# NJIT Research Newsletter

**Issue: ORN-2017-08**

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

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## Save The Date!

### Office of Research Events Calendar: Spring 2017

**Research Showcases and Presidential Research Forums:**

**Event: Inauguration of NJIT Institute of Brain and Neuroscience Research**
**When:** March 6, 2017; 10.00 AM – 2.30 PM
**Where:** Ballroom A/B/Atrium
**Keynote Speaker:** Col. Sidney Hinds, MD, DoD Brain Health Research Program Coordinator, Medical Research and Material Command

**Event: Panel Discussion: NSF Proposal Preparation and Review: Intellectual Merit and Broader Impact** (Details on Page 5)
**When:** March 7, 2017; 1.00 PM – 3.00 PM
**Where:** Campus Center Atrium
**Panel Speakers:**
Dr. Jennifer Slimowitz Pearl, Program Director, Division of Mathematical Sciences (DMS), NSF
Dr. Bernice Anderson, Senior Advisor, Office of Integrative Activities and Program Director-INCLUDES, NSF
Dr. Melvin Hall, Board Member, American Evaluation Association

**Event: Faculty Research Showcase and Presidential Forum**
**When:** March 28, 2017; 10.00 AM – 2.30 PM
**Where:** Ballroom A/B/Gallery
**Keynote Speaker:** James Gallarda, PhD, Senior Program Officer, Diagnostics at Bill & Melinda Gates Foundation

**Event: Innovation Day Symposium and Presidential Forum (Student Research and Innovation Showcase)**
**When:** April 10, 2017; 9.00 AM – 12.00 PM
**Where:** Ballroom A/B/Atrium
**Keynote Speaker:** Bill Huffnagle, President, Reconstructive Division at Stryker Orthopaedics

**Event: Faculty Research Advisory Board Meeting**
**When:** April 11, 2017; 1.00 PM – 2.00 PM
**Where:** Ballroom B

**Event: Science and Technology Forum: Big Data Analytics: Current and Future Trends**
**When:** April 12, 2017; 1.00 PM – 2.00 PM
**Where:** Ballroom B
**Panel Speaker:** Ms. Terry Christiani, Product Marketing Manager, Microsoft

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## Grant Opportunity Alerts

Keywords and Areas Included in the Grant Opportunity Alert Section Below

**NSF:** Petascale Computing Resource Allocations (PRAC**);** Thermal Transport Processes; Nano-Biosensing
**NIH:** NIDCD Research Grants for Translating Basic Research into Clinical Tools (R01); Cancer Tissue Engineering Collaborative: Enabling Biomimetic Tissue-Engineered Technologies for Cancer Research (R01);Early Phase Clinical Trials in Imaging & Image-Guided Interventions (R01)
**Department of Defense/US Army/DARPA/ONR:** FY17 Acquisition Research Program; Internet of Battlefield Things (IoBT) Collaborative Research Alliance (CRA); Defense University Research Instrumentation Program (DURIP); Quantum Computing Research in New and Emerging Qubits & Cross-Quantum Systems Science & Technology; NRL Broad Agency Announcement -Information for the Preparation and Submission of Proposals
**Department of Energy:** Stewardship Science Academic Alliances (SSAA) Program
**NASA**: ROSES 2017: Astrophysics Data Analysis; ROSES 2017: Research Opportunities in Space and Earth Science
**National Endowment of Humanities:** Humanities Access Grants Digital Humanities Advancement Grants

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## Recent Research Grant and Contract Awards

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

**PI:** Siva Nadimpalli (PI)
**Department:** Mechanical and Industrial Engineering
**Grant/Contract Project Title:** NSF CAREER: Electro-Chemo-Mechanics of Polymer/Active material Interface Fracture
**Funding Agency:** NSF
**Duration:** 08/01/17-07/31/22

**PI:** Roman Voronov (PI)
**Department:** Chemical, Biological and Pharmaceutical Engineering
**Grant/Contract Project Title:** Novel Mechanism of Blood Clotting Could Revolutionize Stroke and Heart Attack Treatments
**Funding Agency:** NJ Health Foundation
**Duration:** 03/01/17-02/28/18

**PI:** Michel Boufadel (PI)
**Department:** Natural Resources Development and Protection Center
**Grant/Contract Project Title:** The Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE)
**Funding Agency:** Gulf of Mexico Research Initiative
**Duration:** 01/01/16-12/31/17

**PI:** Suzanne Berliner Heyman (PI)
**Department:** CPCP
**Grant/Contract Project Title:** Exxon Mobil/Bernard Harris Summer Science Camp
**Funding Agency:** ExxonMobil Foundation/Harris Foundation
**Duration:** 02/01/17-12/13/18

**PI:** Suzanne Berliner Heyman (PI)
**Department:** CPCP
**Grant/Contract Project Title:** Victoria Foundation Grant
**Funding Agency:** Victoria Foundation
**Duration:** 02/01/17-12/13/18

**PI:** Suzanne Berliner Heyman (PI)
**Department:** CPCP
**Grant/Contract Project Title:** Unite Foundation Grant
**Funding Agency:** Unite Foundation
**Duration:** 02/01/17-12/13/18

**PI:** Suzanne Berliner Heyman (PI)
**Department:** CPCP
**Grant/Contract Project Title:** PSEG - SPARKS - SESP
**Funding Agency:** PSEG Foundation
**Duration:** 02/01/17-12/13/18

**PI:** Suzanne Berliner Heyman (PI)
**Department:** CPCP
**Grant/Contract Project Title:** Academy of Applied Science
**Funding Agency:** US Army EAO (Academy of Applied Science REAP)
**Duration:** 02/01/17-12/13/18

**PI:** Antai Wang (PI)
**Department:** Mathematical Sciences
**Grant/Contract Project Title:** Predictive Models for Financial and Commercial Data
**Funding Agency:** Shanghai SuperV System Integration Co. Ltd.
**Duration:** 02/27/17-03/01/18

**PI:** Michel Boufadel (PI)
**Department:** Natural Resources Development and Protection Center
**Grant/Contract Project Title:** Agricultural Workshop - Delegation from Gansu
**Funding Agency:** FCC Group International, Inc.
**Duration:** 02/27/17-12/31/17

**PI:** Michel Boufadel (PI)
**Department:** Natural Resources Development and Protection Center
**Grant/Contract Project Title:** Characterizing Dispersant Effectiveness of Crude Oils at High Salinities
**Funding Agency:** US EPA
**Duration:** 01/01/17-12/31/17

**PI:** Dirk Bucher (PI) and Farzan Nadim (Co-PI)
**Department:** Biological Sciences
**Grant/Contract Project Title:** The Role of Axons in Neural Coding
**Funding Agency:** NIH
**Duration:** 09/26/13-09/28/18

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## In the News…

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

**Proposed Increase in Defense Budget:** President Trump's high level plan, as announced, would be to add $54 billion to Defense, while offsetting this in non-defense discretionary spending without impacting mandatory programs or trimming Homeland Security, Justice programs, or Veterans Affairs. This would equate to more than a 10% reduction in non-defense discretionary spending taken by the remaining agencies. The budget reductions will not be across-the-board, but will target some agencies more than others. EPA would absorb a reduction of over 40% in its research budget as well as deep reductions in many other grant programs, cuts publicly opposed by EPA Administrator Scott Pruitt. **ScienceInsider reports**, would be "a potential squeeze on the $31 billion National Institutes of Health, the $7 billion National Science Foundation, the $5 billion Office of Science at the Department of Energy, as well as all other civilian science programs." FDA regulatory activities would also be targeted. Reductions for other in research science agencies are not fully known yet. The White House has maintained that a "skinny budget" with further details will be released March 16. The President's proposal would require a rewriting of the Budget Control Act of 2011 which put in place a "firewall" between defense and non-defense spending and limited both defense and non-defense spending equally in FY18. More Information on the website http://www.cbpp.org/blog/trump-plans-big-cut-in-domestic-programs

**NASA: Sister Solar System**: NASA gained world-wide attention this week with the announcement about the discovery of a new planetary system around a dwarf star named Trappist-1, about 40 light-years, or 235 trillion miles, from Earth. The seven earth sized planets constitute an intriguing solar system some of which may be located in the habitable zone which contains the potential for liquid water, and hence life. Discovered by a robotic telescope operating in the Chilean Atacama Desert, the system provides valuable targets that will be followed up by a variety of other present and future observing platforms such as the James Webb Space Telescope. The planetary system is

aligned such that the bodies pass in front of the host star and thus their atmospheres, if they exist, can be analyzed. More information is posted on http://www.sciencealert.com/nasa-just-released-travel-posters-for-our-new-sister-solar-system-and-they-re-cool-as-hell?utm_content=bufferfdc2b&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

**NSF Announces New Proposal & Awards Policies & Procedures Guide (PAPPG):** The new NSF PAPPG provides the policies and procedures for all proposals to be submitted on or after January 30, 2017. The *Proposal & Award Policies & Procedures Guide* (PAPPG) is comprised of documents relating to the Foundation's proposal and award process for the assistance programs of NSF. The PAPPG, in conjunction with NSF's Grant General Conditions, serves as the Foundation's implementation of 2 CFR § 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*. If the PAPPG and NSF Grant Conditions are silent on a specific area covered by 2 CFR § 200, the requirements specified in 2 CFR § 200 must be followed. Please see a summary of changes and complete PAPPG 2017 document on the NSF website https://www.nsf.gov/pubs/policydocs/pappg17_1/index.jsp.

**NIH Notice NOT-OD-17-003: Ruth L. Kirschstein National Research Service Awards (NRSA) Postdoctoral Stipends, Training Related Expenses, Institutional Allowance, and Tuition/Fees Effective for Fiscal Year 2017**

URL https://grants.nih.gov/grants/guide/notice-files/NOT-OD-17-003.html
Related Announcements
NOT-OD-16-134
NOT-OD-16-062
National Institutes of Health (NIH)

**Purpose:** The purpose of this Notice is to announce the process whereby recipients of Kirschstein-NRSA institutional training grant and individual fellowship awards supporting currently active postdoctoral trainees or fellows with 0, 1, or 2 years of experience as of December 1, 2016, will received increased stipends. The Notice also provides instructions for requesting one-time supplemental funding to cover the stipend increase. As previously announced (NOT-OD-16-134), stipend levels for postdoctoral NRSA recipients with 0, 1 or 2 years of experience will be increased in furtherance of the NIH mission. This increase is distinct from a projected cost-of-living adjustment for postdoctoral stipends that is subject to the availability of FY 2017 appropriations.

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## Webinar and Events

**Event: NJIT Panel Discussion: Understanding the Role of Evaluation in NSF Proposal Preparation: Broader Impacts, Broader Impacts & Participation for Underrepresented Minorities**
**When: March 7, 2017, 1.00 PM-2:30 PM**
**Where: NJIT Campus Center Atrium Newark (also streamed via YouTube live)**
**Brief Description of the Panel:** We are pleased to announce a Panel Discussion event, *Understanding the Role of Evaluation in NSF Proposal Preparation,* sponsored by the Office of Research and Collaborative for Leadership, Education, and Assessment Research (CLEAR) initiative at NJIT. This panel will focus on NSF proposal preparation with respect critical review criteria including boarder impact, intellectual merit and broader participation of women and underrepresented minorities in STEM.
**Panel Moderator:** Dr. Kevin Belfield, Dean, College of Science and Liberal Arts, NJIT

**Panel Speakers:**

Dr. Jennifer Slimowitz Pearl, Program Director, Division of Mathematical Sciences (DMS), National Science Foundation
Dr. Bernice Anderson, Senior Advisor, Office of Integrative Activities and Program Director-INCLUDES, National Science Foundation
Dr. Melvin Hall, Board Member, American Evaluation Association

**Panel Speaker:** Dr. Bernice Anderson
**Title of the Talk**: "Broader Participation: The NSF initiative to Include Everyone"
This presentation will set the stage by beginning the panel with a discussion of the movement toward broader participation in STEM (especially for women and underrepresented minorities) and how it relates to the new priorities in Broader Impacts.
**Speaker Biographical Sketch:** Dr. Bernice Anderson is the Executive secretary of the Committee on Equal Opportunities in Science and Engineering (CEOSE) and a Senior Advisor of the NSF Office of Integrative Activities.

**Panel Speaker:** Dr. Melvin E. Hall
**Title of the Talk**: "Thinking Evaluatively About Broader Impact and Broadening Participation in STEM: Towards What End?"
This presentation will focus thinking on an outcome goal for broadening participation. In essence to help address the "why" and "so what" questions that may be lurking in the minds of faculty and others who are designing projects that include these expectations. If successful I will plant a seed prompting individual investigators to envision what comes after these efforts are successful.
**Speaker Biographical Sketch**: Dr. Hall is Professor of Educational Psychology at Northern Arizona University. Dr. Hall completed his B.S., and Ph.D., degrees at the University of Illinois at Urbana Champaign in Social Psychology and Educational Psychology respectively; and M.S. in Counseling at Northern Illinois University. During a forty plus-year professional career in higher education, Dr. Hall has served in four successive appointments, as an academic dean, comprised of positions at Florida Atlantic University, University of California-Irvine, University of Maryland at College Park, and most recently Northern Arizona University (NAU).

**Panel Speaker:** Dr. Jennifer Slimowitz Pearl
**Title of the Talk**: "Insights into NSF Broader Impacts By a Program Officer"
Dr. Pearl will discuss how panels view broader impacts and provide examples of broader impacts in successful grants from the perspective of an NSF program director.
**Speaker Biographical Sketch**: Dr. Pearl is a Program Director in the Division of Mathematical Sciences (DMS) at NSF. Among her responsibilities are the DMS Infrastructure program and activities in the DMS Workforce portfolio. She recently completed a detail assignment serving as the Acting Deputy Division Director in DMS. She also recently served as a Visiting Provost Fellow at George Mason University. She was formerly a Program Director in NSF's Office of International Science and Engineering. Dr. Pearl has held positions at the National Academies and at Rice University. She was an AAAS/NSF Science and Technology Policy Fellow and was awarded a NSF/NATO Postdoctoral Fellowship to conduct research at the Université du Québec à Montréal.

**Event: NSF Webinar: Introduction to I-Corps Teams**
**When: March 7, 2017; 2.00 PM – 4.00 PM**
**Website**: https://www.nsf.gov/events/event_summ.jsp?cntn_id=189701&org=NSF

**Brief Description: Abstract:** Curious about the NSF I-Corps program? Join this monthly introductory webinar to learn more about I-Corps Teams and how they contribute to the innovation ecosystem. During the webinar, I-Corps program directors will answer questions about I-Corps and provide updated information about I-Corps contacts, the curriculum, important dates and other aspects of I-Corps. The I-Corps curriculum provides real-world, hands-on, immersive learning about what it takes to successfully transfer knowledge into products and processes that benefit society.
The webinar will be held the **first Tuesday of every month at 2:00 p.m., eastern time**.
**To Join the Webinar:** First, access the audio portion of the webinar by phone by calling (800) 857-5210 (for callers inside the U.S.) OR (210) 234-7080 (for callers outside the U.S.). The participant passcode is 3192939#
Second, access the visual portion of the webinar (WebEx meeting number 743 582 265):

- Go to https://nsf.webex.com/nsf/j.php?MTID=m37c931eeb5d7a1c32e62c41975c03a2b [Note: Firefox is recommended for Mac users.]
- If requested, enter your name and email address.
- If a password is required, enter the meeting password: I_C0rp5!
- Click "Join".

You may download the slides in advance--download the slides (PDF, 1.6 MB).
For assistance joining the meeting, go to https://nsf.webex.com/nsf/mc and click "Support" on the left navigation bar.
Note for first-time users: To check whether you have the appropriate players installed for UCF (Universal Communications Format) rich media files, go to https://nsf.webex.com/nsf/systemdiagnosis.php.

**Event: CISCO RFP Webinar**
**When: March 8, 2017; 2.00 PM – 4.00 PM**
**Website**:
http://research.cisco.com/research?utm_source=UIDP+Master+List&utm_campaign=01f21fa5f4-EMAIL_CAMPAIGN_2017_02_21_Cisco_Prime_Reps&utm_medium=email&utm_term=0_4f5a80f40e-01f21fa5f4-294930817
**Brief Description:** This event will provide an overview of CISCO's Global Research & Open Innovation group and Cisco Research Center's (CRC) university research grant and RFP program. CRC connects researchers and developers from Cisco, academia, governments, customers, and industry partners with the goal of facilitating collaboration and exploration of new and promising technologies. We are interested in exploring issues, topics, and problems that are relevant to our core business of improving the Internet. We're also deeply interested in adjacent technologies that leverage the power of the network to change the world around us.
**To Join the Webinar:** In order to participate, you need to register in advance. Please submit your question(s) for the presenter in the registration form. Register at https://app.smartsheet.com/b/form?EQBCT=9af2ad1f3f5948aa9233f52df568f64c&utm_source=UIDP+Master+List&utm_campaign=01f21fa5f4-EMAIL_CAMPAIGN_2017_02_21_Cisco_Prime_Reps&utm_medium=email&utm_term=0_4f5a80f40e-01f21fa5f4-294930817

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## Grant Opportunities

### National Science Foundation

**Grant Program: Petascale Computing Resource Allocations (PRAC)**
**Agency: National Science Foundation NSF 17-542**
**RFP Website**: https://www.nsf.gov/pubs/2017/nsf17542/nsf17542.htm
**Brief Description:** In 2013, a new NSF-funded petascale computing system, Blue Waters, was deployed at the University of Illinois at Urbana-Champaign. The goal of this project and system is to open up new possibilities in science and engineering by providing computational capability that makes it possible for investigators to tackle much larger and more complex research challenges across a wide spectrum of domains. The purpose of this solicitation is to invite research groups to submit requests for allocations of resources on the Blue Waters system. Proposers must show compelling science or engineering challenges that require petascale computing resources. Proposers must also be prepared to demonstrate that they have science or engineering research problems that require and can effectively exploit the petascale computing capabilities offered by Blue Waters. Proposals from or including junior researchers are encouraged, as one of the goals of this solicitation is to build a community capable of using petascale computing.
**Awards:** Standard Grants of about $15,000 each. Anticipated funding amount: $180,000 - $225,000
**Letter of Intent:** Not Required
**Full Proposal Submission Due Date:** November 06, 2017
**Contacts:**

- Edward Walker,CISE/OAC, telephone: (703) 292-4863, email: edwalker@nsf.gov

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**Grant Program: Thermal Transport Processes**
**Agency: National Science Foundation NSF PD 17-1406**
**RFP Website**:
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505328&org=NSF&sel_org=NSF&from=fund
**Brief Description:** The **Thermal Transport Processes** program is part of the **Transport Phenomena** cluster, which includes also 1) Combustion and Fire Systems; 2) Fluid Dynamics; and 3) Particulate and Multiphase Processes.

The **Thermal Transport Processes (TTP)** program supports engineering research projects that lay the foundation for new discoveries in thermal transport phenomena. These projects should either develop new fundamental knowledge or combine existing knowledge in thermodynamics, fluid mechanics, and heat and mass transfer to probe new areas of innovation. The program seeks transformative projects with the potential for improving our basic understanding, predictability and application of thermal transport processes. Projects should articulate the contribution(s) to the fundamental knowledge supporting thermal transport processes and state clearly the potential application(s) impact when appropriate. Projects that combine analytical, experimental and numerical efforts, geared toward understanding, modeling and predicting thermal phenomena, are of great interest. Collaborative and interdisciplinary proposals for which the main contribution is in thermal transport processes fundamentals are also encouraged. Priority is given to insightful investigations of fundamental problems with clearly defined economic, environmental and societal impacts.
**Awards:** CBET program mechanisms: CAREER, RAPID and Conference/Workshop
**Letter of Intent:** Not Required

**Full Proposal Submission Due Date:** October 1, 2017 - October 20, 2017
**Contacts:** José Lage jlage@nsf.gov (703) 292-4997

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**Grant Program: Nano-Biosensing**
**Agency: National Science Foundation NSF PD 17-7909**
**RFP Website**:
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505340&org=NSF&sel_org=NSF&from=fund
**Brief Description:** The **Nano-Biosensing** program is part of the Engineering Biology and Health cluster, which includes also 1) Cellular and Biochemical Engineering; 2) Engineering of Biomedical Systems; 3) Biophotonics; and 4) Disability and Rehabilitation Engineering. The **Nano-Biosensing** program supports fundamental engineering research on devices and methods for measurement and quantification of biological analytes. Proposals that incorporate emerging nanotechnology methods are especially encouraged. Areas of interest include:

- Multi-purpose sensor platforms that exceed the performance of current state-of-the-art devices.
- Novel transduction principles, mechanisms and sensor designs suitable for measurement in practical matrix and sample-preparation-free approaches. These include error-free detection of pathogens and toxins in food matrices, waterborne pathogens, parasites, toxins, biomarkers in body fluids, and others that improve human condition.
- Nano-biosensors that enable measurement of biomolecular interactions in their native states, transmembrane transport, intracellular transport and reactions, and other biological phenomena.
- Studies that examine intracellular measurements must include discussion on the significance of the measurement.

Proposals should clearly identify the proposed problem to be solved, describe why the proposed approach is superior to current available methods, and articulate the benefit of solving the identified problem for the society at large. Sensor designs that yield reliable measurements are encouraged. While sensitivity is important, it cannot be at the expense of reproducibility. Every application must include research strategies for addressing reproducibility of measurement and sensor response, as well as approaches that reduce errors. The program does not support applications with incremental improvements of existing approaches and technologies. Projects that do not include experimental characterization of sensor responses to biological analytes are discouraged, and may be returned without a review. Studies on surface functionalization and immobilization of bio-recognition molecules, and/or orientation of them are not encouraged. Research that is focused on new recognition chemistry is also discouraged. The novelty or potentially transformative nature of the research must be included in the Project Summary. The last line in Project Summary must include three key phrases that describe: (1) sensor transduction principles, (2) type of biological analytes, (3) potential application areas.
**Awards:** CBET program mechanisms: CAREER, RAPID and Conference/Workshop
**Letter of Intent:** Not Required
**Full Proposal Submission Due Date:** October 1, 2017 - October 20, 2017
**Contacts:** Rajakkannu Mutharasan rmuthara@nsf.gov (703) 292-4608

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**National Institutes of Health**

**Grant Program: NIDCD Research Grants for Translating Basic Research into Clinical Tools (R01)**
**Agency: National Institutes of Health PAR-17-184**
**RFP Website**: https://grants.nih.gov/grants/guide/pa-files/PAR-17-184.html
**Brief Description:** The objective of this FOA is to provide support for research studies that translate basic research findings into better clinical tools for human health. The application should seek to translate basic behavioral or biological research findings, which are known to be directly connected to a human clinical condition, to a practical clinical impact. Tools or technologies advanced through this FOA must overcome existing obstacles and should provide improvements in the diagnosis, treatment or prevention of a disease process. For the purposes of this FOA, the basic science advancement must have previously demonstrated potential for clinical impact and the connection to a human clinical condition must be clearly established. The research must be focused on a disease/disorder within one or more of the NIDCD scientific mission areas: hearing, balance, smell, taste, voice, speech or language.

Research conducted under this FOA is expected to include human subjects. Preclinical studies in animal models are allowed only for a candidate therapeutic that has previously demonstrated potential for the treatment of communication disorders. The scope of this FOA allows for a range of activities encouraging the translation of basic research findings to practical impact on the diagnosis, treatment and prevention of deafness and other communication disorders.

Possible goals include, but are not limited to:

- Biochemical, electrophysiological and behavioral assays to enhance diagnostic capabilities.
- Pharmacology (toxicity) and pharmacokinetic studies for candidate therapeutics that have demonstrated potential for the treatment of communication disorders.
- Preclinical animal research for dosage studies and toxicity when a subsequent Phase I/II clinical trial is planned.
- Studies to test the efficacy of highly promising interventions in animal models of disease.
- Development of tools and techniques for better diagnostics or therapeutics, including but not limited, to drug delivery devices, neuro-electrical stimulators and recording devices.
- Development of screening tests, including biomarkers, to identify individuals at risk for a communication disorder to allow for early intervention.
- Development and testing of new tools to better target the treatment to the individual patient and to better predict patient response or prognosis.
- Development of sensitive and objective tools and technologies for clinical decision matrices.
- Development and testing of innovative prevention and treatment paradigms and processes using discoveries from biological, psychological, and social sciences.
- Development and testing of surgical techniques with the goal of providing better patient performance.
- Development and assessment of new data collection, measurement and recording instruments leading to better diagnostic, evaluation and assessment paradigms.
- Modification of laboratory measures of function or laboratory treatment protocols for use in clinical settings.

This FOA is not intended for outcomes/health services research, the extension of ongoing clinical studies, the optimization of current clinical protocols, or pre-translational studies (early stage proof of concept or developmental work premature to direct clinical relevance). Basic discovery research is not appropriate under this FOA.

**Awards:** Application budgets are not limited but need to reflect the actual needs of the proposed project.
**Letter of Intent:** 30 days before the application due date.
**Deadline:** October 18, 2017; June 19, 2018; February 20, 2019; October 18, 2019; June 18, 2020; by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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**Grant Program: Cancer Tissue Engineering Collaborative: Enabling Biomimetic Tissue-Engineered Technologies for Cancer Research (R01)**
**Agency: National Institutes of Health PAR-17-171**
**RFP Website**: https://grants.nih.gov/grants/guide/pa-files/PAR-17-171.html
**Brief Description:** Biomimetic tissue-engineered technologies offer great precision and control of their physical and spatial parameters and components. These technologies bridge the discontinuity in cancer research models between two-dimensional (2D) and three-dimensional (3D) spheroid or cell-laden extracellular matrix in vitro systems and in vivo animal models. Limits exist in the types of biological questions that can be answered with 2D and 3D systems due to the inability to replicate tissue-specific pathophysiology. On the other hand, limitations of in vivo animal models include costly assays and the challenge of precisely controlling experimental variables of the tumor microenvironment, such as spatial, molecular, and physical information. To address these limitations of conventional in vitro systems and in vivo animal models, well-characterized tissue-engineered in vitro systems that incorporate tissue pathology and physiology are needed within the cancer model continuum.

This FOA will support the development and characterization of state-of-the-art biomimetic tissue-engineered technologies for cancer research. *Critical to this FOA will be characterizing the biological relevance of the tissue-engineered technologies.* Applicants will be expected to take a novel engineering approach to define the critical features and parameters for the proposed system, how they are sufficient to mimic the physiology and pathology of the specific cancer question under study, and what characterization will be needed to validate the biological relevance of the system. Characterization could include the demonstration of relevant tissue structure, tumor biology, pathology, and physiological function that replicate the aspect of tumor biology that will be studied using the proposed system. The long-term goal is that the technologies might begin to have novel applications addressing questions in cancer biology, prevention, early detection of aggressive cancer, diagnosis and therapy.

**Possible research areas of emphasis include the development and characterization of tissue-engineered biomimetic technologies, such as the following:**

- Engineered native and/or synthetic scaffolds (e.g., hydrogels, nanofibers, 3D printing, decellularized matrix), bioreactors, and microfluidic devices to better understand the role of the structure and spatial organization in cancer initiation, progression, and treatment. The biomimetic systems could incorporate functionalized biomaterials that mimic tumor properties and are designed to probe cellular behaviors such as crowding, coupled interactions and/or cooperativity, and autocrine/paracrine behaviors at the molecular and cellular length scales.
- Cellular, mechanical, and secreted chemical factors of the tumor microenvironment such as stromal cells, exosomes, immune components, gradients of cytokines, growth factors and hormones, oxygen tension, pH, and extracellular matrix structure.

- Perfusion, lymphatics, interstitial pressure, passive flow, or immobile and soluble gradients to study the role of tumor physiology and immune responses on cancer biology, diagnosis, and treatment. Molecular probes could be incorporated to obtain quantitative and dynamic functional measurements.
- Technologies to facilitate measurements of bi-directional signaling, stresses, and dynamics of complex tumor systems, such as responsive materials, molecular probes, or genome editing tools that can be regulated or monitored with minimal invasiveness. Integration of advanced imaging modalities could allow visualization of dynamic cell and tissue processes across space and time.
- Engineered tissues capable of long-term culture to examine cancer initiation and dormancy over several weeks.
- Coupling with computational models to understand the emergence of tumor form, function, and heterogeneity from genetic or spatial information.
- Multi-organ engineered culture systems to probe organ-to-organ interactions during cancer progression and treatment.
- Systems to model cancer progression from pre-neoplastic lesions to invasive and metastatic disease; to develop biomimetic systems amenable to imaging for early detection of aggressive cancer, diagnosis and prognosis; and to select preventive and therapeutic agents.

**Awards:** Budgets are limited to $400,000 Direct Costs per year. Application budgets should reflect the actual needs of the proposed project.
**Letter of Intent:** 30 days before the application due date.
**Deadline:** Standard dates apply, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

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**Grant Program: Early Phase Clinical Trials in Imaging and Image-Guided Interventions (R01)**
**Agency: National Institutes of Health PAR-17-167**
**RFP Website**: https://grants.nih.gov/grants/guide/pa-files/PAR-17-167.html
**Brief Description:** NCI has invested significant resources in imaging, both to understand cancer biology and to improve clinical management of cancer patients. This investment has stimulated considerable research activity in the fields of new imaging devices, imaging agent development, and image-guided intervention (IGI), systems, methodologies, and therapies. For example, investigators are developing interleukin-2 radiopharmaceuticals known to detect organ infiltrating T cells in human autoimmune diseases, a new PET imaging diagnostic assay to evaluate how well Sarcoma/Abelson tyrosine kinase inhibitors target tumors inside patients, and leveraging sophisticated computer vision, image analysis, computer assisted diagnostic and deformable registration tools to improve the delineation of tumors for targeted laser ablation therapy via multi-parametric MRI. In addition, researchers are also focused on novel uses of clinical imaging technologies to meet the needs of medical oncologists. Molecular and functional imaging methods, for instance, are being investigated to provide clinicians with a better understanding of the effects of a given treatment and at time-points early enough to impact treatment selection and overall management. This early understanding of the effects of a given therapy or intervention could potentially allow clinicians to switch to more effective treatments saving patients from untoward side effects or death, saving both lives and resources. Today, there are many new approaches in cancer imaging and IGI at the preclinical stage of development that

need to be optimized and validated in a clinical setting to determine their impact upon tumor diagnosis, staging, intervention, therapeutic response monitoring, and surveillance. These preliminary clinical studies would serve a number of societal interests in improved cancer care in the general population as well as better serving underserved populations. Despite these discoveries and opportunities, the incorporation of advanced imaging and IGI techniques into clinical trials remains difficult, not in-pace with clinical need, and under supported. Therefore, the purpose of this initiative is to promote the use of advanced imaging and provide the necessary support for the assessment of imaging modalities, methodologies, and agents as well as IGI methods through the early stages of clinical evaluation in both the general and underserved populations.

The goal of this FOA is to promote and accelerate clinical evaluation of imaging modalities, agents, methods, and image-guided interventions to improve cancer management. Therefore, projects that propose Phase I or early Phase II studies of imaging agents and methodologies, or feasibility studies of imaging devices, image-guided surgery or therapies, image-guided radiation therapy using external beams and/or systemic radionuclides, should show that the anticipated preliminary data will be able to justify a future grant application for confirmatory Phase II or Phase III trial. A range of trials at different stages of development are allowed, including first in human Phase I and II single-site or multi-site studies based on conventional or adaptive trial designs (if economically feasible). The early studies should provide important initial information regarding imaging investigations (e.g. safety, tolerability, dosing). Later-stage studies should yield data that allow clear go/no-go decisions regarding whether these imaging investigations or image-guided interventions should proceed to an efficacy trial. Applicants may, for example, propose to conduct a clinical trial where the primary aim is to:

- Evaluate and optimize the dose, safety, tolerability or pharmacokinetics of an imaging agent or intervention in a target population.
- Produce sufficient evidence of short-term activity (e.g., imaging biomarker activity, pharmacodynamic response, target engagement, dose-response trends) in a human proof of concept trial.
- Select or rank the best of two or more potential imaging interventions, technologies, or dosing regimens to be evaluated in a subsequent trial, based on tolerability, safety data, biological activity, or preliminary clinical efficacy (e.g., a futility trial.)
- Conduct exploratory IND studies with less preclinical toxicity data or less micro-dosing of investigational agents than usually required for traditional first in human studies to improve the trial design and efficiency in subsequent trials. See FDA's website for information regarding FDA's Exploratory IND Guidance document.

**Awards:** Application budget should reflect the actual needs of the proposed project and is limited to $500,000 in direct costs for the total project period. No more than $250,000 in direct costs may be requested in any single year.

**Letter of Intent:** 30 days before the application due date.

**Deadline:** June 28, 2017; October 11, 2017; February 14, 2018, June 28, 2018; October 11, 2018; February 14, 2019; June 28, 2019; October 11, 2019; February 14, 2020, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on these dates.

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

**Department of Defense/US Army/DARPA/ONR**

**Grant Program: FY17 ACQUISITION RESEARCH PROGRAM**
**Agency: Department of Defense N00244-17-S-FO03**
**Website**: http://nps%20funding%20opportunity%20announcements/
**Brief Description:** The Acquisition Research Program (ARP) at the Naval Postgraduate School is interested in stimulating and supporting scholarly research in academic disciplines that bear on public procurement policy and management. These include economics, finance, financial management, information systems, organization theory, operations management, human resources management, risk management, and marketing, as well as the traditional public procurement areas such as contracting, program/project management, logistics, test and evaluation and systems engineering management. The ARP primarily supports scholarly research through assistance vehicles that will benefit the general public and/or private sector to a larger extent than any direct benefits that may be gained by the Government. Studies of government processes, systems, or policies should also expand the body of knowledge and theory of processes, systems, or policies outside the government. The ARP in this FOA is interested only in proposals that will provide unclassified and non-proprietary findings suitable for publication in open scholarly literature. Offerors bear prime responsibility for the design, management, direction and conduct of research. Researchers should exercise judgment and original thought toward attaining the goals within broad parameters of the research areas proposed and the resources provided. Offerors are encouraged to be creative in the selection of the technical and management processes and approaches and consider the greatest and broadest impact possible. Note: Proposals for workshops, conferences, and symposia, or for acquisition of technical, engineering, advisory and assistance, and other types of support services for the direct benefit of the Government will not be considered.
**Awards:** Various
**Full Proposal Deadline:** August 01, 2017.
**Contact Information: Janet Norton Contract and Grant Officer Business POC.**

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**Grant Program: Internet of Battlefield Things (IoBT) Collaborative Research Alliance (CRA)**
**Agency: Department of Defense USAMRAA W911NF-17-S-0005**
**Website**: http://www.fbodaily.com/archive/2017/03-March/05-Mar-2017/FBO-04422799.htm
**Brief Description:** The ability of the Army to understand, predict, adapt, and exploit the vast array of internetworked things that will be present of the future battlefield is critical to maintaining and increasing its competitive advantage. The explosive growth of technologies in the commercial sector that exploits the convergence of cloud computing, ubiquitous mobile communications, networks of data-gathering sensors, and artificial intelligence presents an imposing challenge for the Army. These Internet of Things (IoT) technologies will give our enemies ever increasing capabilities that must be countered, but commercial developments do not address the unique challenges that the Army will face in using them. The U.S. Army Research Laboratory (ARL) has established an Enterprise approach to address the challenges resulting from the Internet of Battlefield Things (IoBT) that couples multi-disciplinary internal research with extramural research and collaborative ventures. ARL intends to establish a new collaborative venture (the IoBT CRA) that seeks to develop the foundations of IoBT in the context of future Army operations. The Collaborative Research Alliance (CRA) will consist of private sector and government researchers working jointly to solve complex problems. The overall objective is to develop the fundamental understanding of dynamically-composable, adaptive, goal-driven IoBTs

to enable predictive analytics for intelligent command and control and battlefield services. The Future Army will operate in a highly complex and rapidly changing environment, thus the U.S. Army's Operating Concept is to "Win in a Complex World". The Army must tackle wicked problems wherein objectives and constraints evolve in unpredictable ways. Complexity arises from the increasing heterogeneity, connectivity, scale, dynamics, functionality and interdependence of networked elements, and from the increasing velocity and momentum of human interactions and information. Events now unfold in internet time, as noted by the Defense Science Board (DSB) 2014 Study on Decisive Army Strategic and Expeditionary Maneuver. In this context, future IoBTs will be significantly more complex that today's networked systems, and novel mathematical approaches and techniques will be needed to represent them, reason about them, understand their behaviors, and to provide predictive analytics in diverse and dynamic environments. The Army will use IoTs for diverse and dynamic missions and will require rapid deployment and adaptation in environments with high mobility, resource constraints, and extreme heterogeneity in both very dense and sparse environments. In addition to Things and IoTs that the Army owns and controls, it may also need to make use of IoTs that it does not own or fully control. A foundational problem to be addressed by the CRA is the fundamental understanding of how to learn and devise complex models of IoBT goals, networks, information, and analytics to enable intelligent command and control, and battlefield services. A critical issue embedded throughout all aspects of IoBTs is cyber physical security as the Army will need to use things it does not control (military (blue), adversary (red), civilian (gray)), accommodate deceptive data, and counter advanced persistent threats. ARL strongly believes that a joint collaborative approach by multidisciplinary researchers is required to make fundamental advances towards meeting the CRA goal to develop a fundamental understanding of IoBTs. ARL has identified three interrelated Research Areas (RAs) that when jointly studied will advance the theoretical foundations of IoBTs in the context of future Army operations. • Discovery, Composition and Adaptation of Goal-Driven Heterogeneous IoBTs • Autonomic IoBTs to Enable Intelligent Services • Distributed Asynchronous Processing and Analytics of Things In addition to these three RAs, Cyber-Physical Security has been identified as a Cross-Cutting Research Issue (CCRI) that is inherent in each of the RAs and that must be jointly studied with the RAs to make fundamental advances in IoBTs. The CRA is intended to create a collaborative environment that enables the Alliance to advance the state-of-the-art and to take advantage of the diverse scientific capabilities and viewpoints of both the private sector and government researchers. The CRA will work collaboratively with ARLs Enterprise research programs to identify areas where joint, multi-disciplinary, collaborative research is advantageous. Continuous collaboration, technical exchanges, site visits, and staff rotations will strengthen and improve the CRA research and its Army relevance.

**Awards:** Various; Estimated Funding Available: $70,000,000

**Full Proposal Deadline:** Applications for this cooperative agreement are due July 27, 2017.

**Contact Information:** Niko Georgakopoulos, Phone: 9195410817 nikolaos.georgakopoulos.civ@mail.mil

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**Grant Program: Defense University Research Instrumentation Program (DURIP)**
**Agency: Department of Defense PA-AFRL-AFOSR-2017-0001**

**Website**: http://www.arl.army.mil/www/default.cfm?page=8%20
https://www.fbo.gov/index?s=opportunity&mode=form&id=ed3e2f50150544d3a699052f563d8793&tab=core&_cview=0

**Brief Description:** The Department of Defense (DoD) announces the Fiscal Year 2017 Defense University Research Instrumentation Program (DURIP). DURIP is designed to improve the capabilities of accredited United States (U.S.) institutions of higher education to conduct research

and to educate scientists and engineers in areas important to national defense, by providing funds for the acquisition of research equipment or instrumentation. For-profit organizations are not eligible for DURIP funding.

This announcement seeks proposals from universities to purchase equipment and instrumentation in support of research in areas of interest to the DoD. DoD interests include the areas of research supported by the Army Research Office (ARO), the Office of Naval Research (ONR), and the Air Force Office of Scientific Research (AFOSR), hereafter generally referred to collectively as "we, our, us, or administering agency."

Each administering agency will make grant awards to fund the purchase of research equipment or instrumentation costing $50,000 or more that cannot typically be purchased within the budgets of single-investigator awards. We generally cannot make any individual award that exceeds more than $1,500,000 in DoD funding unless your proposal qualifies for an exception. We intend to award approximately $47 million under this competition, subject to availability of funds. DURIP awards are typically one year in length. DURIP is part of the University Research Initiative (URI).

**Awards:** Various; Estimated Funding Available: $47,000,000

**Full Proposal Deadline:** July 07, 2017 Pre-Proposal inquires and questions must be submitted not later than Friday, 16 Jun 2017.

**Contact Information:** David Broadwell Grants Officer Phone 703-588-2866 Business POC

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**Grant Program: Quantum Computing Research in New and Emerging Qubits & Cross-Quantum Systems Science & Technology**

**Agency: US Army Research Laboratory W911NF-17-S-0001**

**Website**: http://www.arl.army.mil/www/default.cfm?page=8%20
http://www.arl.army.mil/www/pages/8/NEQST%20CQTS%20Final%20BAA.pdf

**Brief Description:** The U.S. Army Research Office (ARO) in collaboration with the Laboratory for Physical Sciences (LPS) is soliciting proposals for research in two focused topic areas: (A) new and emerging qubit science and technology (NEQST) and (B) cross quantum technology systems (CQTS).NEQST focuses on qubit systems that explore new operating regimes and environments, fundamentally new methods of fabrication, and new methods of design, control, or operation. These explorations should have in mind the development of quantum computation where the novel properties of these systems create significant advantages in coherence, fabrication, and/or qubit operation over current state-of-the-art qubits.While NEQST focuses on developing new qubit and quantum gate technologies, CQTS focuses on combining existing disparate quantum technologies to provide functionality that significantly improves the performance of, or adds capability to, any of the individual qubit types. Topics of particular interest are quantum state transfer (e.g. microwave-to-optical), novel classical control paradigms, and quantum memories.(Note: this BAA is concerned only with the circuit model of quantum computation).

**Awards:** Various; Available Funding: $14,000,000

**Full Proposal Deadline:**

- **Whitepapers due:**
  - 4:00 p.m. EDT, Friday, April 28, 2017
- **2017 Deadline for Questions on PA** - 1 April 2017
- **RSVP deadline** - Noon Eastern Standard Time 28 Feb 2017

**Contact Information:** Bryan Ash Contracts Specialist Phone 919-549-4268 Point of Contact

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**Grant Program: NRL Broad Agency Announcement -Information for the Preparation and Submission of Proposals**
**Agency: Department of Defense N00173-17-S-BA01**
**Website**: https://www.nrl.navy.mil/doing-business/contracting-division/baa/current
**Brief Description:** The Naval Research Laboratory (NRL) is the Navy's corporate laboratory. NRL conducts basic and applied research for the Navy in a variety of scientific and technical disciplines. The basic research program is driven by perceptions about future requirements of the Navy. General Information regarding the Naval Research Laboratory can be found on our Homepage located at http://www.nrl.navy.mil. A variety of Informational Publications regarding NRL can be found at http://www.nrl.navy.mil/content.php?P=PUBLICATIONS.

NRL conducts most of its research program at its own facilities but also funds some related research such as anticipated by this announcement. More extensive research support opportunities are available from the Office of Naval Research (ONR). ONR announcements may be accessed via the Internet at http://www.onr.navy.mil.
**Awards:** Various
**Full Proposal Deadline:** Continuous
**Contact Information:** Mary Johnson Contract Specialist Phone 202-767-2021 General inquiries

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**Department of Energy**

**Grant Program: Stewardship Science Academic Alliances (SSAA) Program**
**Agency: Department of Energy Advanced Research Projects Agency Energy**
**DE-FOA-0001634**
**Website**: http://open-grants.insidegov.com/l/48138/Stewardship-Science-Academic-Alliances-SSAA-Program-DE-FOA-0001634
**Brief Description:** The Stewardship Science Academic Alliances (SSAA) Program was established in 2002 to support state-of-the-art research at U.S. academic institutions in areas of fundamental physical science and technology of relevance to the SSP mission. The SSAA Program provides the research experience necessary to maintain a cadre of trained scientists at U.S. universities to meet the nation's current and future SSP needs, with a focus on those areas not supported by other federal agencies. It supports the DOE/NNSA's priorities both to address the workforce specific needs in science, technology, engineering, and mathematics and to support the next generation of professionals who will meet those needs.
**Awards:** Awards may vary between $1 to $3 million. Approximately $18 million available in total funds.
**Deadline:** Apr 30, 2017 Applications should be received by April 30, 2017 and not later than 23:59 ET in Grants.gov.
**Contact Information:** Grants Management Specialist Patricia M. Parrish 505-845-4057 Patricia.Parrish@nnsa.doe.gov

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**NASA**

**Grant Program: ROSES 2017: Astrophysics Data Analysis**
**Agency: NASA NNH17ZDA001N-ADAP**

**Website**:
https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9B644CB9-C0A8-8F23-DE92-FA3837D2F0BD}&path=open

**Brief Description:** Over the years, NASA has invested heavily in the development and execution of an extensive array of space astrophysics missions. The magnitude and scope of the archival data from those missions enables science that transcends traditional wavelength regimes and allows researchers to answer questions that would be difficult, if not impossible, to address through an individual observing program. To capitalize on this invaluable asset and enhance the scientific return on NASA mission investments, the Astrophysics Data Analysis Program (ADAP) provides support for investigations whose focus is on the analysis of archival data from NASA space astrophysics missions. 1.1 Special Considerations for ADAP 2017 Proposers • The budget justification of any proposal that involves the collection and analysis of new ground-based observations must include (1) an explicit statement that all costs associated with the ground-based portion of the project are less than 25% of the total cost of the investigation and (2) a separate budget breakout detailing the work effort and procurement costs (e.g., travel, equipment, consumables, etc.) associated with executing the ground-based observing component of the investigation (see Sec. 1.3.1). Proposals that do not satisfy this requirement will be penalized, even to the extent of being declined and not considered for funding, regardless of their intrinsic merit rating. • Most proposals to ROSES will require a data management plan (DMP) or an explanation of why one is not necessary given the nature of the work proposed. For convenience, the NSPIRES proposal cover page now includes a mandatory text box for this purpose. It is expected that the majority of proposals will simply state that the proposer will meet the mandatory minimum requirement by making the data behind figures and tables available electronically at the time of publication, ideally in supplementary material with the article. More information on the data management plan is available in the SARA DMP FAQs. However, ADAP proposals which involve the development of new databases, data products, or data analysis tools must satisfy the more rigorous requirements described in Subsection 1.3.3. Those proposers should simply indicate that the proposal is in one of these categories and refer to the appropriate section of their proposal in the NSPIRES text box where it asks for a data management plan .

**Awards:** Various.

**Full Proposal Deadline:**

ADAP17 NOIs Due Mar 28, 2017

ADAP17 Proposals Due May 16, 2017

**Contact:** Douglas M. Hudgins Astrophysics Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Telephone: (202) 358-0988 E-mail: Douglas.M.Hudgins@nasa.gov

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**Grant Program: ROSES 2017: Research Opportunities in Space and Earth Science**
**Agency: NASA NNH17ZDA001N**

**Website**:
https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId=%7BE757EF32-60E6-76AE-A276-21A1F8BA96BB%7D&path=open

**Brief Description:** This ROSES NRA (NNH17ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). The NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of

concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. Solicitation website https://nspires.nasaprs.com/external/viewrepositorydocument/cmdocumentid=554057/solicitationId=%7BE757EF32-60E6-76AE-A276-21A1F8BA96BB%7D/viewSolicitationDocument=1/ROSES%202017%20SoS.pdf

**Awards:** Awards range from under $100K per year for focused, limited efforts (e.g., data analysis) to more than $1M per year for extensive activities (e.g., development of specialized science experimental hardware).

**Letter of Intent:** Contact Program Officer

**Full Proposal Deadline:** May 15, 2017 to June 01, 2018

**Contact:** Tsengdar J. Lee, Earth Science Division, Science Mission Directorate, NASA Headquarters, Washington, DC 20546-0001, E-mail: Tsengdar.J.Lee@nasa.gov , Telephone: 202-358-0860

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**National Endowment of Humanities**

**Grant Program: Humanities Access Grants**

**Agency: National Endowment of Humanities**

**Website**: https://www.neh.gov/grants/challenge/humanities-access-grants

**Brief Description:** Humanities Access grants help support capacity building for humanities programs that benefit one or more of the following groups: **children, family, and young adults** (defined to include those between ages 18 and 30).

Humanities Access grants provide funding for existing programs at institutions such as public libraries, local and regional museums, historical societies, community colleges, four-year colleges and universities, archival repositories, and other cultural organizations.

Programs supported by Humanities Access grants have included, for example

- a young readers' initiative sponsored by a state humanities council;
- a "family conversations" program at a rural historical society connecting the area's cultural and natural resources; and
- internships for students at a liberal arts college to work in local cultural organizations during the summer.

Humanities Access Grants offer **two years of match-based funding. All funds must be expended by the end of the grant period**. Humanities Access grant funds should not be used to replace existing program funds. Instead, the grant should expand or enhance an existing exemplary humanities program.

**Awards:** NEH will offer successful applicants a one-to-one matching grant of either $50,000 or $100,000 divided evenly over the first two years of the three-year grant. The grant amount that applicants request should be appropriate to the humanities needs and the fundraising capacity of the institution.

**Proposal Deadline:** May 3, 2017

**Contact:** Contact the staff of NEH's Office of Challenge Grants at 202-606-8309 or at challenge@neh.gov. Applicants who are deaf or hard of hearing can contact NEH via Federal Relay (TTY users) at 800-877-8399.

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**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 combines the former Digital Humanities Start-Up Grants and Digital Humanities Implementation Grants programs; the combined 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.
Digital Humanities Advancement Grants may involve

- creating or enhancing experimental, computationally-based methods or techniques that contribute to the humanities;
- pursuing scholarship that examines the history, criticism, and philosophy of digital culture and its impact on society, or explores the philosophical or practical implications and impact of digital humanities in specific fields or disciplines; or
- revitalizing and/or recovering existing digital projects that promise to contribute substantively to scholarship, teaching, or public knowledge of the humanities.

**Awards:** Awards up to $375,000.
**Proposal Deadline:** June 06, 2017
**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.

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