtful and carefully crafted new government policies and practices, and investment in the infrastructure required to make data publicly accessible. For more information on the recommendation process, please visit https://www.aau.edu/sites/default/files/AAU-Files/Key-Issues/Intellectual-Property/Public-Open-Access/AAU-APLU-Public-Access-Working-Group-Report.pdf

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Webinar and Events

Event: Distinguished Lecture: Towards A Secure and Efficient Vehicular Adhoc Network (VANET)
Sponsor: IEEE
When: December 18, 2017 from 6:15 PM to 7.45 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=243886&org=NSF
Brief Description: Vehicular ad hoc networks (VANETs) have attracted a lot of attention due to their interesting and promising functionalities including vehicular safety, traffic management, entertainment, and location based services. Information security and privacy issues are important in VANETs. Many existing security solutions proposed for VANET suffer from the scalability issue, requiring either the storage of a large number of pseudonyms or centralized key management. In this talk, we will present a distributed key management framework based on group signature to provision privacy in VANETs. Distributed key management is expected to facilitate the revocation of malicious vehicles, maintenance of the system, and heterogeneous security policies, compared with the centralized key management. In particular, security protocols are developed to detect compromised road side units and their colluding malicious vehicles. Moreover, we address the issue of large computation overhead due to the group signature implementation. This talk also

covers a secure cooperative data downloading application framework for paid services in VANETs. The proposed cooperative data downloading guarantees the receipt of the requested data file for each applicant vehicle passing a road side unit. Security and privacy solutions are developed to ensure applicants' exclusive access to the applied data and privacy of the vehicles involved in the application.
Speaker: Prof. Yu Cheng, Dept. of Elec. and Comput. Eng., Illinois Institute of Technology, Chicago
To Join the webinar, please register at
https://events.vtools.ieee.org/meeting_registration/register/49107

Event: 3D Printing's Versatility Enables Medical Innovation
Sponsor: IEEE
When: December 19, 2017 from 1:00 PM to 2.00 PM
Website: https://spectrum.ieee.org/webinar/3d-printings-versatility-enables-medical-innovation
Brief Description: View this webinar to learn how 3D printing's versatility has paved the way for medical advancements by Cardiovascuar Systems, Inc. (CSI). To help fight the battle against CAD and PAD, CSI works continuously to advance their devices and develop new innovations. Work that relies greatly on a wide scope of 3D printing applications. Hear from Jacob Draxler, Product Development Engineer at CSI, and Michael Gaisford, Director of Marketing – Medical Solutions at Stratasys as they discuss medical applications of Stratasys' PolyJet™ technology.
PRESENTERS:
Jacob Draxler, Product Development Engineer, Cardiovascular Systems, Inc**.**
Jacob Draxler is a Product Development Engineer with Cardiovascular Systems, Inc. (CSI). In this role, he works within the engineering team to aid development of new products as well as furthering the understanding of the unique mechanism of action that CSI's Orbital Atherectomy Device (OAD) employs for the treatment of both calcific Peripheral (PAD) and Coronary Artery Disease (CAD) through the use of anatomical 3D printed fixtures. He holds a Master's degree in Mechanical Engineering from the University of St. Thomas as well as Bachelor of Science degrees in Biology and Psychology from the University of Georgia.
Michael Gaisford, Director Marketing – Medical Solutions, Stratasys
Michael Gaisford is the Director of Marketing for Stratasys Medical Solutions. In this role, he oversees global marketing programs, collaborations with physicians and hospitals and medical application development. Michael brings over a decade of medical device and pharmaceutical industry experience, including roles in marketing and strategy with Boston Scientific, as a consultant with Health Advances, a boutique healthcare consulting firm, marketing at Genentech and as a Strategy Associate at CVS/Pharmacy.
To join the webinar: Register at the above URL

Grant Opportunities

National Science Foundation

Grant Program: Re-entry to Active Research Program (RARE)
Agency: National Science Foundation NSF 18-525
RFP Website: https://www.nsf.gov/pubs/2018/nsf18525/nsf18525.htm
Brief Description: The Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET) is conducting a Re-entry to Active Research (RARE) program to reengage, retrain,

and broaden participation within the academic workforce. The primary objective of the RARE program is to catalyze the advancement along the academic tenure-track of highly meritorious individuals who are returning from a hiatus from active research. By providing re-entry points to active academic research, the RARE program will reinvest in the nation's most highly trained scientists and engineers, while broadening participation and increasing diversity of experience. A RARE research proposal must describe potentially transformative research that falls within the scope of participating CBET programs.

The RARE program includes two Tracks to catalyze the advancement of investigators along the academic tenure system after a research hiatus, either to a tenure-track position or to a higher-tenured academic rank. Track 1 of the RARE program reengages investigators in a competitive funding opportunity with accommodations for gap in record that are a result of the research hiatus. A Track 1 proposal will follow the budgetary guidelines of the relevant CBET program for an unsolicited research proposal. Track 2 retrains investigators for whom the research hiatus has led to the need for new or updated techniques, such that retraining is required to return the investigator to competitive research activity. A description of how these new techniques will lead to competitive research in CBET programs is required. A Track 2 proposal budget will include only funds necessary for specific retraining activities, such as travel to a workshop or conference, workshop registration fees, a retraining sabbatical, or seed funding to support collection of preliminary data (including salary support, equipment usage fees, materials, and/or supplies).

Who May Serve as PI: Investigators must contact a RARE program director to confirm eligibility prior to submission. The investigator will receive an e-mail confirmation of eligibility, which must be uploaded as a Single Copy document with the proposal submission.

Awards: Standard Grants; **Anticipated Funding Amount:** $1,200,000

Letter of Intent: Not Required

Submission Deadline: Anytime

Contacts: José Lage, telephone: (703) 292-4997, email: jlage@nsf.gov

- Angela Lueking, telephone: (703) 292-2161, email: alueking@nsf.gov
- Robert McCabe, telephone: (703) 292-4826, email: rmccabe@nsf.gov

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Grant Program: Critical Resilient Interdependent Infrastructure Systems and Processes 2.0 FY18 (CRISP 2.0)

Agency: National Science Foundation NSF 18-523

RFP Website: https://www.nsf.gov/pubs/2018/nsf18523/nsf18523.htm

Brief Description: This CRISP 2.0 solicitation responds both to national needs on the resilience of critical infrastructures and to increasing NSF emphasis on transdisciplinary research. In this context, the solicitation is one element of the NSF-wide Risk and Resilience activity, with the overarching goal of advancing knowledge in support of improvement of the nation's infrastructure resilience. The devastating effects of recent disasters such as Hurricanes Harvey, Irma and Maria have underscored that a great deal remains to be done. In addition, CRISP 2.0 is aligned with the NSF-wide frontier thinking on convergence, characterized as "deep integration of knowledge, techniques, and expertise from multiple fields to form new and expanded frameworks for addressing scientific and societal challenges and opportunities". The Directorate of Engineering and the Directorate of Social, Behavioral, and Economic Sciences therefore jointly invest in the CRISP 2.0 solicitation to stimulate the integration of engineering, and social, behavioral and economic sciences to foster new paradigms and domains in interdependent critical infrastructures.

Critical infrastructures are the mainstay of our nation's economy, security and well-being. They provide essential services through systems and processes. Many of the critical infrastructures are interconnected and even interdependent. This solicitation calls for integrated research on Interdependent Critical Infrastructures (ICIs) by interdisciplinary teams of engineers and social, behavioral, and economic scientists. Research funded through this program is expected to provide the momentum to create a new science of integrative designs in ICIs, to stimulate economic growth, and to inform how communities can engage diverse resources to improve the quality of life for their inhabitants.

Infrastructures are networks of systems and processes that function cooperatively and synergistically to produce and distribute a continuous flow of essential goods and services. For this competition, two or more infrastructures are said to be interdependent if they require each other's services or if the processes by which they deliver services can be affected by each other. The goals of the **Critical Resilient Interdependent Infrastructure Systems and Processes 2.0** (CRISP 2.0) solicitation are to: (1) foster an interdisciplinary research community of engineers and social, behavioral, and economic (SBE) scientists who work synergistically together for innovation in the design and management of infrastructures as processes and services; (2) transform relevant fields by re-thinking ICIs as processes and services that may have complementary and/or substitutional roles with each other; (3) create innovations in ICIs that contribute directly and positively to people's quality of life, spur economic growth, and respond to both internal perturbations and external shocks, regardless of whether they are natural, technological or human-induced.

Awards: Standard Grants; **Anticipated Funding Amount:** $13,400,000
Letter of Intent: Not Required
Submission Deadline: March 07, 2018
Contacts: Robert E. O'Connor (SBE/SES), telephone: (703) 292-7263, email: roconnor@nsf.gov

- Cynthia Chen (ENG/CMMI), telephone: (703) 292-2563, email: qchen@nsf.gov
- Wenda Bauchspies (SBE/SES), telephone: (703) 292 5026, email: wbauchsp@nsf.gov
- Robin L. Dillon-Merrill (ENG/CMMI), telephone: (703) 292-4921, email: rdillonm@nsf.gov

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Grant Program: Smart and Connected Communities (S&CC)
Agency: National Science Foundation NSF 18-520
RFP Website: https://www.nsf.gov/pubs/2018/nsf18520/nsf18520.htm
Brief Description: Communities in the United States (US) and around the world are entering a new era of transformation in which residents and their surrounding environments are increasingly connected through rapidly-changing intelligent technologies. This transformation offers great promise for improved wellbeing and prosperity, but poses significant challenges at the complex intersection of technology and society. The goal of the NSF Smart and Connected Communities (S&CC) program solicitation is to accelerate the creation of the scientific and engineering foundations that will enable smart and connected communities to bring about new levels of economic opportunity and growth, safety and security, health and wellness, and overall quality of life. This goal will be achieved through integrative research projects that pair advances in technological and social dimensions with meaningful community engagement.

For the purposes of this solicitation, communities are defined as having geographically-delineated boundaries—such as towns, cities, counties, neighborhoods, community districts, rural areas, and tribal regions—consisting of various populations, with the structure and ability to engage in meaningful ways with proposed research activities. A "smart and connected community" is, in turn, a community that synergistically integrates intelligent technologies with the natural and

built environments, including infrastructure, to improve the social, economic, and environmental well-being of those who live, work, or travel within it.
A proposal for an S&CC Integrative Research Grants must include the following:

- Integrative research that addresses the technological and social dimensions of smart and connected communities;
- Meaningful community engagement that integrates community stakeholders within the project;
- A management plan that summarizes how the project will be managed across disciplines, institutions, and community entities; and
- An evaluation plan for assessing short-, medium-, and long-term impacts of the proposed activities.

S&CC is a cross-directorate program supported by NSF's Directorates for Computer and Information Science and Engineering (CISE), Education and Human Resources (EHR), Engineering (ENG), Geosciences (GEO), and Social, Behavioral, and Economic Sciences (SBE). Awards may be requested for total budgets ranging from $750,000 to $3,000,000 for periods of up to four years.
Awards: Standard Grants; **Anticipated Funding Amount:** $19,250,000
Letter of Intent: Required; January 30, 2018
Submission Deadline: February 28, 2018
Contacts: David Corman, Program Director, CISE/CNS, telephone: (703) 292-8754, email: dcorman@nsf.gov

- Radhakishan Baheti, Program Director, ENG/ECCS, telephone: (703) 292-8339, email: rbaheti@nsf.gov
- Cynthia Chen, Program Director, ENG/CMMI, telephone: (703)292-2563, email: qchen@nsf.gov

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Grant Program: National Robotics Initiative 2.0: Ubiquitous Collaborative Robots (NRI-2.0)
Agency: National Science Foundation NSF 18-518
RFP Website: https://www.nsf.gov/pubs/2018/nsf18518/nsf18518.htm
Brief Description: The NRI-2.0 program builds upon the original National Robotics Initiative (NRI) program to support fundamental research in the United States that will accelerate the development and use of collaborative robots (co-robots) that work beside or cooperatively with people. The focus of the NRI-2.0 program is on **ubiquity**, which in this context means seamless integration of co-robots to assist humans in every aspect of life.

The program supports four main research thrusts that are envisioned to advance the goal of ubiquitous co-robots: **scalability**, **customizability**, **lowering barriers to entry**, and **societal impact**. Topics addressing **scalability** include how robots can collaborate effectively with multiple humans or other robots; how robots can perceive, plan, act, and learn in uncertain, real-world environments, especially in a distributed fashion; and how to facilitate large-scale, safe, robust and reliable operation of robots in complex environments. **Customizability**includes how to enable co-robots to adapt to specific tasks, environments, or people, with minimal modification to hardware and software; how robots can personalize their interactions with people; and how robots can communicate naturally with humans, both verbally and non-verbally. Topics in **lowering barriers to entry** include development of open-source co-robot hardware and software, as well as widely-accessible testbeds. Topics in **societal impact** include fundamental research to establish and infuse robotics into educational curricula, advance the robotics workforce through education pathways, and explore the social, economic, ethical, and legal implications of our future with ubiquitous collaborative robots. Collaboration between academic,

industry, non-profit, and other organizations is encouraged to establish better linkages between fundamental science and engineering and technology development, deployment, and use.

The NRI-2.0 program is supported by multiple agencies of the federal government including the National Science Foundation (NSF), the U.S. Department of Agriculture (USDA), the U.S. Department of Energy (DOE), and the U.S. Department of Defense (DOD). Questions concerning a particular project's focus, direction and relevance to a participating funding organization should be addressed to that agency's point of contact, listed in section VIII of this solicitation.

Awards: Standard Grants; **Anticipated Funding Amount:** $35,000,000

Foundational projects will range from $250,000 to $750,000 in total costs for up to three years. Integrative projects will range from $500,000 to $1,500,000 in total costs for up to four years.

Letter of Intent: Not Required

Submission Deadline: February 20, 2018

Contacts: Reid Simmons, CISE/IIS, telephone: (703) 292-4767, email: resimmon@nsf.gov

- Radhakisan Baheti, ENG/ECCS, telephone: (703) 292-8339, email: rbaheti@nsf.gov
- Jordan M. Berg, ENG/CMMI, telephone: (703) 292-5365, email: jberg@nsf.gov

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Grant Program: Resource Implementations for Data Intensive Research in the Social, Behavioral and Economic Sciences (RIDIR)

Agency: National Science Foundation NSF 18-517

RFP Website: https://www.nsf.gov/pubs/2018/nsf18517/nsf18517.htm

Brief Description: As part of NSF's Harnessing the Data Revolution (HDR), the Directorate for Social, Behavioral and Economic Sciences (SBE) seeks to develop user-friendly large-scale next-generation data resources and relevant analytic techniques to advance fundamental research in SBE areas of study. Successful proposals will, within the financial resources provided by the award, construct such databases and/or relevant analytic techniques and produce a finished product that will enable new types of data-intensive research. The databases or techniques should have significant impacts, either across multiple fields or within broad disciplinary areas, by enabling new types of data-intensive research in the SBE sciences.

Awards: Standard Grants; **Anticipated Funding Amount:** $4,500,000

Letter of Intent: Not Required

Submission Deadline: February 28, 2018

Contacts: John E. Yellen (SBE/BCS), telephone: (703) 292-8759, email: jyellen@nsf.gov

- William Badecker (SBE/BCS), telephone: (703) 292-5069, email: wbadecke@nsf.gov
- Sara Kiesler (SBE/SES), telephone: (703) 292-8643, email: skiesler@nsf.gov
- Joseph Whitmeyer (SBE/SES), telephone: (703) 292-7808, email: jwhitmey@nsf.gov

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National Institutes of Health

Grant Program: BRAIN Initiative: Biology and Biophysics of Neural Stimulation (R01 Clinical Trial Optional)

Agency: National Institutes of Health RFA-NS-18-018

RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-018.html

Brief Description: This FOA is related to the recommendations in sections III.4 of the BRAIN 2025 report "New and improved perturbation technologies suitable for controlling cells that have been specified by type, wiring, location, and other characteristics (see Section III.2). Perturbation

technologies in this context could include tools for stimulation, inhibition, or modulation that mimic natural activity, and could span optical, ultrasonic, chemical, electromagnetic, biochemical, and other modalities for delivery of control signals." Section III.8 highlights the need to validate these technologies as an integral part of accomplishing the goals and deliverables of the BRAIN Initiative. It also acknowledges that in order to "probe the mechanics of the brain more deeply, we must develop a better understanding of the biophysical properties of modulating neurons. In the same way that the basic electrophysiological properties of single neurons are common across brain areas and species, it is likely that many fundamental forms of neural dynamics will generalize as well." Implicit in this is the need to understand the cellular and local circuit responses to neural stimulation technologies that are used to probe and alter neural dynamics.
The current suite of BRAIN Initiative FOAs range from testing new concepts for large scale recording and modulation, developing and optimizing tools for invasive and non-invasive neuromodulation, including understanding the physiology of non-invasive stimulation at a circuit level, to pre-clinical and clinical studies of next generation recording and modulation technologies. This FOA fills the gap in understanding how these technologies affect the brain at a basic cellular or circuit level. The new recording, mapping, and stimulation tools developed within the BRAIN initiative provide an ample toolset that can now be employed to address this gap and inform the development of next generation tools.
This FOA is designed to improve understanding of the neurobiological underpinnings of existing methods and lay the foundation for the next generation technologies by developing models, systems, and procedures to guide the design of better tools for neuromodulation. Specifically, the goal is to systematically characterize, model, and validate the neurobiological, cellular, and circuit responses of neuronal and non-neuronal cells in the central nervous system (CNS) to neural stimulation.
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 receipt date
Deadline: February 23, 2018, June 6, 2018, October 4, 2018, February 6, 2019, June 4, 2019, October 4, 2019, February 6, 2020, June 4, 2020, and October 6, 2020, by 5:00 PM local time of applicant organization. All types of non-AIDS applicationsallowed 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: Sleep disorders and circadian clock disruption in Alzheimer's disease and other dementias of aging (R01 Clinical Trial Not Allowed)
Agency: National Institutes of Health PAR-18-497
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-497.html
Brief Description: Although there are ongoing research efforts to determine the association between sleep disturbances and circadian clock disruptions with Alzheimer's disease, only a few address the molecular and cellular mechanisms of this association.
Therefore, this FOA is aimed at molecular, cellular, genetic, epigenetic, and systems biology approaches to advance basic and clinical research on the causes and consequences of sleep deficiency and circadian clock dysfunction in Alzheimer's disease, and the roles of sleep and the circadian clock as modifiers of the progression of neurodegeneration. A multiple-principal investigator (PI) format will be required with one or more PD/PIs leading mechanistic studies

related to neurodegeneration, and one or more PIs leading research in sleep and/or circadian biology.
This FOA solicits molecular and cellular research on animal models across a range of topics intersecting the fields of aging, neurodegeneration, and sleep and/or circadian biology. Although observational studies are allowed, mechanistic and intervention studies are strongly encouraged.
Areas of research appropriate to this FOA include, but are not limited to, the following:
1. Explore molecular mechanisms linking disordered sleep and circadian disruptions with cognitive decline and AD.
2. Determine processes interrupted by disordered sleep and circadian disruptions that lead to AD-related pathologies such as accumulation of protein aggregates, synaptic loss or dendritic pruning.
3. Test whether, and through what, molecular and cellular processes acute or chronic disruption of sleep and/or circadian rhythms modulate accumulation and/or spreading of protein aggregates such as Aβ or tau.
4. Assess how various patterns of neuronal activity and sleep architecture modulate accumulation and/or spreading of protein aggregates.
5. Explore how lack of sleep and circadian clock disruption contribute to severity of neurodegenerative diseases.
6. Assess a bidirectional interaction between sleep and/or the circadian clock with neurodegenerative processes in AD.
7. Determine whether the improvement of sleep and/or circadian rhythms alter the course of neurodegenerative conditions and represent a modifiable risk factor that can alter disease progression.
8. Identify the genetic variants that promote variations of sleep and circadian rhythms that may contribute to the risk of AD.
Awards: Application budgets are limited to $500,000 in direct costs per year.
Letter of Intent: February 23, 2018
Deadline: The first application due date is March 26, 2018, by 5:00 PM local time of the applicant organization.
Subsequent due dates for new applications are June 6, 2018; October 7, 2018; February 7, 2019; June 7, 2019; October 7, 2019; February 7, 2020; June 8, 2020; and October 8, 2020, by 5:00 PM local time of the applicant organization.
Due dates for revision and resubmission applications are July 7, 2018; November 7, 2018; March 7, 2019; July 8, 2019; November 7, 2019; March 6, 2020; July 7, 2020; and November 6, 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: NIBIB Exploratory/Developmental Research Grant Program (R21 Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-433
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-433.html
Brief Description: Exploratory/Developmental Research Grant applications should be exploratory and novel, distinct from those supported through the traditional R01 activity code. For example, long-term projects, or projects designed to increase knowledge in a well-established

area, are not appropriate for this FOA. Studies submitted to this FOA should break new ground or take previous discoveries in new directions.
Applications for R21 awards should propose projects distinct from those supported through the traditional R01 mechanism, which are generally longer-term systematic investigations supported by extensive preliminary data. R21 applications should have well-defined goals with the potential for future development. It is expected that successful projects would go on to further development under other funding mechanisms, such as the R01. Not all research endeavors will be suitable for this FOA. Projects from Investigators that are supported by preliminary data should be submitted to the Parent R01 FOA (https://grants.nih.gov/grants/guide/pa-files/PA-16-160.html) or the Bioengineering Research Grant FOA (https://grants.nih.gov/grants/guide/pa-files/PAR-16-242.html).
Projects of limited cost or scope that use widely accepted approaches and methods within well-established fields or are supported by preliminary data may be submitted to the Parent R03 FOA (https://grants.nih.gov/grants/guide/pa-files/PA-16-162.html). Projects of any scope that are supported by preliminary data may be submitted to the Parent R01 (https://grants.nih.gov/grants/guide/pa-files/PA-16-160.html) FOA. Projects that propose incremental improvements in well-established areas of investigation are not appropriate for this FOA.
New and Early Stage Investigators should consider submitting to the NIBIB Trailblazer Award (https://grants.nih.gov/grants/guide/pa-files/PAR-16-390.html), which supports an enhanced, three-year R21 grant.
Awards: Application budgets may not exceed $275,000 direct costs over a maximum two-year funding period. No more than $200,000 in direct costs may be requested in any single year.
Letter of Intent: Not Required
Deadline: Standard dates apply , by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.
The first standard application due date for this FOA is February 5, 2018.
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: Synthetic Biology for Engineering Applications (R01 Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-434
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-434.html
Brief Description: One of the great challenges in biomedical research is to be able to quantitatively predict, test, and harness the complex dynamics of biological systems. Synthetic biology is the design and construction of new biological parts and systems, and the re-design of existing and natural biological systems for specific purposes. In contrast to the traditional genetic engineering approach, which usually focuses on individual genes and proteins, synthetic biology adopts a more systematic approach targeting entire pathways, networks, and whole organisms with quantitative control and modulation. Synthetic biology is arguably the cornerstone of the next generation of reengineered cells. Gaining new insights into the complex and dynamic biological pathways of these designer cells and developing cell-based diagnostics and therapies are at the frontiers of biomedical science. Enabling these de novo biological systems will require the ability to design and build complex pathways with endogenous or novel functions and with predictable and quantitative responses to endogenous or environmental signals. Achieving this paradigm will allow the testing of hypotheses on complex biological systems and the development

of novel therapeutic strategies and diagnostic capabilities. To improve the reach and impact of this paradigm on human health, an integrative research plan based on collaborations of synthetic biologists with computational scientists, cell biologists, engineers, and/or physician scientists is strongly recommended.

Specific Areas of Research Interest

Synthetic biology for human health is advancing, but major challenges, such as the inability to engineer robust complex metabolic and signaling networks or to produce cells with reliable and predicable behavior once in the host, currently limit application. This FOA encourages the development of tools and technology to tackle challenges in biomedical research and in cell-based therapies and diagnostics. Specific topics of interest include, but are not limited to, those listed below.

- Cell-free and cell-based systems for testing and analyzing biological systems and for the efficient and scalable synthesis of complex biological products
- Cell-free (prototyping genetic circuits, discovering and evolving enzymes, and conducting biomolecular reactions)
- Cell-based (materials and pharmaceutical production, microbiome reprogramming, diagnostics)
- Natural and engineered biological circuits for implementing regulation and decision-making strategies in cells (modeling, analysis, design, and use of biological circuits, cell-cell communication, gene regulation, computation strategies)
- Expanding biochemical functionality (novel genetic alphabets, changing molecular machinery of the cell, constructing genomically recoded organisms, genetically encoded reporters)
- Advanced genome editing techniques for manipulating DNA (computational algorithms, zinc finger nucleases, TAL effector nucleases, CRISPR-Cas9)
- Design and evolution strategies to construct biological systems (directed evolution, continuous evolution, multiplexed evolution)

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

Letter of Intent: Not Required

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

The first standard application due date for this FOA is February 5, 2018.

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: Development Optimization, and Validation of Novel Tools and Technologies for Neuroscience Research (SBIR)(R43/R44 Clinical Trial Not Allowed)

Agency: National Institutes of Health PAR-18-501

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-501.html

Brief Description: Based on the priority areas identified by the BRAIN 2025, and in further evaluation of the neurotechnologies currently available to neuroscience researchers, it was determined that there is a need to enable broad dissemination of tools/technologies that improve our understanding of brain function. Many of these inventions require additional R&D before they can be disseminated to the broader neuroscience community. To fill that research gap, this Funding Opportunity Announcement (FOA) which uses the SBIR grant mechanism, is intended to support the development of novel neuroscience tools and technologies in order to better

understand the structure and function of brain circuits- a major goal of the BRAIN Initiative. This FOA will support further development of neurotechnologies developed through the BRAIN initiative or through other funding programs in preparation for commercial dissemination.
It is expected that the activities proposed will require partnerships and close collaboration between the original developers of these technologies and Small Business Concerns (SBCs), which may be accomplished in a number of ways, including the use of multiple program directors/principal investigators.
Examples of neurotechnologies that would be appropriate for this FOA include, but are not limited to, development of:

- Probes for large scale sensing and/or manipulation of neural activity in vivo
- Imaging instrumentation for recording and/or manipulating neural activity in vivo
- Electrodes for large-scale recording and/or circuit manipulation in vivo
- Techniques and approaches for recording/manipulating neural activity during behaviors
- Novel tools to facilitate the detailed analysis of complex circuits and provide insights into cellular interactions that underlie brain function
- Software or hardware related to the BRAIN initiative

While some of the markets for these products may be small, NIH is supportive of developing these technologies towards sustainable commercial manufacture. The full development and dissemination of these technologies will enable neuroscientists to perform novel hypothesis-driven experiments that are not feasible and/or reduce barriers to experiments that currently are too costly, difficult, or time consuming to perform broadly.
For more information about neurotechnologies that may be of interest for this FOA, please see the BRAIN website: https://www.braininitiative.nih.gov/index.htm
Awards: According to statutory guidelines, total funding support (direct costs, indirect costs, fee) normally may not exceed $150,000 for Phase I awards and $1,000,000 for Phase II awards.
Letter of Intent: Not Required
Deadline: Standard dates apply , by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.
The first standard application due date for this FOA is February 5, 2018.
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: Promoting Research in Basic Neuroscience (R01 Clinical Trial Not Allowed)
Agency: National Institutes of Health PAS-18-483
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAS-18-483.html
Brief Description: The mission of NINDS is to seek fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease. NINDS supports research projects that range from basic studies of the nervous system to Phase III clinical trials. Several years ago, NINDS embarked on an institute-wide planning process to analyze its investments in basic, translational, and clinical research and generated a strategic plan (see Overview of NINDS Strategic Plan). The implementation of this plan is an ongoing process, with the goal of optimizing all research areas within the NINDS mission.

As part of the implementation of its strategic plan, NINDS analyzed how extramural funding has been distributed across the spectrum of basic and applied research over the last two decades. To perform this analysis, NINDS developed simple definitions of basic and applied research that could be applied as unambiguously and reproducibly as possible. Each of these

categories was further subdivided into two subcategories—basic/basic, basic/disease-focused, applied/translational, and applied/clinical. For this analysis, basic/basic research was defined as studies aimed at understanding the development, structure and function of the normal nervous system whether performed in vitro, in animals, or in humans. Further description of these definitions and details about this analysis can be found on the NINDS website (Back to Basics). For the purpose of this FOA, basic/basic research will subsequently be referred to as "fundamental basic" research.

For grants within the NINDS mission, the following guidelines apply: (1) projects intended to understand the mechanisms of, or develop treatments for, neurological disease are outside the scope of this FOA; (2) projects that propose any disease-based or applied experiments within a primarily basic grant are also not appropriate; (3) applications aimed primarily at developing tools and resources for basic neuroscience research are of secondary interest; and (4) applications on topics that have traditionally been assigned to other NIH Institutes not participating in this FOA are not appropriate. Furthermore, since some basic neuroscience applications may be more suitable for the FOAs developed through the BRAIN Initiative, investigators are encouraged to carefully examine opportunities within that program (see BRAIN). Applicants with questions about the NINDS mission and the goals of the BRAIN Initiative are strongly encouraged to contact NINDS Scientific/Research staff to determine if their anticipated applications are appropriate for this FOA. Finally, the NINDS believes that all research applications can be greatly strengthened if the design, execution, and interpretation of the proposed studies and supporting data are adequately described (for details see NINDS rigor).

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

Letter of Intent: Not Required

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

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

Grant Program: NIH Research Project Grant (Parent R01 Clinical Trial Not Allowed)
Agency: National Institutes of Health PA-18-484

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PA-18-484.html

Brief Description: The NIH Research Project Grant supports a discrete, specified, circumscribed project in scientific areas that represent the investigators' specific interests and competencies and that fall within the mission of the participating NIH Institutes and Centers (ICs). The R01 is the original, and historically the oldest, grant mechanism used by the NIH to support health-related research and development.

Research grant applications are assigned to participating ICs based on receipt and referral guidelines and many applications are assigned to multiple participating ICs with related research interests. Applicants are encouraged to identify a participating IC that supports their area of research via the R01 IC-Specific Scientific Interests and Contact website and contact Scientific/Research staff from relevant ICs to inquire about their interest in supporting the proposed research project.

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

Letter of Intent: Not Required

Deadline: Standard dates apply , by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.
The first standard application due date for this FOA is February 5, 2018.
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: Clinical and Translational Science Award (U54 Clinical Trial Optional)
Agency: National Institutes of Health PAR-18-464
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-464.html
Brief Description: Translating biomedical discoveries into clinical applications that improve human health is a complex process with high costs and substantial failure rates. This can result in a delay of years or decades before discoveries in biomedical research result in health benefits for patients and communities. Recognizing the need to improve translation, the National Institutes of Health (NIH) established the CTSA Program in 2006. In 2011, the CTSA Program became part of the National Center for Advancing Translational Sciences (NCATS). NCATS' mission is to identify and instantiate the general scientific and operational principles underlying each step of the translational continuum, thus transforming translation from an empirical process to a predictive science. To accomplish this, NCATS supports research to identify and test promising translational innovations and develop, demonstrate, and disseminate advances across the translational science spectrum.

In 2012, at the suggestion of Congress, the Institute of Medicine (IOM) was invited to assess the CTSA Program and make recommendations to enhance its effectiveness in meeting the NCATS mission. In 2013, the IOM delivered its report, suggesting among other recommendations that the program could greatly increase its impact if the multiple largely independent CTSA Program units were to evolve into a national network to "enhance the transit of therapeutic, diagnostic, and preventive interventions along the developmental pipeline; disseminate innovative translational research methods and best practices; and provide leadership in informatics standards and policy development to promote shared resources". Unless otherwise indicated, quotes in this FOA are from this IOM report, which can be found at "The CTSA Program at NIH: Opportunities for Advancing Clinical and Translational Research - Institute of Medicine".

This FOA defines a set of overarching strategic goals for the CTSA Program to which each of the CTSA Program hubs should contribute. The FOA also defines a set of standards and resources that should be available at each CTSA Program hub to allow the CTSA Program to function as a flexible research network. The medical centers that make up the CTSA network are referred to as "CTSA Program hubs" to indicate their central role in their local environments where they coordinate and collaborate with multiple "spokes" (e.g. hospitals, clinics). An important operational principle of all NCATS programs, including the CTSA Program, is to maximize impact via a catalytic approach: developing, demonstrating utility of, and then disseminating improvements in translational science and operations. Depending on the problem being addressed, CTSA Program hubs are expected to develop and demonstrate solutions to translational roadblocks individually, as groups of hubs, or as a network whole; in all cases, dissemination of successful solutions throughout the network, and to the translational research community as a whole, is an explicit goal and expectation.

The NCATS CTSA Program, as a whole, supports the full spectrum of clinical and translational research. The CTSA Program hubs are a critical part of the program. Given the enormous variety of translational scientific and operational issues in need of effective solutions, and the rich diversity of academic medical institutions, each hub is both required to have certain

common capacities and is encouraged beyond these to bring its own unique strengths to the program and the network. Defined sets of capacities and resources should be present at each hub so that it can act as a qualified partner in the CTSA Program, promoting an environment of quality, safety and efficiency for translational and clinical research. CTSA Program Hubs should be agents of continuous improvement as they identify gaps and opportunities in the research process and develop and instantiate innovative solutions at their institutions. In training and operations, CTSA Program Hubs should promote the team science required for translational research, and the development and nurturing of the translational research workforce.

Awards: Award Budgets for the sum of UL1 and KL2 awards are limited to between $3M and $7.5M in direct costs. Within that range, support is limited to 2.5% of total institutional NIH funding in the fiscal year prior to the time of application. Budgets for the TL1 awards are based upon the allowed number of trainees and considered separately. See Administrative Core – Budget Section for details.

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

Deadline: February 2, 2018 for the first receipt date after that Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

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

Grant Program: NINDS Advanced Postdoctoral Career Transition Award to Promote Diversity in Neuroscience Research (K22-No Independent Clinical Trials)

Agency: National Institutes of Health PAR-18-469

RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-18-469.html

Brief Description: The candidate must propose a research project that will be pursued during Phase I and continue into an independent project during Phase II of the award. Consequently, the K22 applicant must have ownership of the project and by explicit agreement of the mentor, must be able to take the project with him/her upon transition to independence. The K22 award will provide up to 5 years of support in two phases. Phase II support will have a maximum duration of 3 years. If an awardee expends the maximum time in Phase I (3 years), Phase II will be limited to two years of support.

The two award phases are intended to be continuous in time. Therefore, although exceptions may be possible in limited circumstances, Phase II awards will generally only be made to those K22 PDs/PIs who accept independent tenure-track (or equivalent) faculty positions by the end of the Phase I award period. Phase II of the K22 award is not automatic. It will be awarded, following adminstrative review, only if the K22 awardee obtains a full-time tenure-track or equivalent faculty position. This position must include an appropriate startup package that is similar to that currently provided to others hired by the department into a similar position, and which is sufficient to promote success in the applicant's research area, appropriate protected time for research (a minimum of 75%) and access to students and resources normally associated with such a position.

Once the tenure track (or equivalent) position has been secured, NINDS senior staff will evaluate the Phase II materials (see below) to ensure that all programmatic requirements are met prior to continuation of the K22 award. Awardees approved to proceed with the second phase of support will receive notification of approval in writing from the NINDS. Updated information from the extramural institution on behalf of the candidate will be required for the NINDS to process the second phase of the K22. The sponsoring institution must demonstrate a

commitment to the candidate by providing protected research time and space needed to perform the proposed research. It is strongly encouraged that Phase II occur at an institution different from that where the Phase I research occurred. However, as long as the faculty position and start-up package are appropriate, and the candidate has full research independence, Phase II may occur at the Phase I institution. If the applicant remains at the same institution, there must be a clear explanation of how independence from the mentor will be established. The details of the requirements for the activation of the Phase II of the K22 award are described in Section VI of this announcement.

During Phase II, it is expected that K22 recipients will apply for independent research grant support as soon as possible. K22 recipients are strongly encouraged to apply for R01 or equivalent Federal or Foundation awards within the final two years of their K22 award. K22 award recipients that obtain independent support during the K22 award period may hold concurrent research support, and, in the last two years of their K22 award, salary support from their career award and a competing NIH research project grant when recognized as a PD/PI or subproject Director of the research project grant.

NINDS support for the K22 program relies equally on scientific merit and programmatic considerations. Consequently, we strongly recommend that potential applicants consult Scientific/Research Staff at NINDS before preparing an application.Please also visit the NINDS website for specific resources and webinars to help develop an application. NINDS will not support projects, regardless of the results of merit review, if they do not fulfill current programmatic priorities at NINDS.

Awards: Award budgets are composed of salary and other program-related expenses, as described below.

Letter of Intent: Not Required

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

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

Department of Defense/US Army/DARPA/ONR

Grant Program: Defense Enterprise Science Initiative (DESI)
Agency: Department of Defense FA9550-18-S-B001
Website: https://www.grants.gov/web/grants/view-opportunity.html?oppId=299112
Brief Description: The Department of Defense (DoD) Defense Enterprise Science Initiative (DESI) is a pilot program that supports use-inspired basic research performed by university-industry teams. DESI is sponsored by the Office of the Assistant Secretary of Defense for Research and Engineering (OASD/R&E), and is run in collaboration with the Air Force Research Lab (AFRL), the Air Force Office of Scientific Research (AFOSR), and the Army Research Office (ARO).
Awards: Award Ceiling: $6,000,000
Proposal Deadline: February 28, 2018
Contact Information: Calvin Scott Grantor Phone 703-696-7308

Grant Program: FY18 Funding Opportunity Announcement (FOA) for the Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program
Agency: Department of the Navy ONR – N00014-18-S-F003
Website: file:///Users/atamdhawan/Downloads/N00014-18-S-F003.pdf
Brief Description: The ONR seeks a broad range of applications for augmenting existing or developing innovative solutions that directly maintain, or cultivate a diverse, world-class STEM workforce in order to maintain the U.S. Navy and Marine Corps' technological superiority. The goal of any proposed effort must provide solutions that will establish and maintain pathways of diverse U.S. citizens who are interested in uniformed or civilian DoN (or Navy and Marine Corps) STEM workforce opportunities.

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: Under this STEM FOA competition, ONR intends to award approximately twenty-five (25) awards for an estimated total value of $6,250,000, subject to the availability of funds. Each individual award will be up to a maximum of $250,000 per year, with one-year (1) option periods, for up to three (3) years. Option years will be funded incrementally based on applicant performance and adherence to established execution benchmarks. Applications for larger amounts will be considered on a case-by-case basis.
Proposal Deadline: White Paper Inquiries and Questions 20 July 2018 (Friday) White Papers must be received between 2 April 2018 (Monday) with a deadline of 31 July 2018 (Tuesday) at 5:00 PM Eastern Time Application Inquiries and Questions 18 September 2018 (Tuesday) Applications must be received no later than 28 September 2018 (Friday) at 11:59 PM Eastern Time

Contact Information: Questions about technical nature and/or funding should be be submitted to: 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: Research Interests of the Air Force Office of Scientific Research
Agency: Department of Defense AFOSR – BAA-AFRL-AFOSR-2016-0007
Website:
https://www.fbo.gov/index?s=opportunity&mode=form&id=d8bfeaf2e38a1e4aeb9908190fc2e0f2&tab=core&_cview=1
Brief Description: AFOSR plans, coordinates, and executes the Air Force Research Laboratory's (AFRL) basic research program in response to technical guidance from AFRL and requirements of the Air Force. Additionally, the office fosters, supports, and conducts research within Air Force, university, and industry laboratories; and ensures transition of research results to support U.S. Air Force needs. The focus of AFOSR is on research areas that offer significant and comprehensive benefits to our national war fighting and peacekeeping capabilities. These areas are organized and managed in two scientific Departments: Engineering and Information Science (RTA) and Physical and Biological Sciences (RTB).
The Air Force Office of Scientific Research, hereafter generally referred to as "we, us, our, or AFOSR," manages the basic research investment for the U.S. Air Force. As a part of the Air Force Research Laboratory (AFRL), our technical experts discover, shape, and champion research within the Air Force Research Laboratory, universities, and industry laboratories to ensure the transition of research results to support U.S. Air Force needs. Using a carefully balanced research portfolio, our research managers seek to foster revolutionary scientific breakthroughs enabling the Air Force and U.S. industry to produce world-class, militarily significant, and commercially valuable products.

To accomplish this task, we solicit proposals for basic research through this general Broad Agency Announcement outlining the U.S. Air Force Defense Research Sciences Program. We invite unclassified proposals that do not contain proprietary information for research in many broad areas. We expect to fund only fundamental research. Our research areas of interest are described in detail in section A. Program Description.

We anticipate many awards in the form of grants, cooperative agreements, or contracts. We reserve the right to select and fund for award all, some, part, or none of the proposals received. There is no guarantee of an award. Please review the entire announcement for full details.
Awards: Funding available: $80,000,000
Proposal Deadline: This announcement remains open until superseded. We review and evaluate proposals as they are received. You may submit proposals at any time; however, some specific topic instructions may recommend submission by specific dates that align with funding expectations. Funding is limited. We commit the bulk of our funding by the fall of each year.
Contact Information: Daniel Smith Procurement Analyst Phone 703-588-8494 Business Office Email

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Grant Program: DoD Medical Simulation and Information Sciences, Toward A Next-Generation Trauma Care Capability: Foundational Research for Autonomous, Unmanned, and Robotics Development of Medical Technologies (FORwARD) Award
Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-17-MSISRP-FOR

Website: http://cdmrp.army.mil/
Brief Description: The MSISRP FORwARD Award mechanism is being offered for the first time in FY17. This mechanism supports basic research to increase knowledge/understanding through discovery and hypothesis generation, and should focus on providing basic fundamental knowledge that will inform and enable the future development of novel autonomous and/or robotic medical systems to care for wounded soldiers/patients through breakthrough, exploratory research. The objective of the FY17 MSISRP FORwARD Award is focused on addressing the following Topic Areas: 1. Autonomous and Unmanned Medical Capability – Identify novel ideas, approaches and research towards the conceptualization of autonomous and unmanned technologies for next-generation, high-quality medical capabilities with limited or absent medical care personnel, or personnel with limited skills. Research novel concepts, plausible approaches and advanced concept designs using biologically inspired cognitive computing models, machine learning, artificial intelligence, soft robotic semi-autonomous/autonomous resuscitation concepts and advanced applications of information sciences among other innovative, exploratory research towards advancing the state-of-the-art in delivery of forward resuscitative care at the point of injury. 2. Medical Robotics Research – Identify novel ideas, approaches and research towards the conceptualization of medical robotics and real-time tele-presence capabilities exploring the limits of machine perception for tele-robotic semi-autonomous and autonomous trauma care within remote and dispersed geographic settings. This could include exploratory research in semi-autonomous robotic surgery to improve the safety profile and efficacy of tele-surgical procedures and outcomes using hard robotics in challenging situations (e.g., combat casualties on the multi-domain battlefield or mass casualty situations) and remote or austere geographic locations, among other innovative, exploratory research aims and novel concepts.
Awards: Funding available: $2,600,000
Proposal Deadline: February 05, 2018
Contact Information: CDMRP Help Desk: 301-682-5507 Email: help@eBRAP.org

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Department of Energy

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

ARPA-E's OPEN FOAs ensure that the agency does not miss opportunities to support innovative energy R&D that falls outside of the topics of the focused technology programs or that develop after focused solicitations have closed. OPEN FOAs provide the agency with a remarkable sampling of new and emerging opportunities across the complete spectrum of energy applications and allow the agency to "take the pulse" of the energy R&D community. OPEN FOAs have been and will continue to be the perfect complement to the agency's focused technology programs – a unique combination of approaches for supporting the most innovative and current energy technology R&D. Indeed, one third of the sixty projects featured in the first two volumes describing ARPA-E impacts stem from OPEN solicitations (https://arpa-e.energy.gov/?q=site-page/arpa-e-impact). Potential applicants to this FOA are strongly encouraged to examine the OPEN projects in these two volumes and all of the projects supported in the previous three OPEN solicitations (https://arpa-e.energy.gov/?q=site-page/open) for examples of the creative and innovative R&D ARPA-E seeks in its OPEN solicitations.

Awards; Up to $10,000,000; Available Funding: $100,000,000

Submission Deadline: Applicants are strongly encouraged to submit their applications at least 48 hours in advance of the submission deadline.

- Concept Paper Submission Deadline: 02/02/2018 5:00 PM ET
- Full Application Submission Deadline: 3/16/2018 5:00 PM ET

Contact Information:

- ExchangeHelp@hq.doe.gov

Please contact the email address above for questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE.

- ARPA-E-CO@hq.doe.gov

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

Grant Program: FOA: State Energy Program 2017 Competitive Awards
Agency: Department of Energy DE-FOA-0001644
Website: https://eere-exchange.energy.gov/#FoaId039aab9e-c42b-4a8a-bf67-85af26b0f2f6

Brief Description: Limited to State Energy Offices (defined as the 50 states, the District of Columbia and five territories). The Office of Energy Efficiency and Renewable Energy's (EERE) State Energy Program (SEP) seeks applications to advance policies, programs, and market strategies that advance affordable and reliable energy to promote economic growth and energy security for the nation. This competitive Funding Opportunity Announcement (FOA) allows States (which includes the District of Columbia and five territories) to compete for funding designed to meet SEP's goals to enhance energy security, advance state-led energy initiatives, and maximize the benefits of decreasing energy waste. Specifically, this FOA includes three Areas of Interest: State Energy Planning, Innovative Opportunities for Energy Efficiency and Renewable Energy (EE/RE) Practices, and Technical Assistance to Advance SEP Formula Grant EE/RE Activities.

Submission Deadline: January 11, 2018. Applicants are encouraged to transmit applications well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE CONSIDERED FOR AWARD. (Please read the FOA instructions for information on how to apply.)

Contact Information: SEPCompetitive2017@ee.doe.gov

NASA

Grant Program: ROSES 2017: Advancing Collaborative Connections for Earth System Science
Agency: NASA NNH17ZDA001N-ACCESS
Website:
https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B7782DF97-B7AE-BDEC-A677-E96F281D39A3%7D&path=open&method=init
Brief Description: The Earth Science Data System (ESDS) Program is soliciting proposals for Advancing Collaborative Connections for Earth System Science (ACCESS). The primary goal of ACCESS is to develop and implement technologies to effectively manage, discover and use NASA's archive of Earth observations for scientific research and applications. This program complements NASA's Earth Observing System Data and Information System (EOSDIS) by engaging researchers and software developers external to EOSDIS in NASA's mission to "drive advances in science, technology, aeronautics, space exploration, economic vitality, and stewardship of the Earth" and furthers Strategic Goal 2.2 to "advance knowledge of Earth as a system to meet the challenges of environmental change and to improve life on our planet" (http://science.nasa.gov/aboutus/science-strategy/). ACCESS aims to improve and expand the use of NASA's Earth science data by leveraging modern techniques for discovering, managing and analyzing large and complex Earth science data sets. Over the past 20 years NASA's EOSDIS has significantly evolved capabilities to process, archive and distribute data from satellites, airborne missions and field campaigns. Since inception, data from EOSDIS have been fully and openly available to anyone. In 2016, over 3 million users downloaded science data from the EOSDIS Distributed Active Archive Centers (DAACs). Today EOSDIS archives contain over 24 petabytes (PBs) of Earth observations. Within 5 years, as new missions are launched and instruments commissioned, the archive is projected to be over 150 PB with an annual growth rate of nearly 50 PB per year. This long-term, continuously updated global environmental record presents unique opportunities for science and significant challenges for data management and access. For more on EOSDIS and its components, please see https://earthdata.nasa.gov/about. The focus of this solicitation is to help EOSDIS address data management, discoverability, and utilization challenges faced by users and curators of NASA's Earth science data. Although focused on information technology development and deployment, the ACCESS program is targeted at addressing existing and anticipated future needs of the research and applied science communities. Proposal teams must include both information technology and Earth science expertise, and must be tied directly to specific issues facing Earth science and applied science users interacting with EOSDIS.
Awards: $4.5M
Notice of Intent: December 7, 2017
Proposal Deadline: January 31, 2018
Contact: http://nspires.nasaprs.com/ (help desk available at nspires-help@nasaprs.com or (202) 479-9376

National Endowment of Humanities

Grant Program: Digital Humanities Advancement Grants
Agency: National Endowment of Humanities
Website: https://www.neh.gov/grants/odh/digital-humanities-advancement-grants

Brief Description: Digital Humanities Advancement Grants (DHAG) support digital projects throughout their lifecycles, from early start-up phases through implementation and long-term sustainability. Experimentation, reuse, and extensibility are hallmarks of this grant category, leading to innovative work that can scale to enhance research, teaching, and public programming in the humanities. This program is offered twice per year. Proposals are welcome for digital initiatives in any area of the humanities.

Through a special partnership, the Institute of Museum and Library Services (IMLS) anticipates providing additional funding to this program to encourage innovative collaborations between museum or library professionals and humanities professionals to advance preservation of, access to, use of, and engagement with digital collections and services. Through this partnership, IMLS and NEH may jointly fund some DHAG projects that involve collaborations with museums and/or libraries.

Awards: Level I awards (from $10,000 to $50,000) are small grants designed to fund exploratory sessions, workshops, early alpha-level prototypes, and initial planning. In addition to early planning towards an experimental prototype, Level I proposals can identify a problem or research question, explore a research agenda, or discover appropriate methodologies or technologies for both new projects and projects in need of substantive revision or recovery. Outcomes for Level I projects would likely include reports, position papers, and plans for subsequent steps and future research or development. Level I projects may also fund meetings, workshops, or reports addressing specific topics related to the impact of technology on the humanities. Proposals should include specific plans for broad dissemination of project outcomes.

Level II awards (from $50,001 to $100,000) are larger grants that can be used for more fullyformed projects that have completed an initial planning phase. Level II proposals should therefore include a more articulated plan of work leading to concrete and tangible outcomes, such as working prototypes; detailed plans for upgrading existing or defunct projects in need of substantive revision, enhancement, or recovery; test beds; or demonstration projects. Digital Humanities Advancement Grants at both Level I and Level II stages support full-time or part-time activities for periods up to eighteen months.

Level III awards (from $100,001 to $325,000 for up to three years) support implementation and scaling-up of already established projects. All projects must already have completed a startup phase prior to application. The earlier phase of the project could have been supported previously by NEH or by another funding source. (Please see the instructions for the narrative component of the application below, in particular beneath the “History of the project” bullet.) Level III projects must submit both data management and sustainability plans, and all projects are expected to fulfill the obligations outlined in these plans.

Proposal Deadline:

Until January 16, 2018: Contact Office of Digital Humanities program officers (at odh@neh.gov) with questions and for advice (optional)

December 5, 2017: Submit draft application by this date (optional)

December 19, 2017: Create or verify your institution’s Entity record at the System for Award Management by this date

January 2, 2018: Register your institution (or verify its registration) with Grants.gov by this date

January 16, 2018: Submit application through Grants.gov by this date

April-May 2018: peer review panels take place

July 2018: meeting of the National Council on the Humanities, followed by funding decisions

August 2018: applicants are notified of the funding decisions

September 2018: institutional grants administrators and project directors of successful applications receive award documents by e-mail

Contact: Contact the Office of Digital Humanities (ODH) via e-mail at odh@neh.gov. Applicants wishing to speak to a staff member by telephone should provide in an e-mail message a telephone number and a preferred time to call. Applicants who are deaf or hard of hearing can contact NEH via Federal Relay (TTY users) at 800-877-8399.

ELSA U. PARDEE FOUNDATION

Grant Program: Theoretical and Computational Astrophysics Networks
Agency: Elsa U. Pardee Foundation
Website: http://www.pardeefoundation.org/grants.aspx
Brief Description: The Elsa U. Pardee Foundation funds research to investigators in United States non-profit institutions proposing research directed toward identifying new treatments or cures for cancer. The Foundation particularly encourages grant applications for a one year period which will allow establishment of capabilities of new cancer researchers, or new cancer approaches by established cancer researchers. It is anticipated that this early stage funding by the Foundation may lead to subsequent and expanded support using government agency funding. Project relevance to cancer detection, treatment, or cure should be clearly identified. By design, there are no limits set on the grant amount that can be requested. It must be reasonably and clearly supported by the scope of the project outlined in the application. Applications requesting more than 15% overhead are usually not considered. Papers verifying nonprofit status and relevant human subject and experimental animal treatment approvals from the recipient institution will be requested prior to project initiation. A final report summarizing financial expenditure and research achievement is required.
Proposal Deadline:

Application Deadline	Final Review
December 31	May
April 30	September
August 31	December

Contact: Eric Blitz, Associate Director for Development, Corporate and Foundation Relations at eric.blitz@njit.edu

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Klingenstein-Simons Neuroscience Fellowships

Grant Program: The Klingenstein-Simons Fellowship Awards in the Neurosciences
Agency: Klingenstein-Simons Neuroscience Fellowships
Website: http://www.klingfund.org/description.php
Brief Description: The Klingenstein-Simons Fellowship Awards in the Neurosciences supports, in the early stages of their careers, young investigators engaged in basic or clinical research that may lead to a better understanding of neurological and psychiatric disorders. The Klingenstein Fund and the Simons Foundation recognize that to accomplish this goal it is necessary to encourage a variety of new approaches. Several areas within the neurosciences are of particular interest:

Cellular and molecular neuroscience—Studies of the mechanisms of neuronal excitability and development, and of the genetic basis of behavior.

Neural systems—Studies of the integrative function of the nervous system.

Translational research—Studies designed to improve the prevention, diagnosis, treatment and our understanding of the causes of neurological and psychiatric disorders.

The candidate must and be within 4 years of completing postdoctoral training and the start of his/her tenure track appointment (between July 1, 2014 and July 1, 2018).

Proposal Deadline: February 15, 2018

Contact: Eric Blitz, Associate Director for Development, Corporate and Foundation Relations at eric.blitz@njit.edu

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Boston Globe Life Sciences Media

Grant Program: Innovative Research Development in Health or Medicine Prize
Agency: Boston Globe Life Sciences Media
Website: https://www.statnews.com/stat-madness-apply/official-rules/
Brief Description: *STAT* newsletter is offering a prize for "innovative research development in health or medicine that changes the life sciences."
NJIT could nominate up to three contestants.
https://www.statnews.com/stat-madness-faq/
Criterion:

1. Creativity of the Innovation, including its potential breakthrough and disruptiveness, and how it addresses unarticulated or existing unmet needs in health and/or medicine (33%);
2. Originality and novelty of the Innovation and its methodologies, (33%); and
3. Potential beneficial impact of the Innovation in its respective field, the general public, and society overall, and its longevity (34%).

Proposal Deadline: January 22, 2018
Contact: Eric Blitz, Associate Director for Development, Corporate and Foundation Relations at eric.blitz@njit.edu

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JDRF and the Helmsley Charitable Trust

Grant Program: Diabetes Innovation Challenge
Agency: JDRF and the Helmsley Charitable Trust
Website: https://diabetes.innovationchallenge.com/skild2/diabetes/loginPage.action
Brief Description: The Diabetes Innovation Challenge is seeking:

- **Automated Insulin Devices** and related components including glucose sensing, insulin delivery systems, and cellular therapy delivery technologies
- **Diagnostics** such as tests for research and screening; early diagnosis and prevention; autoantibodies, C- peptide, or other markers such as beta cell death and risk of diabetic complications
- **Therapeutics** like smart insulins, glucagons, immune-modulating therapies, beta cell regeneration, and treatments for diabetic complications
- **Technology Design/Disease Management.** For example, new approaches to using information and communication technologies to support diabetes management

Awards: The Diabetes Innovation Challenge will award $250,000 in cash and in-kind prizes for the winning innovations.
Proposal Deadline: January 31, 2018

Contact: Eric Blitz, Associate Director for Development, Corporate and Foundation Relations at eric.blitz@njit.edu

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Streamlyne Update

It has been very exciting to introduce Streamlyne as the new tool for Grant Management. Streamlyne is simplifying the pre-award proposal submission processes promoting shared information technology (IT), and improving the timeliness of grant close out. Currently Streamlyne system has been customized in the following areas:

- Download the package with all forms – there are still some exceptions to this as the federal government continues to change some of the standard forms.
- Validation error prior to submission – this allows to review the package for errors
- Work Flow approval transparent to all users
- Budget forms customized to NSF and/or S2S
- Sub-award budgets easily download – this will allow better management of the award

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

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

Also, the following links may be helpful**:**

- Streamlyne Benefits for Proposal Submission and Grant Management
- Grants.gov Presentation on Online Proposal Submission Systems
- Streamlyne Newsletter V2017.1
- Streamlyne FAQs

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

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

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