

Grant Opportunity Alerts: Issue: ORD-GOA-2015-16

In this Issue:

Webinars: NSF CARRER Award Program; CDL - More Data, More Science and.....Moore's Law?; ADVANCE IT and IT-Catalyst pre-proposal Technical Assistance Webinars

Reminder: Grant Challenge Concept Paper, Gates Foundation, May 13, 2015

Special Program: IDEAS Lab at SMSI: Interdisciplinary Approaches to Biomedical Data Science Challenges

Grant Opportunities Alerts:

Keywords and Areas Included in Funding Opportunities Alerts:

NSF: ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers (ADVANCE); Quantum Information Sciences, Computational Physics

National Institute of Justice: NIJ FY15 Comprehensive School Safety Initiative

National Institute of Health: Health Services and Economic Research on the Prevention and Treatment of Drug, Alcohol, and Tobacco Abuse; R01, R21, R03, R34; Neuroimaging Informatics, U24; NeuroNEXT Infrastructure Resource Access, X01;

AFOSR: Research Interests of the Air Force Office of Scientific Research;

US ARMY/DARPA/DoD: DoD Neurofibromatosis New Investigator Award; DARPA Neuromusculoskeletal Injuries Research Award

Webinars

Event: NSF CAREER Program Webinar

When: May 26, 2015, 1:00 PM to 3:00 PM

Brief Description: The NSF CAREER Coordinating Committee hosts a webinar to provide an overview of the NSF Faculty Early Career Development Program ([CAREER](#)) and to answer participants' questions about development and submission of CAREER proposals.

The webinar includes an overview presentation followed by a question-and-answer period.

Participants may submit questions about CAREER proposal development and submission in advance of and during the webinar by sending e-mail to: careerwebinarqs@nsf.gov

Please note that questions requiring determinations of eligibility for the CAREER program will not be addressed during the webinar. Questions about individual eligibility should be directed to the appropriate NSF Divisional contact shown on the web page

<http://www.nsf.gov/crssprgm/career/contacts.jsp>

How to Access the Webinar: Video and audio for the webinar are provided separately. Video (no sound provided):

- Use a web browser to access
- <https://nsfevents.webex.com/nsfevents/onstage/g.php?d=749500813&t=a>
- Event number: 749 500 813
- Event password: Career2015

Audio:

- Call 1-888-942-9075 (USA toll free) or
- see list of international numbers below.
- Participant passcode: Career2015

For closed captioning, visit <http://www.fedrcc.us/> and input event confirmation number 2598904.

Event: CDL - More Data, More Science and.....Moore's Law?

When: May 20, 2015, 2:00 PM to 3:30 PM

Brief Description: In the same way that the Internet has combined with web content and search engines to revolutionize every aspect of our lives, the scientific process is poised to undergo a radical transformation based on the ability to access, analyze, and merge large, complex data sets. Scientists will be able to combine their own data with that of other scientists to validate models, interpret experiments, re-use and re-analyze data, and make use of sophisticated mathematical analyses and simulations to drive the discovery of relationships across data sets. This “scientific web” will yield higher quality science, more insights per experiment, an increased democratization of science, and a higher impact from major investments in scientific instruments. In this talk I will describe some examples of how science disciplines such as biology, material science and cosmology are changing in the face of their own data explosion, and how mathematical analyses, programming models, and workflow tools can enable different types of scientific exploration. This will lead to a set of open questions for computer scientists due to the scale of the data sets, the data rates, inherent noise and complexity, and the need to “fuse” disparate data sets. Rather than being at odds with scientific simulation, many important scientific questions will only be answered by combining simulation and observational data, sometimes in a real-time setting. Along with scientific simulations, experimental analytics problems will drive the need for increased computing performance, although the types of computing systems and software configurations may be quite different.

How to Access: Please register at:

<https://nsf.webex.com/nsf/j.php?RGID=r76ea57a6829a160d6f397263d507e528>

by 11:59pm EST on Tuesday, May 19, 2015.

After your registration is accepted, you will receive an email with a URL to join the meeting. Please be sure to join a few minutes before the start of the webinar. This system does not establish a voice connection on your computer; instead, your acceptance message will have a toll-free phone number that you will be prompted to call after joining. Please note that this registration is a manual process; therefore, do not expect an immediate acceptance. In the event the number of requests exceeds the capacity, some requests may have to be denied.

Event: ADVANCE IT and IT-Catalyst pre-proposal Technical Assistance Webinars

When: May 17, 2015, 1:00 PM to 2:30 PM and May 23, 2015, 3:00 PM to 4:30 PM

Brief Description:

The ADVANCE program office will offer two webinars one on the ADVANCE Institutional Transformation track and one on the IT-Catalyst track in the [ADVANCE solicitation 14-573](#). Please review the solicitation before the webinar. There will be time for questions and answers during the webinars.

How to Access: ADVANCE Institutional Transformation (IT)

- **June 17, 2015** 1pm to 2:30pm EST
- Register at:
<https://nsf.webex.com/nsf/j.php?RGID=r714de34766f098efb8795cefe79a02f4>

ADVANCE IT-Catalyst

- **June 23, 2015** 3:00pm to 4:30pm EST
- Register at:
<https://nsf.webex.com/nsf/j.php?RGID=rcbe4443fd0379281a2b56695ec898848>

Note institutional eligibility limitations for IT-Catalyst in the solicitation: Institutions that qualify for Department of Education Title III and Title V status, non-profit community colleges, designated minority serving institutions, (e.g. Tribal Colleges and Universities, Historically Black Colleges and Universities, Hispanic-Serving Institutions, Native Hawaiian Serving Institutions, and Alaska Native Serving Institutions, Predominantly Black Institutions, Non-Tribal, Native American-Serving Institutions).

The webinars will be recorded and posted on the [ADVANCE program website](#) about three weeks after these dates so you can review them if you are not available on these dates.

Reminder: Grand Challenges Concept Paper: Gates Foundation

Grand Challenges Explorations, an initiative to encourage innovative and unconventional global health and development solutions, is now accepting grant proposals for its latest application round. Applicants can be at any experience level; in any discipline; and from any organization, including colleges and universities, government laboratories, research institutions, non-profit organizations, and for-profit companies.

Two-page proposals are being accepted online until **May 13, 2015, 11:30 A.M** U.S. Pacific Day Light Time on the following topics:

- [Addressing Newborn and Infant Gut Health Through Bacteriophage-Mediated Microbiome Engineering](#)
- [Explore New Ways to Measure Delivery and Use of Digital Financial Services Data](#)
- [Surveillance Tools, Diagnostics and an Artificial Diet to Support New Approaches to Vector Control](#)
- [New Approaches for Addressing Outdoor/Residual Malaria Transmission](#)
- [New Ways to Reduce Childhood Pneumonia Deaths Through Delivery of Timely Effective Treatment](#)
- [Enable Merchant Acceptance of Mobile Money Payments](#)

Initial grants will be US \$100,000 each, and projects showing promise will have the opportunity to receive additional funding of up to US \$1 million. Full descriptions of the new topics and application instructions are available at: www.grandchallenges.org/explorations .

Statistical and Applied Mathematical Sciences Institute (SAMSI) Funded by NIH, NSF, Duke, UNC, NCSU, NISS

Grant Program: Interdisciplinary Approaches to Biomedical Data Science Challenges
Agency: Statistical and Applied Mathematical Sciences Institute (SAMSI)

RFP Website: <http://www.samsi.info/workshop/interdisciplinary-approaches-biomedical-data-science-challenges-samsi-ideas-lab-july-20-24->

Brief Description: Applications are invited for an **Ideas Lab** on "Interdisciplinary Approaches to Biomedical Data Science Challenges" taking place from July 20 to 24, 2015 at the Statistical and Applied Mathematical Sciences Institute (SAMSI) located in the Research Triangle Park, North Carolina.

The Ideas Lab process entails participation in an intensive five-day residential workshop, the development of multidisciplinary collaborative proposals through a real-time and iterative review process, and the opportunity to submit proposals for small, 1-year awards to further build the collaborations. The Ideas Lab process was modeled on the "IDEAs Factory" program developed by the Engineering and Physical Sciences Research Council (EPSRC) of the United Kingdom. The concept of the IDEAs Factory program is to organize intensive interactive multidisciplinary workshops ("Sandpits") involving around 30 participants, with the aim of developing new and bold approaches to address grand challenge questions for topics that could benefit from a new dimension in thinking. The participants are assisted by a team of professional facilitators and by a team of scientists with relevant expertise. These scientific experts, known as mentors, are not eligible for any funds that may be available for proposals, and therefore act as impartial referees of the process.

SAMSI is organizing an Ideas Lab on Interdisciplinary Approaches to Biomedical Data Science Challenges. The goal is to foster the formation of new interdisciplinary collaborations among mathematicians, statisticians and biomedical science researchers on developing models, methods and approaches for overcoming challenges in precision medicine, an important application area that is at the intersection of the biomedical and data sciences. A more-detailed description of the Lab can be found [here](#). Some exemplar areas of interest are suggested [here](#). Working under the oversight of several mentors, participants will form teams during the workshop to develop interdisciplinary projects. At the end of the workshop, they will have the opportunity to submit one-year proposals that may be considered for funding by the NSF.

This Ideas Lab is jointly sponsored by the National Institutes of Health and the National Science Foundation.

Application Procedure: Applications will be considered from researchers in mathematics, statistics, computer science, biology, clinical informatics and neuroscience, as well as other data-intensive areas such as finance and astronomy. A small committee will select approximately 30 applicants to take part in the Lab. Selected participants will have their travel and hotel expenses fully covered by SAMSI*. Applicants must be willing to commit to stay for the full week.

Application deadline: May 25, 2015. Applicants will be notified whether they have been accepted by June 8, 2015.

National Science Foundation

Grant Program: ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers (ADVANCE)

Agency: National Science Foundation NSF 14-573

RFP Website: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383

Brief Description: The goals of the ADVANCE program are (1) to develop systemic approaches to increase the representation and advancement of women in academic STEM careers; (2) to develop innovative and sustainable ways to promote gender equity in the STEM academic workforce; and (3) to contribute to the development of a more diverse science and engineering workforce. ADVANCE also has as its goal to contribute to and inform the general knowledge base on gender equity in the academic STEM disciplines. There are three tracks with distinct purposes. The Institutional Transformation (IT) track is meant to produce large-scale comprehensive change and serve as a locus for research on gender equity and institutional transformation for academic STEM. The Institutional Transformation Catalyst (IT Catalyst) track is meant either to conduct self-assessment or to implement unique strategies – either adapted from those found effective in the IT track or ones designed to be responsive to the unique environments of eligible institutions – and evaluate their effectiveness. The Partnerships for Learning and Adaptation Networks (PLAN) track is meant to provide a larger scale environment for adapting, implementing and creating knowledge about the effectiveness of a particular strategy for change within a context of networked adaptation and learning. PLAN is focused on adaptation/implementation and learning either in particular STEM disciplines (PLAN D) or across institutions of higher education (PLAN IHE).

ADVANCE projects support institutional transformation in STEM. STEM includes but is not limited to Arctic and Antarctic sciences, biological sciences, computer and information sciences, engineering, geosciences, mathematics, physical sciences, the learning sciences, and social, behavioral and economic sciences. Institutional Transformation and IT Catalyst awards are expected to include all STEM disciplines at the institution submitting the proposal. PLAN awards may include all of STEM or a subset or one discipline.

The following types of institutions are strongly encouraged to apply to the ADVANCE program: For All Project Types: Community colleges, primarily undergraduate institutions, minority-serving institutions (e.g. Tribal Colleges and Universities, Historically Black Colleges and Universities, Hispanic-Serving Institutions, Native Hawaiian Serving Institutions, Alaska Native Institutions, Predominantly Black Institutions and Non-tribal, Native American Serving Institutions), women's colleges, and institutions primarily serving persons with disabilities are encouraged to apply. It is anticipated that there may be significant differences in the issues facing faculty in these institutions, compared to faculty in other types of institutions, which will warrant development of unique strategies and/or adaptation of proven strategies in a unique way to achieve ADVANCE Program goals.

ADVANCE projects are viewed as team research and, as such, the team of principal investigators is expected to be multidisciplinary and representative of the theoretical, methodological and contextual expertise necessary to conceptualize, implement, and evaluate a successful project.

Awards: Various levels

Letter of Intent: Institutional Transformation Catalyst (IT Catalyst): October 5, 2015

Institutional Transformation (IT): November 5, 2015

Deadlines: Institutional Transformation Catalyst (IT Catalyst): November 3, 2015

Institutional Transformation (IT): January 20, 2016

Grant Program: Quantum Information Science**Agency: National Science Foundation NSF PD 15-7281****RFP Website:**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505207&org=NSF&sel_org=NSF&from=fund

Brief Description:

Quantum Information Science (QIS) supports theoretical and experimental proposals that explore quantum applications to new computing paradigms or that foster interactions between physicists, mathematicians, and computer scientists that push the frontiers of quantum-based information, transmission, and manipulation.

The quantum information science program is focused on investigations relevant to disciplines supported by the Physics Division, while encouraging broader impacts on other disciplines. Disciplines within the purview of the Physics Division include: atomic, molecular, optical, plasma, elementary particle, nuclear, gravitational and biological physics, particle astrophysics, and accelerator science.

Proposals with intellectual focus in areas supported by other NSF Divisions should be submitted to those divisions directly. Proposals that cross Divisional lines are welcome, but the Physics Division encourages PIs to request a co-review by naming other Divisional programs on the cover sheet. This facilitates the co-review and participation of other programs in the review process.

Awards: Various

Letter of Intent: Not required

Deadlines: December 3, 2015

Grant Program: Computational Physics**Agency: National Science Foundation NSF PD 15-7244****RFP Website:**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505207&org=NSF&sel_org=NSF&from=fund

Brief Description:

Computational Physics (CP) supports research for computational and data-enabled science.

The program emphasizes novel methods for high-performance computing that require significant code development. Priority will be given to proposals that, in addition to compelling scientific goals, have a computational advance or new enabling capability.

Proposals should include either innovation in computing, such as algorithm development and efficient use of novel architectures, or provide significant improvement to community codes.

Computational Physics is the program through which the Physics Division participates in the Computational and Data-Enabled Science and Engineering (CDS&E) program.

The computational physics program is focused on investigations relevant to disciplines supported by the Physics Division, while encouraging broader impacts on other disciplines. Disciplines within the purview of the Physics Division include: atomic, molecular, optical, plasma, elementary particle, nuclear, gravitational and biological physics, particle astrophysics, and accelerator science.

Proposals with intellectual focus in areas supported by other NSF Divisions should be submitted to those divisions directly. Proposals that cross Divisional lines are welcome, but

the Physics Division encourages PIs to request a co-review by naming other Divisional programs on the cover sheet. This facilitates the co-review and participation of other programs in the review process.

Awards: Various

Letter of Intent: Not required

Deadlines: December 3, 2015

National Institute of Justice

Grant Program: NIJ FY15 Comprehensive School Safety Initiative

Agency: National Institute of Justice and UD Department of Justice

RFP Website: <https://www.ncjrs.gov/pdffiles1/nij/sl001161.pdf>

Brief Description: The U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), National Institute of Justice (NIJ) is seeking applications for the Comprehensive School Safety Initiative (CSSI). This program furthers the Department's mission by funding rigorous research to produce practical knowledge that can improve the safety of schools and students. The initiative is carried out through partnerships between researchers, educators and other stakeholders, including law enforcement and mental health professionals. Projects funded under the CSSI are designed to produce knowledge that can be applied to schools and school districts across the nation for years to come. This solicitation includes four funding categories with different expectations and requirements to accomplish the purposes of the CSSI.

In general, NIJ is authorized to make grants to, or enter into contracts or cooperative agreements with, States (including territories), units of local government (including federally recognized Indian tribal governments as determined by the Secretary of the Interior), nonprofit and for-profit organizations (including tribal nonprofit or for-profit organizations), institutions of higher education (including tribal institutions of higher education), and certain qualified individuals. Local education agencies (LEAs), public charter schools that are recognized as an LEA, and State education agencies (SEAs) also are eligible to apply.

Category 1: Developing Knowledge About What Works to Make Schools Safe

The purpose of Category 1 funding is to support demonstrations and evaluations of programs, practices, policies, and strategies designed to enhance school and student safety. Applicants in this category are encouraged strongly to focus their efforts on a limited range of specific, locally implemented, interventions so that they can develop the most robust research designs possible and produce scientific evidence regarding the efficacy, effectiveness, and cost/benefit of these interventions.

Category 2: Causes and Consequences of School Violence

The purpose of Category 2 funding is to support research to better understand the potential root causes and related factors that contribute to school violence, as well as the impact and consequences of school violence. The foundational research funded under Category 2 should have the potential to produce advances in theory, methodology, and/or understanding of important constructs with clear potential implications for policy or practice related to school and student safety. Projects funded under Category 2 will answer questions about why school violence occurs, where and when it occurs, who is involved, and how schools and people are affected. Research on root causes may include those factors that increase the risk of school violence and protective factors that buffer against risk. Applicants are encouraged to consider

a variety of research questions and research methods to improve the understanding of violence in schools, among students, and directed at students. NIJ encourages applicants to consider longitudinal studies, mixed methods approaches, and studies that incorporate multiple existing data sources.

Category 3: Shorter Term Studies on School Safety

The purpose of Category 3 funding is to produce research findings with implications for school safety practice and policy with project periods that are no longer than 24 months. Applicants are encouraged to consider topics and research designs that are amenable to shorter timeframes. For example, this timeframe may only allow for new data collection during a single school year, with advance planning, analysis and reporting occurring in the months before and after the academic year. Studies that can be implemented within this timeframe might include high- quality case studies or mixed methods comparative research focused on the challenges, opportunities, and lessons learned from efforts to increase school and student safety under different circumstances.

Category 4: Developing and Evaluating a Comprehensive School Safety Framework

The purpose of Category 4 funding is to support the development and testing of comprehensive approaches to school safety. This funding will support two to three multidisciplinary partnerships that will develop a comprehensive school safety framework, implement that framework within local school districts, and evaluate outcomes and costs. These efforts are intended to produce a single comprehensive school safety framework that can inform school safety activities across the nation.

Projects funded under Category 4 will be carried out by a diverse, multidisciplinary team of subject matter experts and researchers, working closely with educators, law enforcement, behavioral and mental health professionals, and others in one or more local school districts. A single organization or agency (the applicant) should be designated as the project lead that will assure that all components of the project are implemented as intended. The applicant that serves as the project lead will enter into a cooperative agreement with NIJ (see below for more information about cooperative agreements) and will make subawards (with entities expected to receive a portion of award funds to carry out part of the funded project) and/or enter into administrative agreements with other entities working on the project.

Awards: Various

Letter of Intent: Not required

Deadlines: June 12, 2015

National Institutes of Health and FDA

Grant Program: Health Services and Economic Research on the Prevention and Treatment of Drug, Alcohol, and Tobacco Abuse (R21), (R01), (R03) and (R34)

Agency: National Institutes of Health PA-15-253

[PA-15-251, R01](#) Research Grant

[PA-15-252, R03](#) Small Grant Program

[PA-15-250, R34](#) Planning Grant

RFP Website: <http://grants.nih.gov/grants/guide/pa-files/PA-15-253.html>

Brief Description: In this time of broad change in the U.S. healthcare delivery system, there is an urgent need for high quality health services research on drug, tobacco, and alcohol prevention, treatment, and recovery support services. With the expansion of health insurance coverage to millions of Americans – including a disproportionate percentage of persons at

high risk for drug, tobacco, and use disorders– research is needed to understand variation in realized access, utilization, quality, cost, and outcomes. Related topics include comparative effectiveness research on evidence-based prevention and therapeutic interventions and business practices; models for integrating screening and treatment for drug, alcohol, and/or tobacco use into general medical settings; processes or mechanisms through which capacity to implement quality improvements in health services is increased; chronic care and recovery support systems for addiction; workforce issues associated with increased demand for services; and economic studies to identify efficient and economic models for organizing and financing services.

Clinical Quality Improvement – studies that may improve the appropriateness, effectiveness, safety, and efficiency of prevention, treatment, and recovery interventions, and services delivered to individuals in a variety of settings including substance abuse and mental health treatment programs; schools; general health care settings; criminal and juvenile justice systems; child welfare systems, and social service agencies. Such research could include services for special populations (e.g., children, adolescents, women, veterans, racial and sexual minorities, geriatric populations, justice-involved populations, those with or at risk of contracting HIV/HCV); adaptive service delivery strategies to adjust the level, dosage, and type of interventions and services over time in response to changing needs; continuity of care; development of performance measures and standards of care to improve assessment of patient needs, treatment progress, and outcomes; use of information technology to increase effectiveness, efficiency, and potency of prevention intervention and health service delivery; training and supervision of behavioral healthcare professionals; integration of prevention interventions into primary care; juvenile justice and child welfare; integration of alcohol, tobacco, or drug treatment in primary care and in treatment for co-morbid mental disorders; the efficacy of widely used but untested prevention and treatment approaches; revising payment mechanisms to incentivize high quality care, reimbursing for care coordinated across social services and medical systems, or paying for management of addiction as a chronic condition; and strategies to enhance the availability of prevention and treatment services in criminal justice settings.

Quality Improvement in Services Organization and Management – studies that address organizational contexts and service delivery models; the interaction of providers and programs within and across systems, and at multiple levels (e.g., program, practice network, state); and their collective impact on quality of service delivery. Research topics may include testing models for collaboration, co-location, or integration of drug, alcohol, and tobacco prevention, treatment, and recovery support services with medical settings; management and human resources issues including workforce recruitment, training and retention; the use of best practices, performance measures, and standards of care to improve assessment of client needs, treatment progress, and outcomes; effects of state, payer, and institutional policies on treatment accessibility, cost, duration, and quality; and use of health information technology to facilitate cross-systems collaboration and improve service quality.

Implementation Research – studies that seek to explain and ultimately improve the uptake of evidence-based prevention and treatment practices, including HIV prevention and treatment in real-world service delivery settings. Such studies might include the measurement or enhancement of organizational capacity for innovation and adoption; tests of organizational change strategies to implement evidence-based practices; comparative tests of alternative approaches to dissemination and implementation; development of measures and methods for assessing adoption, implementation, fit, fidelity, and sustainability of evidence-based practices; and identification of systems-level factors that facilitate or impede the diffusion and adoption of evidence-based practices. Other areas that implementation research can offer

insight include the processes through which science-based interventions enter broad practice, such as the decision-making processes that clinicians, service providers, agencies or communities use to select interventions for adoption; the processes through which interventions may be adapted to meet the unique needs of specific settings, and populations receiving interventions; utilizing technology to facilitate uptake and sustainability, and using technology to improve the operational practice and characteristics that impact the effectiveness and reach of interventions. Research on the de-adoption of programs, policies, and practices that have been shown to be ineffective is also of interest. Proposed studies in this area should test or apply conceptual models that allow results to contribute to the broader field of implementation science.

Awards: Direct costs are limited to \$275,000 over a two-year period, with no more than \$200,000 in direct costs allowed in any single year.

Letter of Intent: Potential applicants are strongly encouraged to contact Scientific/Research staff prior to submitting an application.

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

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

Grant Program: Neuroimaging Informatics Tools and Resources Clearinghouse (U24)

Agency: National Institutes of Health RFA-EB-15-005

RFP Website: <http://grants.nih.gov/grants/guide/rfa-files/RFA-EB-15-005.html>

Brief Description: The Neuroimaging Informatics Tools and Resources Clearinghouse (NITRC) (<http://www.nitrc.org>), originally funded by the NIH Blueprint for Neuroscience Research in 2006, is a dynamic inventory of web-based neuroimaging informatics resources: software, data, and tools accessible via any computer connected to the internet. The purpose of the NITRC project is to promote the enhancement, sharing, adoption, and evolution of neuroimaging informatics tools and resources by providing access, information, and forums for interaction for the user community and the associated developers. The NITRC project was designed to improve scientific research and promote sharing of previously funded research and initiatives and to encourage community interaction and collaboration. NITRC facilitates finding and comparing neuroimaging resources for functional and structural neuroimaging analyses. The goals of NITRC are to catalog and point to standardized information about neuroimaging tools, or resources. In 2011, the scope of NITRC was expanded to provide enhanced services such as virtual computing, and data storage.

The functionality of the Neuroimaging Informatics Tools and Resources Clearinghouse (NITRC) has enabled three distinct components to flourish

- NITRC-R: the NITRC resource for software and tool exchange.
- NITRC-IR: the NITRC image repository of publicly accessible, anonymized, and curated, clinical neuroimaging data.
- NITRC-CE: the NITRC compute environment permitting researchers around the globe the ability to do computations on neuroimaging datasets.

NITRC-R has become the major web-based collaborative environment enabling the distribution, enhancement, and adoption of neuroinformatics resources. It currently hosts more than 748 tools and resources in areas such as magnetic resonance imaging (MRI),

electroencephalography (EEG), magnetoencephalography (MEG), multi-modal, positron emission tomography, single photon emission computed tomography (PET / SPECT), computed tomography (CT), clinical neuroinformatics, imaging genomics, optical imaging, and computation neuroscience.

NITRC-IR currently comprises a curated repository of more than 6,000 human subjects' DICOM and NIfTI-1 images, which are searchable by metadata such as handedness, gender, and grouping. This data is registered on INCF Dataspace and is a Tier 3 resource on the Neuroscience Information Framework (NIF). NITRC-IR is the data repository for the 1000 Functional Connectomes (resting state), the ABIDE study (resting state), CANDIShare (T1 and manual segmentations), ADHD200 (resting state), INDI NKI/Rockland (resting state), PING (structural, diffusion, and resting state), CoRR (test-retest reliability and reproducibility), as well as international studies such as Beijing Enhanced DTI, Beijing Eyes Open Eyes Closed, Beijing Short TR study, Study Forrest rev003 (structural brain scans, physiological measurements, technical confounds), IXI study (normal, healthy subjects MRI scans).

NITRC-CE is an on-demand, virtual computing platform built upon a NeuroDebian operating system. It is pre-configured with a number of neuroimaging applications (for example, AFNI, FSL, etc.). NITRC-CE can be implemented by researchers within their academic infrastructure, or there are implementations made available through commercial cloud providers (such as Amazon Web Services, and Microsoft VM Depot).

Awards: Application budgets may request up to \$350,000 per year in direct costs up to 3 years.

Letter of Intent: June 14, 2015

Deadline: July 14, 2015, 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.

Grant Program: NeuroNEXT Infrastructure Resource Access (X01)

Agency: National Institutes of Health NINDS PAR-15-195

Companion Program: [PAR-15-194](#), U44 Small Business Innovation Research (SBIR) Cooperative Agreement

RFP Website: <http://grants.nih.gov/grants/guide/pa-files/PAR-15-195.html>

Brief Description: This FOA (Funding Opportunity Announcement) encourages applications for exploratory clinical trials of investigational agents (drugs, biologics, surgical therapies or devices) that may contribute to the justification for and provide the data required for designing a future trial, for biomarker validation studies, or for proof of mechanism clinical studies. Applications for drugs or biologics should provide compelling scientific evidence that the investigational agent proposed for study will reach/act upon the designated target or that its mechanism of action is such that it is expected to be of benefit in ameliorating a specific aspect of the disease. Neurologic diseases chosen for study must fall within the primary responsibility of NINDS (www.ninds.nih.gov/funding/areas/index.htm). Multi-site studies in stroke prevention, treatment and/or recovery are not considered responsive to this FOA; those applications should go to NIH StrokeNET: <http://www.nihstrokenet.org/>.

Applications in rare diseases are encouraged while recognizing that available patient pools may not be adequate to meet the sample size requirements normally required to establish the efficacy of an intervention. NINDS acknowledges that innovative, non-traditional trial designs including adaptive designs may be appropriate in rare disease studies. While NeuroNEXT is primarily intended for exploratory trials, the network will consider Phase 2/3 trials in diseases with a US prevalence of under 5,000 persons.

For medical devices, in addition to providing initial clinical safety data, appropriate studies are those

- that inform the next phase of development, usually by finalizing the device design, establishing
- operator technique, and/or finalizing the choice of study endpoints for the design of a pivotal clinical trial.

This FOA is not intended to support the conduct of a clinical trial where the primary aim is to confirm efficacy of a drug or biologic.

Examples of appropriate studies under this FOA include, but are not limited to, those designed to:

- Evaluate and optimize the dose, formulation, safety, tolerability or pharmacokinetics of an intervention in the target population.
- Evaluate whether an intervention produces sufficient evidence of short-term activity (e.g., 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 interventions or dosing regimens to be evaluated in a subsequent trial, based on tolerability, safety data, biological activity, or preliminary clinical efficacy (e.g., fertility trials).
- Evaluate biological activity relative to clinical endpoints.
- Applications seeking to obtain data needed for pharmacometric modeling are encouraged, with the ultimate aim of enabling the optimal design of a future efficacy trial of an intervention.

Awards: N/A; SBIR Funding mechanism is available.

Letter of Intent: Not required

Deadline: Applications are accepted by continuous receipt, 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:

Council Round: May

Receipt Window: November 13 - March 12

Council Round: October

Receipt Window: March 13 - July 12

Council Round: January

Receipt Window: July 13 - November 12 .

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.

Air Force Office of Scientific Research (AFOSR)

Grant Program: Research Interests of the Air Force Office of Scientific Research
Agency: Air Force Office of Scientific Research (AFOSR) BAA-AFRL-AFOSR-2015-0001
RFP Website:

<https://www.fbo.gov/index?s=opportunity&mode=form&id=d34562467cd2df32dd11499d42cba698&tab=core&cvview=0>

Brief Description: AFOSR plans, coordinates, and executes the Air Force Research Laboratory's (AFRL) basic research program in response to technical guidance from AFRL and requirements of the Air Force. Additionally, the office fosters, supports, and conducts research within Air Force, university, and industry laboratories; and ensures transition of research results to support U.S. Air Force needs. The focus of AFOSR is on research areas that offer significant and comprehensive benefits to our national warfighting and peacekeeping capabilities. These areas are organized and managed in two scientific Departments: Engineering and Information Science (RTA) and Physical and Biological Sciences (RTB). The research activities managed within each Department are summarized in this section. The Engineering and Complex Systems team within the Engineering and Information Science Branch leads the discovery and development of the fundamental and integrated science that advances future air and space flight. The broad goal of the division is to discover and exploit the critical fundamental science and knowledge that will shape the future of aerospace sciences. A key emphasis is the establishment of the foundations necessary to advance the integration or convergence of the scientific disciplines critical to maintaining technological superiority. A wide range of fundamental research addressing electronics, fluid dynamics, materials, propulsion, and structural mechanics are brought together in an effort to increase performance and achieve unprecedented operational capability. The division carries out its ambitious mission through leadership of an international, highly diverse and multidisciplinary research community to find, support, and foster new scientific discoveries that will ensure future novel innovations for the future U.S. Air Force.

The central research direction for this team focuses on meeting the basic research challenges related to future air and space flight by leading the discovery and development of fundamental science and engineering in the following research areas:

- 1) Aerothermodynamics, Dr. Ivett Leyva
- 2) Dynamic Materials and Interactions, Dr. Jennifer Jordan
- 3) Energy and Combustion Sciences, Dr. Chiping Li
- 4) GHz-THz Electronics, Dr. Kenneth Goretta
- 5) Low Density Materials, Dr. Joycelyn Harrison
- 6) Multi-Scale Structural Mechanics and Prognosis, Dr. David Stargel
- 7) Optoelectronics and Photonics, Dr. Gernot S. Pomrenke
- 8) Space Power and Propulsion, Dr. Mitat A. Birkan
- 9) Test Science for Test and Evaluation, Dr. Michael Kendra
- 10) Turbulence and Transition, Dr. Rengasamy Ponnappan

The Physical Sciences Team research portfolios and their program officers are listed here:

- 1) Aerospace Materials for Extreme Environments, Dr. Ali Sayir
- 2) Atomic and Molecular Physics, Dr. Tatjana Curcic
- 3) Electromagnetics, Dr. Arje Nachman
- 4) Flow Interactions and Control, Dr. Douglas Smith
- 5) Laser and Optical Physics, Dr. John Luginsland
- 6) Plasma and Electro-Energetic Physics, Dr. Jason Marshall
- 7) Quantum Electronic Solids, Dr. Harold Weinstock
- 8) Remote Sensing and Imaging Physics, Dr. Julie Moses

- 9) Sensing, Surveillance and Navigation, Dr. Arje Nachman
- 10) Space Science, Dr. Kent Miller
- 11) Ultrashort Pulse Laser-Matter Interactions, Dr. Enrique Parra

The Chemistry and Biological Sciences Team research portfolios and their program officers are listed here:

- 1) Biophysics, Dr. Hugh De Long and Dr. William P. Roach
- 2) Human Performance and Biosystems, Dr. Patrick O. Bradshaw
- 3) Mechanics of Multifunctional Materials and Microsystems, Dr Byung-Lip Lee
- 4) Molecular Dynamics and Theoretical Chemistry, Dr. Michael R. Berman
- 5) Natural Materials, Systems, and Extremophiles, Dr. Hugh C. De Long
- 6) Organic Materials Chemistry, Dr. Charles Y. Lee

Awards: In Fiscal Year 2014, AFOSR managed funding support for approximately 1,600 grants, cooperative agreements, and contracts to about 470 academic institutions, non-profit organizations and industrial firms. This included grants, cooperative agreements and contracts to academic institutions, non-profit organizations and industry. About \$260M is anticipated to be available for support of actions awarded through this BAA process; subject to availability of funds. Research proposals in the range of \$200-400K per year are encouraged. Awards may be proposed for up to five years. Awards may start any time during the fiscal year.

Letter of Intent: Applicants are encouraged to contact the Program Officer for the subject area to discuss the proposed research effort, particularly the current state of related research, the potential of the effort to advance the state of the art, and anticipated budget. The Program Officer may ask for additional information at that time.

Deadline: Full Proposal Deadline(s): This announcement remains open until superseded. Proposals are reviewed and evaluated as they are received. While proposals overall may be submitted at any time, specific topic instructions may recommend proposal submission by specific dates in accordance with (IAW) anticipated funding.

DoD/ DARPA/ US Army Medical Research Acquisition Activity

Grant Program: DoD Neurofibromatosis New Investigator Award

Agency: US Army Medical Research Acquisition Activity W81XWH-15-NFRP-NIA

RFP Website: http://cdmrp.army.mil/funding/pa/15nfrpnia_pa.pdf

Brief Description: The intent of the NFRP New Investigator Award is to support the continued development of promising independent investigators and/or the transition of established investigators from other research fields into a career in the field of NF research. Prior experience in NF research is not required. However, Principal Investigators (PIs) with a limited background in NF research are strongly encouraged to have a collaborator who is experienced in the NF field. Research projects may focus on any phase of research, excluding clinical trials. Applications must include preliminary and/or published data that is relevant to NF and the proposed research project. Preclinical Research: All projects should adhere to a core set of standards for rigorous study design and reporting to maximize the reproducibility and translational potential of preclinical research.

The FY15 NFRP strongly encourages research applications that specifically address the critical needs of the NF community in one or more of the following Areas of Emphasis:

- Health services research for NF (see definition below)
- Heterogeneity of neurofibromas and other NF-related tumors
- Manifestations of NF post-adolescence:
- Mechanisms of pain
- Novel disease and treatment response markers for NF using genomics, epigenetics, systems biology, metabolomics, or other similar approaches
- Target identification and drug discovery for the treatment of NF
- Environmental, nutritional, and other modifiers of NF

Eligibility: An independent investigator *at or below* the level of Assistant Professor (or equivalent); *or* An established independent investigator in an area other than NF *at or above* the level of Assistant Professor seeking to transition to a career in NF thereby bringing their expertise to the field.

Must not have received more than \$300,000 in total direct costs for previous or concurrent NF research as a PI of one or more federally funded, non-mentored peer reviewed grants;

Awards: Total funds available in FY15: \$15 million

Letter of Intent: Not Required. Recommended to contact program officer

Pre-Application Deadline: 5:00 p.m. Eastern time (ET), June 18, 2015

Invitation to Submit an Application: July 2015

Application Submission Deadline: July 27, 2015

Grant Program: Neuromusculoskeletal Injuries Research Award

Agency: US Army Medical Research Acquisition Activity W81XWH-15-JPC-8/CRM RP-NMSIRA

RFP Website: http://cdmrp.army.mil/funding/pa/15crmrpnmsira_pa.pdf

Brief Description: The FY15/16 JPC-8/CRM RP Neuromusculoskeletal Injuries Research Award (NMSIRA) is intended to support preclinical research and clinical trials on the reintegration after injury, functional utility of assistive devices related to the human-device interface, secondary health effects following severe extremity injury, and optimizing rehabilitation and device prescription for patients with neuromusculoskeletal injury.

To meet the intent of the award mechanism, applications **must** specifically address one or more of the FY15/16 JPC-8/CRM RP NMSIRA Focus Areas listed below. Applications proposing research outside of the Focus Areas listed below should **not** be submitted in response to this Program Announcement/Funding Opportunity.

- **Limited capability to assess and facilitate the optimal restoration of physical and psychosocial reintegration following neuromusculoskeletal injury**
 - ○ Lack of efficacious social support strategies
 - ○ Limited innovative technologies for interconnectivity
 - ○ Lack of demonstrable methods and technologies to assist and promote lifelong wellness and improved quality of life
 - ○ Limited validated methods that assess and facilitate effective return to desired real-world functional performance
- **Current assistive technology, including prosthetic and orthotic, characteristics that limit patient interaction, usability and durability**
 - ○ Lack of proprioceptive and other sensory inputs that inhibit functional use and safety

- ○ Lack of intuitive user intent control for functional use of assistive devices
- ○ Lack of device interoperability between available and future components that limits functional potential of multi-joint systems
- ○ Lack of human-device interface to address limb health, comfort, and function
- **Limited ability to predict, identify, and reduce secondary health effects that develop after primary neuromusculoskeletal injury**
 - ○ Inability to determine factors that predict development and successful treatment of osteoarthritis, low back pain, or other musculoskeletal conditions
 - ○ Limited intervention strategies to diminish risk of falls
 - ○ Limited intervention strategies to decrease risk of fractures
 - ○ Limited strategies to prevent chronic comorbidities such as obesity, cardiovascular disease, and diabetes
- **Limited understanding of the optimal treatment strategies and sequence of progression throughout the rehabilitation process following neuromusculoskeletal injury, to include sprains and strains**
 - Inadequate evidence to determine the optimal dose, timing, frequency, duration, setting, and use of innovative rehabilitative techniques to minimize impairments, maximize function and performance, and/or achieve optimal quality of life
- **Inadequate measures for standardized assessment of relevant activity performance and participation**
 - ○ Lack of validated metrics that effectively predict function following neuromusculoskeletal injury
 - ○ Limited number of validated metrics that effectively quantify changes that result from rehabilitation or provision of novel technologies
 - ○ Lack of quantifiable and functional objective standards for discharge from clinical care

Awards: The anticipated total costs budgeted for the entire period of performance (up to 3 years) will not exceed **\$1.5 million (M)**.

Letter of Intent: Not Required. Recommended to contact program officer

Pre-Application Deadline: 5:00 p.m. Eastern time (ET), June 1 2015

Invitation to Submit an Application: June 29, 2015

Application Submission Deadline: August 17, 2015

Grant Program: DARPA Program on Biological Technologies

Agency: DARPA-BAA-15-35 Biological Technologies

RFP Website:

https://www.fbo.gov/index?s=opportunity&mode=form&id=805fad2938220bfbb1b60f70bc e0580a&tab=core&_cvview=0

http://www.darpa.mil/Opportunities/Solicitations/BTO_Solicitations.aspx

Brief Description: The Defense Advanced Research Projects Agency (DARPA) is soliciting innovative research proposals of interest to the Biological Technologies Office (BTO).

Proposed research should investigate leading edge approaches that enable revolutionary advances in science, technologies, or systems at the intersection of biology with engineering and the physical and computer sciences. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of the art. BTO seeks unconventional approaches that are outside the mainstream, challenge assumptions, and have

the potential to radically change established practice, lead to extraordinary outcomes, and create entirely new fields.

The mission of BTO is to foster, demonstrate, and transition breakthrough fundamental research, discoveries, and applications that integrate biology, engineering, computer science, mathematics, and the physical sciences to expand the national security toolkit. BTO's investment portfolio goes far beyond life sciences applications in medicine to include areas of research such as human-machine interfaces, microbes as production platforms, and deep exploration of the impact of evolving ecologies and environments on U.S. readiness and capabilities. BTO's programs operate across a wide range of scales, from individual cells to the warfighter to global ecosystems. BTO responds to the urgent and long-term needs of the Department of Defense (DoD) and addresses national security priorities. The overarching goal is to develop, demonstrate, and transition biological- based technologies as part of the toolkit available to DARPA stakeholders.

BTO is seeking novel approaches that will build technical communities that tap into sources of innovation both inside and outside traditional DoD performer communities. BTO encourages efforts that are creative and agile both in terms of the technologies proposed and in the structure of the approach. See the attached BAA Package for specific areas BTO is interested in receiving submissions for, and the specific abstract and proposal submission requirements.

Eligibility: An independent investigator *at or below* the level of Assistant Professor (or equivalent); *or* An established independent investigator in an area other than NF *at or above* the level of Assistant Professor seeking to transition to a career in NF thereby bringing their expertise to the field.

Must not have received more than \$300,000 in total direct costs for previous or concurrent NF research as a PI of one or more federally funded, non-mentored peer reviewed grants;

Awards: Multiple Awards

Letter of Intent: Abstract to be submitted to program officer email: DARPA-BAA-15-35@darpa.mil

Application Deadline:

Proposal Abstracts and Full Proposals will be submitted on a rolling basis until April 28, 2016, 4:00pm ET
