

NJIT Research Newsletter

Issue: ORN-2016-031

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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(Related to research funding)

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Recent Research Grant and Contract Awards

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

PI: Alexander Kosovichev (PI)

Department: Center for Heliophysics

Grant/Contract Project Title: NASA Earth & Space Science Fellowship 2016

Funding Agency: NASA

Duration: 09/01/16-08/31/17

PI: Lou Kondic (PI)

Department: Mathematical Sciences

Grant/Contract Project Title: NASA Shared Services Center (NSSC)

Funding Agency: NASA

Duration: 08/16/16-08/15/18

PI: Gelu Nita (PI), Alexander Kosovichev (Co-PI) and Vincent Oria

Department: Center for Solar Terrestrial Research, Center of Heliophysics, and Department of Computer Science

Grant/Contract Project Title: Multi-Instrument Database of Solar Flares

Funding Agency: NASA

Duration: 06/23/15-06/22/17

PI: Namas Chandra (PI)

Department: Center for Injury Biomechanics, Materials and Medicine

Grant/Contract Project Title: Fundamental Understanding of the Mechanism of Blast-Induced Traumatic Brain Injury

Funding Agency: US Army

Duration: 09/28/15-09/27/18

PI: Wenda Cao (PI) and Phillip Goode (Co-PI)

Department: Center for Solar Terrestrial Research

Grant/Contract Project Title: International Collaborations to Optimize Scientific Output of the New Solar Telescope in Big Bear

Funding Agency: The National Astronomical Observatory of China

Duration: 01/01/14-12/31/18

PI: Rajesh Dave (PI) Zafar Iqbal (Co-PI) and Ecevit Bilgili (Co-PI)

Department: Chemical, Biological and Pharmaceutical Engineering

Grant/Contract Project Title: Development of regulatory science for continuous manufacturing of strip-film based drug dosage forms capable of real-time release

Funding Agency: NIH

Duration: 09/15/15-08/31/18

PI: Laurence Howell (PI)

Department: EOP

Grant/Contract Project Title: Greater Philadelphia Region Louis Stokes Alliance for Minority Participation (Philadelphia AMP) Initiative (Senior-Level Alliance)

Funding Agency: NSF

Duration: 08/01/14-07/31/19

In the News...

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

NSF: NEW NANO NODES: Current awards for Network for Computational Nanotechnology (NCN) nodes expire in September, 2017. Proposals for the next phase should address these questions: What compelling new nanoscience modeling and computational tool(s) will be developed and how will it advance nanotechnology to meet critical national needs? What will the Node undertake to nucleate a community of academic and industry users engaged in the new tool(s) and increase quality and quantity of nanoHUB tools, resources, and usage? How will the Node interact productively with the Cyber Platform and other Nodes to augment existing capabilities and ensure seamless and complementary advancement of the NCN's goals? More about NCN Hubs on <http://nanohub.org/groups/ncn/> NSF RFP 16-593 **Network for Computational Nanotechnology (NCN)** is included in the grant opportunity alert below.

NSF: NSF's Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program "supports academe-industry partnerships, which are led by an interdisciplinary academic research team collaborating with at least one industry partner to carry out research to advance,

adapt, and integrate technology(ies) into a specified, human-centered smart service system." Projects "should be focused on translational, pre-commercialization space, building on novel fundamental research discoveries with the objective of creating or transforming a 'smart(er)' service system that has the potential for significant social and economic impact." Webinar event and NSF RFP 15-591 are included in the sections below. RFP website is <https://www.nsf.gov/pubs/2016/nsf16591/nsf16591.htm>

ONR: The Office of Naval Research "seeks to identify and support academic scientists and engineers who are in their first or second full-time tenure-track or tenure-track-equivalent academic appointment" who show "exceptional promise for doing creative research." ONR's Young Investigator Program (YIP) is interested in receiving proposals aimed at supporting these investigators' teaching and research careers. More information on <http://www.onr.navy.mil/~media/Files/Funding-Announcements/BAA/2016/N00014-16-S-F015.ashx>

IEEE Spectrum: Where the Tech Jobs Are: 2016: The Internet of Things, medical electronics, and railroads are all good bets. **The Class of 2016 will enter** the most welcoming U.S. job market in nearly a decade: Sixty-seven percent of employers say they plan to hire recent college graduates this year, the highest number since 2007, according to job site CareerBuilder's [annual forecast](#). Second only to business majors, freshly minted engineers are set to enjoy most of that hiring goodwill as the U.S. economy continues its slow-but-steady postrecession growth. According to a survey conducted by [the National Association of Colleges and Employers](#)(NACE), at the end of last year, two-thirds of company respondents were [planning to hire engineers](#). Complete article on <http://spectrum.ieee.org/at-work/tech-careers/where-the-tech-jobs-are-2016>

Events and Announcements

Event: Partnerships for Innovation: Building Innovation Capacity - Smart Service Systems

When:

- **Wednesday, September 7, 2016, 11:30am-1:00 pm EDT**
- [REGISTER HERE](#)
- **Friday, September 9, 2016, 2:00 pm - 3:30 pm EDT**
- [REGISTER HERE](#)

Website: <https://www.nsf.gov/eng/iip/pfi/bic.jsp>

Brief Description: The Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program supports academe-industry partnerships to carry out research to advance, adapt, and integrate technology (ies) into a specified, human-centered smart service system. The selected service system should function as a technology test bed. These translational research projects require additional effort to integrate the technology into a "smart" service system, one that can identify, learn, adapt, and make decisions. It is essential that this research incorporate human factors considerations to assure the system's efficacy. The research tasks in turn might generate additional discoveries inspired by the interaction of humans and technology.

A highly interdisciplinary collaboration is needed to achieve successful integration into a smart service system. Thus, required research components to be included in PFI:BIC projects are as follows:

- Engineered system design and integration;

- Computing, sensing, and information technologies; and
- Human factors, behavior sciences, and cognitive engineering.

There is a single funding competition each fiscal year. Click here to see [current list of active awards](#). Please access the current solicitation here: [NSF PFI:BIC 16-591](#) (see the Grant Opportunity section below).

Event: 2016 NRT (NSF Research Traineeship) Program Information Webinar

When: November 9, 2015 1:00 AM to December 9, 2016 11:45 PM

Website: http://www.nsf.gov/events/event_summ.jsp?cntn_id=134466&org=NSF

Brief Description: The NSF Research Traineeship program (NRT) prerecorded informational videos to provide an overview of the NRT program and describe the key similarities and differences of the two tracks. The aim of these webinars was to give potential principal investigators information on program announcement [16-503](#) by emphasizing several key features and requirements of each track.

Grant Opportunity Alerts

Keywords and Areas Included in Grant Opportunity Alerts:

Internal Faculty Seed Grant Opportunities: 2016 NJIT Faculty Seed Grants; 2016 Rutgers BHI-RUN-NJIT Pilot Grants Program in Neuroscience

NSF: National Science Foundation Research Traineeship (NRT) Program; NRT Internal Competition; Network for Computational Nanotechnology (NCN); Ecology and Evolution of Infectious Diseases (EEID); Partnerships for Innovation: Building Innovation Capacity (PFI:BIC); Alliances for Graduate Education and the Professoriate" (AGEP)

NIH: NCI Small Grants Program for Cancer Research (NCI Omnibus R03); Innovation Corps (I-Corps™) at NIH Program for NIH and CDC; Centers of Biomedical Research Excellence (COBRE) (P20); BRAIN Initiative: Non-Invasive Neuromodulation - New Tools and Techniques for Spatiotemporal Precision; BRAIN Initiative: Foundations of Non-Invasive Functional Human Brain Imaging and Recording - Bridging Scales and Modalities (R01)

Department of Defense/US Army/DARPA/ONR: Extreme Optics and Imaging (EXTREME) Proposers Day; Microsystems Technology Office (MTO) Office-wide Proposers Day; Young Investigator Program (YIP)

Department of Energy: Request For Information On Potential Technical Focus Areas For Advanced Manufacturing - Related Traineeships

NASA: ROSES 2016: Astrophysics Probe Mission Concept Studies

Grant Opportunities

Internal Faculty Seed Grants

NJIT Faculty Seed Grant Awards – 2016-17

Purpose:

NJIT “2020 Vision” strategic plan targets on substantial increase in academic research and external funding with faculty and student professional development. The purpose of the NJIT Faculty Seed Grant (FSG) initiative is to promote academic research in the core and interdisciplinary areas by providing seed funding to obtain preliminary results or establish hypotheses for developing future grant proposals for submission to external funding agencies. The FSG initiative specifically seeks seed funding proposals from faculty to launch new initiatives in core and interdisciplinary emerging areas aligned with NJIT strategic tactics to develop critical research mass.

Eligibility and Type of Awards:

NJIT full-time faculty with specific research initiative to enhance the critical mass in key and emerging areas may apply to FSG program for internal funding with a budget of \$7500 per project over the FY17 ending June 30, 2017. Multidisciplinary projects with strong recommendation and justification from College/School Dean will be considered at the funding level of \$10,000 subject to availability of funds. It is expected that 15-20 FSG awards will be made this year. Funding is arranged through the Offices of Research and College/School Deans.

Recipients of FSG as lead faculty are not eligible to receive another FSG award as lead faculty within three years from the last FSG award. Projects funded by FSG are not eligible to receive another FSG as the intent of internal seed funding is to facilitate initial research towards obtaining external funds to pursue research.

Allowable Expenses include Project supplies and small equipment, travel to conferences and/or funding agencies, travel expenses for funding agency people to visit NJIT, student hourly wages. Faculty summer salary, AY release and any stipend are not permitted in the budget.

Deadlines:

CFP Announcement: May 6, 2016

FSG Proposal Due in the Office of College/School Dean: September 1, 2016

College/School Dean Recommendations to Office of Research: September 10, 2016

Announcement of Awards: September 15, 2016

Period of Award: October 1, 2016 – June 30, 2017 (no extension will be available)

Please see previous NJIT Research Newsletter Issue: ORN-2016-026:029 for more details.

2016 Rutgers BHI-RUN-NJIT Pilot Grants Program in Neuroscience

We are pleased to announce the 2016 pilot grants program in neuroscience at Rutgers University. There are two main objectives of these pilot awards program: (i) to foster **new** collaborative, interdisciplinary research in the neurosciences not only across Rutgers but also NJIT, Kessler Foundation Research Center, East Orange VA Medical Center, and (ii) support pilot experiments that will lead to sustained funding from an external agency (e.g., NIH). There are two categories of pilot

grants available; each award is limited to **\$40,000** direct costs and no indirect costs or overhead are allowed. For both type of pilots, collaborative multidisciplinary efforts are encouraged. The deadline for these applications is **5 PM Tuesday, September 6th, 2016**. The two categories of awards are:

(i) Translational neuroscience awards – these must address disease mechanisms, focusing on diagnosis, tools or treatments that involve animal models, clinical studies, or basic neuroscience relevant to a future clinical application. *The clinical relevance must be clearly described in the Research Plan*. These pilots require at least 2 faculty Co-PIs with appointments from different Schools across Rutgers. Formation of teams that integrate basic and clinical themes with a vision of a future translational impact will have preference. **Six** translational pilots are available and are funded by the BHI. Four out of the six BHI-funded pilot awards will only be for applications submitted by faculty co-PIs from RU-New Brunswick and RBHS. The other two can include co-PIs from RUN and NJIT.

(ii) Basic neuroscience awards – These can include a focus on more basic neural mechanisms, or focus on translational neuroscience experiments involving an animal model or clinical studies. These Basic awards must include at least 2 Co-PIs, no more than one of which can be a faculty member at RUN (**Four** awards funded by the RUN Strategic plan fund), or at NJIT (**One** award funded by NJIT).

Please see previous NJIT Research Newsletter Issue: ORN-2016-026:029 for more details.

Internal Competition: National Science Foundation

Grant Program: National Science Foundation Research Traineeship (NRT) Program

Agency: National Science Foundation NSF 16-503

RFP Website: <http://www.nsf.gov/pubs/2016/nsf16503/nsf16503.htm>

Brief Description: The NSF Research Traineeship (NRT) program is designed to encourage the development and implementation of bold, new, and potentially transformative models for STEM graduate education training. The NRT program seeks proposals that ensure that graduate students in research-based master's and doctoral degree programs develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. The NRT program includes **two tracks**: the **Traineeship Track** and the **Innovations in Graduate Education (IGE) Track**.

The **Traineeship Track** is dedicated to effective training of STEM graduate students in high priority interdisciplinary research areas, through the use of a comprehensive traineeship model that is innovative, evidence-based, and aligned with changing workforce and research needs. For FY2016, there are four priority areas: (1) Data-Enabled Science and Engineering (DESE), (2) Understanding the Brain (UtB), (3) Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS), and (4) any other interdisciplinary research theme of national priority. The priority research areas for the FY2017 competition will be (1) UtB, (2) INFEWS, and (3) any other interdisciplinary research theme of national priority.

The **IGE Track** focuses on test-bed projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education. IGE projects are intended to generate the knowledge required for their customization, implementation, and broader adoption. While the Traineeship Track promotes building on the current knowledge base to develop comprehensive programs to effectively train STEM graduate students, the IGE Track supports testing of novel models or activities with high potential to enrich and extend the knowledge base on effective graduate education approaches.

The NRT program addresses both workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. For both tracks, strategic collaborations with the private sector, non-governmental organizations (NGOs),

government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged.

Awards: Standard Grants; **Anticipated Funding Amount:** \$51,680,000.

Letter of Intent: December 09, 2016

Full Proposal Submission Due Date: February 7, 2017

Limit on Number of Proposals per Organization: 4

Limit on Number of Proposals per Organization: 2 for the Traineeship Track, 2 for the Innovations in Graduate Education Track

An eligible organization may participate in two Traineeship Track proposals and two Innovations in Graduate Education Track proposals per competition. **Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal.** Organizations participating solely as evaluators on projects are excluded from this limitation.

Limit on Number of Proposals per PI or Co-PI: 1

An individual may serve as Lead Principal Investigator (PI) or Co-PI on only one proposal submitted to the NRT program per annual competition

Contacts:

- Claire Hemingway, telephone: (703) 292-7135, email: nrt@nsf.gov
- Richard Tankersley, telephone: (703) 292-5199, email: nrt@nsf.gov

NJIT Internal Competition for Selection of Proposals

Internal Competition Deadline: Submit an internal Letter of Intent following the NSF LOI instructions (copied below) to your college/school dean by October 7, 2016.

Dean's recommendations with the internal Letter of Intent (not more than 2 for the Traineeship Track and 2 for the Innovation in Graduation Track) should be submitted to the Office of Research for Institutional Reviews and selection by October 17, 2016. PIs and deans will be notified for selected LOIs by October 24.

Instruction of Preparation of Letters of Intent (required):

A Letter of Intent (LOI) submitted by the lead institution only is required for proposal submissions planned for either NRT track. Limits on the number of proposals submitted per institution and per PI/coPI also apply to the Letters of Intent. Letters of Intent are not reviewed but are used to gauge review requirements. They are not used as pre-approval mechanisms for the submission of proposals, and no feedback is provided to the submitters.

Submit a one-page LOI through FastLane with the following information:

- The name and departmental affiliation of the Principal Investigator (PI);
- The name(s) and departmental affiliation(s) of the Co-PI(s) and others composing the 10 Core Participants;
- The names(s) of any other participating institutions or organizations;
- Project Title: For Traineeship Track proposals, the title must begin with "NRT-DESE:", "NRT-UtB:", "NRT-INFEWS:", for projects targeting the Data-Enabled Science and Engineering, Understanding the Brain, and Nexus of Food, Energy, and Water Systems research areas, respectively. Titles for projects addressing another interdisciplinary theme must begin with "NRT:". For Innovations of Graduate Education Track proposals, the title must begin with "NRT-IGE:".
- Project Synopsis (2500 text-based characters): For Traineeship Track proposals, provide a brief summary of the vision and goals of the proposed training program, including a

brief description of the interdisciplinary research theme, the main training elements, the integration of the research and training, and the need for the program; for IGE Track proposals, provide a brief description of the graduate education model(s), approach(es), or activities to be piloted and tested, including a brief description of the disciplinary or interdisciplinary needs and/or challenges addressed.

Keywords: For Traineeship Track proposals, include 4-5 keywords that specify the disciplines and/or themes targeted; for IGE Track proposals, include 4-5 keywords that describe the model, approach, and/or activities to be piloted and tested.

National Science Foundation

Grant Program: Network for Computational Nanotechnology (NCN) Supporting the Next Phase of NCN Nodes Programs

Agency: National Science Foundation NSF 16-593

RFP Website: <http://www.nsf.gov/pubs/2016/nsf16593/nsf16593.htm>

Brief Description: The goals of the Network for Computational Nanotechnology (NCN) are to: 1) accelerate the transformation of nanoscience to nanotechnology through the integration of simulation with experimentation; 2) engage an ever-larger and more diverse cyber community sharing novel, high-quality nanoscale computation and simulation research and educational resources; 3) develop open-access, open-source software to stimulate data sharing; and 4) inspire and educate the next-generation workforce. The NCN consists of a stand-alone Cyber Platform, which provides computation, simulation, and education services to over 330,000 researchers, educators, students, and industry members of the nanoscience and engineering community annually worldwide; and Nodes, which develop compelling new computational and simulation tools to disseminate through Cyber Platform (nanoHUB.org) and cultivate communities of users in emerging areas of nanoscale science and engineering. For more information on NCN, please see <http://nanohub.org/about#funding>.

This solicitation will support the next phase of NCN Nodes Programs. Current awards for existing NCN Nodes expire in September 2017. Those who submit proposals in response to this solicitation will need to address the following questions:

- What compelling new nanoscience modeling and computational tool(s) will be developed and how will it advance nanotechnology to meet critical national needs?
- What will the Node undertake to nucleate a community of academic and industry users engaged in the new tool(s) and increase quality and quantity of nanoHUB tools, resources, and usage?
- How will the Node interact productively with the Cyber Platform and other Nodes to augment existing capabilities and ensure seamless and complementary advancement of the NCN's goals?

Content areas of the three new Nodes will be:

Engineered nanoBIO - Create integrated computational tools that support new understanding and simulation of biological phenomena from the nanoscale across length scales for the design of devices and systems;

Hierarchical nanoMFG - Computation and simulation software to address the challenges of hierarchical nanomanufacturing processes from nanoscale components to devices and systems, and their scale up;

Nano-Engineered Electronic Device and Module Application Node (NEEDMA) - Develop computation and simulation tools that can be employed for turning nanoscale science

and engineering into applications through the discovery and development of nanoelectronic-based devices and modules with impact on circuit and systems responding to grand challenges. Proposals will be accepted only for the above Node content areas. A proposal for another Node content area will be returned without review.

Awards: Cooperative Agreement. Anticipated funding amount: \$2,500,000

Letter of Intent: Required: November 03, 2016

Full Proposal Submission Due Date: December 02, 2016

Contacts:

- Eduardo A. Misawa,ENG/EEC, telephone: (703) 292-5353, email: emisawa@nsf.gov
 - Khershed Cooper,ENG/CMMI, telephone: (703) 292-7017, email: khcooper@nsf.gov
 - William Olbricht,ENG/CBET, telephone: (703) 292-2563, email: wolbrich@nsf.gov
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Grant Program: Ecology and Evolution of Infectious Diseases (EEID)

Agency: National Science Foundation NSF 16-592

RFP Website: <http://www.nsf.gov/pubs/2016/nsf16592/nsf16592.htm>

Brief Description: The Ecology and Evolution of Infectious Diseases program supports research on the ecological, evolutionary, and socio-ecological principles and processes that influence the transmission dynamics of infectious diseases. The central theme of submitted projects must be quantitative or computational understanding of pathogen transmission dynamics. The intent is discovery of principles of infectious disease transmission and testing mathematical or computational models that elucidate infectious disease systems. Projects should be broad, interdisciplinary efforts that go beyond the scope of typical studies. They should focus on the determinants and interactions of transmission among humans, non-human animals, and/or plants. This includes, for example, the spread of pathogens; the influence of environmental factors such as climate; the population dynamics and genetics of reservoir species or hosts; the cultural, social, behavioral, and economic dimensions of disease transmission. Research may be on zoonotic, environmentally-borne, vector-borne, or enteric diseases of either terrestrial or freshwater systems and organisms, including diseases of animals and plants, at any scale from specific pathogens to inclusive environmental systems. Proposals for research on disease systems of public health concern to developing countries are strongly encouraged, as are disease systems of concern in agricultural systems. Investigators are encouraged to develop the appropriate multidisciplinary team, including for example, modelers, bioinformaticians, genomics researchers, social scientists, economists, epidemiologists, entomologists, parasitologists, microbiologists, bacteriologists, virologists, pathologists or veterinarians, with the goal of integrating knowledge across disciplines to enhance our ability to predict and control infectious diseases.

Awards: Standard Grant. **Anticipated Funding Amount:** \$13,500,000

Letter of Intent: Not Required

Full Proposal Submission Due Date: November 14, 2016

Contacts:

- Samuel M. Scheiner, Program Director, BIO/NSF, telephone: (703) 292-7175, email: sscheine@nsf.gov
 - Christine Jessup, Program Director, NIH/FIC, telephone: (301) 496-1653, fax: (301) 402-0779, email: christine.jessup@nih.gov
 - Peter Johnson, National Program Leader, USDA/NIFA, telephone: (202) 401-1896, email: pjohnson@nifa.usda.gov
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Grant Program: Partnerships for Innovation: Building Innovation Capacity (PFI:BIC)

Agency: National Science Foundation NSF 16-591

RFP Website: <http://www.nsf.gov/pubs/2016/nsf16591/nsf16591.htm>

Brief Description: The Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program supports academe-industry partnerships which are led by an interdisciplinary academic research team collaborating with a least one industry partner. In this program, there is a heavy emphasis on the quality, composition, and participation of the partners, including their appropriate contributions. These partnerships focus on the integration of technologies into a specified human-centered service system with the potential to achieve transformational benefits, satisfying a real need by making an existing service system smart(er) or by spurring the creation of an entirely new smart service system. The selected service system should function as a test bed.

Service systems are socio-technical configurations of people, technologies, organizations, and information¹ designed to create value by fulfilling the needs of those participating in the system. A "**smart**" **service system** is a system that amplifies or augments human capabilities² to identify, learn, adapt, monitor and make decisions. The system utilizes data received, transmitted, or processed in a timely manner, thus improving its response to future situations. These capabilities are the result of the incorporation of technologies for sensing, actuation, coordination, communication, control, etc.

PFI:BIC funds research partnerships working on projects that operate in the post-fundamental/translational space; the proposers must be mindful of the state of the art and the competitive landscape. However, a clear path to commercialization does not need to be a central part of this proposal. These projects require additional effort to integrate the technology into a real service system, incorporating human factors considerations to assure the system's efficacy. The research tasks in turn might spawn additional discoveries inspired by this interaction of humans with the technology.

Examples of partnership activities that drive sustained innovation include the targeted allocation of resources such as capital, time, and facilities; and sharing of knowledge in a cross-organizational and interdisciplinary context. The research tasks of the project must demonstrate a highly collaborative research plan involving participation of the primary industrial partner(s) as well as of any other primary partners with the academic researcher during the life of the award.

NSF recognizes that interdisciplinary collaboration (involving many areas of expertise beyond just those related to the technology) is needed to achieve successful integration into a smart service system. The research components to be included in this project are: 1) engineered system design and integration; 2) computing, sensing, and information technologies; and 3) human factors, behavioral sciences, and cognitive engineering. **The proposer must show how these components will be integrated in the context of the project as part of the research plan in the Project Description.**

WEBINARS: Webinars will be held to answer questions about the solicitation. Register on the PFI:BIC website (<https://www.nsf.gov/eng/iip/pfi/bic.jsp>). Potential proposers and their partners are encouraged to attend. Also encouraged to attend are the following stakeholders: Vice Presidents for Research, Vice Presidents for Research and Innovation, and academic personnel concerned with the internal review of their respective institution's selection of candidates for submission, individuals from Sponsored Research Offices, and those focused on the identification and understanding of limited application submissions.

Awards: Standard Grants. **Anticipated Funding Amount:** \$10,000,000

Limit on Number of Proposals per Organization: 2 (Please send an email to dhawan@njit.edu if you plan to **submit an internal Letter of Intent before September 15, 2016 to secure submission**. If there are more than 2 internal LOIs are received, an institutional review will be conducted for limited submission.)

Letter of Intent: October 14, 2016

Full Proposal Submission Due Date: November 16, 2016

Contacts:

- Alexandra Medina-Borja, ENG/IIP, telephone: (703) 292-7557, email: amedinab@nsf.gov
 - Hector Munoz-Avila, CISE/IIS, telephone: (703) 292-7129, email: hmunoz@nsf.gov
 - Gurdip Singh, CISE/CNS, telephone: (703) 292-8950, email: gsingh@nsf.gov
 - Jordan M. Berg, ENG/CMMI, telephone: (703) 292-5365, email: jberg@nsf.gov
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Update on NSF 16-552: Alliances for Graduate Education and the Professoriate" (AGEP) program (the NSF-552 alert is in [Newsletter/Grant Opportunity: ORN-2016-11](#) or NSF website <http://www.nsf.gov/pubs/2016/nsf16552/nsf16552.htm>

NSF Deal Colleague Letter: NSF 16-125: Dear Colleague Letter: MPS AGEP-GRS

Website:

http://www.nsf.gov/pubs/2016/nsf16125/nsf16125.jsp?WT.mc_id=USNSF_25&WT.mc_ev=click

Brief Description: MPS has long promoted efforts to recruit and retain students from underrepresented groups in all areas of the mathematical and physical sciences. AGEP-GRS introduces a new mechanism by which a current MPS research awardee is able to support one (additional) Ph.D. student in an ongoing MPS-funded research project. The goal is to create an opportunity to engage additional students in research, to develop a positive learning environment for students, and to improve diversity and retention at the doctoral level within the mathematical and physical sciences. Anticipated Type of Award: One-year (twelve-month) supplements to currently active MPS awards for a single Ph.D. student; renewable for a total support period of up to three years, contingent upon the duration of the active MPS research award and satisfactory progress of the student towards completion of the Ph.D.

Eligibility: A request for AGEP-GRS funding may be made by the PI of a currently active MPS research award. The PI must be affiliated with an academic unit of an institution participating in an active AGEP project or a Legacy AGEP institution as defined above. Instrumentation acquisition awards, REU awards and large awards governed by cooperative agreements (e.g., facilities, institutes, and centers) are not eligible. AGEP-GRS student candidates must be United States citizens, nationals, or permanent residents.

The AGEP-GRS program will support up to one additional Ph.D. student per PI, regardless of the number of awards in MPS. Students being nominated for support must not have other government-funded (NSF, NIH, DoE) support (stipend and tuition), e.g., students currently being supported full-time by the PI on any NSF award as a doctoral student are not eligible for AGEP-GRS support, and students who received NSF-GRF support are not eligible for AGEP-GRS support. The graduate student's research project must be consistent with the research topic of the original MPS award.

To be eligible for a renewal of an AGEP-GRS for a second or third year, a student must be in good academic standing. The GRS renewal request must include a report on the student's progress towards the Ph.D. GRS renewals are subject to availability of funds in the program, and should be submitted approximately three months in advance of the renewal date for the previous supplement.

National Institutes of Health

Grant Program: NCI Small Grants Program for Cancer Research (NCI Omnibus R03)

Agency: National Institutes of Health PAR-16-416

RFP Website: <http://grants.nih.gov/grants/guide/pa-files/PA-16-416.html>

Brief Description: This funding opportunity announcement (FOA) supports discrete, well-defined projects in any area of cancer research using the NIH R03 small grant mechanism.

The NIH R03 small grant mechanism supports discrete, well-defined projects that realistically can be completed in 2 years and that require limited levels of funding. Examples of the types of projects that the R03 grant mechanism include, but are not limited to, the following:

- Pilot or feasibility studies;
- Secondary analysis of existing data;
- Small, self-contained research projects;
- Development of research methodology; and
- Development of new research technology.

Specific Research Objectives

All areas of cancer research relevant to the mission of the NCI are appropriate for projects submitted in response to this FOA [for a list of extramural research funding programs at the NCI, go to <http://www.cancer.gov/researchandfunding/extramural>]. Projects submitted to this FOA may involve basic, translational, clinical, and/or population research related to cancer. Examples of relevant areas include but are not limited to studies of: cancer biology; cancer control; cancer diagnosis; cancer disparities; cancer prevention; and cancer treatment.

Awards: A budget for direct costs of up to \$50,000 per year may be requested.

Letter of Intent: Not Required.

Deadline: February 28, 2017; June 27, 2017; October 26, 2017; February 27, 2018; June 29, 2018; October 26, 2018; February 26, 2019; June 28, 2019; October 25, 2019, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on 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: Innovation Corps (I-Corps™) at NIH Program for NIH and CDC Phase I Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Grantees (Admin Supp)

Agency: National Institutes of Health PA-16-414

RFP Website: <http://grants.nih.gov/grants/guide/pa-files/PA-16-414.html>

Brief Description: This funding opportunity announcement (FOA) seeks to develop and nurture a national innovation ecosystem that builds upon biomedical research to develop technologies, products and services that benefit society. Toward meeting this objective, the I-Corps™ program is being offered. The I-Corps™ at NIH program is focused on educating researchers and technologists on how to translate technologies from the lab into the marketplace. Under this FOA, participating NIH and CDC Institutes and Centers will provide administrative supplement awards to two cohorts of currently-funded SBIR and STTR Phase I grantees to support entrepreneurial training under the I-Corps™ at NIH Program. The program is designed to provide three-member project teams with access to instruction and mentoring in order to accelerate the translation of technologies currently being developed with NIH and CDC SBIR and STTR funding. It is anticipated that outcomes for the I-Corps™ teams participating in

this program will include significantly refined commercialization plans and well-informed pivots in their overall commercialization strategies. Prospective applicants are strongly encouraged to contact NIH or CDC Scientific/Research staff for more information about the program before applying.

The goal of the I-Corps™ Program is to accelerate the translation of biomedical research to the marketplace by providing training to SBIR and STTR grantees in the areas of innovation and entrepreneurship. Under this program, the NIH and CDC foster the development of early-stage biomedical technologies, focus on teaching researchers how to gain a clearer understanding of the value of their inventions in the marketplace, and ultimately how to advance their technologies from the research lab into the commercial world. This program is designed to complement activities within the scope of the parent SBIR Phase I (R43) or STTR Phase I (R41) grant or the Phase I portion of an SBIR/STTR Fast-Track grant (R43/R41, respectively), to help accelerate the commercialization of new products and services derived from NIH and CDC funded technical feasibility studies.

Through this program, I-Corps™ teams will participate in an Entrepreneurial Immersion course. The I-Corps™ curriculum uses a hypothesis-driven method of customer discovery in order to gain insights into the issues associated with technology commercialization. As part of this program, participants are required to get “out of the lab” and gather information by conducting a large number of interviews (i.e., 100+) with potential customers, strategic partners, and other third-party stakeholders. During the course, I-Corps™ teams share what they learn with other teams, gaining new insights into the prospective impact of the technology being developed under the SBIR or STTR grant. It is anticipated that the feedback and learning gained during the I-Corps™ program will help inform future Phase II SBIR/STTR projects and commercialization strategies.

The I-Corps™ at NIH Program will be supported through administrative supplement awards to active NIH or CDC SBIR and STTR Phase I grantees. Administrative supplement awards are intended only to support travel and other costs associated with the training program. Two cohorts (24 teams per cohort) will be selected to participate in the I-Corps™ at NIH Program, which is expected to last approximately eight weeks. **The NIH anticipates that applicants receiving administrative supplements under this FOA will be enrolled in the I-Corps™ at NIH Program in one of two cohorts in 2017**

Awards: Application budgets are limited to no more than \$50,000 in direct costs, and must reflect the actual needs of the proposed project.

The award budget should only be used to cover travel and other costs associated with participation in the I-Corps™ at NIH Program.

Letter of Intent: Not required.

Deadline: November 1, 2016; January 9, 2017, by 5:00 PM local time of applicant organization.

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: Centers of Biomedical Research Excellence (COBRE) (P20)

Agency: National Institutes of Health PAR-16-415

RFP Website: <http://grants.nih.gov/grants/guide/pa-files/PAR-16-415.html>

Brief Description: The application in response to this FOA must have a thematic scientific focus in a specific research area and may use basic, clinical, and/or translational research approaches, including community engagement and outreach research, to attain the goals of the proposed center. The center is intended to support investigators from several complementary disciplines. It will enable the institution to develop a critical mass of investigators and enhance

their competitiveness in a specific research area that accelerates the rate at which those investigators compete for other complementary NIH, Federal or non-Federal external peer-reviewed research grant support. It is also anticipated that, in some instances, the support through this FOA will facilitate the development of new disease-specific research centers or augment the capability of existing centers.

Although the individual career development of the junior investigators is an important part of this program, the primary objective of the COBRE initiative is to build and develop thematic multi-disciplinary research centers. This is accomplished through the leadership of a peer-reviewed, funded investigator with expertise central to the research theme of the application. The scientific leadership provided by one or more established biomedical research faculty is critical to the success of this FOA, especially for the career guidance of promising junior investigators.

Although the individual career development of the junior investigators is an important part of this program, the primary objective of the COBRE initiative is to build and develop thematic multi-disciplinary research centers. This is accomplished through the leadership of a peer-reviewed, funded investigator with expertise central to the research theme of the application. The scientific leadership provided by one or more established biomedical research faculty is critical to the success of this FOA, especially for the career guidance of promising junior investigators.

Support for research core facilities necessary to carry out the objectives of the center may be proposed in the Overall Center Organization and Management Plan.

Administrative Core:

The administrative core will provide management in administrative, fiscal, and scientific aspects of the proposed COBRE center. The plans for the administrative core should identify established senior faculty members who will provide career guidance and oversight to the junior investigator; constructive evaluations by members of the External Advisory Committee (EAC, see details below); and how the COBRE PD/PI will coordinate the management of all of these individuals. An internal advisory committee may provide additional oversight and input, but this committee may not act as a substitute for the EAC.

Each junior investigator should have at least one scientific advisor. The advisor must be an established investigator who has demonstrated the ability to advise others through the acquisition of external support and the maintenance of an independent research laboratory. In some instance a suitable advisor may not be available within the applicant's institution, and it is therefore acceptable to enlist appropriate advisors from outside institutions, including institutions in non-IDeA states.

All research project leaders must submit an investigator-initiated Research Project Grant (RPG) application by the end of two years of COBRE support. It is expected that a research project investigator will be supported by the COBRE for 3 years and move to independent research support. COBRE support beyond three years may be provided in circumstances where the PD/PI and the EAC have carefully evaluated the progress and research project and concluded that continued support is justified. Support of a research project investigator by the COBRE mechanism beyond a total of 5 years is not allowed.

The award of a RPG to a junior investigator should be viewed as a milestone and a criterion for changing the status of an investigator from mentored support via the COBRE to independent investigator. A junior investigator also may be considered for a status change if independence is indicated by the acquisition of sufficient skills and knowledge. However, it is stressed that the goal of the COBRE program is to promote the development of an independent and sustainable center.

External Advisory Committee: Each COBRE must be advised by an EAC comprised of 3-5 scientists with national scientific reputations in their fields. Their expertise must be directly relevant to the scientific theme of the COBRE. The EAC critiques the scientific progress of the COBRE and also offers advice on scientific matters to the COBRE PD(s)/PI(s). The EAC will be involved in developing and planning concepts and programs, encouraging and assisting faculty development and career guidance, identifying resources, evaluating the development of the center, evaluating the progress of the individual research projects, and evaluating the junior investigators' progress toward acquiring independent status. The PD(s)/PI(s) will share the advice and critiques provided by the EAC with other COBRE investigators at the center. The EAC also will review and recommend candidate investigators for replacement/substitute projects, as required, before such requests are forwarded to the NIGMS for programmatic review. The EAC should meet at least twice per year. Video-, teleconferencing or other means may be used in situations where it would be difficult to hold an in-person meeting. The applicant should not contact potential EAC members or provide the names of potential EAC members during the preparation or review of the application as this complicates the peer review process.

Research Core: Funds may be requested to establish core facilities. Although the COBRE award is not intended to replace support for ongoing investigator-initiated research projects, all center participants, including the advisors, as well as other non-center investigators at the institution, may use core facilities.

Sharing research resources among COBRE and IDeA Networks of Biomedical Research Excellence (INBRE) investigators is strongly encouraged. As much as practicable, applicants should seek to utilize existing equipment and instrumentation supported by other COBRE or INBRE awards.

It is expected that proposed core should be unique and not duplicate services or facilities that already exist at the applicant institution. Utilization/modification/expansion of existing resources to accomplish the goals of proposed research is strongly encouraged. Proposed research cores that appear to replicate services already available at the applicant institution will not be allowed without extensive justification.

Research Projects: The individual research projects should stand alone, but share the COBRE's common thematic scientific focus. Each research project should be led by a single junior investigator who is responsible for ensuring that the Specific Aims of that project are met.

Alteration and Renovation: Alteration and Renovation (A&R) costs to improve existing research laboratories or animal facilities are allowed. A&R projects must be relevant to the scope of the proposed research.

Awards: The annual budgets must not exceed \$1.5 million in direct costs. Additional direct costs in year one only of up to \$300,000 as a one-time expenditure for Alteration and Renovation may be requested.

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

Deadline: January 24, 2017; January 24, 2018; and January 24, 2019, by 5:00 PM local time of applicant organization. All types of applications allowed for this funding opportunity announcement are due on these dates.

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

Grant Program: BRAIN Initiative: Non-Invasive Neuromodulation - New Tools and Techniques for Spatiotemporal Precision

Agency: National Institutes of Health RFA-MH-17-240

RFP Website: <http://grants.nih.gov/grants/guide/rfa-files/RFA-MH-17-240.html>

Brief Description: Non-invasive neuromodulation devices are rapidly becoming one of the tools considered for the treatment and diagnosis of brain disorders and could become an alternative or an adjunct to neurological, neuropsychopharmacological, rehabilitative, or cognitive behavioral therapies. Non-invasive devices can be defined as those that do not require surgery and do not penetrate the brain parenchyma. These devices include, but are not limited to, those used for focused ultrasound stimulation, magnetic seizure therapy, electroconvulsive therapy, static magnets, transcranial alternating current stimulation, transcranial direct current stimulation, and transcranial magnetic stimulation. Applications involving devices that require surgery or penetrate the brain parenchyma will be deemed nonresponsive and will not be reviewed.

A related FOA ([RFA-MH-17-245](#)) in the area of non-invasive technology seeks applications focused on understanding how neural activity is modified in response to an exogenously applied stimulus using existing devices. This FOA solicits grant applications in two related but distinct areas.

The first area is in the development and testing of novel tools and methods of neuromodulation that go beyond the existing variations on magnetic or electrical stimulation. These novel approaches/tools must be clearly beyond incremental advances over existing approaches. The rationale for this objective is that existing magnetic and electrical stimulation methods have limited spatial and temporal precision. To overcome these obstacles and move beyond incremental advances in the field, collaborations between physicists, engineers, neuroscientists, and clinicians are encouraged. The fresh perspective of such integrative teams would enable the development and testing of novel approaches that leverage other types of energy in a way that can lead to novel tools for scientific discovery and for therapeutic brain stimulation with high spatial and temporal resolution. This type of application may be in the initial stages and may therefore still be in the animal testing phase; however, the proposed tools and methods must be adaptable for use in humans.. In recognition of the fact that these methods might be in early stages of development, work with human volunteers can, but does not need to, be included.

The second, distinct, area that this FOA seeks to encourage is the significant improvement of existing electrical and magnetic stimulation methods. The related FOA ([RFA-MH-17-245](#)) in the area of non-invasive technology seeks applications focused on understanding how neural activity is modified in response to an exogenously applied stimulus using existing devices. This second area of this FOA is aimed at improving existing devices rather than elucidating their mechanism of action. Applications should propose technology improvements and testing methods in areas such as: (1) substantial improvement of the focality and depth of penetration of the stimulus, (2) prevention of extraneous stimulation (e.g. auditory clicking, scalp sensation, stimulation of non-target brain regions), (3) integration with endogenous rhythmic activity and advancing closed-loop stimulation capabilities, (4) use in natural ambulatory settings such as home or community settings, and (5) improved sham and control conditions. These five topics are discussed below in greater detail. They are not meant to be an exhaustive list, but provide examples of the types of improvements that are needed in this field.

- The first type of improvement is related to improving the focality and depth of the stimulation signal. The issue of focality is compounded for deep brain areas where existing non-invasive devices and protocols do not adequately provide both depth of penetration and target resolution. Advances toward noninvasive devices that allow deep and focal stimulation of the brain are strongly desired. Devices that could specifically stimulate more than one site are welcome.

- A second type of improvement involves the elimination of unintended extraneous stimulation. Current noninvasive techniques generally stimulate large regions of the brain. This is due both to the lack of focality of the stimulation signal as well as extraneous mechanical effects associated with device operation that independently stimulate auditory and somatosensory systems, thereby confounding experimental protocols. These extraneous effects can be a significant confound in trying to deliver precise stimulation.
- A third type of improvement entails enhanced control of the temporal component of the delivered stimulation dose. Such temporal control can apply both to the stimulation signal itself as well as the interaction of the stimulation with dynamic brain processes. Applications could focus on developing closed-loop devices that are sensitive and responsive to dynamic neural activity recorded from the brain, but this is not a requirement. Improvements that enable an exploration of the frequency of the stimulation, the duration, number, or shape of pulses that are delivered during the stimulation, or the shape of the pulse of the delivered stimulation would allow the research community to understand how those parameters affect the functioning.
- A fourth area would be modifying devices for use in more natural settings. For example, devices that could be used outside the clinic, that allow long term stimulation, that are informed by endogenous oscillations, or are personalized to individual anatomy and physiology could all be significant improvements to existing technologies.
- A fifth area entails creating a common standard for sham and control conditions for non-invasive neuromodulation.

As mentioned above, this FOA uses two paths to foster development of new neuromodulation tools and techniques: development of wholly novel brain stimulation methods that do not involve the existing electrical or magnetic stimulation methods, and optimization of existing technologies. The higher risk inherent in the former is balanced overall by the parallel emphasis on improving existing methods in the second area.

The following types of studies are not responsive to this FOA and will not be reviewed:

- Studies with devices that require surgery or penetrate the brain parenchyma
- Projects without a description of how the methods would be scaled up for use in humans
- Projects that propose to explore the use of non-invasive devices for recreational uses
- Studies directed toward inducing maladaptive behaviors

Applicants may want to make use of some of the ideas that have been made available as part of the NIH BRAIN Initiative Public Private Partnership program (http://braininitiative.nih.gov/BRAIN_PPP/).

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

Letter of Intent: October 23, 2016.

Deadline: November 23, 2016 , 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: BRAIN Initiative: Foundations of Non-Invasive Functional Human Brain Imaging and Recording - Bridging Scales and Modalities (R01)

Agency: National Institutes of Health RFA-MH-17-235

RFP Website: <http://grants.nih.gov/grants/guide/rfa-files/RFA-MH-17-235.html>

Brief Description: As stated in the BRAIN 2025 report, “The last twenty years have seen explosive growth in the development and use of noninvasive brain mapping methods, predominantly MRI, complemented by MEG and electroencephalography (EEG), to investigate the human brain under normal and pathological conditions, and across the human lifespan.” Human neuroimaging methods and technology have made significant advances in elucidating the macroscopic structural and functional organization of the human brain. At the same time animal research, aided by advances in optical imaging and other techniques, has allowed detailed study of the brain anatomy and physiology at the microscopic scale of brain function. The overarching research objective of this FOA is to advance our ability to accurately and precisely infer these microscopic details of underlying anatomy and physiology in the human brain from the more limited data available from noninvasive functional brain mapping methods. At present, relatively little is understood of the fundamental relationships between brain imaging signals at macroscopic levels and the underlying circuits and cellular activity at more fine-grained scales. What is needed is to integrate the information from the signals collected using non-invasive imaging and recording techniques with studies aimed at better understanding the cellular- and circuit-bases of these signals. Such integrative, multidisciplinary efforts would revolutionize our understanding of the biological and bioinformatic content of data collected from non-invasive human brain imaging and functional evaluation techniques. This knowledge could lead to transformative breakthroughs in understanding dynamic functions of the human brain under both normal and pathological conditions.

Thus, the goal of this FOA is to improve our understanding of the dynamic function of the human brain using non-invasive imaging techniques that are suited to the general human population. Research proposed in response to this FOA should focus on determining what the signals detected with non-invasive neuroimaging and functional evaluation techniques reveal about the underlying neural circuitry, with an emphasis on determining how the acquired signal at one level informs our understanding of activity at other levels. A key to achieving these goals will be bridging microscopic and macroscopic scales across temporal and/or spatial domains. This approach will yield a deeper understanding of how electrical and chemical activity in different populations of neurons and glia are represented in macroscopic-level measurements of brain structure and function. The knowledge gained could potentially enable non-invasive measurements of circuit and network interactions at multiple spatial and temporal scales.

Awards: Application budgets are limited to \$700,000 in direct costs (including consortium F&A) in any project year, and need to reflect the actual needs of the proposed project.

Letter of Intent: October 23, 2016.

Deadline: November, 23, 2016, 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 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: Extreme Optics and Imaging (EXTREME) Proposers Day

Agency: Department of Defense DARPA-SN-16-62

Website:

<https://www.fbo.gov/index?s=opportunity&mode=form&id=7583672f3835994c93cc4af781c65908&tab=core&cvview=0>

Brief Description: The Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is sponsoring a Proposers Day to provide information to potential proposers on the

objectives of an anticipated Broad Agency Announcement (BAA) for the Extreme Optics and Imaging (EXTREME) program. The Proposers Day will be held on September 1, 2016 from 2:00 PM to 3:00 PM. This event will be conducted solely via webcast and advance registration is required. Note, all times listed in this announcement and on the registration website are Eastern Time. More on [DARPA-SN-16-62.pdf](#)

Proposer Day: September 1, 2016 , 2.00 PM – 3.00 PM

Grant Program: Microsystems Technology Office (MTO) Office-wide Proposers Day

Agency: Department of Defense DARPA-SN-16-59

Website:

<https://www.fbo.gov/index?s=opportunity&mode=form&id=56df9d77f07333a10341f64dfc5b8879&tab=core&cvview=0>

Brief Description: The objectives of the MTO office-wide proposers day are to: (1) familiarize participants with MTO's mission and facilitate discussion on MTO's thrust areas (listed below) and on-going efforts, (2) provide information on the anticipated MTO office-wide BAA and Commercial Performer Program Announcement, (3) promote understanding of ways to work with DARPA, and (4) provide an opportunity for potential proposers to share their capabilities and ideas. More on <https://www.fbo.gov/utills/view?id=f5bc406ab2218000bac41bdc5b8624fd>

REGISTRATION OPENS: Friday, September 2, 2016, 11:00AM EDT

REGISTRATION DEADLINE: Tuesday, September 13, 2016, 5:00PM EDT

REGISTRATION WEBSITE: <http://www.cvent.com/d/jvqkv8>

E-MAIL: DARPA-SN-16-59@darpa.mil

Grant Program: Young Investigator Program (YIP)

Agency: Office of Naval Research ONR [N00014-16-S-FO15](#)

Website: <http://www.onr.navy.mil/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx>

Brief Description: The Office of Naval Research (ONR) is interested in receiving proposals for its Young Investigator Program (YIP). ONR's Young Investigator Program (YIP) seeks to identify and support academic scientists and engineers who are in their first or second full-time tenure-track or tenure-track-equivalent academic appointment, have begun their first appointment on or after 04 November 2011, and who show exceptional promise for doing creative research. The objectives of this program are to attract outstanding faculty members of Institutions of Higher Education (hereafter also called "universities") to the Department of the Navy's research program, to support their research, and to encourage their teaching and research careers.

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

An individual wishing to apply for a Young Investigator award must submit a research proposal and at least one letter of support through the appropriate university officials. Refer to Section V "Evaluation Information" regarding the importance of the letter(s) of support in the overall evaluation criteria and Section IV "Application and Submission Information" regarding

its content. The research proposal should follow the format described in FOA Section IV entitled, "Application and Submission Information." ONR makes awards to institutions, not to individuals.

Offerors may request up to \$170,000 per year for three (3) years. These funds may be budgeted against any reasonable costs related to conducting the proposed research, for example, salary for the Young Investigator, graduate student support, supplies, and applicable indirect cost. Additional funds (beyond the basic \$170,000 yearly amount) for capital equipment which enhances the Young Investigator's proposed research may be requested for the first budget period based on the needs of the research.

The competition for YIP awards continues to be intense. In 2016 more than 260 proposals were received resulting in 47 Young Investigator awards. Past awardees have both submitted outstanding research proposals and possessed outstanding records of prior professional accomplishments. Given that "past performance" is a selection criterion, applicants are advised that the biographical information submitted as part of the proposal (see "Qualifications" under "Proposal Content," below) should list all relevant past and present activities. See Section V, "Evaluation Information" for more details regarding evaluation of submitted proposals.

Proposals not selected for the Young Investigator Program may be considered for grant award under the ONR Long Range Broad Agency Announcement. Under the ONR Long Range BAA, grant proposals would be in competition with all other research proposals submitted in response to the ONR Long Range BAA. Historically, only a limited number of proposals initially submitted to the YIP received funding under the ONR Long Range BAA. The YIP is not a "research initiation" opportunity with standards that are less demanding than ONR's other research grant programs; instead, it is intended to confer honor upon awardees beyond the funding being provided. Consideration of any YIP proposal to another ONR research grant program is at the discretion of the cognizant program officer

Awards: Proposed research should be structured to have a three (3) year period of performance beginning 01 June 2017. It is anticipated that individual awards will be up to \$170,000 per year for three (3) years (with the possibility of greater support for equipment and/or to support additional, collaborative research with a Navy laboratory). The \$170,000 limit includes all funds paid to the university, including all indirect costs.

Questions Due: 07 October 2016 (Friday) 3:00 PM Eastern Daylight Time (EDT)

Full Proposal Deadline: Full Proposals: The due date for receipt of Full Proposals is 11:59 PM (EDT) on Friday, 04 November 2016. Full proposals received after the published due date and time will not be considered. It is STRONGLY recommended that proposals be uploaded sufficiently in advance to avoid any possible delays with Grants.gov.

After the final full proposal evaluation process is completed, offerors will be notified via email of their project's selection or non-selection for FY17 funding.

Department of Energy

Grant Program: Request For Information On Potential Technical Focus Areas For Advanced Manufacturing - Related Traineeships

Agency: Department of Energy DE-FOA-0001635

Website: <https://eere-exchange.energy.gov/#Foald701f4169-15f7-46ae-85af-99acb2ab9c0c>

Brief Description: The Department of Energy (DOE) funds university-led traineeship programs that strategically address workforce training needs in key technical focus areas. The following objectives guide DOE's Office of Energy Efficiency and Renewable Energy (EERE) Advanced Manufacturing Office's (AMO) traineeship efforts:

- Advance the DOE mission relative to advanced manufacturing – DOE funded Traineeship Programs are designed and implemented to advance specific Science, Technology, Engineering and Math (STEM) workforce competencies required for the DOE’s unique mission to ensure America’s security and prosperity by addressing its science, energy, and environmental challenges.
- Address priority STEM workforce needs and identified gaps – DOE funded Traineeship Programs focus on advancing those critical STEM disciplines and competencies specifically relevant to the EERE and AMO missions where other U.S. Government or academic workforce development programs either do not exist or where DOE-relevant applications are not being leveraged to support specific DOE mission responsibilities.

In July 2015, EERE released a Funding Opportunity Announcement (FOA) to address emerging needs in graduate training enabling preparedness for the field of advanced Power Electronics Engineering careers beyond those in academia. As a result, EERE made two competitively-selected awards supporting five-year graduate-level programs in Power Electronics Engineering, leveraging existing DOE assets including the wide band gap National Network for Manufacturing Innovation (NNMI) Institute, PowerAmerica.

The purpose of this Request for Information (RFI) is to gather from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to future EERE-funded and AMO-funded graduate-level Traineeships. This RFI is not a FOA; therefore, DOE is not accepting applications at this time. All responses to this RFI must be provided as an attachment (in Microsoft Word format) to an e-mail message addressed to AMOTraineeship@ee.doe.gov.

Deadline: Responses must be received no later than 5:00pm (ET) on October 14th, 2016.

Contact Information:

- EERE-ExchangeSupport@hq.doe.gov
- EERE Exchange support.
- AMOTraineeship@ee.doe.gov

Responses to this Request for Information

NASA

Grant Program: ROSES 2016: Astrophysics Probe Mission Concept Studies

Agency: NASA NNH16ZDA001N-APROBES

RFP Website:

<https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={96D40385-EB0D-6F64-9195-CE8B5555F9BD}&path=init>

Brief Description: NASA has started preparations for the 2020 Astronomy and Astrophysics Decadal Survey (<http://science.nasa.gov/astrophysics/2020-decadal-survey-planning/>). One of the tasks of the 2020 Decadal Survey Committee will be to recommend a portfolio of astrophysics missions. The Decadal Survey Committee may choose to recommend a portfolio of missions containing a mix of prioritized large- and medium-size mission concepts, or even a program of competed mediumsize missions. NASA and the community are interested in providing appropriate input to the 2020 Decadal Survey regarding medium-size mission concepts, also referred to as Astrophysics Probe concepts. To this end, NASA is soliciting proposals to conduct mission concept studies for Astrophysics Probe missions. Following peer review of the proposed mission concept studies, NASA will select a small number of proposals for 1.5 year (18 month) funded studies. Results of the selected studies will be provided by NASA

as input to the 2020 Decadal Survey. Astrophysics Probes are envisioned to have a total lifecycle (NASA Phases A through E) cost between that of a MIDEX mission (~\$400M) and ~\$1B. Proposals for concept studies may envision missions that include contributions from other agencies (national or international), industry, and universities. Should NASA choose to develop a mission that flows from any selected mission concept study, the responsibility for that mission will be assigned by NASA; there is no expectation that the mission concept study team or participating organizations will necessarily participate in the eventual mission development.

Award: Various

Proposal Deadline:

APROBES16 NOIs Due Sep 16, 2016

APROBES16 Proposals Due Nov 15, 2016
