NJIT Research Newsletter

Issue: ORN-2017-20

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/ .

Streamlyne Update

Research proposals are being successfully submitted through Streamlyne. 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

In addition, most Frequently Asked Question (FAQs) from PIs are posted with answers on the same website as 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
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Iris Pantoja, CoAD and SOM Project Manager
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Grant Opportunity Alerts

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: Innovative Technology Experiences for Students and Teachers (ITEST); Centers for Chemical Innovation (CCI) ; Division of Physics: Investigator-Initiated Research Projects (PHY); NSF-Simons Research Centers for Mathematics of Complex Biological Systems (MathBioSys)
NIH: NIH StrokeNet Regional Coordinating Stroke Centers (U24); Revision Applications for Regenerative Medicine Innovation Projects (RMIP) (R01)
Department of Defense/US Army/DARPA/ONR: Autism Research Program (ARP) Idea Development Award; Office of Naval Research (ONR) Young Investigator Program (YIP); DoD Peer Reviewed Medical Investigator-Initiated Research Award; Spinal Cord Injury Research Program, Investigator-Initiated Research Award
Department of Energy: Request For Information (RFI): Clean Water Technologies**; Request For Applications (RFA) Entitled "Biomass Research And Development Initiative (BRDI)"**
NASA: ROSES 2017: New Investigator Program; ROSES 2017: Early Stage Innovation
National Endowment of Humanities: Summer Stipends; Research and Development Grants

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Recent Research Grant and Contract Awards

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

PI: Namas Chandra (PI)
Department: Institute of Brain and Neuroscience Research: Center for Brain Injury Biomechanics, Materials and Medicine
Grant/Contract Project Title: Development of Methodology for Standardized Testing under Blast Loading Conditions Using Modular Shock Tube
Funding Agency: US Army
Duration: 06/01/16-05/30/18

PI: Craig Stanley (PI)
Department: Center for Pre-College Programs **(**CPCP)
Grant/Contract Project Title: Activity Grant 2017 NCCEP/GEAR UP Capacity Building Workshop
Funding Agency: NJ Commission on Higher Education
Duration: 09/26/16-09/25/17

PI: Maggie Cheng (PI)
Department: MT School of Management
Grant/Contract Project Title: REU Supplement - EAGER: Factoring User Behavior into Network Security Analysis
Funding Agency: NSF
Duration: 12/01/16-08/31/18

PI: Qing Liu (PI)
Department: Electrical and Computer Engineering
Grant/Contract Project Title: Science-driven Data Management for Multi-tiered Storage
Funding Agency: Department of Energy
Duration: 06/01/17-09/30/19

PI: Lazar Spasovic (PI)
Department: Intelligent Transportation Systems Research Center
Grant/Contract Project Title: Update to the 2007 Statewide Freight Master Plan
Funding Agency: NJ Department of Transportation
Duration: 10/12/16-12/31/17

In the News…

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

Congress Seeks to Reject NSF Research Cuts: The House appropriations panel responsible for the National Science Foundation seems to be "preparing to break away from the White House on NSF funding," CQ reports. "And while a reduction is still possible, subcommittee Chairman John Culberson does not appear inclined to significantly cut" the agency, which the White House proposed to slash by 11 percent. After Director France Córdova enthusiastically described cosmic explorations like the first-ever detection of gravitational waves, the Texas Republican spoke of "how vital it is for the Congress, for the country to stand behind NSF and make sure that you've got the support, the financial backing over a sustained period of time to continue to unlock the mysteries of the universe." For her part, Córdova said, "We very much understand that Congress is in the driver's seat on the FY 18 budget." More information is on the website https://www.youtube.com/watch?v=z38Wa7DArNE

National Academies (Engineering, Science and Medicine) Report on Undergraduate Research Experience (URE): The Committee on Strengthening Research Experiences for Undergraduate STEM Students of the National Academies (National Academy of Engineering, National Academy of Science and National Academy of Medicine) has strongly recommended strategic enhancements in external and internal resources for developing more opportunities for engaging undergraduate students in research in educational programs at all levels (https://download.nap.edu/cart/download.cgi?record_id=24622). The report noted the following characteristic benefits from a variety of different types of URE programs. Due to the variation in the types of UREs, not all experiences include all of the following characteristics in the same way; experiences vary in how much a particular characteristic is emphasized.

- They engage students in research practices including the ability to argue from evidence.
- They aim to generate novel information with an emphasis on discovery and innovation or to determine whether recent preliminary results can be replicated.
- They focus on significant, relevant problems of interest to STEM researchers and in some cases a broader community (e.g., civic engagement).
- They emphasize and expect collaboration and teamwork.
- They involve iterative refinement of experimental design, experimental questions, or data obtained.
- They allow students to master specific research techniques.
- They help students engage in reflection about the problems being investigated and the work being undertaken to address those problems.
- They require communication of results, either through publication or presentations in various STEM venues.
- They are structured and guided by a mentor, with students assuming increasing ownership of some aspects of the project over time.

Some of the recommendations made in the report include:

Recommendation 1: Researchers with expertise in education research should conduct well-designed studies in collaboration with URE program directors to improve the evidence base about the processes and effects of UREs.

Recommendation 2: Funders should provide appropriate resources to support the design, implementation, and analysis of some URE programs that are specifically designed to enable detailed research establishing the effects on participant outcomes and on other variables of interest such as the consequences for mentors or institutions.

Recommendation 3: Designers of UREs should base their design decisions on sound evidence.

Recommendation 4: Institutions should collect data on student participation in UREs to inform their planning and to look for opportunities to improve quality and access.

Recommendation 5: Administrators and faculty at all types of colleges and universities should continually and holistically evaluate the range of UREs that they offer.

Full report is available on the website
https://download.nap.edu/cart/download.cgi?record_id=24622.

Future of Fusion Research: The American Institute of Physics reports that the Department of Energy's Office of Fusion Energy Sciences (FES) has asked the National Academies to develop a multi-decade strategy for the U.S. magnetically confined burning plasma research program. The head of DOE's fusion energy sciences program "urged the panel to 'be bold' in its report, which will consider scenarios in which the U.S. remains in or withdraws from the long-delayed ITER fusion project." The final report, to be released about a year later, will consider scenarios in which the U.S. is and is not a partner in the international ITER project, a tokamak facility under construction in France. Under both scenarios, the panel will *"provide guidance on a long-term strategic plan (covering the next several decades) for a national program of burning plasma science and technology research which includes supporting capabilities and which may include participation in international activities, given the U.S. strategic interest in realizing economical fusion energy in the long term."* More information is on the website https://www.aip.org/fyi/2017/doe-urges-national-academies-panel-%E2%80%98be-bold%E2%80%99-fusion-strategic-plan?utm_medium=email&utm_source=FYI&dm_i=1ZJN,4ZLI8,E29SF8,IZQPW,1

NSF Policy and Awards Update (May 2017): **NSF Pilots a New Collaborator and Other Affiliations Template:** Last month NSF began piloting a new format for submitting Collaborators and Other Affiliations Information in FastLane. Proposers are required to include collaborators and other affiliations information for principal investigators (PIs), co-PIs and other senior project personnel. NSF uses this information to manage reviewer selection. The pilot standardizes the collection of this data across the Foundation and ensures that the information is submitted in a searchable format. This reduces the burden on NSF program staff who currently must spend time manipulating non-searchable files. Likewise, for the community, proposers can rest assured knowing that their format is acceptable to NSF. The new format requires PIs, co-PIs and other senior project personnel who are identified on the proposal to individually upload their Collaborators and Other Affiliations Information as a Single Copy Document which are only seen by NSF staff and not by reviewers.

Proposers will be directed to the new spreadsheet template while in FastLane. The template is fillable, and the content and format requirements must not be altered by the user. Proposers should not convert the file to PDF format prior to submitting the proposal to NSF, rather it should be completed and saved in .xlsx or .xls format to ensure preservation of searchable text, and

uploaded into FastLane as a Single Copy Document. Using any other file format may delay the timely processing and review of the proposal. The template has been tested in Microsoft Excel, Google Sheets and LibreOffice. In addition to benefiting the merit review process, this template provides a compliant and reusable format for PIs to maintain and update for use in subsequent proposal submissions to NSF. The new Collaborators and Other Affiliations pilot only applies to FastLane proposal submissions. Grants.gov proposal submissions shall continue to follow the instructions in the Grants.gov Application Guide, Chapter VI. 2.4.
More information on
https://www.nsf.gov/pubs/2017/nsf17084/nsf17084.pdf?WT.mc_id=USNSF_109

NSF Policy and Awards Update (May 2017): **NSF Research Terms and Conditions (RTC):** Implementation: the revised Research Terms and Conditions (RTCs) have been made available to research agencies for use with research and research-related awards. The RTCs address and implement the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200). The RTCs incorporate the entire Uniform Guidance by reference and clarify or supplement existing provisions where appropriate. They further incorporate by reference the most recent Office of Management and Budget (OMB) FAQs (https://cfo.gov/cofar/cofar-resources/) in the Uniform Guidance. Pertinent sections of the Uniform Guidance are presented on the left side, and clarifications for research and research-related awards on the right. More information is posted on CFO-United States website https://cfo.gov/cofar/cofar-resources/

Webinar and Events

Event: IEEE MITs Webinar: GALLIUM NITRIDE POWER MMICS — FACT AND FICTION
When: June 13, 2017; 12.00 PM – 1.00 PM
Website:
https://event.on24.com/eventRegistration/EventLobbyServlet?target=reg20.jsp&referrer=&eventid=1406021&sessionid=1&key=2A8A5ED79042B83961D9E93D6E37F5DB&regTag=&sourcepage=register&et_rid=2035965180&et_mid=83485120
About the Webinar: Gallium Nitride (GaN) based transistor technology's characteristics of very high current density combined with high voltage operation have held promise to vastly improve many microwave circuit applications that presently utilize Gallium Arsenide (GaAs) devices. Today, GaN transistors are capable of high voltage operation while simultaneously demonstrating FT & Fmax characteristics more typical of lower voltage GaAs PHEMT devices. The potential benefits of GaN device characteristics combined with monolithic microwave integrated circuit (MMIC) technology are many. Highly efficient switched modes of power amplifier operation should be possible at higher output power levels and frequency. High output impedance typical of transistors operated at three to five times the voltage of GaAs should facilitate lower loss matching networks due to the reduced transformation ratio. Alternately, transistor periphery and corresponding output power could be dramatically increased while maintaining impedance transformation ratios similar to that of existing GaAs PHEMT amplifiers. The higher output power density of GaN devices should lead to greatly reduced die size for GaN implementations of existing power amplifier functions. The improved heat flow realized by the high thermal conductivity Silicon Carbide (SiC) substrate material should allow for acceptable junction temperatures even with the much higher power dissipation. Very high power switches could be designed by using

large control voltages and taking advantage of the high current capability (high Imax) of GaN. While the advantages of GaN are manifest, many of the features that make GaN transistors attractive can be shown to create significant issues that are typically not encountered with lower voltage technologies. In this talk, examples and scenarios are discussed highlighting the benefits and issues associated GaN MMIC technology.

Speaker: Charles F. Campbell received B.S.E.E., M.S.E.E. and Ph.D. degrees from Iowa State University in 1988, 1991 and 1993 respectively. From 1993 to 1998 he was with Texas Instruments involved with microwave module design and MMIC development. Since 1998 he has been with various divisions of TriQuint Semiconductor where he has held positions of Design Team leader, Design Engineering Director and Design Engineering Fellow. He is currently an Engineering Senior Fellow with the Infrastructure and Defense Products Division of Qorvo. A Fellow of the IEEE, he has served on the Editorial Board for IEEE Transactions on Microwave Theory and Techniques, general chair for the 2015 Compound Semiconductor Integrated Circuits Symposium, and the IEEE Microwave Prize selection committee. He has authored or co-authored over 50 journal and conference papers, and authored an on-line book chapter on MMIC power amplifier design.

Register at:
https://event.on24.com/eventRegistration/EventLobbyServlet?target=reg20.jsp&referrer=&eventid=1406021&sessionid=1&key=2A8A5ED79042B83961D9E93D6E37F5DB&regTag=&sourcepage=register&et_rid=2035965180&et_mid=83485120

Event: NSF Webinar: A View of the Cloud Enabling Broad Data Science Education
When: June 14, 2017; 11.00 AM – 12.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=242157&org=NSF

About the Webinar: Two years ago, UC Berkeley launched a Data Science education program with a goal of bringing computational and inferential thinking in the context of real-world questions and data to the entire undergraduate community, as well as developing depth in the emerging discipline and an undergraduate major. The program has grown from zero to two thousand students in two years, starting from a freshman-level Foundations of Data Science course and growing out into a network of two dozen 'connector' and advanced courses. A key technological component of this effort is the use of the cloud reduce the barrier to entry for students, especially those not pursuing computer science related studies, and for faculty seeking to stand up a course or a data science module in an existing course. This view of the cloud as enabler extends through several aspects of the data science learning experience. The student need no more than a browser to open this domain of learning. All lectures, labs, assignments take place as a hosted Jupyter notebook. Each unfolds as a kind of computational narrative, starting from a question and relevant raw data, evolving through various visualizations and analyses to reach an observation or conclusion – a very different introductory programming experience. The infrastructure behind is sophisticated and designed to scale, but a new instructor need to do little more than populate a github repository. Other tools and services, including authentication, storage, auto-grading, assisted learning, become part of the learning environment. Advanced courses expose students to more of the technology they have been utilizing and out in the world. But, equally important is the social networks among faculty, researchers, and students that cross institutional boundaries and serve to disseminate experiences, methods and understandings.

Speaker: David Culler is the Friesen Professor of Computer Science and a member of UC Berkeley's EECS faculty since 1989. He received his B.A. from UC Berkeley in 1980, and an M.S. and Ph.D. from MIT in 1985 and 1989, respectively. He has just been appointed Interim Dean for

Data Sciences, having served as Co-Director of Berkeley's Data Science Planning Initiative, Chair of the EECS Department, Faculty Director of the CITRIS Sustainable Infrastructure initiative and founding Director of Intel Research Berkeley. His research addresses the extremes of networked systems. His early work on high-performance clusters, including Berkeley Network of Workstation (NOW) Project and PlanetLab laid foundations for today's cloud. His research on embedded wireless sensor networks, including the Berkeley Motes, TinyOS, and 6LoWPAN, shaped the Internet of Things. He is currently focused on creating the robust, secure network systems infrastructure for cyberphysical systems and its data analytics, including energy efficient buildings, smart grids, and sustainable transportation. He won the Okawa Prize in 2013 and is a member of the National Academy of Engineering, an ACM Fellow, and an IEEE Fellow. He was named one of Scientific American's Top 50 Researchers and the creator of one of MIT's Technology Review's 10 Technologies that Will Change the World.
Register at: http://www.tvworldwide.com/events/nsf/170614/

Event: NSF Webinar: NSF-Simons Research Centers for Mathematics of Complex Biological Systems (MathBioSys) Webinar
When: June 15, 2017; 3.00 PM – 4.30 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=242105&org=NSF
About the Webinar: *NSF-Simons Research Centers for Mathematics of Complex Biological Systems (MathBioSys)* aims to enable innovative collaborative research at the intersection of mathematics and molecular, cellular and organismal biology, to establish new connections between these two disciplines, and to promote interdisciplinary education and workforce training. NSF and the Simons Foundation shall jointly sponsor up to three new research centers to facilitate collaborations among groups of mathematicians, statisticians, and biologists. Research activities conducted at each center will be focused on a particular set of topics at the interface of the mathematical sciences with molecular, cellular, and organismal biology. Each center will conduct interdisciplinary education and training through research involvement of recent doctoral degree recipients and graduate students from across this multi-disciplinary spectrum. Each center is also expected to conduct convening activities, including short-term and/or long-term visitors programs, workshops, and/or outreach activities.
Register at: Participants should register in advance at the web page https://nsf.webex.com/nsf/j.php?RGID=r1bcf080b103b66de5a16d6cabb53444c

Event: NSF Webinar: Confidentiality à la Carte with Cipherbase
When: June 22, 2017; 12.00 PM – 1.00 PM
Website: https://www.nsf.gov/events/event_summ.jsp?cntn_id=242159&org=NSF
About the Webinar: Organizations move data and workloads to the cloud because the cloud is cheaper, more agile, and more secure. Unfortunately, the cloud is not perfect and there are some fundamental tradeoffs that need to be made in the cloud. The Cipherbase project studies the tradeoffs between confidentiality and functionality that arise when state-of-the-art cryptography is combined with databases in the cloud: The more operations that are supported on encrypted data, the more information that can be leaked unintentionally. There has been a great deal of work studying these tradeoffs in the specific context of property-preserving encryption techniques. For instance, deterministic encryption can support equality predicates directly over encrypted data, but it is also vulnerable to inference attacks. This talk discusses the tradeoffs that arise in a more general context when trusted computing platforms such as FPGAs or Intel SGX technology are used to process encrypted data.

Speaker: Donald Kossmann is the director of the Microsoft Research Lab in Redmond. He joined Microsoft in 2014. Before that, he was a professor in the Systems Group of the Department of Computer Science at ETH Zurich (Switzerland). He is the Chair of ACM SIGMOD and an ACM Fellow. He is a co-founder of four start-ups in the areas of Web data management and cloud computing.
Register at: http://www.tvworldwide.com/events/nsf/170622/

Grant Opportunities

National Science Foundation

Grant Program: Innovative Technology Experiences for Students and Teachers (ITEST)
Agency: National Science Foundation NSF 17-565
RFP Website: https://www.nsf.gov/pubs/2017/nsf17565/nsf17565.htm
Brief Description: As the nation continues to expand the horizon of opportunities and possibilities through advances in science, technology, engineering and mathematics (STEM), the need for a more diverse and well-prepared STEM workforce is also expanding[1]. The challenge of preparing citizens for the expanding workforce and the changing workplace environments calls for new innovations in STEM education[2]. ITEST is a research and development program that supports projects to promote PreK-12 student interests and capacities to participate in the STEM and information and communications technology (ICT) workforce of the future. The ITEST program supports research on the design, development, implementation, and selective spread of innovative strategies for engaging students in technology-rich experiences that: (1) increase student awareness of STEM occupations; (2) motivate students to pursue appropriate education pathways to STEM occupations; or (3) develop disciplinary-based knowledge and practices, or promote critical thinking, reasoning skills, or communication skills needed for entering STEM workforce sectors. ITEST projects may adopt an interdisciplinary focus that includes multiple STEM disciplines, focus on a single discipline, or focus on one or more sub-disciplines. The ITEST program supports projects that provide evidence for factors, instructional designs, and practices in formal and informal learning environments that broaden participation of students from underrepresented groups in STEM fields and related education and workforce domains. Projects that actively engage business and industry partners to better ensure that PreK-12 experiences foster the knowledge and skill-sets needed for emerging STEM occupations are strongly encouraged.
Awards: Standard Grants. **Anticipated Funding Amount:** $20,000,000. Depending on the availability of funds, ITEST anticipates making approximately 2-4 Exploratory awards with durations up to two years and total budgets up to $400,000 each, 6-12 Strategies awards with durations up to three years and total budgets up to $1,200,000 each, and 1-2 SPrEaD (Successful Project Expansion and Dissemination) awards with durations of three to five years and total budgets up to $2,000,000 each.
Letter of Intent: Not Required
Proposal Submission Due Date: September 05, 2017
Contacts: Address general questions to, telephone: (703) 292-8628, email: DRLITEST@nsf.gov

- David L. Haury, telephone: (703) 292-5102, email: dhaury@nsf.gov
- Amy L. Baylor, telephone: (703) 292-5126, email: abaylor@nsf.gov
- David B. Campbell, telephone: (703) 292-5093, email: dcampbel@nsf.gov

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Grant Program: Centers for Chemical Innovation (CCI)
Agency: National Science Foundation NSF 17-564
RFP Website: https://www.nsf.gov/pubs/2017/nsf17564/nsf17564.htm
Brief Description: The Centers for Chemical Innovation (CCI) Program supports research centers focused on major, long-term fundamental chemical research challenges. CCIs that address these challenges will produce transformative research, lead to innovation, and attract broad scientific and public interest. CCIs are agile structures that can respond rapidly to emerging opportunities through enhanced collaborations. CCIs integrate research, innovation, education, broadening participation, and informal science communication.

The FY 2018 Phase I CCI competition is open to projects in all fields supported by the Division of Chemistry, and must have focus and the potential for transformative impact in chemistry. *NSF Chemistry particularly encourages projects in Data-Driven Discovery Science in Chemistry (D3SC).*

The CCI Program is a two-phase program. Both phases are described in this solicitation. Phase I CCIs receive significant resources to develop the science, management and broader impacts of a major research center before requesting Phase II funding. Satisfactory progress in Phase I is required for Phase II applications; Phase I proposals funded in FY 2018 will seek Phase II funding in FY 2021. This solicitation also covers the renewal application of the Phase II CCI initiated in FY 2013: CAICE, led by the University of California San Diego.
Awards: Standard Grants. **Anticipated Funding Amount:** $9,400,000.
Letter of Intent: Not Required
Preliminary Phase-1 Proposal: September 12, 2017
Full Proposal Submission Due Date: March 06, 2018: Phase I Full Proposals, by invitation only

- **Contacts:** Katharine J. Covert, telephone: (703) 292-4950, email: kcovert@nsf.gov
- Lin He, telephone: (703) 292-4956, email: lhe@nsf.gov

Grant Program: Division of Physics: Investigator-Initiated Research Projects (PHY)
Agency: National Science Foundation NSF 17-561
RFP Website: https://www.nsf.gov/pubs/2017/nsf17561/nsf17561.htm
Brief Description: The Division of Physics (PHY) supports physics research and the preparation of future scientists in the nation's colleges and universities across a broad range of physics disciplines that span scales of space and time from the largest to the smallest and the oldest to the youngest. The Division is comprised of disciplinary programs covering experimental and theoretical research in the following major subfields of physics: Accelerator Science; Atomic, Molecular and Optical Physics; Computational Physics; Elementary Particle Physics; Gravitational Physics; Integrative Activities in Physics; Nuclear Physics; Particle Astrophysics; Physics of Living Systems; Plasma Physics (supported under a separate solicitation); and Quantum Information Science.
Additional Information
The Physics Division strongly encourages single proposal submission for possible co-review rather than multiple submissions of proposals with slight differences to several programs.
Awards: Standard Grants. **Anticipated Funding Amount:** $90,000,000.
Letter of Intent: Not Required
Full Proposal Submission Due Date: Various depending on the area;

October 25, 2017 for Atomic, Molecular & Optical Physics - Experiment & Theory; Elementary Particle Physics - Experiment; Gravitational Physics - Experiment & Theory; Integrative Activities in Physics; LIGO Research Support; Particle Astrophysics - Experiment; Physics of Living System
Contacts: Krastan B. Blagoev, Physics of Living Systems, telephone: (703) 292-4666, email: kblagoev@nsf.gov
Michael J. Cavagnero, Atomic, Molecular and Optical Physics - Theory, telephone: (703) 292-2163, email: mcavagne@nsf.gov
Mark Coles, Projects and Facilities, telephone: (703) 292-4432, email: mcoles@nsf.gov
Jean Cottam Allen, Particle Astrophysics (Cosmic Phenomena) - Experiment, telephone: (703) 292-8783, email: jcallen@nsf.gov

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Grant Program: NSF-Simons Research Centers for Mathematics of Complex Biological Systems (MathBioSys)
Agency: National Science Foundation NSF 17-560
RFP Website: https://www.nsf.gov/pubs/2017/nsf17560/nsf17560.htm
Brief Description: The purpose of the NSF-Simons Research Centers for Mathematics of Complex Biological Systems (MathBioSys) is to enable innovative collaborative research at the intersection of mathematics and molecular, cellular and organismal biology, to establish new connections between these two disciplines, and to promote interdisciplinary education and workforce training. The National Science Foundation Directorates for Mathematical and Physical Sciences (MPS) and for Biological Sciences (BIO) and the Simons Foundation Division of Mathematics and the Physical Sciences (MPS) and Division of Life Sciences shall jointly sponsor up to three new research centers to facilitate collaborations among groups of mathematicians, statisticians, and biologists. Research activities conducted at each center will be focused on a particular set of topics at the interface of the mathematical sciences with molecular, cellular, and organismal biology. Each center will conduct interdisciplinary education and training through research involvement of recent doctoral degree recipients and graduate students from across this multi-disciplinary spectrum. Each center is also expected to conduct convening activities, including short-term and/or long-term visitors programs, workshops, and/or outreach activities. These centers will have annual meetings of the Principal Investigators (PIs) and other principal researchers, held at the Simons Foundation in New York City.
Awards: Continuing Grants. **Anticipated Funding Amount:** $30,000,000.
Letter of Intent: Not Required
Full Proposal Submission Due Date: Proposals Accepted Anytime

- **Contacts:** ary Ann Horn, Directorate for Mathematical and Physical Sciences, NSF, telephone: (703) 292-4879, email: mhorn@nsf.gov
- Arcady Mushegian, Directorate for Biological Sciences, NSF, telephone: (703) 292-8528, email: amushegi@nsf.gov

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National Institutes of Health

Grant Program: NIH StrokeNet Regional Coordinating Stroke Centers (U24)
Agency: National Institutes of Health PAR-17-276
RFP Website: https://grants.nih.gov/grants/guide/pa-files/PAR-17-276.html
Brief Description: Stroke is a disabling, often fatal and expensive disorder that is a major public health burden. Globally it is the second leading cause of death, but in North America stroke has

fallen to the fourth most common cause of mortality as the result of ongoing successes in prevention and acute care. Vascular disease of the brain can manifest not only as overt stroke but also as silent infarction and diffuse white matter disease with cognitive and functional decline. Stroke is a syndrome, with two broad types (ischemic and hemorrhagic) and with multiple possible underlying causes. Although stroke impacts all age groups (including children and especially neonates), the incidence is strongly linked to aging. Stroke will become increasingly prominent in the next 30 years with the projected rise in the proportion of elderly in the US, and it will impose an even more significant toll on individuals, families, and society.

NIH-funded basic, translational and clinical research offers the promise to reduce the burden of stroke.

The Stroke Progress Review Group and NINDS stroke planning efforts identified a need for stroke trial network infrastructure to effectively pursue a number of scientific opportunities and to accelerate translation (see http://www.ninds.nih.gov/find_people/ninds/OSPP/Stroke-Research-Priorities-Meeting-2012.htm). The unbiased evaluation of newly-developed and existing interventions-drugs, devices and systems of care-in randomized, controlled clinical trials are necessary to establish efficacy of interventions for improving important clinical outcomes. Phase 1/2 trials explore safety, target engagement, proof of biological concept, and dose response to inform Phase 3 efficacy trials. Phase 3 efficacy trials are designed to demonstrate clinical benefit that patients consider meaningful. Comparative effectiveness trials examine how to best apply established efficacious treatments.

In 2013, the NIH StrokeNet was established to conduct clinical trials in a centrally coordinated network that includes 25 regional centers that are linked to over 350 stroke hospitals across the United States. The NIH StrokeNet was designed to rapidly initiate and efficiently implement small and large multi-site exploratory and confirmatory clinical trials focused on promising interventions for stroke prevention, treatment and recovery, as well as validation studies of biomarkers or outcome measures. The network includes an education platform designed to train the next generation of stroke clinical researchers and collaborations from a variety of health professionals across multiple disciplines. The interdisciplinary nature of the NIH StrokeNet is expected to build research capabilities that match the scientific opportunities across the spectrum of stroke research. Additional information on the current structure of the network can be found at: www.nihstrokenet.org.

Research Objectives

The aims of the network are to harness multidisciplinary stroke expertise to collaboratively and efficiently conduct exploratory NINDS-sponsored Phase 1/2 clinical trials for stroke interventions with the goal to quickly move potential treatments into larger, confirmatory Phase 3 trials. In addition, the network may perform biomarker validation studies that are immediately preparatory to clinical trial(s). Collaboration with international consortia will facilitate the execution of the larger, Phase 3 definitive trials. Together with the larger U.S. and the international stroke research community, stroke patients, and stroke-related nonprofit associations, the investigators at the RCC's will work to design and execute the most clinically impactful stroke research. Study execution and performance will be monitored by the NINDS and the National Clinical Coordinating (NCC) and National Data Management (NDMC) Centers to ensure that all eligible stroke patients are considered for NINDS-funded trials. The NINDS intends that the NIH StrokeNet will be the primary and first-line infrastructure involved in implementing all multi-site stroke trials submitted to the NINDS.

Network Organization

The NIH StrokeNet currently includes: one NCC, one NDMC and 25 RCC's that have the capacity of coordinating activities in a large number of Stroke Centers across the United

States. This FOA encourages both currently awarded network centers and new center applications for funding of infrastructure for RCC's in the NIH StrokeNet. The additional project-specific funds to support the implementation of protocols conducted in the network will be from separate awards. Projects can come from academic investigators, from small business or industry through a CRADA or from the NINDS through a specific funding opportunity announcement. Collaborative projects developed by site investigators in the network will be strongly encouraged. These funds will be distributed to the RCC's via the NCC on a per-patient basis protocol budgets via master trial agreements with the RCC's.
Awards: NIH intends to fund an up to 25 awards, corresponding to a total of $8,700,000, for fiscal year 2018. Future year amounts will depend on annual appropriations. he Maximum allowable direct cost per year for a NIH StrokeNet RCC will be $200,000 per year up to 5 years.
Letter of Intent: 30 days prior to application due Date
Deadline: September 25, 2017, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Program: Revision Applications for Regenerative Medicine Innovation Projects (RMIP) (R01)
Agency: National Institutes of Health RFA-HL-17-029
RFP Website: https://grants.nih.gov/grants/guide/rfa-files/RFA-HL-17-029.html
Brief Description: Research projects responsive to this FOA are expected to involve both of the following: (1) human subjects or material of human origin, such as cells, tissues, and specimens; and (2) human stem cells that are not of embryonic or fetal origin. Research projects involving induced pluripotent stem (iPS) cells may be supported, as long as the cells used to generate iPS cells were not of fetal or embryonic origin. Applicable research on adult human stem cells may encompass, for example, research on biologics (e.g., growth factors, cytokines) and biomaterials (e.g., ECM, scaffolds) that stimulate host adult stem cell growth, differentiation, and function or otherwise directly act upon adult stems cells to support innate host healing mechanisms, treat disease, and/or restore function. Funding could be used, for example, for the appropriate chemistry, manufacturing, and controls development to support the production of such products for clinical trials using good manufacturing practices (GMP). Funds may not be used for research involving human cells of embryonic or fetal origin.
This FOA will support highly meritorious clinical research projects proposing to explore and enable the development of safe and effective RM interventions. Specifically, for FY 2017 funds, in addition to being subject to the standard NIH review criteria, clinical research projects for this FOA will also be assessed according to the following criteria:

- Contributes to breadth/diversity of RM science;
- Addresses critical issues relevant to clinical research and regulatory submissions including those related to product development. Areas of focus may include improved tools, methods, standards, or applied science that support a better understanding and improved evaluation of product manufacturing, quality, safety, or effectiveness; and
- Helps to significantly build or advance the field of RM by contributing to foundational knowledge while addressing a well-recognized challenge in clinical development including the development and evaluation of safe and effective RM products.

Research Examples
Applications that demonstrate potential to catalyze sustained and accelerated development of the RM field through contributing to the knowledge critical for product development, clinical testing, and data standards and sharing, are strongly encouraged. For example, such projects may:

- Further development of standards and GMP for adult stem cell-based RM products;
- Leverage extant cell production facilities for product preparation and qualification;
- Promote and enhance mechanisms for data standardization, curation, integration, and sharing;
- Utilize clinical trial network(s) to leverage infrastructure and facilitate subject recruitment and follow up as well as data sharing; and/or
- Contribute to a better and shared understanding of current technical and operational barriers as well as the regulatory science issues.

Awards: Application budgets should not exceed $324,500 per year in direct costs. See details in R&R or Modular Budget
Letter of Intent: May 26, 2017
Deadline: June 26, 2017, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.
No late applications will be accepted for this Funding Opportunity Announcement.
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: Autism Research Program (ARP) Idea Development Award
Agency: Department of Defense
W81XWH-17-ARP-IDA Idea Development Award
W81XWH-17-ARP-CTRA Clinical Translation Award
Website:
Idea Development Award: http://cdmrp.army.mil/funding/pa/FY17-ARP-IDA.pdf
Clinical Translation Award: http://cdmrp.army.mil/funding/pa/FY17-ARP-CTRA.pdf
Brief Description: The FY17 ARP Idea Development Award seeks applications from all areas of basic and preclinical research and strongly encourages applications that address the critical needs of the ASD community in one or more of the following areas: • Assessment of novel therapeutics using valid preclinical models • Environmental risk factors • Mechanisms of heterogeneous clinical expression of ASD • Mechanisms underlying conditions co-occurring with ASD (e.g., sleep disturbances, gastrointestinal issues, aggression, depression, anxiety, attention deficit, seizures) • Factors promoting success in key transitions to independence for individuals living with ASD • Development of healthcare provider-focused training or tools to improve healthcare delivery for individuals with ASD, particularly in adulthood • Cultural factors in treatment efficacy, delivery, and access to services Applications that focus on the examination of gender effects in any of the Areas of Interest stated above, as well as those studies investigating any of the Areas of Interest across the lifespan of an individual with ASD, are of particular importance to the ARP.
Awards: The anticipated direct costs budgeted for the entire period of performance for an FY17 ARP Idea Development Award will not exceed $500,000.
Proposal Deadline:
Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 26, 2017

· Invitation to Submit an Application: September 1, 2017
· Application Submission Deadline: 11:59 p.m. ET, October 19, 2017
Contact Information: CDMRP Help Desk Phone: 301-682-5507 Email: help@eBRAP.org

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Grant Program: FY2018 Office of Naval Research (ONR) Young Investigator Program (YIP)
Agency: Department of Defense Office of Naval Research N00014-17-S-F014
Website: www.onr.navy.mil
Brief Description: The Office of Naval Research (ONR) is interested in receiving proposals for its Young Investigator Program (YIP). ONR's Young Investigator Program (YIP) seeks to identify and support academic scientists and engineers who are in their first or second full-time tenure-track or tenure-trackequivalent academic appointment, have begun their first appointment on or after 31 December 2012, and who show exceptional promise for doing creative research. The objectives of this program are to attract outstanding faculty members of Institutions of Higher Education (hereafter also called "universities") to the Department of the Navy's Science and Technology (S&T) research program, to support their research, and to encourage their teaching and research careers. Proposals addressing research areas (as described in the ONR Science and Technology Department section of ONR's website at www.onr.navy.mil) which are of interest to ONR program officers will be considered. Contact information for each division (a subgroup of an S&T Department) is also listed within the S&T section of the website.

Applicants are STRONGLY ENCOURAGED to contact the appropriate Program Officer who is the point of contact for a specific technical area to discuss their research ideas. A list of most Program Officers and their contact information can be found at: http://www.onr.navy.mil/en/ScienceTechnology/Contacts.aspx Brief informal pre-proposals may be submitted to facilitate these discussions but are not required. Such discussions can clarify the content and breadth of the priority research areas and enhance the match between a subsequent proposal and Department of the Navy research needs. Please allow adequate time for such discussions with the ONR Program Officer.

An individual wishing to apply for a Young Investigator award must submit a research proposal and at least one letter of support through the appropriate university officials. Refer to Section V “Evaluation Criteria” regarding the importance of the letter(s) of support in the overall evaluation criteria and Section IV “Application and Submission Information” regarding its content. Applications received without at least one letter of support will be considered incomplete and will not be considered for award. The research proposal should follow the format described in FOA Section IV entitled, “Application and Submission Information.”
Awards: Applicants may request up to $170,000 per year for three (3) years. These funds may be budgeted against any reasonable costs related to conducting the proposed research, for example, salary for the Young Investigator, graduate student support, supplies, and applicable indirect cost.
Proposal Deadline: September 15, 2017
Contact Information:
Dr. Reginald G. Williams YIP Program Manager Code 03R Office of Naval Research 875 North Randolph Street - Suite 660 Arlington, VA 22203-1995 reginald.g.williams@navy.mil

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Grant Program: DoD Peer Reviewed Medical Investigator-Initiated Research Award
Agency: Department of Defense USAMRAA W81XWH-17-PRMRP-IIRA
Website: https://www.grants.gov/web/grants/search-grants.html

Brief Description: The PRMRP Investigator-Initiated Research Award is intended to support studies that will make an important contribution toward research and/or patient care for a disease or condition related to at least one of the Congressionally directed FY17 PRMRP Topic Areas. The rationale for a research idea may be derived from a laboratory discovery, population-based studies, a clinician's first-hand knowledge of patients, or anecdotal data. Applications must include relevant data that support the rationale for the proposed study. These data may be unpublished or from the published literature. The program seeks applications in laboratory, clinical, behavioral, epidemiologic, and other areas of research to advance knowledge in disease etiology, improve prevention, detection, diagnosis, treatment, and quality of life for those affected by a relevant disease or condition, and to develop and validate clinical care or public health guidelines.
Awards: Various; Anticipated funding: $90,000,000
Proposal Deadline: October 18, 2017
Contact Information: CDMRP Help Desk 301-682-5507 help@eBRAP.org

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Grant Program: DoD Spinal Cord Injury Research Program, Investigator-Initiated Research Award
Agency: Department of Army USAMRAA W81XWH-17-SCIRP-IIRA
Website: http://cdmrp.army.mil/funding/pa/FY17-SCIRP-IIRA.pdf
Brief Description: The FY17 SCIRP challenges the scientific community to design research that will foster new directions for and address neglected issues in the field of SCI-focused research. Applications from investigators within the military Services, and applications involving multidisciplinary collaborations among academia, industry, the military Services, the Department of Veterans Affairs (VA), and other Federal Government agencies are highly encouraged. Though the SCIRP supports groundbreaking research, all projects must demonstrate solid scientific rationale.
The FY17 SCIRP encourages applications that specifically address one or more of the following areas: • Pre-hospital, prolonged field care, en route care, and early hospital management of SCI • Development, validation, and timing of promising interventions to address consequences of SCI and to improve recovery, including, but not limited to: ○ Bladder, bowel, and autonomic dysfunction ○ Cardiometabolic dysfunction ○ Neuropathic pain and sensory dysfunction ○ Pressure ulcers ○ Respiratory dysfunction ○ Sexual dysfunction ○ Depression in the early period after injury.
Awards: The anticipated direct costs budgeted for the entire period of performance for an FY17 SCIRP IIRA will not exceed $500,000.
Proposal Deadline:
Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), August 8, 2017
• Invitation to Submit an Application: September 2017
• Application Submission Deadline: 11:59 p.m. ET, November 29, 2017
Contact Information: CDMRP Help Desk Phone: 301-682-5507 Email: help@eBRAP.org

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Department of Energy

Grant Program: Notice of Intent (Noi) To Issue a Request For Applications (RFA) Entitled "Fiscal Year 17 Biomass Research And Development Initiative (BRDI)"

Agency: Department of Energy DE-FOA-0001711
Website: https://eere-exchange.energy.gov/
Brief Description: The U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA) in conjunction with the U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), Bioenergy Technologies Office (BETO) intends to issue a Request for Applications (RFA) entitled "Fiscal Year 17 Biomass Research and Development Initiative (BRDI)." For fiscal year (FY) 2017, the BRDI program requires that funded projects address at least one (1) of the following three (3) legislatively mandated technical (topic) areas:
1) Feedstocks development – The intent of this Topic Area is to address research, development, and demonstration (RD&D) activities regarding feedstocks and feedstock logistics (including harvest, handling, transport, preprocessing, and storage) relevant to production of raw materials for conversion to biofuels and biobased products. The BRDI program is designed to support near-term commercial systems. Projects should emphasize development and optimization of existing feedstocks that will be available for testing and demonstration during the life of the project. Proposals that include breeding or genetic improvement of feedstocks should reconcile this work with the Program's emphasis on near-term impacts.
2) Biofuels and biobased products development – The intent of this Topic Area is to address RD&D activities to support (i) development of diverse cost-effective, innovative technologies for the use of cellulosic biomass in the production of biofuels, bioenergy, and biobased products; and, (ii) product diversification through technologies relevant to the production of a range of biobased products (including chemicals, animal feeds, and cogeneration power) that potentially can increase the feasibility of fuel production in a biorefinery.
3) Biofuels development analysis – The intent of this Topic Area is to apply systems evaluation methods that can be used to optimize system performance and market potential and to quantify the project's impact on sustainability; therefore, successful applications will consider the lifecycle (cradle-to-grave) impacts including environmental, social, and economic implications that are attributable to the project. Successful projects should include these sustainability data in engineering process models and be used over the life of the project to improve the system and quantify sustainability impacts.

NIFA and EERE envision awarding multiple financial assistance awards in the form of grants and cooperative agreements, respectively. The estimated period of performance for each award will be approximately three (3) years.

This Notice is issued so that interested parties are aware of NIFA's and EERE's intention to issue the RFA in the near term. All of the information contained in this Notice is subject to change. Neither NIFA nor EERE will respond to questions concerning this Notice. Once the RFA has been released, NIFA will provide an avenue for potential Applicants to submit questions.
NIFA and EERE plan to issue a RFA titled "Fiscal Year 17 Biomass Research and Development Initiative" in mid February 2017 via the EERE Exchange website (https://eere-exchange.energy.gov/default.aspx).
Contact Information:

- EERE-ExchangeSupport@hq.doe.gov

For all responses and questions regarding this RFI.

Grant Program: Request For Information (RFI): Clean Water Technologies
Agency: Department of Energy DE-FOA-0001676
Website: https://eere-exchange.energy.gov/default.aspx#FoaId46380d32-05f4-43ed-96a7-9a4e43151674

Brief Description: EERE's Advanced Manufacturing Office (AMO) partners with industry, small business, universities, and other stakeholders to identify and invest in emerging technologies with the potential to create high-quality domestic manufacturing jobs and enhance the global competitiveness of the United States. Through this Request for Information, EERE, on behalf of AMO, seeks feedback on technologies with the potential for early stage research and development (R&D) that if successfully advanced could impact the cost-effective and energy efficient availability of clean water processed from a variety of sources such as surface water, ground water, brackish water, seawater, wastewater and produced water for a range of applications including municipal drinking water, agricultural uses, and industrial needs.

Responses to this RFI must be submitted electronically to AMOCleanWater@ee.doe.gov no later than 5:00 pm (EDT) on July 28, 2017. Responses must be provided as attachments to an email. This RFI is not a Funding Opportunity Announcement (FOA); therefore, EERE is not accepting applications at this time. EERE may issue a FOA in the future based on or related to the content and responses to this RFI; however, EERE may also elect not to issue a FOA. There is no guarantee that a FOA will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if EERE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of EERE funded awards, will be subject to Congressional appropriations and direction.

Document: Request for Information (RFI) - Clean Water Technologies - DE-FOA-0001676

- **Contact Information:** AMOCleanWater@ee.doe.gov

For all responses and questions regarding this RFI.

- EERE-ExchangeSupport@hq.doe.gov

For technical questions concerning the Exchange website.

NASA

Grant Program: ROSES 2017: New (Early Career) Investigator Program
Agency: NASA NNH17ZDA001N-NIP
Website:
https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={344D6EF1-D56F-60FD-505E-A31035E2B19C}&path=open

Brief Description: The New (Early Career) Investigator Program (NIP) in Earth Science is designed to support outstanding scientific research and career development of scientists and engineers at the early stage of their professional careers. The program aims to encourage innovative research initiatives and cultivate scientific leadership in Earth system science. The Earth Science Division (ESD) places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing through the proposed research. The NIP supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (http://science.nasa.gov/about-us/sciencestrategy/). In research and analysis, the focus areas are: • Carbon Cycle and Ecosystems, • Climate Variability and Change, • Water and Energy Cycle, • Atmospheric Composition, • Weather, and • Earth Surface and Interior. In Applied Sciences, the ESD encourages efforts to discover and demonstrate practical uses of NASA Earth science data, knowledge, and technology (see http://appliedsciences.nasa.gov). In technological research, the ESD aims to foster the creation and infusion of new technologies into space missions in order to enable new scientific observations of the Earth system or reduce the cost of current observations (see http://esto.nasa.gov). The ESD also promotes innovative development in computing and information science and engineering of direct relevance to ESD.

See Appendix A.1 for more detailed descriptions of the Focus Areas, themes in applied sciences, and related research topics of high priority to the ESD.

The proposed research project must be led by a single, eligible (see further description below for eligibility) investigator serving as the Principal Investigator (PI). Indeed, this individual must be the only essential team member; no Co-Investigators (Co-Is), paid or unpaid, are permitted. The NIP does not accept proposals with Co-PIs nor two types of PIs, such as Science PI and Institutional PI. Students and postdoctoral fellows may participate as paid team members. The proposed research may include collaborations. See the Guidebook for Proposers at http://www.hq.nasa.gov/office/procurement/nraguidebook/ for the definitions of Collaborator vs. Co-Investigator and descriptions of China-related restrictions.

To be eligible for an NIP award, proposed PIs must meet the following requirements:

1. Be employed at an institution in the U.S., its territories, or possessions, or the Commonwealth of Puerto Rico, which awards a baccalaureate or advanced degree in a field supporting the objectives of NASA Earth system studies, or be employed at any nonprofit research institution or other nonprofit organization that performs a significant amount of work in fields of research supporting the objectives of NASA's Earth Science Program. Such organizations could include museums, observatories, Government or nonprofit research laboratories, as well as nonprofit entities in the private sector.
2. Be in tenure- or nontenure-track positions in either teaching or research or both, as long as the employing institution assumes the responsibility of submitting the proposal with the individual as the proposed PI.
3. Despite being more than five years beyond the receipt of their Ph.D. degrees, individuals who have interrupted their careers for reasons such as family leave or serious health problems may also be eligible. These applicants should make a written request for prior concurrence from NASA before the due date for Notices of Intent to propose. NASA will provide a written response within three weeks. Such exception is not intended for individuals who have had successful employment in technical fields in science and engineering, even though the employment is not a direct continuation of their Ph.D. research, nor is it intended for individuals with a recent Ph.D. degree after having already established a successful career in Earth system science and related disciplines.
4. Not hold or have held tenure (or equivalent) on or before the submission deadline of this program.
5. Not be a current or former recipient of the NIP or Presidential Early Career Award for Scientists and Engineers (PECASE) (see further below) award.

Awards: Proposals to the NIP are openly solicited approximately every two years. The anticipated average award is $80-90K per year for a period of up to three years, subject to satisfactory progress and availability of funds.

Proposal Deadline: NIP17 NOIs Due: July 31, 2017
NIP17 Proposals Due: August 31, 2017

Contact: Lin Chambers
Earth Science Division
Science Mission Directorate
NASA Headquarters
Washington, DC 20546-0001
Telephone: 202-358-1667
E-mail: lin.h.chambers@nasa.gov

Grant Program: ROSES 2017: Early Stage Innovation
Agency: NASA NNH17ZOA001N-17ESI_B2
Website:
https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId=%7B68935F1B-9778-91FC-CB89-D49868D3FC94%7D&path=init
Brief Description: The STRG Program within STMD is fostering the development of innovative, low-TRL technologies for advanced space systems and space technology. The goal of this lowTRL endeavor is to accelerate the development of groundbreaking, high-risk/high-payoff space technologies, not necessarily directed at a specific mission, to support the future space science and exploration needs of NASA, other government agencies, and the commercial space sector. Such efforts complement the other NASA Mission Directorates' focused technology activities which typically begin at TRL 3 or higher. The starting TRL of the efforts to be funded as a result of this Appendix will be TRL 1 or TRL 2; typical end TRLs will be TRL 2 or TRL 3. See Attachment 2 of the NRA for TRL descriptions.

This Appendix seeks proposals to develop unique, disruptive, or transformational space technologies that have the potential to lead to dramatic improvements at the system level — performance, weight, cost, reliability, operational simplicity, or other figures of merit associated with space flight hardware or missions. Although progress under an award may be incremental, the projected impact at the system level must be substantial and clearly defined. This Appendix does not seek literature searches, survey activities or incremental enhancements to the current state of the art (SOA).
Awards: Various
Proposal Deadline: ESI17 NOIs Due: June 2, 2017
ESI17 Proposals Due: June 30, 2017
Contact: Claudia Meyer
Space Technology Research Grants Program Executive
Space Technology Mission Directorate, NASA Headquarters
hq-esi-call@mail.nasa.gov

National Endowment of Humanities

Grant Program: Summer Awards
Agency: National Endowment of Humanities
Website: https://www.neh.gov/grants/research/summer-stipends
Brief Description: Summer Stipends support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Eligible projects usually result in articles, monographs, books, digital materials and publications, archaeological site reports, translations, or editions. Projects must not result solely in the collection of data; instead they must also incorporate analysis and interpretation.

Summer Stipends support continuous full-time work on a humanities project for a period of two consecutive months. Summer Stipends support projects at any stage of development.
Awards: $6,000 stipend.
Proposal Deadline: September 27, 2017 *for Projects Beginning May 2018*
Contact: Contact NEH's Division of Research Programs at 202-606-8200 or stipends@neh.gov .

Grant Program: Research and Development Grants
Agency: National Endowment of Humanities
Website: https://www.neh.gov/grants/preservation/research-and-development
Brief Description: The Research and Development program supports projects that address major challenges in preserving or providing access to humanities collections and resources. These challenges include the need to find better ways to preserve materials of critical importance to the nation's cultural heritage—from fragile artifacts and manuscripts to analog recordings and digital assets subject to technological obsolescence—and to develop advanced modes of organizing, searching, discovering, and using such materials. This program recognizes that finding solutions to complex problems often requires forming interdisciplinary project teams, bringing together participants with expertise in the humanities; in preservation; and in information, computer, and natural science.
All projects must demonstrate how advances in preservation and access would benefit the cultural heritage community in supporting humanities research, teaching, or public programming.
Research and Development offers two funding tiers in order to address projects at all stages of development and implementation.
Tier I: Planning and Basic Research
Tier I grants support the following activities:

- planning and preliminary work for large-scale research and development projects; and
- stand-alone basic research projects, such as case studies, experiments, or the development of methods, models, and tools.

Tier II: Advanced Implementation
Tier II grants support projects at a more advanced stage of implementation for the following activities:

- the development of standards, practices, methodologies, or workflows for preserving and creating access to humanities collections; and
- applied research addressing preservation and access issues concerning humanities collections.

Awards: For Planning and Basic Research (Tier I) projects, the maximum award is $75,000 for up to two years. For Advanced Implementation (Tier II) projects, the maximum award is $350,000 for up to three years. Successful applicants will be awarded a grant in outright funds, federal matching funds, or a combination of the two, depending on the applicant's preference and the availability of NEH funds.
Proposal Deadline: June 8, 2017
Contact: Contact the staff of NEH's Division of Preservation and Access at preservation@neh.gov and 202-606-8570. Applicants who are deaf or hard of hearing can contact NEH via Federal Relay (TTY users) at 800-877-8399.
