

# NJIT Research Newsletter

Issue: ORN-2020-36

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**NJIT Research Newsletter** includes recent awards, and announcements of research related seminars, webinars, national and federal research news related to research funding, and **Grant Opportunity Alerts** (with links to sections). The Newsletter is posted on the NJIT Research Website <https://research.njit.edu/funding-opportunities> .

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## Special Announcements

### **Fall 2020 Undergraduate Research and Innovation (URI) Student Seed Grants Call for Proposals**

**URI Phase-1 Student Seed Grants: \$500 per project**

**Track-1 Technology/Product Development and Innovation**

**Track-2: Application Based Research**

**Proposal Submission Deadline: September 28, 2020**

**Notification of Proposals Accepted for Oral Presentations: Wednesday, October 7, 2020**

**URI Workshop Proposal Oral Online Presentations: Week of October 12, 2020**

NJIT 2025 Strategic Plan emphasizes providing undergraduate students an outstanding education with opportunities to have research and innovation experience as part of their NJIT learning enabling them to succeed and assume leadership roles in our society.

The NJIT URI Program is pleased to announce the **Fall 2020 Undergraduate Research and Innovation Student Grant (URISG) Program** to provide students **Phase-1 Student Seed Grants of \$500 per project** to pursue preliminary research or demonstrate an initial proof-of-concept/prototypes. Note: *URI Phase-2 Student Seed Grants are not being awarded this semester and may resume in Spring 2021.*

Seed grant funds can only be used to order project supplies and prototyping through the Office of Undergraduate Research and Innovation. The student may prepare URI Student Phase-1 Seed Grant proposals following the **Proposal Guidelines**.

#### **URI Fall 2020 Proposal Submission Information and Forms**

- Students working with a faculty member may submit **Track-1 Technology/Product Development and Innovation or Track-2: Application Based Research** proposals in the required format by **September 28, 2020**. The Proposal Guidelines and Template are available in the Forms/Templates section below.
- Complete and submit the online **URI Fall 2020 Student Seed Grant Application Form** that will require uploading of the proposal using the **Proposal Cover Sheet Template**. You will need to have your research proposal ready to upload when you fill out the online application form.
- Complete and submit the **MODE OF RESEARCH FORM** which requires faculty advisor approval. This is submitted separately via email to [brenda.g.herman@njit.edu](mailto:brenda.g.herman@njit.edu)
- Finalists selected for URI oral presentations will be announced by **Weds., October 7**.
- Finalists are required to present their oral presentations to the External Advisory Board via WebEx or Zoom following the presentation format posted on the URI website.

#### **FORMS/TEMPLATES LIST**

- [Application Form](#)
- [Proposal Guidelines](#)
- [Proposal Cover Sheet Template](#)
- [Mode of Research Form](#)

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### **NJIT – I-Corps Site Mini-Grant**

**Have a great technology concept?  
Need funds to explore the commercialization pathways?**  
<https://judithsheft.wufoo.com/forms/r1wl7a6n05g1mwb/>

NJIT has been designated as an NSF I-Corps Site and through the NJIT School of Management and NJ Center for Innovation Acceleration, we will provide specialized training and mini grants of up to \$3,000 to teams interested in exploring the commercial viability of their ideas for products and businesses that are based on their own inventions or NJIT intellectual property. Do you have an exciting technology that works in the lab? Would you like help to start a company to commercialize the technology? Do you want to test a prototype in the real-world environment?

**Benefits:** Learn the lean start up methodology – an approach that has significant advantages over traditional business planning / new product development approaches. Get out of the building and spend the majority of your time talking to potential customers to discover how your technology could effectively ‘solve’ customers’ unmet needs or pain points Make connections with experienced entrepreneurs and investors that can lead to potential follow-on support or collaboration

**Eligibility:** I-Corps mini grants are available to teams made up NJIT students and faculty. Each team must have:

- an entrepreneurial lead (typically an NJIT undergraduate or graduate student(s))
- an academic lead researcher/advisor (faculty member)
- a business mentor with significant entrepreneurial business experience.

The NJIT I-Corps Program Manager (Dr. Michael Ehrlich) will provide assistance to complete teams as necessary. You must have at least 2 teams members identified to apply. All team members must be able to participate for the 6-month project duration.

**Deadlines:** Deadline for Submissions: October 6, 2020

Interviews of Finalists: October 12 - 16, 2020

Announcement of Awards – October 21, 2020

Mandatory Team Orientation – October 28, 2020 (Common Hour)

Other Mandatory Sessions: November 25, 2020 / January 27, March 10 2021

Final Report Due: March 18, 2020

**Questions: Please Contact:** Dr. Michael Ehrlich – NJIT School of Management and Director of the NJ Innovation Acceleration Center - [ehrllich@njit.edu](mailto:ehrllich@njit.edu)

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## NJIT Pandemic Recovery Plan

### Research Continuity and Phased Recovery Plan

<https://research.njit.edu/njit-pandemic-recovery-plan>

NJIT faculty, staff, and students at research facilities must follow the specific social distancing and safety protocols including the use of personnel protective equipment (PPE) as required by the institutional, state and federal guidelines in the respective phase of the research continuity plan. State and national information regarding current conditions can be found at:

- New Jersey’s COVID-19 information hub: <https://covid19.nj.gov/index.html>
- CDC guidelines on “Symptoms of Coronavirus”: <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- CDC guidelines on “Use of Cloth Face Coverings to Help Slow the Spread of COVID-19”: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html>

The details on NJIT Research Continuity and Phased Recovery Plan and associated protocols are posted on the website <https://research.njit.edu/njit-pandemic-recovery-plan>

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## [Grant Opportunity Alerts](#)

Keywords and Areas Included in the Grant Opportunity Alert Section Below

**NSF:** CISE Community Research Infrastructure (CCRI); Collaborative Research in Computational Neuroscience (CRCNS); Research Training Groups in the Mathematical Sciences (RTG); Advancing Informal STEM Learning (AISL); Advanced Computing Systems & Services: Adapting to the Rapid Evolution of Science and Engineering Research; Focused Research Hubs in Theoretical Physics (FRHTP)

**NIH:** Genomic Data Analysis Network: Genomic Data Center (U24); NIH Blueprint for Neuroscience Research: Functional Neural Circuits of Interoception (R01); Innovative Research in Cancer Nanotechnology (IRCN) (R01); Cellular and Molecular Biology of Complex Brain Disorders (R21); BRAIN Initiative: Data Archives for the BRAIN Initiative (R24)

**Department of Defense/US Army/DARPA/ONR:** Verified Security and Performance Enhancement of Large Legacy Software (V-SPELLS); DoD Combat Readiness, Rapid Development and Translational Research Award; Defense Sciences Office Office-wide; C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research

**Department of Transportation:** Advanced Transportation and Congestion Management Technologies Deployment Initiative

**Department of Agriculture:** NRCS's Regional Conservation Partnership Program; Agriculture and Food Research Initiative - Foundational and Applied Science; REAP-Renewable Energy Systems and Energy Efficiency Improvements

**Department of Labor:** Supply Chains Tracing Project

**Department of Commerce/EDA:** Effects of Sea Level Rise (ESLR); STEM Talent Search

**EPA:** Center for Early Lifestage Vulnerabilities to Environmental Stressors

**Department of Energy:** FY 2021 SBIR/STTR Phase I Release 1; FY 2021 Bioenergy Technologies Office Multi-Topic Request for Information (RFI); Solar Energy Technologies Office Fiscal Year 2020 Perovskite Funding Program; American-Made Solar Prize

**NASA:** NASA Space Technology Graduate Research Opportunities; ROSES 2020: Carbon Cycle Science; Heliophysics Science Center (HSC); ROSES 2020: Science Team for the OCO Missions

**National Endowment of Humanities:** Scholarly Editions and Scholarly Translations; Humanities Connections

**Private Foundations:** Activate.Org: Activate Fellowships

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## **Recent Research Grant and Contract Awards**

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

**PI:** Junjie Yang (PI)

**Department:** Physics

**Grant/Contract Project Title:** Exotic Magnetic Orders and Dynamics in Chiral Magnets

**Funding Agency:** U.S. Department of Energy

**Duration:** 08/01/20-07/31/21

**PI:** Antje Ihlefeld (PI)  
**Department:** Biomedical Engineering  
**Grant/Contract Project Title:** I-Corps: Diagnostic Tool for Auditory Processing Disorder  
**Funding Agency:** NSF  
**Duration:** 08/01/20-07/31/21

**PI:** Atam Dhawan (PI)  
**Department:** Office of Research  
**Grant/Contract Project Title:** Mobile Medical Care Unit (M2CU)  
**Funding Agency:** Tuchman Foundation  
**Duration:** 05/01/20-04/30/21

**PI:** Wen Zhang (PI)  
**Department:** Civil and Environmental Engineering  
**Grant/Contract Project Title:** PFI-TT: Electrochemically Reactive Membrane Filtration for Enhanced Recalcitrant Pollutant Removal  
**Funding Agency:** NSF  
**Duration:** 09/01/20-08/31/22

**PI:** Alexander Kosovichev (PI)  
**Department:** Center for Computational Heliophysics  
**Grant/Contract Project Title:** Machine Learning Tools for Predicting Solar Energetic Particle Hazards  
**Funding Agency:** NASA  
**Duration:** 01/13/20-01/12/23

**PI:** Michael Lee (PI)  
**Department:** Informatics  
**Grant/Contract Project Title:** WORKSHOP: VL/HCC 2020 Graduate Consortium I  
**Funding Agency:** NSF  
**Duration:** 10/01/20-09/30/21

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### **In the News...**

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

**BIOLOGICAL RESEARCH AT THE DEPARTMENT OF ENERGY:** As the COVID-19 pandemic began to unfold in the US, it became apparent that DOE's laboratories and programs were also well positioned to help us respond to the virus. It is perhaps not well known, but this territory of research is not new to the labs. DOE Labs house and operate national user facilities like the Joint Genome Institute, established by the department in 1997 as part of the Human Genome Project. Today, Institute researchers survey the biosphere to characterize organisms relevant to the DOE science missions of bioenergy, global carbon cycling, and biogeochemistry. They also provide advanced sequencing and computational analysis of genes related to clean energy generation and environmental characterization and cleanup. Leveraging these capabilities has enabled researchers to develop countermeasures against the novel coronavirus like diagnostic tests and allowed them to assess transmission and evolution dynamics as the virus spreads

globally. This hearing examined the historic reasons for why the department possesses advanced bioscience capabilities to address the nation's grand challenges and to stimulate innovation; how this expertise and DOE's biological research tools are being leveraged to respond to the COVID19 pandemic; and what future directions for the Department's biological system research can provide solutions for our nation's most pressing issues. More information is posted on the [Science, Space and Technology website](#). The House Committee on Science, Space, and Technology; Research and Technology Subcommittee discussed the impact of the COVID-19 crisis on innovation as it relates to our academic research system. The chair noted that federally funded research conducted on university campuses across the nation is a critical driver of U.S. innovation and economic development, pairing with private sector and government partners to jumpstart new technology and scientific breakthroughs. *The COVID-19 crisis sent shock waves through this critical ecosystem. University administrators, research facility managers, faculty, postdocs, and students are all reeling from the profound disruptions to their work and struggling to adapt amid persistent uncertainty about how long this crisis will last. The RISE Act authorizes \$26 billion in emergency relief funding for science agencies to support full-cost extensions of research grants so that we don't lose literally years of critical research. The Supporting Early-Career Researchers Act creates a new \$250 million fellowship program at the National Science Foundation to help keep recent Ph.D. recipients in the STEM pipeline.* Theresa S. Mayer Executive Vice President for Research and Partnerships Professor of Electrical and Computer Engineering Purdue University testified that With the current trends in COVID-19 positive cases across the country, it is reasonable to expect that federally funded researchers will continue to experience declines in productivity due to COVID-19 related issues such as absences due to illness, quarantine, gaps in childcare and school, and other factors.

The time and resources committed to the institutional response is only one aspect of the research impact. COGR recently reported an excellent study that qualitatively analyzes and predicts the effect of different "pandemic normal" scenarios on short- and long-term financial impact to sponsored program research. It is also important to quantitatively measure and document the level of disruption and financial impact on individual sponsored programs to overall university portfolios to feed these models and to inform federal agencies of actual COVID-19 related losses due to factors including: lost access to facilities, travel restrictions preventing state, national, and international collaborations and field work, illness and family leave, and others.

All testimonies on impact of research at universities are posted on the [Science, Space and Technologies website](#).

**IBM Announces Summer Internship Program In Quantum Computing:** [TechGig](#) (9/10) reports IBM "just announced the Summer 2021 internship program in the US" and also "has just wrapped up their Summer 2020 internship program." This year's program "hosted more than 70 interns supported by 28 managers and 51 mentors from across IBM quantum team." IBM "plans to train the future scientists, engineers and developers across the globe on quantum computing."

**Report Explores Level Of Investment Needed For Clean Energy Future:** [Forbes](#) (9/9, Cherney) that a "report recently published by the University of California Berkeley's Goldman School of Public Policy argues that transitioning the U.S. electricity sector to 90% clean energy by 2035 is operationally feasible, and, even more striking, possible without raising customer's bills from today's levels." However, "achieving this outcome, the report acknowledges, will require 'strong policies' to enhance large-scale adoption of renewable energy." Based on "the Berkeley report, to reach 90% clean energy by 2035 the deployment of new clean energy and storage capacity in the United States would need to average 75 gigawatts each year, reaching over 1,200 gigawatts in total by 2035."

**Pentagon, Defense Contractors Are Out Of Step On Tech Innovation:** wo years after the Pentagon set out to spend billions on 10 breakthrough research and engineering efforts, defense contractors instead are putting most of their money in less ambitious research projects. The development gap between the military and its suppliers troubled investigators at the Government Accountability Office, or GAO, who determined in a report released Thursday that the Defense Department isn't keeping good watch over those private efforts and doesn't know how much of it would fit into the military's tech goals. The Pentagon's undersecretary for research and engineering in 2018 [laid out](#) several [big idea research areas](#) that would be most relevant to maintaining an edge on China or Russia. Many are in the very early stages of maturation; the biggest breakthroughs are expected in the second half of the coming decade.

They are: artificial intelligence, autonomy, biotechnology, directed energy, space, cyber, microelectronics, hypersonics, networked command and control, and quantum science. These areas of the future will go on to determine technology superiority in 2030, and the Department of Defense is eager to invest . It plans to spend \$7.5 billion on artificial intelligence, autonomy, hypersonics, and directed energy this year, according to the report. The article is posted on the [GoveExec website](#).

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### **Webinar and Events**

**Event: Webinar: Startups and Early Stage Investing**

**Sponsor: NJBIZ**

**When: September 14, 2020, 11.00 AM-12.00 PM**

**Website:** [https://gannett.zoom.us/webinar/register/WN\\_5jxIEkseTleJMNj3JOuwNw](https://gannett.zoom.us/webinar/register/WN_5jxIEkseTleJMNj3JOuwNw)

**Brief Description:** Join us for a special installment of NJBIZ Conversations for a live virtual discussion moderated by Editor Jeffrey Kanige featuring a panel of experts exploring entrepreneurship during the COVID-19 pandemic, including:

- How startups and small businesses can navigate the downturn
- Which steps businesses should take first
- Why the economic environment disproportionately hurts businesses run by people of color
- Where new opportunities can be found right now
- Who is providing financing during the pandemic
- When to persevere and when to fold
- And more!

**To Join the Webinar:** Register at the above URL.

**Event: Cyberinfrastructure for Sustained Scientific Innovation (CSSI) Program Webinar**

**Sponsor: NSF**

**When: September 16, 2020 2.00 PM**

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301208&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301208&org=NSF)

**Brief Description:** The new CSSI solicitation ([Cyberinfrastructure for Sustained Scientific Innovation](#)) [NSF 20-592](#) is now released with a submission deadline of October 28, 2020. This solicitation continues the CSSI program's emphasis on integrated cyberinfrastructure services while also recognizing the importance of adaptation to the evolving research community needs as well as the continuing evolution of the computing landscape. Among the changes reflected by the new solicitation, the priorities for the collaborating NSF directorates and divisions has been updated for 2021. PIs are strongly encouraged to contact program officer(s) from the list of Cognizant Program Officers in the division(s) that typically support the scientists and engineers who would make use of the proposed work, to gain

insight into the priorities for the relevant areas of science and engineering to which their proposals may be responsive. Proposals may now include requests for cloud computing resources through an external cloud access entity supported by NSF's Enabling Access to Cloud Computing Resources for CISE Research and Education (Cloud Access) Program. Three project themes have been introduced, along with a grouping and clarification of the expected specific items in CSSI proposals.

**To Join the Webinar:** To participate in the webinar, please register at: [https://nsf.zoomgov.com/webinar/register/WN\\_hzqixnS1SRakQOWnLYosPQ](https://nsf.zoomgov.com/webinar/register/WN_hzqixnS1SRakQOWnLYosPQ)

**Event: Webinar: High Resolution Observations of Solar Flares: SolFER Colloquium - Solar Physics Webinar of Global Reach # 33**

**Sponsor: NJIT Institute for Space Weather Sciences Colloquium**

**When: September 18, 2020 1.00 PM – 2.00 PM**

**Website: [http://www.ioffe.ru/LEA/SF\\_AR/webinar.html](http://www.ioffe.ru/LEA/SF_AR/webinar.html)**

**Speaker: Dr. Haimin Wang, Distinguished Professor of Physics, NJIT**

**Brief Description:** In recent years, the operation of 1-meter class solar telescopes have advanced the understanding of solar activity. In particular, the Adaptive Optics equipped 1.6-meter Goode Solar Telescope (GST) at Big Bear Solar Observatory provides observations of with a spatial resolution in the order of 100km. I review some recent fundamental discoveries using these high resolution observations, including: (1) Flare ribbon fronts, as well as pre- and post-flare loops are in the scale of about 100 km. The injection flare electron flux should increase substantially comparing to the results from lower resolution RHESSI observations. (2) In He10830, flare front may appear as narrow dark front, indicating the effect of collisional ionization. (3) Irreversible/rapid photospheric magnetic structures are detected such as formation of new penumbra, rapid sunspot rotation and sudden transvers field orientation change. (4) Filament eruptions may consist of rising of many small scale threads, corresponding to small scale brightening in chromosphere.

**To Join the Webinar:** To connect: The Webinar uses the Cisco Webex service available at NJIT (link to connect:

<https://njit.webex.com/njit/j.php?MTID=mcb6f3cb75b5e6b62bbcbba16d36e963>; meeting # 924 797 400, password solfer).

**Event: National Artificial Intelligence (AI) Research Institutes Program Webinar**

**Sponsor: NSF**

**When: September 21, 2020 3.30 PM – 5.00 PM**

**Website: [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301175&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301175&org=NSF)**

**Brief Description:** Artificial Intelligence (AI) has advanced tremendously and today promises personalized healthcare; enhanced national security; improved transportation; and more effective education, to name just a few benefits. Increased computing power, the availability of large datasets and streaming data, and algorithmic advances in machine learning (ML) have made it possible for AI research and development to create new sectors of the economy and revitalize industries. Continued advancement, enabled by sustained federal investment and channeled toward issues of national importance, holds the potential for further economic impact and quality-of-life improvements.

The goal of this program is to enable multidisciplinary, multi-stakeholder research on large-scale, long-time-horizon challenges in areas of national importance, through the growth of the network of National AI Research Institutes. This webinar will introduce the program, describe funding opportunities, and address questions about the program.

The National Artificial Intelligence (AI) Research Institutes program is a joint government effort between the National Science Foundation (NSF), U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA), U.S. Department of Homeland Security (DHS) Science &



Technology Directorate (S&T), and the U.S. Department of Transportation (DOT) Federal Highway Administration (FHWA). New to the program this year are contributions from partners in U.S. industry who share in the government's goal to advance national competitiveness through National AI Research Institutes. This year's industry partners are Accenture, Amazon, Google, and Intel Corporation.

This webinar will cover the [National Artificial Intelligence Research Institutes](#) solicitation [NSF 20-604](#), submission requirements and program updates.

**To Join the Webinar: Register in advance for this webinar:**

[https://nsf.zoomgov.com/webinar/register/WN\\_6Qo-wGMtTOaniMch4auBKQ](https://nsf.zoomgov.com/webinar/register/WN_6Qo-wGMtTOaniMch4auBKQ)

- **Prepare in advance by testing your internet connection and devices with Zoom software:** <https://zoom.us/test> . Learn more about participating in meetings remotely with NSF at: <https://beta.nsf.gov/about/participant>.

## **Event: Deep Dive Into Deep Tech Incubation Workshop**

**Sponsor: NSF**

**When: September 25, 2020 12.30 PM – 1.30 PM**

**October 16, 2020 12.00 PM – 1.00 PM**

**November 18, 2020 12.00 PM – 1.00 PM**

**December 18, 2020 12.00 PM – 1.00 PM**

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301160&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301160&org=NSF)

### **Brief Description: Part I**

**Friday, September 25, 12 pm Eastern (90 min)**

#### **How COVID-19 Is Affecting The Deep Tech Startup Ecosystem**

COVID-19 has been the most profound shock to the national research enterprise since World War II. The repercussions are still shaking out, but lost research output due to temporary closures of most state economies has wreaked havoc on the pace of innovation and commercialization in the U.S. It is expected that the financial and economic effects of the pandemic on capital markets will be a catastrophic event for many early-stage companies, especially those that are bringing deep technologies to market. The first part of the Deep Dive Into Deep Tech Incubation webinar series will feature thought leaders from government, academia, startups, and the investment community to discuss how deep tech entrepreneurs can try to weather COVID-19 and make it out on the other side of this ongoing crisis stronger and better prepared.

### **Part II**

**Friday, October 16, 12 pm Eastern (60 min)**

#### **Deep Tech Incubation Fundamentals and Best Practices**

Deep tech innovators and entrepreneurs often need increasing levels of support due to the capital intensity and long lead times required to commercialize their innovations. Incubators and accelerators play a critical role in helping fill gaps and connect dots for aspiring deep tech startups, providing everything from mentorship to access to talent and matchmaking with various capital sources. This support is essential to an early-stage company's success, especially given the plethora of well-intentioned programs that can often confuse or misguide aspiring entrepreneurs and innovators who are almost always working with limited resources. The second part of the Deep Dive Into Deep Tech Incubation webinar series will feature leading experts from the nation's top deep tech incubators and accelerators who will share tips, lessons learned, and best practices for deep tech startups and venture development organizations.

### **Part III**

**Wednesday, November 18, 12 pm Eastern (60 min)**

#### **Deep Tech Incubation and Academia Nexus**

Deep tech innovation is often born out of academic research at campuses across the nation. As a result, colleges and universities play a unique and critical role in fostering the development and

commercialization of technologies that will transform our lives. The technology discovery and transfer processes can be especially risky for deep tech innovations given the complexity of scaling them from lab to market and understanding potential commercial applications. However, colleges and universities remain at the forefront of deep tech incubation. Their people and programs that support this research translation process directly impact the strength and competitiveness of technology innovation in the U.S. The third part of the Deep Dive Into Deep Tech Incubation webinar series will feature visionaries from leading academic institutions to discuss this research translation nexus and how they manage the deep tech commercialization process and instill strong entrepreneurial cultures at their respective campuses.

#### **Part IV**

**Friday, December 18, 12 pm Eastern (60 min)**

#### **Deep Tech Venture Capital and Corporate Partnerships**

Deep tech startups typically require significant capital and time to get their innovations into the market. More and more financial investors have entered this space as they view the outsize financial returns that are possibly worth the risk of supporting deep tech startups. In addition, more corporate and strategic partners are competing by investing in innovation, whether it is structured as direct investments in early-stage companies or other forms of support like joint ventures or non-recurring engineering. These venture capital and corporate partnerships provide highly valuable validation for deep tech startups, which enables them to raise follow-on capital and secure the partnerships that are critical to commercializing their technology. The fourth and final part of the Deep Dive Into Deep Tech Incubation webinar series will feature top investors and corporations who are actively partnering with deep tech startups as well as entrepreneurs who have benefited from this type of support.

**To Join the Webinar:** Register at <https://www.eventbrite.com/e/deep-dive-into-deep-tech-incubation-series-tickets-114163867200>

#### **Event: I-Corps Teams Webinar**

**Sponsor:** NSF

**When:** October 1, 2020 12.00 PM – 1.00 PM

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=301112&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=301112&org=NSF)

**Brief Description:** Join a monthly NSF Innovation Corps (I-Corps) Teams webinar to learn how to make your technology concept into a product through customer discovery. If you have worked on an NSF grant in the last few years, you may be eligible for the [National I-Corps Teams program](#). Program directors will answer questions and provide updated information about I-Corps contacts, the curriculum and important dates

**To Join the Webinar:** [Register for the October 1 webinar](#)

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## **Grant Opportunities**

### **National Science Foundation**

**Grant Program:** CISE Community Research Infrastructure (CCRI)

**Agency:** National Science Foundation NSF 20-610

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20610/nsf20610.htm>

**Brief Description:** The Computer and Information Science and Engineering (CISE) Community Research Infrastructure (CCRI) program drives discovery and learning in the core CISE disciplines of the three participating divisions [(Computing and Communication Foundations (CCF), Computer and

Network Systems (CNS), and Information and Intelligent Systems (IIS)] by funding the creation and enhancement of world-class research infrastructure. This research infrastructure will specifically support diverse communities of CISE researchers pursuing **focused research agendas in computer and information science and engineering**.

The CCRI program supports three classes of awards:

- **Planning Community Infrastructure (Planning)** awards support planning efforts to engage research communities to develop new CISE community research infrastructures (Planning).
- **Medium Community Infrastructure (Medium)** awards support the creation of new CISE community research infrastructure or the enhancement of existing CISE community research infrastructures with integrated tools, resources, user services, and research community outreach to enable innovative CISE research opportunities to advance the frontiers of the CISE core research areas. The **Medium** award class includes **New (New) and Enhance/Sustain (ENS)** awards.
- **Grand Community Infrastructure (Grand)** awards support projects involving significant efforts to develop new CISE community research infrastructures or to enhance and sustain an existing CISE community research infrastructure to enable world-class CISE research opportunities for broad-based communities of CISE researchers that extend well beyond the awardee organization(s).

Each CCRI **Medium or Grand** award may include support for operation of the infrastructure, ensuring that the awardee organization(s) is (are) well positioned to provide a high quality of service to CISE community researchers expected to use the infrastructure to realize their research goals.

**Awards:** Standard and Continuing Grants; **Anticipated Funding Amount:** \$25,000,000

With up to 10 **Planning** awards, up to 12 **Medium** awards, and up to 3 Grand awards in each competition. The majority of the **Medium** awards will be for up to three years and in the \$1,000,000 - \$2,000,000 range per award. A small number of **Grand** awards will be for up to five years and in the \$2,000,000 - \$5,000,000 range per award. The majority of the **Planning** awards will be for up to one and one-half years and in the \$50,000 - \$100,000 range per award.

**Letters of Intent:** December 15, 2020

**Proposal Submission Deadline:** January 28, 2021

**Contacts:** Mimi McClure, Program Director, CISE/CNS, telephone: (703) 292-8950, email: [mmcclure@nsf.gov](mailto:mmcclure@nsf.gov)

- Tatiana D. Korelsky, Program Director, CISE/IIS, telephone: (703) 292-8930, email: [tkorelsk@nsf.gov](mailto:tkorelsk@nsf.gov)
- Yuanyuan Yang, Program Director, CISE/CCF, telephone: (703) 292-8067, email: [yyang@nsf.gov](mailto:yyang@nsf.gov)

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## **Grant Program: Collaborative Research in Computational Neuroscience (CRCNS)**

**Agency: National Science Foundation NSF 20-609**

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20609/nsf20609.htm>

**Brief Description:** Computational neuroscience provides a theoretical foundation and a rich set of technical approaches for understanding complex neurobiological systems, building on the theory, methods, and findings of computer science, neuroscience, and numerous other disciplines.

Through the CRCNS program, the U.S. National Science Foundation (NSF), National Institutes of Health (NIH), and Department of Energy (DOE); the German Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF); the French National Research Agency (Agence Nationale de la Recherche, ANR); the United States-Israel Binational Science Foundation (BSF); Japan's National Institute of Information and Communications Technology (NICT); and Spain's State Research Agency (Agencia Estatal de Investigación, AEI) and National Institute of Health Carlos III (Instituto de

Salud Carlos III, ISCIII) support collaborative activities that will advance the understanding of nervous system structure and function, mechanisms underlying nervous system disorders, and computational strategies used by the nervous system.

Two classes of proposals will be considered in response to this solicitation:

**Research Proposals** describing collaborative research projects, and  
**Data Sharing Proposals** to enable sharing of data and other resources.

**Awards:** Standard and Continuing Grants; **Anticipated Funding Amount:** \$5,000,000 to \$20,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** December 10, 2020

**Contacts:** Kenneth Whang, CRCNS Program Coordinator - NSF; Program Director, Division of Information and Intelligent Systems, National Science Foundation, telephone: (703) 292-5149, fax: (703) 292-9073, email: [kwhang@nsf.gov](mailto:kwhang@nsf.gov)

- Chantel Sanders, CRCNS Administrative Coordinator - NSF; Program Analyst, Division of Information and Intelligent Systems, National Science Foundation, telephone: (703) 292-2617, fax: (703) 292-9073, email: [cesander@nsf.gov](mailto:cesander@nsf.gov)

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### **Grant Program: Research Training Groups in the Mathematical Sciences (RTG)**

**Agency:** National Science Foundation NSF 20-608

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20608/nsf20608.htm>

**Brief Description:** The long-range goal of the Research Training Groups in the Mathematical Sciences (RTG) program is to strengthen the nation's scientific competitiveness by increasing the number of well-prepared U.S. citizens, nationals, and permanent residents who pursue careers in the mathematical sciences, be they in academia, government, or industry. The RTG program supports efforts to improve research training by involving undergraduate students, graduate students, postdoctoral associates, and faculty members in structured research groups pursuing coherent research programs. Research groups supported by RTG must include vertically-integrated activities that span the entire spectrum of educational levels from undergraduates through postdoctoral associates.

**Awards:** Standard and Continuing Grants; **Anticipated Funding Amount:** \$10,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** June 01, 2021

**Contacts:** Swatee Naik, telephone: (703) 292-4876, email: [snaik@nsf.gov](mailto:snaik@nsf.gov)

- Pawel J. Hitzcenko, telephone: (703) 292-5330, email: [phitzcen@nsf.gov](mailto:phitzcen@nsf.gov)
- Eun Heui Kim, telephone: (703) 292-2091, email: [eukim@nsf.gov](mailto:eukim@nsf.gov)

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### **Grant Program: Advancing Informal STEM Learning (AISL)**

**Agency:** National Science Foundation NSF 20-607

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20607/nsf20607.htm>

**Brief Description:** The **Advancing Informal STEM Learning (AISL)** program seeks to advance new approaches to and evidence-based understanding of the design and development of STEM learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; advance innovative research on and assessment of STEM learning in informal environments; and engage the public of all ages in learning STEM in informal environments. The AISL program supports six types of projects: (1) Pilots and Feasibility Studies, (2) Research in Service to Practice, (3) Innovations in Development, (4) Broad Implementation, (5) Literature Reviews, Syntheses, or Meta-Analyses, and (6) Conferences.

**Awards:** Standard and Continuing Grants; **Anticipated Funding Amount:** \$30,000,000 to \$39,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** January 21, 2021

**Contacts:** Address Questions to the Program, telephone: (703) 292-8616, email: [DRLAISL@nsf.gov](mailto:DRLAISL@nsf.gov)

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**Grant Program: Advanced Computing Systems & Services: Adapting to the Rapid Evolution of Science and Engineering Research**

**Agency:** National Science Foundation NSF 20-606

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20606/nsf20606.htm>

**Brief Description:** The intent of this solicitation is to request proposals from organizations willing to serve as service providers (SPs) within the NSF Innovative High-Performance Computing (HPC) program to provide advanced cyberinfrastructure (CI) capabilities and/or services in production operations to support the full range of computational- and data-intensive research across all of science and engineering (S&E). The Advanced Computing Systems & Services program is intended to complement previous NSF investments in advanced computational infrastructure by provisioning resources, broadly defined to include systems and/or services, in two categories:

- Category I, Capacity Systems: production computational resources maximizing the capacity provided to support the broad range of computation and data analytics needs in S&E research; and
- Category II, Innovative Prototypes/Testbeds: innovative forward-looking capabilities deploying novel technologies, architectures, usage modes, etc., and exploring new target applications, methods, and paradigms for S&E discoveries.

This solicitation welcomes **only Category II proposals**.

**Awards:** Cooperative Agreement; **Anticipated Funding Amount:** \$5,000,000 per award. A total of \$10,000,000 is available for this solicitation, subject to the availability of funds. It is anticipated that 1-2 awards will be made at up to \$5,000,000 per award for up to five years.

**Letters of Intent:** Not required

**Proposal Submission Deadline:** December 03, 2020

**Limit on Number of Proposals per Organization:** 1

**Contacts:** Robert Chadduck, Program Director, CISE/OAC, telephone: (703) 292-8970, email: [rchadduc@nsf.gov](mailto:rchadduc@nsf.gov)

- Alejandro Suarez, Associate Program Director, CISE/OAC, telephone: (703) 292-7092, email: [alsuarez@nsf.gov](mailto:alsuarez@nsf.gov)
  - Edward Walker, Program Director, CISE/OAC, telephone: (703) 292-4863, email: [edwalker@nsf.gov](mailto:edwalker@nsf.gov)
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**Grant Program: Focused Research Hubs in Theoretical Physics (FRHTP)**

**Agency:** National Science Foundation NSF 20-605

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20605/nsf20605.htm>

**Brief Description:** Focused Research Hubs in Theoretical Physics (FRHTP) are designed to enhance significant breakthroughs at an intellectual frontier of physics by providing resources beyond those available to individual investigators, so as to promote a collaborative approach to a focused topic while promoting the preparation of scientists at the beginning of their independent scientific careers. Although interdisciplinary aspects may be included, the bulk of the effort must fall within the purview of the Division of Physics. The successful hub will demonstrate: (1) the potential to advance science; (2) the enhancement of the development of early career scientists; (3) creative, substantive activities aimed at enhancing education, diversity, and public outreach; (4) potential for broader impacts, e.g., impacts on other field(s) and benefits to society; (5) a synergy or value-added rationale that justifies a group approach.

The FRHTP will be funded for an initial duration of five years. The intent is that the research topics proposed are at the stage that the scientific goals of the hub can be achieved in the first five years of the project. The FRHTP awards will provide support only for postdoctoral researchers plus general support for hub-related activities. The FRHTP are not intended to provide additional support for senior personnel (individual PIs), graduate or undergraduate students. Instead, the FRHTP is intended to support postdoctoral researchers and enable collaborative interactions via support for travel, collaboration meetings and workshops.

**Awards:** Cooperative Agreement; **Anticipated Funding Amount:** \$3,750,000 to \$10,250,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** January 15, 2021

**Contacts:** Bogdan Mihaila, telephone: (703) 292-8235, email: [bmihaila@nsf.gov](mailto:bmihaila@nsf.gov)

- Julio R. Gea-Banacloche, telephone: (703) 292-7936, email: [jgeabana@nsf.gov](mailto:jgeabana@nsf.gov)
- Robert Forrey, telephone: (703) 292-5199, email: [rforrey@nsf.gov](mailto:rforrey@nsf.gov)

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## **National Institutes of Health**

**Grant Program: Genomic Data Analysis Network: Genomic Data Center (U24 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health RFA-CA-20-053**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-CA-20-053.html>

**Brief Description:** This funding opportunity announcement (FOA) is designed to support genomic programs managed by the Center for Cancer Genomics (CCG). The overall goal of all CCG programs is to help elucidate the mechanisms of cancer initiation and evolution, as well as resistance to therapy by means of genomic characterization of well-annotated, high quality tumor samples. These data could, in the future, be used to identify and accelerate the development of new diagnostic and prognostic markers, new targets for pharmaceutical interventions, and new cancer prevention and treatment strategies. It is not the intent of this FOA to fund follow-up translational and functional studies, but rather to enable the cancer research community to develop a new generation of studies that will leverage the genomic findings from NCI programs for the benefit of cancer patients. NCI project data, both ongoing and completed, will provide a unique reference resource on cancer-specific genomic aberrations for the cancer research community at large. *To serve the overarching goals of NCI, this FOA solicits applications for highly collaborative Genome Data Analysis Centers (GDACs) that will, in aggregate, form the Genomic Data Analysis Network (GDAN).*

**Awards:** Application budgets are limited to \$300,000/year in direct costs, but need to reflect the actual needs of the proposed project. The NCI intends to support up to 10 GDAC awards for a total of \$10 million (total costs). Future year amounts will depend on annual appropriations.

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

**Proposal Submission Deadline:** November 12, 2020;

No late applications will be accepted for this FOA.

All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** Jean C. ZenKlusen, PhD, National Cancer Institute (NCI), Telephone: 301-451-2144, Email: [jz44m@nih.gov](mailto:jz44m@nih.gov)

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**Grant Program: NIH Blueprint for Neuroscience Research: Functional Neural Circuits of Interoception (R01, Clinical Trial Not Allowed)**

**Agency:** National Institutes of Health RFA-AT-21-003

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-AT-21-003.html>

**Brief Description:** The NIH Blueprint for Neuroscience Research is a collaborative framework through which 14 NIH Institutes, Centers and Offices jointly support neuroscience related research, with the aim of accelerating discoveries and reducing the burden of nervous system disorders (for further information, see <http://neuroscienceblueprint.nih.gov/>).

The goal of this FOA is to enhance our fundamental understanding of interoception with a specific focus on dissecting and determining the function of neural circuits that connect peripheral organs/tissues with the central nervous system (CNS) via peripheral ganglia. For this FOA, interoception science includes studies of the processes by which an organism senses, interprets, integrates, and regulates signals originating from within itself. The FOA encourages projects that combine diverse expertise and use innovative approaches to delineate interoceptive mechanisms at the molecular, cellular, circuitry, functional, and/or behavioral levels. Outcomes of this research will lay a critical foundation for future translational and clinical research on interoception as well as its roles in nervous system disorders. Studies of interoceptive neural circuits exclusively within the CNS may be more appropriate for [The BRAIN Initiative](#) funding opportunities. Applications in response to this FOA should budget for an annual investigator meeting organized by the NIH Blueprint for Neuroscience Research. Human subject research is not allowed under this FOA.

**Awards:** Application budgets need to reflect the actual needs of the proposed project. The budgets are limited to \$375,000 direct costs annually.

**Letter of Intent:** November 18, 2020

**Proposal Submission Deadline:** December 18, 2020

All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** Wen G. Chen, M.MSc., Ph.D., National Center for Complementary and Integrative Health (NCCIH), Telephone:301-451-3989, Email: [wen.chen2@nih.gov](mailto:wen.chen2@nih.gov)

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**Grant Program: Innovative Research in Cancer Nanotechnology (IRCN) (R01 Clinical Trial Not Allowed)**

**Agency:** National Institutes of Health PAR-20-284

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PAR-20-284.html>

**Brief Description:** IRCN awards are expected to advance employment of nanotechnology in understanding, diagnosing, and treating neoplastic diseases. Each proposed IRCN project is expected to generate new fundamental knowledge aiding the development of nanotechnology-based solutions to major problems in cancer biology and/or oncology. Typical efforts and applications in this area of research involve 1) demonstration of therapies based on nanoparticle delivery with the attempt to obtain improved efficacy and 2) demonstration of diagnostic tools (*in vitro* or *in vivo*) with improved sensitivity and specificity. These are clearly important objectives, but it is often that the above goals can be accomplished without a full understanding of the therapeutic mode of action or insight into mechanisms contributing to

improved sensitivity and specificity of diagnostics. Projects submitted to this FOA need to be designed differently. While proposing an innovative, nanotechnology-based solution to cancer biology and/or oncology problems, the project should focus on mechanistic studies. These studies are expected to address the fundamental understanding of nanomaterial and/or nano-device interactions with biological systems in the effort to uncover mechanisms governing effective delivery of nanoparticles and/or nano-devices to desired and intended cancer targets *in vivo* and/or successful operation of detection and diagnostic devices and sensors *in vitro*. *The innovative use of nanotechnology to solve cancer biology/oncology problems is viewed as more significant than innovation in nanotechnology itself (e.g., development of new nanomaterials).*

**Awards:** Application budgets are limited to \$450K in direct costs per year and need to reflect the actual needs of the proposed project.

**Letter of Intent:** Not applicable

**Proposal Submission Deadline:** November 4, 2020, May 6, 2021, November 4, 2021, May 5, 2021, November 3, 2022, May 4, 2023

All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** Piotr Grodzinski, Ph.D. National Cancer Institute (NCI) Telephone 240-781-3305

Email: [grodzinp@mail.nih.gov](mailto:grodzinp@mail.nih.gov)

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**Grant Program: Cellular and Molecular Biology of Complex Brain Disorders (R21 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health PAR-20-264**

**Companion Opportunities:**

[PAR-20-263](#) - [R01](#) Research Project Grant

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PAR-20-264.html>

**Brief Description:** This FOA encourages research on the biology of high confidence risk factors associated with complex brain disorders, with a focus on the intracellular, transcellular and circuit substrates of neural function. For the purposes of this FOA, the term “complex” can refer to a multifactorial contribution to risk (e.g., polygenic and/or environmental) and/or highly distributed functional features of the brain disorder. Studies may be either hypothesis-generating (unbiased discovery) or hypothesis-testing in design and may utilize *in vivo*, *in situ* or *in vitro* experimental paradigms, e.g., model organisms or human cell-based assays. While behavioral paradigms and outcome measures can be incorporated into the research design to facilitate the characterization of intracellular, transcellular and circuit mechanisms, these are neither required nor expected. Studies should not attempt to “model” disorders but instead should aim to elucidate the neurobiological impact of individual or combined risk factor(s), such as the affected molecular and cellular components and their relationships within defined biological process(es). This can include the fundamental biology of these factors, components and processes. The resulting paradigms, component pathways and biological processes should be disseminated with sufficient detail to enrich common and/or federated data resources (e.g., those contributing to the Gene Ontology, Synaptic Gene Ontology, FAIR Data Informatics) in order to bridge the gap between disease risk factors, biological mechanism and therapeutic target identification. See Section IV, Application and Submission Information, Data and Resource Sharing.

**Awards:** The combined budget for direct costs for the two-year project period may not exceed \$275,000. No more than \$200,000 may be requested in any single year.

**Letter of Intent:** Not applicable



**Proposal Submission Deadline:** [Standard dates](#) apply. The first standard application due date for this FOA is October 16, 2020.

All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** Joy Boyer, National Human Genome Research Institute (NHGRI), Telephone: 301-402-4997  
Email: [boyerj@mail.nih.gov](mailto:boyerj@mail.nih.gov)

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**Grant Program: BRAIN Initiative: Data Archives for the BRAIN Initiative (R24 Clinical Trial Optional)**

**Agency:** National Institutes of Health RFA-MH-20-600

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-20-600.html>

**Brief Description:** The purpose of this FOA is to provide support for the creation and management of more than one data archive to hold data related to the BRAIN Initiative. These archives are part of the informatics infrastructure for the BRAIN Initiative. The other components of that infrastructure include developing data standards that are needed to describe the new experiments that are being created by or used in the BRAIN Initiative ([RFA-MH-17-256](#), [RFA-MH-19-146](#), and [RFA-MH-20-128](#)), and developing software to visualize and analyze the data ([RFA-MH-17-257](#) and [RFA-MH-19-147](#)). Each of these components is aimed at building an infrastructure that is used by a particular sub-domain of BRAIN Initiative related experiments rather than building a single all-encompassing informatics infrastructure. Building the infrastructure one experimental area at a time will ensure that the infrastructure is immediately useful to the research community. As our understanding of the brain improves, we plan to create linkages between these various sub-domain specific informatics programs. While current efforts are limited in scope, investigators of the informatics programs should factor in plans for the eventual linkage of the various sub-domain specific informatics programs.

The data archives supported under this FOA are expected to use relevant standards that describe BRAIN Initiative experiments, and to be integrated with relevant software tools for visualization and analysis of archived data. Such standards and tools may be developed under BRAIN Initiative informatics awards or may already exist. Awardees under all the informatics programs are expected to work together. The awardees should budget for hackathons and other collaborative efforts that will be necessary to integrate the products produced by all awardees.

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

**Letter of Intent:** 30 days prior to the application due dates

**Proposal Submission Deadline:** July 14, 2021, July 14, 2022, and July 14, 2023 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. No late applications will be accepted for this Funding Opportunity Announcement.

All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** Ming Zhan, Ph.D., NIMH, Telephone: 301-827-3678 Email: [ming.zhan@nih.gov](mailto:ming.zhan@nih.gov)

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## Department of Defense/US Army/DARPA/ONR/AFOSR

### **Grant Program: Verified Security and Performance Enhancement of Large Legacy Software (V-SPELLS)**

**Agency: Department of Defense DARPA - Information Innovation Office HR001120S0058**

**Website:** <https://beta.sam.gov/opp/7dc5798bf5e74d8aa3df767edd3e0815/view>

**Brief Description:** The goal of the V-SPELLS program is to create a developer-accessible capability for piece-by-piece enhancement of software components with new verified code that is both correct-by-construction and compatible-by-construction, i.e., safely composable with the rest of the system. V-SPELLS will create practical tools for developers to gain benefits of formal software verification in incremental software (re)engineering rather than only in clean-slate introduction. V-SPELLS tools will enable developers to deliver assured incremental modernization of legacy systems in a manner that leverages verification technologies and reduces rather than raises risk. V-SPELLS aims to radically broaden adoption of software verification by enabling incremental introduction of superior technologies into systems that cannot be re-designed from scratch and replaced as a whole.

**Awards:** There are multiple technical areas for this solicitation. Currently, DARPA anticipates multiple awards in Technical Area 1, Technical Area 2 and Technical Area 3; and a single award for Technical Area 4. DARPA anticipates making multiple awards under this BAA, which has a total anticipated funding amount of approximately \$40 million.

**Letter of Intent:** Not Required

**Proposal Deadline:** September 9, 2020, 12:00 noon (ET)

**Proposers Day:** July 29, 2020

**Contact Information:** Dr. Sergey Bratus, Program Manager, DARPA/I2O

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### **Grant Program: DoD Combat Readiness, Rapid Development and Translational Research Award**

**Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-20-S-CRRP**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328340>

**Brief Description:** The CRRP vision is to deliver high-impact medical solutions throughout the continuum of care to increase survivability and readiness of the Warfighter in diverse operational settings. The program seeks to develop innovative solutions to increase medical readiness, mitigate fatalities, optimally treat life-threatening injuries, and promote positive long-term outcomes. While the CRRP focuses on capability gaps in frontline care, the program also considers how chronic disorders typically associated with pre-deployment readiness (e.g., sleep, gastrointestinal conditions) may influence the delivery of care in deployed environments and contribute to injury susceptibility and recovery. Innovations developed by CRRP-supported research may be applied proactively as a way to establish medical readiness ahead of deployment, in-theater at the point of injury or during periods of prolonged care, or during transport/en route care within and from theater to hospital settings. These solutions will not only help to minimize the morbidity and mortality of combat-related injuries sustained by the Warfighter, they will also often translate to civilian care.

**Awards:** The anticipated total costs budgeted for the entire period of performance for an FY20 CRRP RDTRA will not exceed \$2M.

**Letter of Intent:** Pre-Proposal Required

**Proposal Deadline:** Pre-Proposal/Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), September 10, 2020 • Invitation to Submit an Application: October 16, 2020 • Proposal/Application Submission Deadline: 11:59 p.m. ET, December 3, 2020

**Contact Information:** CDMRP Help Desk Phone: 301-682-5507 Email: [Help@eBRAP.org](mailto:Help@eBRAP.org)

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**Grant Program: Defense Sciences Office Office-wide**

**Agency: Department of Defense DARPA - Defense Sciences Office HR001120S0048**

**Website:** <https://beta.sam.gov/opp/36d6bc789b364142a0f7a267017b06d9/view>

**Brief Description:** The mission of the Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is to identify and create the next generation of scientific discovery by pursuing high-risk, high-payoff research initiatives across a broad spectrum of science and engineering disciplines and transforming these initiatives into disruptive technologies for U.S. national security. In support of this mission, the DSO Office-wide BAA invites proposers to submit innovative basic or applied research concepts or studies and analysis proposals that address one or more of the following technical thrust areas: (1) Frontiers in Math, Computation and Design, (2) Limits of Sensing and Sensors, (3) Complex Social Systems, and (4) Anticipating Surprise. Each of these thrust areas is described below and includes a list of example research topics that highlight several (but not all) potential areas of interest. Proposals must investigate innovative approaches that enable revolutionary advances. DSO is explicitly not interested in approaches or technologies that primarily result in evolutionary improvements to the existing state of practice.

**Awards:** Multiple awards are anticipated; however, the level of funding for individual awards made under this solicitation has not been predetermined and will depend on the scope and quality of the proposals received, as well as the availability of funds.

**Proposal Deadline:** Executive Summary Due Date and Time: June 11, 2021, 4:00 p.m. o Proposal Abstract Due Date and Time: Abstracts may be submitted on a rolling basis until June 11, 2021, 4:00 p.m. o FAQ Submission Deadline: June 2, 2021, 4:00 p.m. Proposals may be submitted on a rolling basis until June 11, 2021, 4:00 p.m

**Contact Information:** Phil Root, Deputy Director, DARPA/DSO o BAA Email: [HR001120S0048@darpa.mil](mailto:HR001120S0048@darpa.mil)

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**Grant Program: C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research**

**Agency: Department of Defense Naval Information Warfare Center Pacific N66001-20-S-4702**

**Website:** <https://www.grants.gov/web/grants/search-grants.html>

**Brief Description:** Naval Information Warfare Center, Pacific (NIWC Pacific), is soliciting proposals in accordance with FAR 35.016, DoDGARS 22.315(a), and DoD Other Transactions (OT) Guide for Prototype Projects for research in areas relating to the advancement of C4ISR capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems. Submissions in response to this announcement shall be for areas relating to the advancement of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems. Proposed research should investigate unique and innovative approaches for defining and developing next generation integratable C4ISR capabilities and command suites. The area topics reflect the interest of the NIWC Pacific, but interest from other Team NAVWAR components could be generated and selections could be made for funding by other than NIWC Pacific. Only offers that are in the areas of basic research, applied research, advanced technology development, and advanced component development and prototypes will be considered (see Appendix A). Testing and optimizing of concepts or prototypes may be necessary. This may involve virtual simulation and/or laboratory as well as at sea measurements.

**Awards:** Multiple awards are anticipated

**Proposal Deadline:** Closing date; June 03, 2021 Any white papers received during that time shall only be considered for award of a contract, other transaction, grant, or cooperative agreement.

**Contact Information:** David Roden (Primary) Contract Specialist Telephone: (619) 553-2087 Email: [David.Roden@navy.mil](mailto:David.Roden@navy.mil) NIWC Pacific Code 22710 53560 Hull Street San Diego, CA 92152-5001

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## **Department of Transportation**

### **Grant Program: Advanced Transportation and Congestion Management Technologies Deployment Initiative**

**Agency:** Department of Transportation 693JJ320NF00010

**Website:** <https://www.fhwa.dot.gov/fastact/factsheets/advtranscongmgmtfs.cfm>

**Brief Description:** The DOT hereby requests applications to result in awards to eligible entities to develop model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. These model deployments are expected to provide benefits in the form of: • reduced traffic-related fatalities and injuries; • reduced traffic congestion and improved travel time reliability; • reduced transportation-related emissions; • optimized multimodal system performance; • improved access to transportation alternatives, including for underserved populations; • public access to real time integrated traffic, transit, and multimodal transportation information to make informed travel decisions; • cost savings to transportation agencies, businesses, and the traveling public; or • other benefits to transportation users and the general public. This competitive ATCMTD Grant Program will promote the use of innovative transportation solutions. The deployment of these technologies will provide Congress and DOT with valuable real-life data and feedback to inform future decision-making.

**Letter of Intent:** Not Required

**Proposal Deadline:** August 31, 2020

**Contact Information:** Submit Questions to: [ATCMTD@dot.gov](mailto:ATCMTD@dot.gov)

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## **Department of Agriculture:**

### **Grant Program: NRCS's Regional Conservation Partnership Program**

**Agency:** Department of Agriculture USDA-NRCS-NHQ-RCPPC-21-NOFO0001033

**Website:** <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/>

**Brief Description:** The Regional Conservation Partnership Program (RCPP) promotes coordination of NRCS conservation activities with partners that offer value-added contributions to expand our collective ability to address on-farm, watershed, and regional natural resource concerns. Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges and provide measurable improvements and outcomes tied to the resource concerns they seek to address. Successful RCPP projects embody the following core principles:

- **Impact**—RCPP applications must propose effective and compelling solutions that address one or more natural resource priorities to help solve natural resource challenges. Partners are responsible for evaluating a project's impact and results.

- **Partner Contributions**—Partners are responsible for identifying any combination of cash and in-kind value-added contributions to leverage NRCS’s RCPP investments. It is NRCS’s goal that partner contributions at least equal the NRCS investment in an RCPP project. Substantive partner contributions are given priority consideration as part of the RCPP application evaluation criteria.
- **Innovation**—NRCS seeks projects that integrate multiple conservation approaches, implement innovative conservation approaches or technologies, build new partnerships, and effectively take advantage of program flexibilities to deliver conservation solutions.
- **Partnerships and Management**—Partners must have experience, expertise, and capacity to manage the partnership and project, provide outreach to producers, and quantify the environmental outcomes of an RCPP project. RCPP ranking criteria give preference to applicants that meaningfully engage historically underserved farmers and ranchers.

**Awards:** Up to \$10,000,000; Anticipated available funding: \$360,000,000

**Proposal Deadline:** RCPP Classic Application Period Open through November 4, 2020

**Contact Information:** [NRCS RCPP Staff](#)

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**Grant Program: Agriculture and Food Research Initiative - Foundational and Applied Science**

**Agency: Department of Agriculture USDA-NIFA-AFRI-007692**

**Website:** <https://nifa.usda.gov/funding-opportunity/agriculture-and-food-research-initiative-foundational-applied-science-program>

**Brief Description:** The AFRI Foundational and Applied Science Program supports grants in six AFRI priority areas to advance knowledge in both fundamental and applied sciences important to agriculture. The six priority areas are: Plant Health and Production and Plant Products; Animal Health and Production and Animal Products; Food Safety, Nutrition, and Health; Bioenergy, Natural Resources, and Environment; Agriculture Systems and Technology; and Agriculture Economics and Rural Communities. Research-only, extension-only, and integrated research, education and/or extension projects are solicited in this Request for Applications (RFA). See Foundational and Applied Science RFA for specific details.

**Letter of Intent: Required.**

**Awards:** Up to \$15,000,000; Anticipated available funding: \$290,000,000

**Proposal Deadline:** Thursday, July 29, 2021

**Contact Information:** [AFRI Coordination Team](#)

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**Grant Program: REAP-Renewable Energy Systems and Energy Efficiency Improvements**

**Agency: Department of Agriculture RDBCP-11-REAP-RES-EEI-2020**

**Website:** <https://www.govinfo.gov/content/pkg/FR-2019-08-30/pdf/2019-18825.pdf>

**Brief Description:** Eligible applicants are agricultural producers and rural small businesses. All agricultural producers, including farmers and ranchers, who gain 50% or more of their gross income from the agricultural operations are eligible. Small businesses that are located in a rural area can also apply. Rural electric cooperatives may also be eligible to apply. Additional Information on Eligibility: Citizenship - To be eligible, applicants must be individuals or entities at least 51 percent owned by persons who are either: 1) citizens of the United States (U.S.), the Republic of Palau, the Federated States of Micronesia, the Republic of the Marshall Islands, or American Samoa; or 2) legally admitted permanent residents residing in the U.S. Project - The project must be to conduct a feasibility study for a renewable energy system. Eligible technologies include: projects that produce energy from wind, solar, biomass, geothermal, hydro power and hydrogen-based sources.

**Awards:** Up to \$500,000; Anticipated Funding: \$70 million

**Submission Deadline:** September 30, 2020

**Contact: Technical Contact:** Maureen Hessel, Energy Specialist, Phone 202-401-0142

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## **Department of Labor**

**Grant Program: Supply Chains Tracing Project**

**Agency: Department of Labor FOA-ILAB-20-04**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328321>

**Brief Description:** The Bureau of International Labor Affairs (ILAB), U.S. Department of Labor (USDOL, or the Department), announces the availability of approximately \$8,000,000 total costs (subject to the availability of federal funds) for up to two cooperative agreements of up to \$4,000,000 total costs each to fund technical assistance projects to increase the downstream tracing of goods made by child labor or forced labor. 1 Project outputs include (1) increasing the number of tested supply chain tracing methodologies; (2) increasing the number of piloted tools for supply chain tracing; and (3) increasing the dissemination of supply chain tracing tools and methodologies to a broad range of stakeholders.

**Awards:** The duration of the project will be a maximum of 4.5 years (54 months) from the effective date of the award. If applying for both cooperative agreements, applicants may not combine applications into one—they must submit separate applications. Each application should request no more than \$4,000,000 total costs in funding and each application must separately meet all the requirements of this announcement. In the event that the same applicant is selected for award for both cooperative agreements, USDOL reserves the right to issue one cooperative agreement covering both proposals, and to adjust the budget accordingly for administrative costs.

**Proposal Deadline:** The closing date for receipt of applications under this announcement is September 8, 2020. Applications must be received no later than 4:00:00 p.m. Eastern Time.

**Contact Information:** Sue Levenstein, Grants Management Specialist. [levenstein.susan.l@dol.gov](mailto:levenstein.susan.l@dol.gov)

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## **Department of Commerce/EDA**

**Grant Program: FY21 Effects of Sea Level Rise (ESLR)**

**Agency: U.S. Department of Commerce NOAA-NOS-NCCOS-2021-2006594**

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328992>

**Brief Description:** The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) [formerly Center for Sponsored Coastal Ocean Research (CSCOR)/Coastal Ocean Program (COP)], is soliciting proposals for the Effects of Sea Level Rise Program (ESLR). The program name was shortened in 2020, and was formerly known as the Ecological Effects of Sea Level Rise Program (EESLR). This solicitation is to improve adaptation and planning in response to regional and local effects of sea level rise and coastal inundation through targeted research on key technologies, natural and nature-based infrastructure, physical and biological processes, and model evaluation. The overall goal of the ESLR Program is to facilitate informed adaptation planning and coastal management decisions through a multidisciplinary research program that results in integrated models of dynamic physical and biological processes capable of evaluating vulnerability and resilience under multiple SLR, inundation, and management scenarios. Funding is contingent upon the availability of Fiscal Year 2021 Federal appropriations. It is anticipated

that projects funded under this announcement will have a September 1, 2021 or September 1, 2022 start date.

**Awards:** It is anticipated that approximately \$1,200,000 may be available in Fiscal Year 2021 for the first year for some projects in each focus area, while an additional \$1,200,000 could be available in Fiscal Year 2022 for the first year for additional projects selected from this opportunity.

**Letter of Intent:** The required letters of intent (LOI) sent by e-mail to [nccos.grant.awards@noaa.gov](mailto:nccos.grant.awards@noaa.gov) and must be received by 11:59 p.m. Eastern Time on October 16, 2020.

Responses to LOIs should be expected by October 30, 2020.

**Proposal Deadline:** Full applications must be received and validated by Grants.gov by 11:59 p.m. Eastern Time on January 7, 2021.

**Contact Information:** David Kidwell, Director, NCCOS/CRP, 240-533-0286, [David.Kidwell@noaa.gov](mailto:David.Kidwell@noaa.gov)

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### **Grant Program: STEM Talent Challenge**

**Agency:** U.S. Economic Development Administration (EDA), U.S. Department of Commerce

**Website:** <https://www.eda.gov/oie/stem/>

**Brief Description:** EDA is seeking applications from eligible applicants to create and implement innovative science, technology, engineering and mathematics (STEM) apprenticeship models that complement their respective region's innovation economy. The STEM Talent Challenge is authorized under Section 28 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. § 3723). The STEM Talent Challenge seeks to develop or expand regional workforce capacity to support high-growth, high-wage entrepreneurial ventures, industries of the future (which usually includes industries that leverage emerging technologies), and other innovation driven businesses that have a high likelihood of accelerating economic competitiveness and job creation in their respective regions and in the United States. The STEM Talent Challenge is designed to help communities with two activities – planning and development, and program implementation. A total of \$2 million has been appropriated for this program and EDA invites applications that maximize impacts across both activities within this program, though planning and development activities are optional.

**Awards:** Applicants may not request in excess of \$300,000 over an 18 to 24-month period of performance, of which no more than \$50,000 may support planning and development activities if such support is needed. A total of \$2 million has been appropriated for this program.

**Proposal Deadline:** The deadline for receipt of applications is 11:59 P.M. EASTERN TIME ON WEDNESDAY, OCTOBER 14, 2020.

**Contact Information:** For questions concerning this NOFO, you may contact the EDA Office of Innovation and Entrepreneurship: Email: [oie@eda.gov](mailto:oie@eda.gov); Phone: (202) 482-8001

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## **EPA**

**Grant Program:** Center for Early Lifestage Vulnerabilities to Environmental Stressors

**Agency:** Environmental Protection Agency EPA-G2020-STAR-E1

**Website:** <https://www.epa.gov/research-grants/center-early-lifestage-vulnerabilities-environmental-stressors>

**Brief Description:** The U.S. Environmental Protection Agency (EPA), as part of its Science to Achieve Results (STAR) program, is seeking applications to support a Center for Early Lifestage Vulnerabilities

to Environmental Stressors. EPA is interested in supporting a transdisciplinary research center to better understand potential causal relationships among cumulative exposures to chemicals and non-chemical environmental stressors during early lifestages and modifying factors that result in adverse developmental health effects. Developmental health outcomes may include attention deficit/hyperactivity disorder (ADHD), reduced IQ, obesity, lessened self-regulatory capacities, anxiety, depression, attention problems, lower memory function, or structural changes to the brain. The application should include the development and demonstration of novel and revolutionary quantitative methods and approaches to integrate multidisciplinary data (epidemiology, toxicology, exposure science, risk assessment, public health, social science, and environmental science)

**Award:** Estimated Total Program Funding: \$1,900,000

**Submission Deadline:** November 12, 2020 : 11:59:59 pm Eastern Time

**Contact:** Technical Contact: Intaek Hahn, 202-564-4377;

Eligibility Contact: Ron Josephson, 202-564-7823; Electronic Submissions Contact: Debra M. Jones, 202-564-7839 [Intaek Hahn](#); [Ron Josephson](#); [Debra M Jones](#)

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## **Department of Energy**

**Grant Program: FY 2021 SBIR/STTR Phase I Release 1**

**Agency: Department of Energy DE-FOA-0002359**

**Website:** <https://science.osti.gov/sbir/Funding-Opportunities>

**Brief Description:** The Office of Science's mission is to deliver scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic and national security of the United States. The Office of Science is the Nation's largest Federal sponsor of basic research in the physical sciences and the lead Federal agency supporting fundamental scientific research for our Nation's energy future. For more information on the Office of Science mission please visit <https://science.osti.gov/>. The topic below is a collaborative topic among multiple programs in the Office of Science.

1. TECHNOLOGIES FOR MANAGING AND ANALYZING COMPLEX DATA IN SCIENCE AND ENGINEERING

Application Area 1: Advanced Data Analytic Technologies for Systems Biology and Bioenergy

Application Area 2: Technologies and Tools to Integrate and Analyze Data from Multiple User Facilities, Community Resources, Instruments and Data Systems

Application Area 3: Capabilities for Structuring, Mining and Extracting Knowledge from Chemical and Geochemical Data

Application Area 4: Capabilities for Management, Mining and Knowledge Extraction from Materials Databases

2. HPC CODE AND SOFTWARE TOOLS

3. HPC CYBERSECURITY

4. INCREASING ADOPTION OF HPC

5. TECHNOLOGIES FOR SHARING NETWORK PERFORMANCE DATA

6. EMERGING NETWORK TECHNOLOGIES

7. TECHNOLOGIES FOR EXTREME-SCALE COMPUTING

8. TECHNOLOGY TO FACILITATE THE USE OF NEAR-TERM QUANTUM COMPUTING HARDWARE

9. ADVANCED MICROFLUIDICS FOR X-RAY AND ELECTRON BEAMS

**Awards:** Maximum Phase I Award Amount: \$250,000 Maximum Phase II Award Amount: \$1,600,000



**Letter of Intent:** Tuesday, September 08, 2020 5:00pm ET  
**Submission Deadline:** Monday, October 19, 2020 11:59pm ET  
**Contact:** Carl Hebron Program Manager Phone 301-903-5707  
[Program Manager's Email](#)

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**Grant Program: FY 2021 Bioenergy Technologies Office Multi-Topic Request for Information (RFI)**

**Agency:** Department of Energy DE-FOA-0002386

**Website:** <https://eere-exchange.energy.gov/#FoaId6d7106e1-070a-4c46-bf34-35083498252f>

**Brief Description:** The purpose of this Request for Information (RFI) is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to overcoming the technical barriers and challenges in the design of clean, efficient residential scale wood heaters and in bioprocessing separations development. EERE is specifically interested in information on the following areas:

Topic Area 1 - Residential Wood Heater Technology Advancement: Identifying the critical technology gaps and resources required to significantly reduce emissions and improve efficiency of residential wood heaters.

Topic Area 2 - Bioprocessing Separations Development: Identifying the critical technology gaps and research needs required to enable more efficient separations technologies spanning biochemical and thermochemical approaches.

**Awards:** TBD

**Letter of Intent:** N/A

**Submission Deadline:** Responses to this RFI must be submitted electronically to [FY21MultiTopic@ee.doe.gov](mailto:FY21MultiTopic@ee.doe.gov) no later than 5:00pm (ET) on September 21, 2020.

**Contact:** [FY21BETOMultiTopic@ee.doe.gov](mailto:FY21BETOMultiTopic@ee.doe.gov)

For responses to this Request for Information

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**Grant Program: Solar Energy Technologies Office Fiscal Year 2020 Perovskite Funding Program**

**Agency:** Department of Energy DE-FOA-0002357

**Website:** <https://eere-exchange.energy.gov/#FoaId4f6953d0-ac25-44f6-b99a-ce04f8e119d6>

**Brief Description:** This funding opportunity announcement (FOA) is being issued by the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) Solar Energy Technologies Office (SETO). SETO supports solar energy research and development (R&D) with the goal of improving the affordability, reliability, and domestic benefit of solar technologies.

The SETO 2020 Perovskite Funding Program seeks to advance perovskite photovoltaic technology development and competitiveness through projects in economically viable device and manufacturing R&D and performance validation. The primary goals are to improve understanding of stability; establish methods to produce high-efficiency, stable devices using industry-relevant fabrication techniques; and develop test protocols that enable high confidence in long-duration field performance of perovskite-based photovoltaic technologies.

**Awards:** Various; Anticipated Available Funding: \$20,000,000

**Letter of Intent:** Concept Paper Submission Deadline: 9/23/2020 5:00 PM ET

**Submission Deadline:** Full Application Submission Deadline: 12/1/2020 5:00 PM ET

**Contact:** [seto.pvsk.foa@ee.doe.gov](mailto:seto.pvsk.foa@ee.doe.gov)

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**Grant Program: American-Made Solar Prize****Agency:** Department of Energy National Renewable Energy Lab (NREL)**Website:** <https://www.herox.com/solarprizeround4>**Brief Description:** The American-Made Solar Prize is a \$3M competition organized by NREL to revitalize the US ecosystem of innovators and entrepreneurs in solar. Our goal is to rapidly develop new solar solutions and bring them to market.

The Solar Prize is an opportunity for anyone interested in accelerating ideas and solutions. The American-Made Network is designed to strengthen and scale the very best ideas and teams through three progressive prize competitions, the Ready! Set! Go! Contests. This network provides the tools and expertise to help projects succeed and is comprised of an unparalleled innovation system. These resources will provide technical insight, product validation, and strategic support to teams throughout the competition. **Competing in the prize is easy!**

1. Identify an important problem you want to solve
2. Submit a 90-second video describing your challenge and proposed solution, team, and plan
3. Answer a short, four-question narrative and make a slide about this problem or challenge
4. Submit a two-page technical assistance request
5. Update your videos and statements as you advance through the contests.

Read more about preferred innovation approaches for the Prize at our [ProblemSpace](#) platform or attend the [Solar Prize information webinar](#) hosted by NREL on 8/19. When you're ready to go, share your idea at the [American-Made Solar Prize](#) application site.

**Awards:** Winning teams receive *up to \$500K in non-dilutive funding* in addition to in-kind support from the National Labs. To date, 60 winners from 23 different states have been selected over 3 rounds for a total of \$9M in funding

**Letter of Intent:** Please visit the [How to Compete in the American-Made Solar Prize page](#) to view the full rules for the American-Made Challenges Solar Prize.

**Submission Deadline:** October 8, 2020

**Contact:** Chris Richardson [ADL Ventures](#) - [Email](#)

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**NASA****Grant Program: NASA Space Technology Graduate Research Opportunities - Fall 2021****Agency:** NASA 80HQTR20NOA01-21NSTGRO-B4**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B2BC591E9-FFFA-4B1C-19A2-9283E5018B99%7D&path=&method=init>

**Brief Description:** NASA's Space Technology Mission Directorate (STMD) seeks to sponsor U.S. citizen, U.S. national and permanent resident graduate student research that has significant potential to contribute to NASA's goal of creating innovative new space technologies for our Nation's science, exploration, and economic future. The development of advanced and innovative space technologies is critical for our Nation to meet its goals to explore and understand the Earth, our solar system, and the universe. Space technology efforts will improve the Nation's leadership in key research areas, enable far-term capabilities, and motivate disruptive innovations that make science, space travel, space exploration and commercial space more effective, affordable, and sustainable. NASA Space Technology Graduate Researchers will improve America's technological competitiveness by providing the Nation with a pipeline of innovative space technologies. NASA's pursuit of a suite of revolutionary discoveries will also lead to major breakthroughs that are needed to address energy, health, transportation, and

environmental challenges. This call for graduate student space technology research proposals, titled NASA Space Technology Graduate Research Opportunities – Fall 2021 (NSTGRO21), solicits proposals on behalf individuals pursuing or planning to pursue master’s or doctoral (Ph.D.) degrees in relevant space technology disciplines at accredited U.S. universities.

**Awards:** Student Stipend \$36,000 Faculty Advisor Allowance \$11,000 Visiting Technologist Experience Allowance \$10,000 Health Insurance Allowance \$2,500 Tuition and Fees Allowance \$20,500 TOTAL \$80,000

**Notice of Intent:** Please see below.

**Proposal Deadline:** Deadline for submission of proposal November 2, 2020 at 6 PM ET, 3 PM PT  
Deadline for submission of Letters of Recommendation November 5, 2020 at 6 PM ET, 3 PM PT  
Selection notification April 6, 2021 (target) Deadline for intent to accept April 27, 2021 (target) Deadline for submission, by university, of budget with justification and PI CV May 11, 2021 (target)

**Contact:** Claudia Meyer [Program Executive](#)

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**Grant Program: ROSES 2020: Carbon Cycle Science**

**Agency:** NASA NNH20ZDA001N-CARBON

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId={4613663C-BD94-C1FF-E216-5032790DD390}&path=&method=init>

**Brief Description:** The Marine and Terrestrial Ecosystems and Natural Resources Management Panel of the 2017 Decadal Survey for Earth Science and Applications from Space (ESAS) of the National Academies of Sciences, Engineering, and Medicine (NASEM) Thriving on Our Changing Planet: A Decadal Strategy for Earth Observations from Space identified several science and application questions which are essential to understanding how the Earth system is changing, what the impact to ecosystems may be, how this may affect the services they provide (i.e., benefits people obtain from ecosystems, such as provisioning of water and food and absorbing human-generated carbon dioxide from the atmosphere), and how the structure of these ecosystems affects the fluxes of carbon, nutrients, and energy between and across the Earth system. In addition, recent investments in synthesis research, such as the Second State of the Carbon Cycle Report (SOCCR2), as well as recent meetings, for example the 2019 OCB OceanAtmosphere Interactions workshop and 2019 AGU Chapman Conference on Understanding Climate-Carbon Feedbacks, have highlighted key priority areas of research needed to fill important scientific knowledge gaps that will help inform decision-making stakeholders about carbon management and mitigation strategies and improved resilience

**Awards:** Expected total program budget: \$4.5M/year

**Notice of Intent:** September 28, 2020

**Proposal Deadline:** December 3, 2020

**Contact:** Laura Lorenzoni, Program Manager, Ocean Biology and Biogeochemistry Program  
Telephone: (202) 358-0197 Email: [Laura.Lorenzoni@nasa.gov](mailto:Laura.Lorenzoni@nasa.gov)

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**Grant Program: ROSES 2020: Science Team for the OCO Missions**

**Agency:** NASA NNH20ZDA001N-OCOST

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B7B9745C4-04AD-74F8-59B7-3CF0C8EF15E3%7D&path=&method=init>

**Brief Description:** Proposals are solicited for participation in the Science Team for the Orbiting Carbon Observatory-2 (OCO-2) and Orbiting Carbon Observatory-3 (OCO-3) missions. NASA launched the OCO-2 mission in July 2014. OCO-2 has been operating on orbit, producing precise column average CO<sub>2</sub>

concentration data globally with validated precision and accuracy of better than 0.25% , since September 2014. The OCO-3 mission, with a near-replica instrument to OCO-2, has been operating on the International Space Station (ISS) since June of 2019 and is now returning data with similar precisions as OCO-2. The primary differences in the data sets are the spatial and temporal sampling as a result of the different orbits of the observations (especially inclination) and the available observational modes of the instruments.

**Awards:** Funding anticipated: \$3,500,000

**Notice of Intent:** November 13, 2020

**Proposal Deadline:** January 13, 2021

**Contact:** Kenneth W. Jucks, Earth Science Division, Science Mission Directorate, NASA Headquarters Washington, DC 20546-0001 Telephone: 202-358-0476 Email: [kenneth.w.jucks@nasa.gov](mailto:kenneth.w.jucks@nasa.gov)

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## **National Endowment of Humanities**

### **Grant Program: Digital Humanities Advancement Grants**

**Agency:** National Endowment for the Humanities 20210115-HAA

**Website:** <https://www.neh.gov/grants/odh/digital-humanities-advancement-grants>

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

In support of its efforts to advance digital infrastructures and initiatives in libraries and archives, and subject to the availability of funds and IMLS discretion, the [Institute of Museum and Library Services](#) (IMLS) anticipates providing funding through this program. These funds may support some DHAG projects that further the IMLS mission to advance, support, and empower America's museums, libraries, and related organizations. IMLS funding will encourage innovative collaborations between library and archives professionals, humanities professionals, and relevant public communities that advance preservation of, access to, and public engagement with digital collections and services to empower community learning, foster civic cohesion, and strengthen knowledge networks. This could include collaborations with community-based archives, community-driven efforts, and institutions or initiatives representing the traditionally underserved. Interested applicants should also refer to the current [IMLS Strategic Plan](#) for additional context.

**Award:** Maximum award amount: Level I: \$50,000; Level II: \$100,000; Level III: \$325,000 in outright funds, with an additional \$50,000 in matching funds

**Proposal Deadline:** Optional Draft due: December 1, 2020: Application due: January 15, 2021

**Contact:** Contact the Office of Digital Humanities Team [odh@neh.gov](mailto:odh@neh.gov)

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### **Grant Program: Scholarly Editions and Scholarly Translations**

**Agency:** National Endowment for the Humanities 20201202-RQ

**Website:** <https://www.neh.gov/grants/research/scholarly-editions-and-translations-grants>

**Brief Description:** The Scholarly Editions and Scholarly Translations program provides grants to organizations to support collaborative teams who are editing, annotating, and translating foundational humanities texts that are vital to learning and research but are currently inaccessible or are available only in inadequate editions or translations. Typically, the texts are significant literary, philosophical, and historical materials, but other types of work, such as musical notation, may also be the subject of an edition.

The program supports continuous full-time or part-time activities during the periods of performance of one to three years. Projects must be undertaken by at least two scholars working collaboratively. While international collaboration is permitted, projects must maintain an equitable balance between scholars at U.S. institutions and scholars at non-U.S. institutions. In addition to supporting long-term editorial projects, the program also encourages applications for short-term projects and for projects that are at a planning stage.

**Award:** Maximum award amount \$300,000; up to \$450,000 may be available for projects that respond to “A More Perfect Union”: NEH Special Initiative Advancing Civic Education and Celebrating the Nation’s 250th Anniversary.

**Proposal Deadline:** Application due December 2, 2020

**Contact:** Contact the Division of Research Programs Team; 202-606-8200; [editions@neh.gov](mailto:editions@neh.gov)

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### **Grant Program: Humanities Connections**

**Agency:** National Endowment for the Humanities 20200930-AKA-AKB

**Website:** <https://www.neh.gov/grants/education/humanities-connections>

**Brief Description:** The Humanities Connections program seeks to expand the role of the humanities in undergraduate education at two- and four-year institutions. Awards support innovative curricular approaches that foster productive partnerships among humanities faculty and their counterparts in the social and natural sciences and in pre-service or professional programs (such as business, engineering, health sciences, law, computer science, and other technology-driven fields), in order to encourage and develop new integrative learning opportunities for students.

**Awards:** Maximum award amount up to \$35,000 for Planning; up to \$100,000 for Implementation

**Proposal Deadline:** Optional Draft due August 31, 2020; Application due September 30, 2020

**Contact:** Contact the Division of Education Programs Team [humanitiesconnections@neh.gov](mailto:humanitiesconnections@neh.gov)

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### **Private Foundations**

#### **Activate.ORG**

**Grant Program: Activate Fellowships**

**Agency:** Activate.org

**Website:** <https://www.activate.org/>

**Brief Description:** We exist to discover, fund, champion, and propel individuals who have a technology vision that could benefit society and who are committed to bringing it to the world as a new product or business. Every year, we work with our partners to select a cohort of entrepreneurial scientists and engineers from around the world to be fellows. For two years these innovators embed in a world-class

research institution, where they are supported with funding, mentorship, education, and connections with our network of industry leaders, investors, and philanthropists.

**Awards:** Fellows receive a yearly living stipend of \$80,000 to \$110,000 plus a health insurance stipend and travel allowance. Each project also receives \$100,000 of research support at the host laboratory.

**Proposal Deadline:** Applications open early October

**Contact:** If interested, please contact Dr. Michael Ehrlich, Associate Professor, Martin Tuchman School of Management, and Co-Director of NJ Innovation Acceleration Center at [michael.a.ehrlich@njit.edu](mailto:michael.a.ehrlich@njit.edu)

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### **Streamlyne Question of the Week**

Question: How can I update my eRA Commons ID for all future NIH proposals?

Answer: Go to Main Menu>Setting>Person Extended Attributes, click "Edit", enter it under "eRA Commons User Name" and submit the change/update.

More FAQs on Streamlyne: Please visit <https://research.njit.edu/streamlyne>

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### **Proposal Submission and Streamlyne Information Internal Timeline for Successful and Timely Proposal Submission**

Due to the COVID-19 outbreak, PIs are strongly advised to prepare proposals well in advance of agency deadlines. Every effort will be made to meet agency deadlines following the NJIT Research Continuity Plan (<https://research.njit.edu/njit-research-continuity-plan>).

The NJIT Proposal Submission Guidelines and Policy posted on the website <https://research.njit.edu/proposal-submission-guidelines> provides the expected institutional timeline for proposal submission. Streamlyne User Manuals are posted on <https://research.njit.edu/streamlyne>. For contact information on proposal submission, pre-award services and post-award grant management, please visit research website <https://research.njit.edu/researchers> and <https://research.njit.edu/contact>.

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